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# ESG Report 2020-2021

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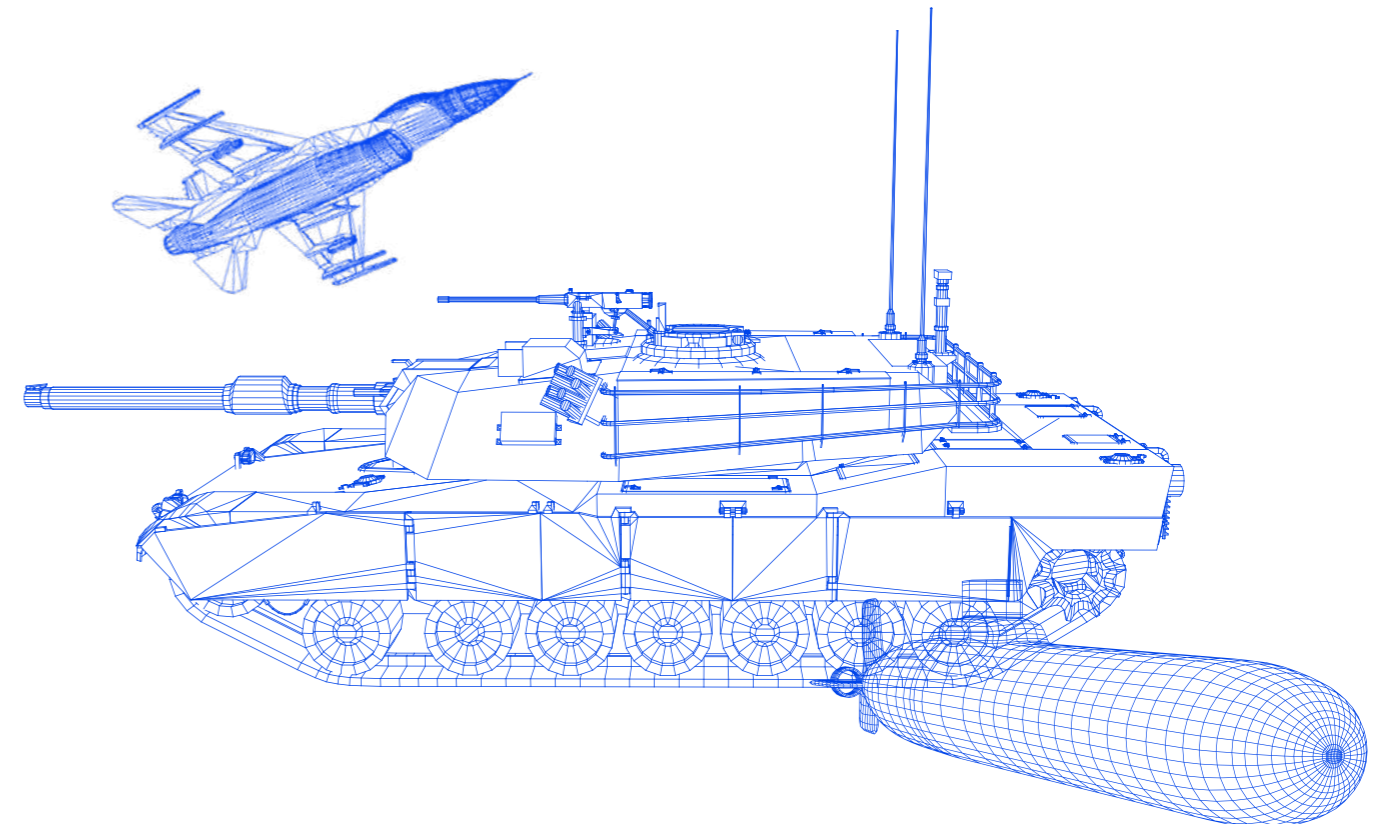
# CONTENTS

<b>4</b> From the CEO	<b>6</b> About the company	<b>38</b> Rafael – An innovative company
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<p>Company profile .....8</p> <p>Vision, purpose and values .....8</p> <p>Organizational structure .....14</p> <p>Our systems.....16</p> <p>Significant ESG issues .....32</p> <p>Dialogue with stakeholders.....34</p> <p>Cooperation and associations .....36</p> <p>About the report .....37</p>	<p>Corporate governance.....40</p> <p>Ethics and compliance .....42</p> <p>Quality at Rafael.....46</p> <p>Commitment to environmental protection.....50</p> <p>Employees – the human resource.....64</p> <p>Health and safety.....82</p> <p>Responsible purchasing.....90</p>
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<b>94</b> Rafael – Leading social and economic change in Israel	<b>108</b> Rafael – a central pillar in Israel's security	<b>122</b> Indexes
--	--	-----------------------

<p>Promoting Israeli society and communities .....96</p> <p>Developing Israel's periphery .....102</p> <p>Promoting economic strength across Israel .....104</p>	<p>A central pillar in Israel's security ..... 110</p> <p>Business sustainability and emergency preparedness ..... 118</p>	<p>GRI Index .....124</p> <p>SASB Index .....129</p>
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# From The CEO

## Dear readers,

Rafael Advanced Defense Systems Ltd. plays a key role in Israel's security with a wide range of systems and capabilities such as the "Iron Dome" and "David's Slingshot" defense systems, the "Windbreaker" active defense system for tanks as well as air, land, sea, cyber and space systems and capabilities. Our advanced systems have been recognized and applauded in Israel and around the world. Rafael has also been the proud recipient of 56 Israel prizes.



Rafael is unique in the world in its commitment to business excellence. It successfully competes with leading Israeli and international companies active in the same fields and, at the same time, functions as a national Israeli technological and security research and development center. It also acts as a significant engine for the growth for Israel's society and economy, especially in its periphery.

Our role as a central pillar in Israel's national security includes a significant contribution over many years, to Israel's economy, employment and society. Rafael is the largest employer in the north of Israel and also the largest HI Tec employer with more than 8,000 people employed directly by the company and an additional 20,000 households employed indirectly. In 2021 Rafael opened, for the first time, a production and development facility in Shlomi thereby strengthening its presence in the north of Israel and creating dozens of new jobs.

Since its foundation, and in addition to its main areas of activity, Rafael leads the field in ESG (Environment, Social, Governance) both in relation to other large companies and government owned companies. The company promotes activities to increase social responsibility, to create extensive positive circles of



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influence in the field of education, supports those with special needs and promotes scientific and technological education for a wide range of stake holders.

Rafael's local purchases constitute a significant growth engine for the Israeli economy. In 2021 the company's purchases in Israel were some 3.8 billion NIS which represents 58% of the company's total purchases. Additionally, the company pays, every year, a significant dividend to the state which, so far, total's some two billion NIS.

Rafael's ability to develop and produce ground breaking systems and technologies is based on the quality of its employees. This is the foundation of its success. Thousands of employees work day and night in a wide range of areas in order to provide the solutions required, first and foremost, for Israel's defense system and its partners abroad. These are the elements that allow Rafel to realize its extraordinary achievements in all of the areas it operates in. Rafael's employees also contribute their abilities and energy to Israeli society and the communities in which they live: thousands of the company's employees are active in voluntary community work, backed by Rafael's support and assistance in finding suitable and effective avenues to volunteer.

We have real partnerships with municipalities and communities around our facilities. This includes the provision of support, above and beyond our regular volunteer work. Rafael's activities in the areas of the environment, society and corporate governance (ESG) have been recognized by the "Maala" organization for many years. In 2021 we were once again awarded the organization's highest rating, Platinum Plus thus maintaining years of recognition by this prestigious organization.

For the purposes of this report, we identified the most significant ESG issues for us to focus our activities. We will continue to invest in these activities and develop a dialogue with all of our partners so that we will continue to be in the forefront in the integration of work for Israel's security alongside extensive and varied activities for the benefit of society and the community.

**Major General (Retired) Yoav Har-Even**  
CEO Rafael



# About the Company





# Company Profile

Rafael Advanced Defense Systems Ltd.. develops and manufactures a wide range of air, land, sea, and cyber warfare combat systems. The company's main focus is to meet the operational and technological needs of the IDF and Israel's defense establishment as well as our customers around the globe. Rafael is owned and controlled by the Israeli government and is the second largest government owned security and defense company in Israel.

Rafael is a force for the State of Israel's economic and security. As a government owned company, Rafael contributes 50% of its profits to the government and since

becoming a commercial company, Rafael has paid the state some two billion NIS. In addition, Rafael has won 56 Israel Defense Prizes as well as many international prizes.

## Vision



To be a central and significant pillar for the security of the State of Israel, to be a global, expanding and profitable innovative company, that produces and supports military systems that place operational needs and technological advances at the forefront.



## Our Goals

To lead in the development of advanced, ground breaking security, in Israel and the world.

To continue to be a national center for security research and development and a central pillar in the development of the State of Israel's deterrent and defense capabilities and Israel's military dominance.

To be a major force that attracts and inspires outstanding minds in all areas of the company's activities.

Each of the attributes in Rafael's goals is vigorously implemented in its activities and is a force that attracts and inspires excellence in its employees in all areas of the company's activities.



In 2021:

More than  
**8,000**  
employees

**30**  
subsidiary companies in  
Israel and the world

**400M<sub>NIS</sub>**  
net profit

**700M<sub>NIS</sub>**  
in self-funded research  
and developmen

**3.5B<sub>NIS</sub>**  
in purchases (yearly average)



# Values

Rafael has defined core values that govern how it operates and that support its vision and its three goals:



## COMMITMENT TO ISRAEL'S SECURITY

Rafael is committed to the security of the State of Israel and sees the IDF as a strategic partner. The company aims to maintain Israel's proven military and security superiority in the region and to develop the IDF's deterrent capabilities and its ability to overcome all enemies.



## COMMITMENT TO ISRAEL'S SOCIAL AND ECONOMIC STRENGTH

Rafael has set itself the goal of contributing to Israel's economy, both by being a profitable company that contributes a portion of its revenues to the state treasury, and by working with Israeli suppliers, many of them small.

Rafael has established branches in Shlomi, Be'er Sheva, Terdion, Tel Aviv, Shadma (near Mitzpeh Ramon) and in Jerusalem, it has a dedicated branch that employs ultra-Orthodox men and women.

Rafael will continue to concentrate its activities in the north of Israel and is committed to being the largest employer in the area. In addition, Rafael "graduates" make an important contribution to the development of Israel's flourishing high-tech sector. Rafael also contributes to Israel's social resilience by running over 50 diverse community programs with approximately 2,500 regular volunteers.

### Rafael's community activities are based on four guiding principles:

- Promotion of scientific-technological education
- Assisting populations that require support.
- Assistance to those with special needs
- Preserving the memory of the Holocaust and reaffirming the message "Never again".



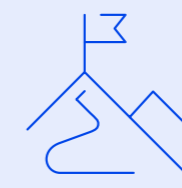
## PEOPLE AT THE CENTER

We believe that people are Rafael's most important asset - they are the company's main strength and its lever for success. We are committed to creating a challenging, rewarding and meaningful work environment for our employees, one that continuously nurtures their abilities, encourages diversity, increases their connection to society and recognizes them for their performance and successes. We will provide people with the knowledge, tools, conditions and leadership they require to maximize their potential and succeed. We continue to develop Rafael as an organization that cares for its employees, that respects and nurtures every employee, is a professional home for them and a source of pride both for them and their families.



## THE CUSTOMER AT THE FOREFRONT

We believe in and are committed to our ability to provide real value to our customers. We continue to lead in the development, production and maintenance of our products. We provide solutions and combat systems that help our customers, in Israel and abroad, achieve technological and operational superiority and realize their goals. To achieve this, we foster a continuous and close relationship with our customers based on fairness, integrity and professionalism. We study the challenges, needs and intentions of our customers in order to provide full service and support for their Rafael systems, and we will continue to develop systems that will answer their future challenges.



## EXCELLENCE AS A WAY OF LIFE

We will be the best in every field and never settle for less. We will maximize the potential of people and managers, knowledge and abilities, in order to reach greater achievements and successfully deal with developing challenges. Our goal is to carry out every activity in a professional manner, while setting high standards and doing the right thing in the right way. We will make our employees proud of themselves, not only because of their excellent results, but also because of the paths they choose to achieve their goals and success.



## DARING AND INNOVATION

We will strive and be ready to face new challenges. We will identify problems that require unique solutions, lead in providing valuable solutions for our customers and sow the seeds of future success. We will do this by striving to develop and bring new knowledge into the organization. We will encourage personal skills, innovation and creative and groundbreaking thinking. We will embrace changes that challenge the existing, we will learn from our successes as well as our mistakes. We will encourage people to take risks, with the understanding that this is the route that will bring Rafael to greater heights. We will encourage connections with the academic world and start-up companies in order to be exposed to new, innovative and groundbreaking technologies.



## ONE RAFAEL

Rafael's divisions at work together with shared ideas for the advancement of the company's products, interests and goals. The Rafael spirit reflects shared responsibility, teamwork, uncompromising quality and professional ethics. Cooperation is facilitated through managerial leadership that creates common goals, minimizes barriers, increases transparency and gives priority to projects that combine the capabilities and systems of different fields.



# Milestones in Rafael's Development



**1948**

The IDF's "Scientific Research" Division was established.

**1952**

The division was transferred to the Ministry of Defense.

**1958**

The division's name was changed to "Rafael" – The Authority for the Development of Combat Systems.

**1974**

Start of exports

**1968**

Start of production

**1984**

The "Leshem Institute" was established in the Galil.

**1991**

The company began its international cooperation

**2001**

From a "Division" the company became a state-owned company.

**2003**

The AI guided weapons system "Barad" (Hail) became operational in the Israeli Air Force

**2007**

The company changed its name to "Rafael Advanced Defense Systems Ltd."

**2011**

"Kipat Barzel" (Iron Dome) and "Meil Ruach" (Windbreaker) became operational

**2016**

Establishment of the National Cyber Command

**2017**

Establishment of the Terdion research branch.  
Establishment of the Jerusalem research branch.  
Establishment of the Tel Aviv research branch

**2019**

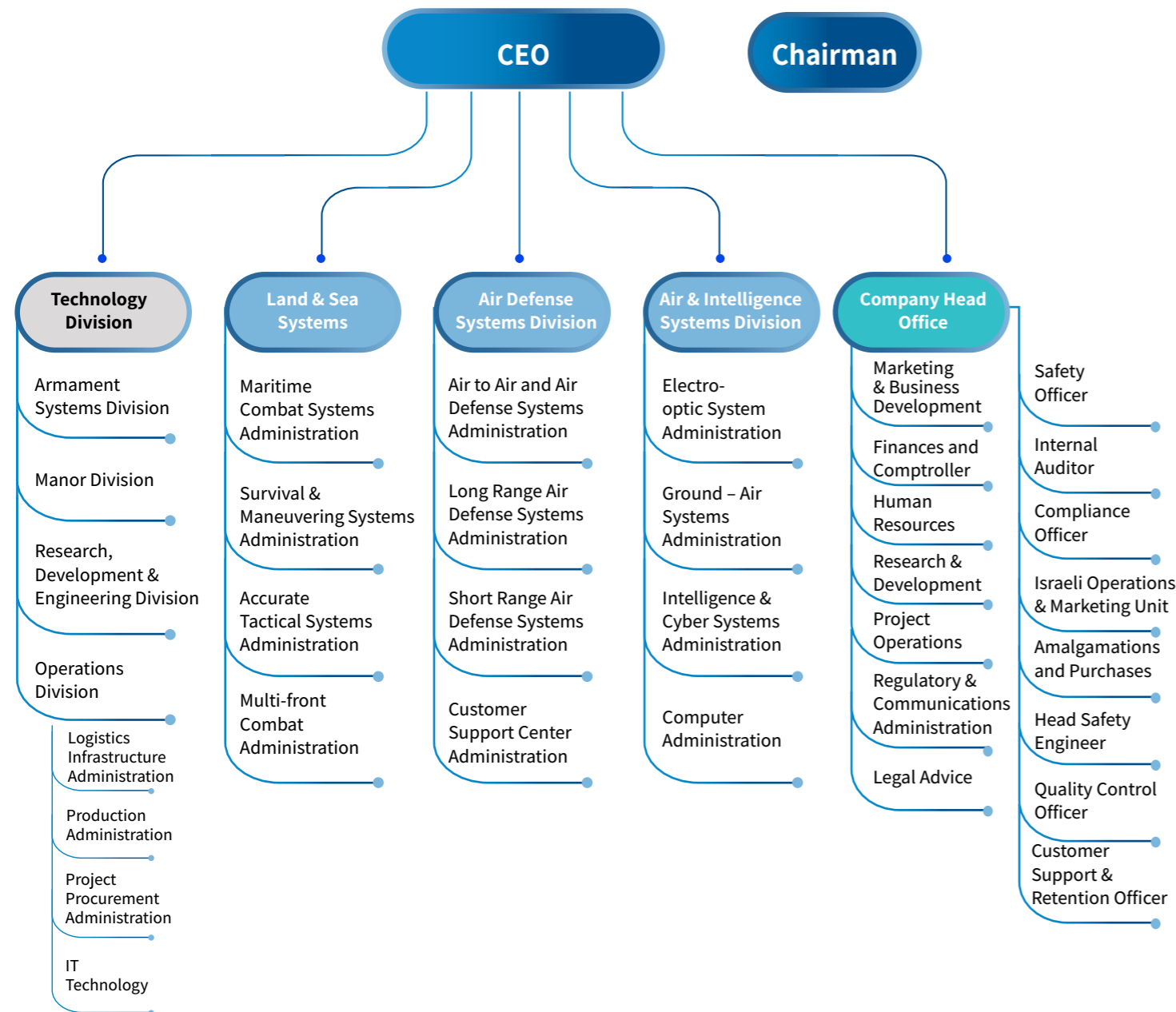
Establishment of the Petach Tikva research branch

**2021**

Establishment of the Shlomi production facility

# Organizational Structure

The company's organizational structure includes its head office that operates with agencies both within and outside of the company, three business divisions, and four technological divisions. In addition, Rafael has subsidiary companies and partnerships in Israel and abroad and representatives abroad.



## Rafael Divisions



### Technology Divisions

This division develops rocket engines, space propulsion systems, warheads and pyrotechnics and disposable naval decoys. The key products of this division include all propulsion systems for Rafael systems and other systems in Israel and abroad.



### Armament Systems Division

This division is a focus for national systems and infrastructures. Amongst other areas, it includes a national testing section, the Center for Military Research, and the Electronic Warfare Simulation Center.



### Research, Development and Engineering Division

This division brings together Rafael's research and development activities with advanced capabilities in the fields of image processing, mechanics, combat intelligence, cyber, electronics, software, aeronautical engineering, microelectronics and more. This division brings to light the core capabilities of the organization in the fields of research and development and enables the implementation of our vision and the provision of systems with the most advanced capabilities.



### Operations Division

This division is responsible for maintaining the supply chain and managing Rafael's production and procurement resources, as well as

The institutionalization and implementation of project management and control processes, while determining and optimizing cross-organizational work processes.



### Land & Sea Systems Division

This division designs, develops and manufactures systems that operate on land and at sea and offers complete and integrated solutions in the fields of precision attack, maneuvering and cyber warfare, protection and survivability, border and facility protection on land and at sea.



### Air Defense Systems Division

This division designs, develops and manufactures air and missile defense systems and one of the most advanced air-to-air systems of its kind in the world. This is an important component of Israel's multi-layered defense concept.



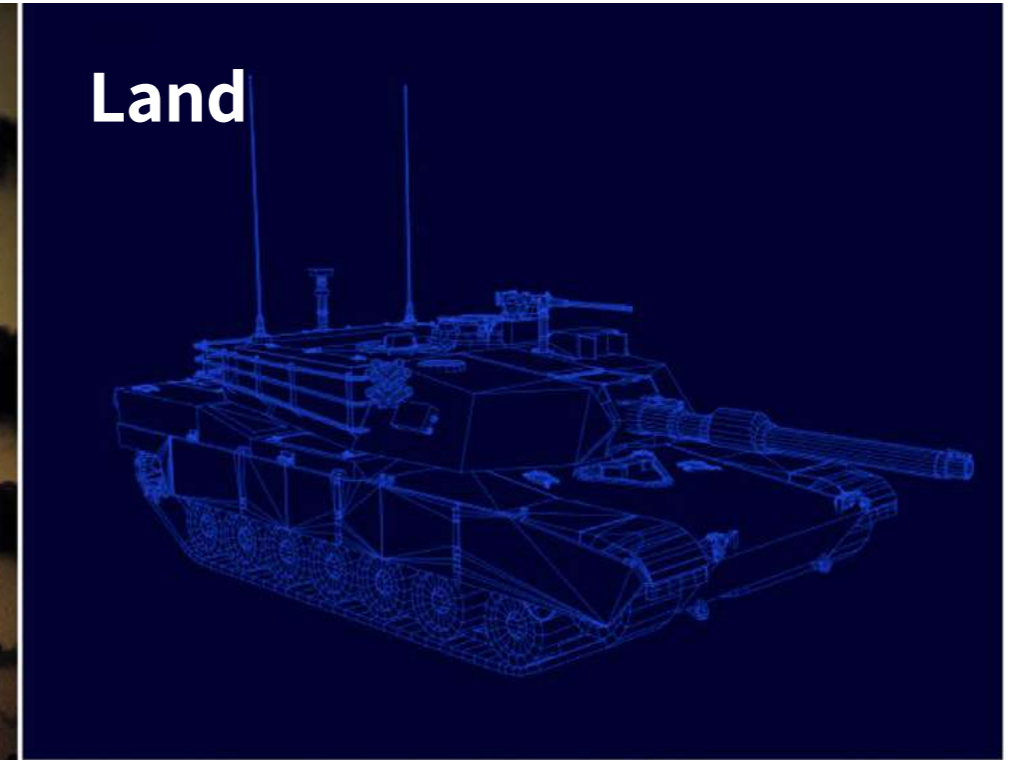
### Air Systems & Intelligence Division

This division develops and manufactures a wide variety of air and intelligence systems for combat and closing circles of fire that enable optimal synchronization between combat teams on the ground and in the air/ This includes electro-optical systems, communications and information, space and the provision of advanced responses to cyber issues.





# Our Systems





Rafael provides its customers solutions with its range of different systems:

## Maritime Systems

Rafael offers solutions that provide a multi-layered solution for the protection of maritime vessels while providing a comprehensive and integrated solution, i.e. perimeter protection, surface protection and underwater protection. Solutions include the "Naval Dome" system

for the protection of ships at sea, along the coast, and on facilities of national importance close to the coast. Rafael also provides solutions for protection against enemy swarm attacks such as drones and fast ships as well as torpedo protection for submarines and surface ships.



## Air & Space Systems

Rafael specializes in the development and production of advanced weapon systems, which enable identification and tracking as well as navigation and attack capabilities. Rafael offers the following solutions that it develops and produces:

### Air-to-Air Missiles

**Python 5** - an innovative fifth generation with a revolutionary capability of firing backwards. The missile, which provides the pilot with 360-degree launch capabilities, incorporates advanced technologies including navigation, detection and jamming systems. The missile can also be launched for short ranges.

**I-Derby** is a light weight missile that allows adaptation to modern fighter planes and a variety of light planes. It can be launched throughout the day and in any weather conditions. It is integrated with an active radar and can be used short range and beyond the line-of-sight firing.

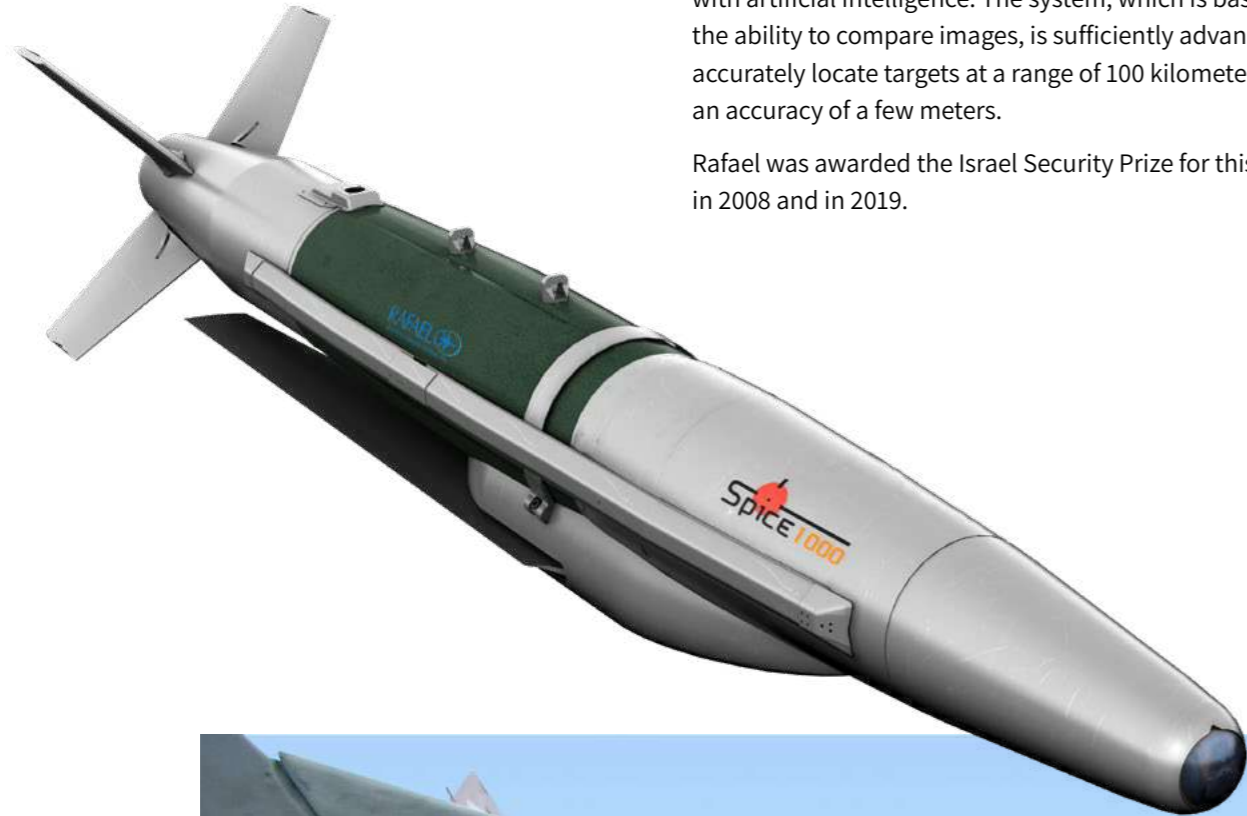




## Ground-to-Air Systems

"Bardim-" Rafael developed the "Bardim" ground-to-air missile family. This is a collection of armament systems with artificial intelligence. The system, which is based on the ability to compare images, is sufficiently advanced to accurately locate targets at a range of 100 kilometers with an accuracy of a few meters.

Rafael was awarded the Israel Security Prize for this system in 2008 and in 2019.



## Target Missiles

"Anchor" – is a family of target missiles designed to be launched from an aircraft and simulate ballistic missiles, which are used by Israel for the testing of air defense systems. The missile has different models that allow flexibility and adaptability to any potential purpose.

## Navigation, Collection & Attack Systems Based On Advanced Electro-Optical Capabilities

**Litening** is a navigation pod for identifying and attacking targets based on electro-optical technology. It includes a laser designator for precise launching of laser-guided weapons. The system, which is installed externally underneath the allows for the reception of clear, high-quality images in real time thus enabling accurate identification and fast homing to the target.

**ReccLite** is a tactical intelligence system used for observation and real-time data collection. The system simultaneously collects high-resolution images from a large number of sensors and sources and in addition enables long-range photography, in a stable and continuous manner. The system is not affected by aircraft movements and maneuvering.

**Toplite** is a system that upgrades the intelligence gathering capabilities including the manual or automatic tracking of targets, measuring the range to the target and precise firing direction. It is used for tracking, targeting and weapon control. The system is based on advanced sensors and also combines computerized image and vision processing capabilities.

## Electronic Warfare Systems with Deception, Jamming & Protection Systems

**Sky-Shield** - the third generation of Rafael's electronic warfare systems. It enables the disruption and evasion of the enemy's detection systems. The high-power system has 360-degree coverage, a wide frequency range and a compact configuration.

## Space Propulsion Systems For Satellites & Launchers

Rafael is a key partner in the Israeli space program and in collaborative programs with space agencies around the world. Today, Rafael products are installed in over 80 satellites orbiting in space. Rafael applies solid propulsion technologies, hydrazine propulsion and electric propulsion and even develops and supplies structural products made of composite materials for satellites.



Anchor



Litening



Toplite



Sky Shield



Space Propulsion System



## Intelligence & Cyber Systems

Rafael specializes in providing defensive solutions for border control and the protection of facilities and infrastructure in the field of cyber defense, intelligence systems and Big Data analysis systems.

The company was chosen by the Israeli government to establish and operate the National Cyber Security Agency. Among other things, Rafael provides cyber and infrastructure protection for significant entities in the Israeli economy such as Israel Railways and the Bank of Israel's national credit pool. Its products include:



### SCADA Dome

A cyber protection system based on advanced artificial intelligence algorithms. The system can warn of cyber-attacks and repel them.



### Wisdom Stone

A unique cyber system for intelligence management and interpretation of large quantities of data in a multi-sensor environment and different types of information. The system is able to analyze a huge amount of DATA and turn it into accessible and valuable information. It is designed and constructed using the "open architecture" method and to all of the customer's sources and sensors.



### ImiSight

An intelligence and visual analysis system that can process a great amount of image data using a large number of sensors therefore providing real-time operative intelligence.



### ImiLite

A multi-sensor intelligence system that uses advanced image processing algorithms for the purpose of processing and distributing incoming information from a large number of different types of intelligence platforms.





## Air Defense Systems

As part of Rafael's mission to protect Israel's security, it manufactures and develops life-saving systems that have changed Israel's defense concepts. As part of the State's multi-layered defense concept, Rafael provides solutions for 3-layers of defense. Thus Its systems protect Israeli civilian population, strategic sites and infrastructures, and maneuvering forces.

Products include:

### Iron Dome

An air defense system to intercept short range aerial threats such as mortars, artillery shells, rockets, unmanned aerial vehicles and helicopters. In 2012 the system was awarded the Israel Security Award.

### David's Sling

A nationwide air defense system developed in collaboration with the American company Raytheon. The system has won the technological innovation award presented by the American Missile Defense Agency (MDA) - the system has an interceptor with extremely high maneuverability and a single multi-stage engine, the only one of its kind in the world.

### Drone Dome

Defense system against drones and mini-UAVs - a defensive system for intercepting drones and mini-UAVs that is built from several components including radar, electro-optical resources, jamming systems and laser interception capabilities.





## Land Based Systems

The resources developed and produced by Rafael are a key milestone in the strengthening of the IDF and the building of its military superiority. Active protection systems for tanks, missiles, remotely controlled weapon positions, observation and identification capabilities are only some of the solutions that make up the technological and operational infrastructure that strengthens the ability of ground forces to maneuver effectively. Among the solutions offered include:

### Spike Missiles

A family of advanced, fifth generation, electro-optic missiles. The missiles can be launched from a variety of land, sea, and air platforms. The missiles have "fire and forget" capabilities, learning and updating, automatic steering and the ability to attack camouflaged targets.

### Passive & Active Defense

Modular protection systems that provide protection from a wide range of threats such as armor-piercing missiles, powerful charges, artillery shrapnel, improvised charges and slingshot charges.

### Samson – RWS

Weapons positions that are remotely controlled and integrated into land and sea platforms. They have high survival rates on land and at sea and are adapted to a wide variety of armored vehicles, amphibious vehicles, trucks and ships.

### Windbreaker

The system that changed the face of land maneuvering. This is an active system for armored combat vehicles, the only one operational in the world. The system detects threats precisely at an angle of 360 degrees, alerts the vehicle's crew and autonomously destroys the threat through unique and advanced interception capabilities.

### "Smart Trigger"

A digitization battlefield system that connects all participants in the land battlefield with the aim of enabling effective, fast and safe closing of accurate circles of fire. The system displays all operational information on one screen based on 3D models and augmented reality.





## The map of Rafael's activities

The map of Rafael's activities throughout the country reflects the company's significant presence in Israel's geographical periphery on the one hand, and its presence in Israel's main cities in Israel, where it successfully competes with leading high-tech companies in Israel and the world in attracting talented and high-quality human resources.



## Subsidiary companies

Rafael also works to implement the company's strategy through the establishment of subsidiaries in Israel and abroad. These companies operate in a wide variety of military and civilian fields, starting with command-and-control systems, advanced navigation systems, observation balloons and electro-optical capabilities, and on to products

for the fields of medicine and more. Collaborations with the subsidiaries allow for the preservation and transfer of knowledge and capabilities to maximize research and development potential, to enable feedback between civilian and military technologies, and to jointly market mutually synergistic capabilities and relative advantages.

Israel	Australia	Far East	Americas	Europe



## Buisness Partnerships

Rafael implements a corporate culture of creating partnerships in Israel and around the world with governments, aerospace companies and leading defense industries. These partnerships provide a combination of strength and leverage for Rafael's technological know-how and advanced systems.

The company operates in a competitive environment, which includes local and international competitors. In some cases, the customers purchase considerations may also be determined by external considerations, apart from the cost of the product, its characteristics and the extent to which it is suitable for the customer's needs. Sometimes international political considerations, a preference for local production over imports (localization) and security restrictions are at work.

This is why the acquisition of subsidiaries in Israel and the world and cooperation with leading companies in Israel and the world results in the creation of synergy "(a force multiplier)" for winning tenders in Israel and other countries and saving development and production costs.

Sometimes winning an order from a foreign country requires Rafael to carry out a direct and indirect reciprocal purchase of significant volumes in that country. In recent years, the demand among customers to transfer production capabilities to create jobs and build local industrial capacity has also been increasing. This trend requires evaluation and adjustments in Rafael's activities around the world through the expansion of joint ventures, mergers and acquisitions.



## Rafael Representatives Globally

Rafael has representatives around the world that focus on the promotion and marketing of the company's products, on continuous and close contact with customers, on gaining a greater understanding of local security and defense needs and on getting to know the companies operating in the various countries. Rafael's representative offices or

companies are located around the world, for example in the USA, Brazil, Great Britain, Germany, India, Thailand and Australia. The spread of local representatives is dynamic and changes according to marketing efforts and regional potential.







# Significant ESG Issues

Rafael concentrates its ESG activities on issues that the company has identified as essential to its nature and fields of activity.

The essential issues presented in this report were identified using an international methodology based on GRI guidelines, the world's leading organization in setting standards for ESG reports. It includes an analysis of global trends in the defense systems manufacturing sector, and broad research based on ESG rating bodies, international investors, international standards and leading companies in the industry.

The report provides an answer to all the sections (disclosures) defined by the organization as core sections (Core), and also lists additional indicators that reflect material issues, as emerged from the materiality analysis conducted at Rafael. These are the material issues in the ESG areas identified at Rafael and the company's principled approach regarding each of them:

## E (Environment)



Subject	Description
Energy management	Effective management of the company's energy consumption, while striving for reduction, and increased use of energy from renewable sources.
Climate change and management of greenhouse gas emissions	Monitoring and measurement of greenhouse gases emitted directly by the company resulting from its electricity consumption with the intention of reducing the scope of emissions.
Waste Management	Monitoring the amount of waste in the various waste streams that the company produces (organic, paper, metal, hazardous, etc.) in an effort to reduce the amount of waste, to facilitate the optimal treatment of waste for reduced environmental impact, with an emphasis on the treatment required for hazardous waste.
Materials and resource management	The company uses a large number of materials in the manufacture of its products and places an emphasis on responsible procurement and active initiatives for a transition to the use of environmentally and employee friendly materials.

## S (Social)



Subject	Description
Health & Safety in the workplace	Rafael's safety requirements are higher than the legal requirements and include risk assessment, work plans and support systems. Corporate culture at Rafael sees safety as a way of life for all employees and transparency as one of the keys to achieving it.
Diversity & acceptance	Rafael places great importance on the recruitment and integration of employees who belong to underrepresented populations and operates in a variety of programs to promote the issue. We expanded and established the holistic treatment of occupational diversity with an emphasis on those with special needs and then ultra-orthodox.

## S (Social)



Subject	Description
Managing community relations	Rafael considers it vital that the company creates a positive impact on the communities in which it operates and sees this as an essential part of its activities. Employee volunteering is in areas where they can make a unique contribution such as science, technology, engineering and the issue is managed centrally, with the effect of the activity being measured and monitored.

## G (Governance)



Subject	Description
Management of a responsible supply chain	Just as it is important for Rafael to conduct itself responsibly, it is also important for the company that its suppliers, throughout the entire value chain behave in this way, in aspects regarding the safeguarding of workers' rights, the environment and safety.
Confidentiality and information security	Due to Rafael's areas of business, the company possesses large quantities of confidential personal and commercial information. Rafael take great care to preserve the privacy and confidentiality of stakeholders' information through a strict privacy protection policy, procedures for handling violations, and providing annual training to all employees regarding privacy protection
Ethics	Rafael is committed to ethical conduct in all aspects of its activities - between employees and managers, between the company's employees and its customers, suppliers and partners, regarding the company's responsibility to its employees and their responsibility to it. The company's code of ethics for itself and its employees deals with the prevention of corruption and bribery, regulates relations with government officials and lobbying activities, commits to non-discrimination of workers, and promotes transparency, integrity and trust.
Product quality and safety	Rafael is active in a field where its products have a high-risk potential if quality is insufficiently high. In order to maintain the highest level of safety and quality in the world, Rafael operates a quality system independent of the product's developers manufacture's and operators. This unit is responsible for the company's quality assurance operations.
Adhering to regulatory issues	Due to the nature of its systems and its sensitive fields of activity, and also because it is a government company, Rafael is subject to extensive regulations, for example in the fields of safety, environment, suppliers from which it is allowed to buy and those agencies to whom it is allowed to sell. Rafael works thoroughly and continuously to meet all relevant regulatory requirements.
Innovation and digitization	Innovation is an essential aspect in all fields in which the company is active, fields that are constantly changing and highly technological. The desire for innovation and the success of its implementation, including the digitalization of processes, is deeply embedded in the company's nature which invests many resources in research and development and encouraging and rewarding innovation among its employees.
Commercial sustainability	Due to the nature of its products, Rafael's continuous operation, even in emergency conditions, is essential to Israel's security. Therefore business continuity is essential for the company both from a business and a value perspective. The company has a permanent committee that deals with the subject and is updated on a regular basis.



# Dialogue With Stakeholders

We believe that an inspiring organizational culture, one that encourages managers and professional and value orientated employees to behave at a high is an essential and necessary element for the organization's success. Rafael's strength is built not only from its business successes and technological capabilities, but also from its branding as a company whose integrity, business and human ethics are important to it and allow us to justify the trust that our customers, employees and business partners have in us.

Rafael managers maintain a regular and open dialogue with partners relevant to their field of activity. The discourse usually deals with coordination and clarification regarding essential issues for Rafael such as: environmental protection, current government relations and neighboring communities. Care is taken to provide a comprehensive response to inquiries. Rafael is committed to transparency in its relationship with stakeholders, and to periodically presenting its performance in the areas of corporate responsibility.

Rafael conducts the dialogue with the stakeholders in a responsible manner ensuring the privacy and confidentiality of all information received from them, through a privacy protection policy and procedures for handling violations. In addition, all employees are given annual training on the protection of privacy. At Rafael, there were no cases of information leakage or customer privacy.

As an integral part of Rafael's corporate responsibility development, the company initiates a dialogue with its main stakeholders:

- **Customers** - Rafael places great importance on loyalty and commitment to its customers. This is reflected in our pursuit to provide our customers with the best value in terms of solutions, products and service, while observing the rules and regulations that protect Rafael's core assets and financial strength. We strive to build a long-term relationship with our customers based on trust, integrity, mutual respect and an understanding of their needs.

- **Employees** - Rafael is in constant dialogue with employees throughout the life cycle of the employee in the organization, from recruitment to the end of employment. The company's concept is that of "employee first." Among employees, surveys are distributed on a regular basis that receive a high response rate and serve as a tool for managers to provide feedback and implement plans among the employees.
- **Community** - We are proud to be an integral part of Israeli society in general and in particular communities in the north where we operate. We act responsibly towards the community and the environment. We encourage social involvement and contribution to the community both at the organizational level and by each employee individually. Rafael operates a variety of activities in the community, and the annual activity plan is planned in consultation with the community partner, from initiation to implementation. Rafael maintains extensive community activities near its main centers of activity, and over 2,500 employees volunteer in some 50 projects. Rafael is in contact and partnership with over 14 local authorities as part of its volunteering activities.
- **Regulations** - Due to the nature of its systems and its sensitive fields of activity, Rafael is subject to extensive regulations in the fields of safety, the environment, the suppliers from whom it is allowed to buy and the agencies to which it is allowed to sell. The company works diligently and regularly to comply with all regulatory requirements.

During the past year, surveys and tests were conducted among various stakeholders - employees, customers and consumers, suppliers, subcontractors and business partners - which evaluated, among other things, their positions in relation to ethical aspects of the company's conduct.

- **Suppliers** - Rafael sees its suppliers as business partners essential for the success of its operations and to that end ensures regular contact with them. Rafael operates a special area on its portal for suppliers. As part of the portal, suppliers can ask questions on various topics relating to Rafael's work with them and receive relevant answers. As part of quality surveys

that Rafael conducts among its suppliers, it initiates partner improvement processes and relevant training for its suppliers development. Rafael is, for many of its suppliers, a significant and critical customer. Rafael identifies opportunities to strengthen its suppliers in terms of quality, safety and employee employment, thereby retaining quality suppliers over time.





# Partnerships & Relationships

Rafael takes an active part in promoting corporate responsibility and ESG principles as part of its membership in a number of leading organizations and institutions in the field in Israel and the world, including:



“Maala” – the Association for the Advancement Corporate Responsibility in Israel



Transparency International – ארגון השקיפות הבינלאומי



Israel Standards Institute



Transparency International Israel



Manufacturers Association of Israel



הפורום הביטחוני ופורום המרכזים של ACC ישראל - נציגי הלשכה המשפטית של עומדים בראשות פורומים אלה



Quality Association of Israel



The Security Forum and Tenders Forum of ACC Israel - representatives of the Legal Bureau head these forums



Iitem - Association of users of advanced technologies in knowledge-intensive integrated systems



In 2021, Rafael won, for the ninth time in a row, a Platinum Plus rating (the highest rating government company to join achieve this prestigious ranking) for corporate responsibility, from the "Ma'ala" organization. Rafael is the first.

# About The Report

This is the seventh report reviewing the company's social responsibility (ESG) performance and it covers the years 2020-2021.

The report reviews Rafael's performance, not including subsidiaries, and the information in it does not include information relating to Rafael's missions abroad, other than employee data.

The company committed to publishing a periodic ESG report that presents the achievements of Rafael and its employees in the field of ESG, as well as long term trends, goals and developments.

In some of the data tables, percentages may not equal 100% or exact amounts, due to numbers being rounded up or down.

The report was written according to the guidelines and standards of the Global Reporting Initiative (Global GRI) at reporting levels determined by the Sustainability Accounting Standards Board (SASB) for the Defense & Aerospace sector. The contact person for the report is Mrs. Ricky Meman, Director of Corporate Responsibility. You can respond and submit questions regarding the report to rikim@rafael.co.il.



# Rafael As An Innovative Corporation





# Corporate Governance

Rafael is a government company with the government of Israel being its majority shareholder (99.9%). In addition there are a number of other government companies that hold individual shares. However, Rafael operates as an international, competitive company and strives to meet the highest international standards of proper corporate governance.

At the beginning of 2011, Rafael's board approved the 'Corporate Governance Procedure' which was updated in 2019 and included an update regarding the composition and powers of the board's committees. The procedure is based on the Companies Law, the Government Companies Law, guidelines of the Government Companies Authority and basic documents relating to the company and its regulations. The procedure is a criterion for reference, and as such regulates the relationship between the board of directors, management, shareholders and other company stakeholders. It is designed to assist the company in the establishment of mechanisms for defining its goals, means for achieving them and monitoring the manner in which they are implemented.

Rafael's principles of corporate governance reflect the company's goals for honesty and ethical behavior, transparency, responsibility and commitment to the organization. They integrate with the company's values and vision and are another aspect of Rafael's pursuit for excellence in its operations while maintaining all mandatory regulations and beyond (Beyond Compliance) in all areas, including environmental protection and sustainable development, safety, transparency and business ethics.

Rafael is subject to the Government Companies Law and its relevant regulations that determine the composition and work of the board of directors, its powers, the suitability of directors and how they are appointed, directors remuneration and rules for ensuring the accuracy of financial statements and board of directors report.

## Board Responsibility and Roles

The board of directors bears ultimate responsibility for Rafael's activities, its solidity and its success. The board's role is to outline the Rafael Group's vision and policies, to ensure their implementation and to supervise the actions of the CEO and management and the manner in which they perform their duties. The board of directors also sets and implements high standards of behavior to promote excellence, professional behavior and integrity and their assimilation in Rafael. The board of directors determines clear areas of action and responsibility, while maintaining a clear separation between its responsibilities and those of management. It also supervises and outlines the company's monitoring and risk management policy.

In addition, the board of directors establishes guidelines for the preparation of ongoing company work plans and their approval, including long term plan, the annual business plan and a work plan in terms of an execution and budget. The board appoints the company's general manager, approves the appointment of senior company officials and determines their terms of employment as per the Governmental Companies law, as well as employee standards and the company's salary and remuneration policy.

### The board of directors approves:

- Directors acting on Rafael's behalf in its subsidiary companies based on the CEO's recommendation.
- Appointments of the heads of the company's foreign offices
- The financial and financing plan to create financial resources that will allow Investments required in the company.

- Control and audit programs.
- The company's mergers and acquisitions plan.
- Compliance and code of ethics programs.
- Financial reports, annual and periodic reports.
- The principles of the company's organizational structure .
- Strategy for sustainable development and environmental preservation.

Once a year the complete board of directors meets as an ESG committee. In this capacity, the company's ESG strategy, relevant risks and opportunities, activities executed in the field and their effectiveness, planned actions and training to promote knowledge regarding ESG issues are detailed. In addition, the subject of ESG is presented to management once a year.

The board of directors may delegate its powers regarding economic, social and environmental matters to company managers and employees, with the exception of those powers specified in section 32 of the Government Companies law, and those that the government or government ministers have informed Rafael cannot be delegated.

## Board Structure and Composition

The Companies Authority is responsible for the appointment of the board of directors and is responsible for the diversity of its composition and the expertise and knowledge of its members. As of 31.12.2021, 2 women out of 5 directors serve on the board of directors. The directors are paid according to standards set by the Government Companies Authority, based on a methodical and approved formula, by which managers and senior company employees receive payment and a bonus according to the company's annual and quarterly performance.

**At the time that the present procedure was approved, the following board of director committees are part of Rafael:**

- Finance and Investments Committee



- Strategy and Business Development Committee
- Compliance Committee
- Audit and Safety Committee

## Preventing Conflict of Interests

Each member of the board of directors owes a fiduciary duty to Rafael, and they must avoid any action that could be seen to be a conflict of interest between their position as a director and any other position they hold or their personal interest. They must also avoid any action that is in competition with Rafael's business or that takes advantage of Rafael's business opportunities. At the time of their appointment, directors sign a statement in which they are obliged to avoid any conflict of interest between their non-company related activities and the company's activities.

A Rafael employee and/or a service provider employed by Rafael, either directly or through a company or another entity, for the purpose of carrying out work, a project or a service agreement, such as a consultant, supplier, human resources, etc. may find themselves in a situation in which there is a suspicion of a conflict of interest in their work.

To address this matter, Rafael has a procedure that handles the issue by reporting and a process for examining appropriate solutions to resolve any concerns regarding a conflict of interest. The process is carried out by a conflict-of-interest committee consisting of the senior VP human resources and the company, a senior vice president and the company's legal advisor, plus another board member determined ad hoc and in accordance with a letter of appointment issued by Rafael's CEO.

# Ethics and Compliance

We believe that an organizational culture that inspires and encourages managers and professional and valuable employees to behave at a high ethical level, is an essential and necessary element for the company's success. Rafael's strength is built not only on its business successes and technological capabilities but also on its reputation and standing as a company whose integrity and business and human ethics and the trust that our customers, employees and business partners have in the company are of prime importance.

Rafael is obligated to act according to all applicable laws and regulations. But has, for many years, assumed ethical obligations and limitations far beyond them. For example, in order to ensure compliance with the highest international standards, Rafael has been complying with the ISO 37001 standard for several years which stipulates a management system to prevent bribery and corruption. The company is also active in international compliance and ethics organizations, such as the International Forum on Business Ethical Conduct.

Dealing with issues relating to ethics and compliance within the company is the foundation of Rafael's corporate culture and supports both the company's excellence and the existence of a clear ethical identity. Rafael's approach to these issues requires all of the company's managers and employees to meet strict standards of integrity and reliability, as the company believes that such an approach reduces the taking of unreasonable and unwanted risks.

## Code of Ethics

The company's and employees code of ethics is based on the company's vision and values and supports our aspiration to continue to be a central pillar bolstering the security of the State of Israel, while at the same time continuing to be a global, innovative, growing and profitable company that develops, manufactures and supports combat systems that are at the forefront of operational needs and technology.

As such, we are required to apply ethical rules of conduct, adhere to high standards of honesty and integrity, and observe fairness, reliability, transparency, integrity and incorruptibility in our internal conduct, in order to preserve

organizational quality, foster employee identification with Rafael and their desire to continue belonging to a valuable and leading organization. Ethics pertains to the organization's rules of conduct— whether between an individual and their colleague, between a manager and his employees, between the company's employees and its customers, suppliers and partners, and the company's responsibility to its employees and their responsibility towards it.

Rafael's code of ethics is a compass for proper behavior. It reflects the values and norms for behavior and actions within Rafael, and its purpose is to maintain high ethical levels within the organization and act as a tool for the development of an organizational culture and internal standards. It addresses issues of responsibility, reliability, honesty, professionalism, sensitivity to “how things appear”, and also to the company's commitment to its employees, the safeguarding of human dignity, life and health, as well as to the interface with all company stakeholders, including customers, suppliers and competitors.

The code, which is published on the company's website, is adapted for the international business sector in which Rafael operates and reflects the unique characteristics of its activities. It includes values, standards, issues and mandatory rules of conduct, which define what is appropriate and permissible for Rafael employees and its **managers at all levels of operation including issues such as:**

- Equal opportunities and non-discrimination based on race, religion and sex, gender identity and sexual identity.
- Prevention of harassment.
- Guidelines regarding the receiving of gifts and benefits.



- Protection of customer and employee privacy.
- Use of confidential and internal company information.
- Prevention of bribery and corruption.
- Prevention of conflicts of interest.
- Transparency in personal relationships with customers and stakeholders.
- Fair competition including the collection of information regarding competitors.
- Government relations.
- Non-abuse of company power.
- Validity and reliability of company reports.

All employees are expected to adhere to these rules and report their violation, even if instructed otherwise by their superiors. The code of ethics was reviewed and evaluated over the previous two years in order to verify its relevance, including employees involvement in the process and discussion and approval by the company's management.

The company's management has an active ethics committee as well as an ethics forum with representatives from a variety of company departments and agencies.

## Preventing Corruption

Rafael and its affiliated companies believe in conducting business fairly. This has always been the company's policy, and the company obeys all of Israel's anti-corruption legislation, the anti-bribery convention of the Organization for Economic Cooperation and Development (OECD) and all relevant anti-corruption laws in the countries in which it operates.

In order to ensure its effectiveness Rafael's compliance program is dynamic. Rafael updated its anti-corruption

policy in 2019 and will complete another update in early 2023.

The compliance plan includes an action plan for implementation at all company levels as well as with its business partners. The plan's procedures are intended to effectively implement ethical conduct and prevent bribery and corruption, and they apply to all directors, managers, employees and consultants within the company and its business partners. As part of the company's compliance efforts, the company has a VP for compliance who reports to the CEO who reports to the CEO and to the company's board of directors on the implementation of compliance efforts.

**These are the main topics referenced in the compliance program:**

- Due diligence regarding suppliers, consultants and business partners, especially those involved in the organization's sales processes or representing the organization with government authorities.
- Training for the prevention of corruption and to encourage ethical behavior.
- A range of monitoring processes.
- Internal approval processes and management compliance risks.
- Reporting business violations.
- Hospitality, leisure & cultural events and expenses.
- Donations and sponsorships.



## Lobbying and Political Donations

As a general rule, Rafael, as a government-controlled company, is not allowed to make political contributions of any kind, whether in money or any monetary equivalent, including allowing the use of its assets and rights by others, either directly or indirectly. Additionally, the company does not employ lobbyists acting on its behalf. During 2020-2022 Rafael had no fines or convictions regarding customer service and lobbying issues or activities.

## Ethics Management In The Company

The implementation, management and assimilation of Rafael's ethical code is entrusted to the Compliance and Ethics Division headed by the VP of Compliance and Ethics. In addition a managerial ethics committee was appointed by the company which includes the VP of Compliance and Ethics, the legal advisor, the VP of Human Resources and the internal auditor. The committee meets at least once a year. The ethics committee's areas of activity include interpretation of the code of ethics, setting an ethics policy, determining goals and targets for the ethics program, discussions for the implementation of ethic plans, discussion of specific and annual plans, monitoring the effectivity of the ethics program, reviewing incidents of ethical violations in the organization as well as periodic updating of the code of ethics, all subject to privacy protection requirements and company procedures.

In addition to the VP of Compliance and Ethics and the Ethics Committee, an ethics forum is also active in Rafael whose members are relevant stakeholders in the company, including "ethics trustees" from the various divisions. Their role is to serve as a professional-resident authority for consulting and reporting on ethics issues. Also included in the forum are the security unit reliability officer, parties involved in ESG, internal audit officers, legal advice agents and others.

Rafael's VP of Compliance and Ethics, in consultation with management's ethics committee and with the assistance of the ethics forum, is responsible for implementing an ethics integration plan that includes periodic updating of the code of ethics, an annual report to company management, the implementation of ethics information and training activities for employees and managers, the publication and distribution of the code of ethics, integration of ethics content in executive training and more.

Employees who wish to consult ethical issues should, first and foremost, contact their superiors, and then the VP of Compliance and Ethics, or the unit's director of human resources director. If necessary, other parties are available who can be contacted for appropriate advice. Reports and complaints regarding ethics are handled with total discretion and with the assurance that the complainant will not be harmed and will not be exposed to harassment due to their complaint.

After disclosure of suspected unethical or illegal activity at Rafael, an investigation will be conducted by one of the relevant parties. The complaint handling process is documented by the party dealing with the complaint. At the investigation's completion the main recommendations are submitted to the complainant. If necessary, actions are taken to correct the issue and prevent the recurrence of similar cases in the future. These include disciplinary measures and publishing the circumstances of the case.

The Compliance and Ethics Department is responsible for handling the following, main issues:

- Prevention of bribery and corruption
- Relevant regulation updates
- International sanctions.
- Procurement supervision
- The various aspects of ethics in Rafael

## Consultation

Each and every one of Rafael's employees is personally responsible for acting and behaving in a manner consistent with Rafael's values and ethical principles. In order to help fulfill this obligation, they are invited to contact divisional ethics trustees or contact the compliance and ethics department directly, for consultation on an issue where the employee suspects there has been a violation of the code of ethics.

## Enforcement

A code of ethics is essentially an educational and guidance tool and is not punishment oriented. The company's management seeks to encourage company's employees and managers to meet the standards of proper behavior dictated by the code of ethics. Therefore, the organization's managers are expected to warn their employees of any deviation from the ethical code and in cases where the

deviation constitutes a disciplinary offense, to deal with the issue on this level, while referring it to relevant elements in human resources management.

## Integrating Ethical Principles In The Company

In order for the ethical code and the behavioral standards it outlines to be effective, and to assist in dealing with everyday ethical situations, every year a program is developed at Rafael that aims to integrate its guidelines with employees. This includes:

- **Corruption prevention study software** - prepared in collaboration with a legal team. This was last updated in 2019 and is expected to undergo another update soon. Employees must successfully complete the program once every two years.
- **A management system for the prevention of bribery and corruption**, certified according to the ISO 37001 standard. Rafael's compliance policy document in this area can be found on the company's website.
- Starting in 2022, employees and managers are obliged to successfully complete a **computer-based ethics course**.

The company evaluates the success of its integration efforts based on a number of indicators:

- The percentage of employees who underwent ethics training.
- The percentage of units that underwent ethics training.
- Number of calls to the anonymous telephone line.
- Number of approaches to the Ethics Officer.

## Ethical Violations

There were no criminal proceedings or administrative enforcement proceedings against the company or its officers in 2021 - and no fines were imposed on the company resulting from violations. The company's managers have not been charged or convicted by a regulatory authority of such violations.

## Marketing Communications, Sponsorships and Advertising

Due to the company's areas of activity and the fact that it is a government company, its advertising and advertising targets are limited, specific and closely supervised with the majority of advertising being focused on professional exhibitions. All marketing material presented to a client undergoes internal approval processes by the company's marketing communications director, a senior vice president for marketing and business development and the security division and must also be approved by the Ministry of Defense Export Control Division. Rafael employs marketing representatives in strategic countries who ensure that marketing materials comply with the laws of that country. The company's marketing consultants are also checked by the business intelligence unit to verify their reputation and ensure that no conflict of interests exists.

As per company procedure, a committee examines the sponsorship requests and decisions. All sponsorship requests must be approved by the committee.

## Transparency of Information Regarding Company Products

As part of marketing procedures, customers are provided with approved materials, in accordance with the company's procedures and the nature of the activity. As part of project procedures, Rafael strives to fully meet the client's requirements, both in terms of specifications and the production of instruction manuals for the systems provided. These include full technical specifications for components and the system, instruction manuals produced according to the company's procedures and the client's requirements while conducting a series of surveys and meetings with the client both at the company's facilities and at the client's sites.

Project documentation and literature provided to the client includes chapters that detail all tests performed on and for the system, such as environmental, safety, quality, calibration and performance tests. In the years 2020-2022, no lawsuits were instigated against the company regarding its marketing communications or for failure to provide mandatory information about a product or service it provided.

# Quality at Rafael

## Quality Management

At Rafael, the pursuit of quality and excellence is an essential element in the creation of value for the customer and realizing the strategic goals of the organization. Therefore the integration of a culture of quality management at all stages of a project and throughout the company is essential for the existence and growth of Rafael and is a derivative of its mission and vision. The goal of promoting quality processes throughout the company is to preserve and promote Rafael's reputation as a company that strives for excellence, to achieve profitability and growth, and to ensure that the norms by which Rafael operates meet international standards. Rafael's quality management processes encompass the entire company, are uniform and systematic from initial development stages and through to production, customer service and support while being flexible to the special needs of each customer.

Rafael implements an integrated management systems approach: the quality management system, environmental protection, occupational health and safety, safety and quality of transportation and shipping systems and social responsibility. Management system standards are approved by the documentation and certification bodies and by customers relevant to the entire organization and its divisions.

The company's activities are dependent on international and local standards, specifications, laws and contractual requirements and quality aspects as defined in each project's quality plan. The quality management system meets the requirements of the AS9100 standard (a quality standard for companies in the aviation, defense and space sector and also includes Israeli Standard 9001). In addition, the environmental protection management system complies with ISO 14001 and ISO-45001 standards for safety and security system management and Israeli Standard 10000 standard for responsible social management. Laboratories at Rafael meet the ISO 17025 standard, and Rafael's energy management meets the ISO

50001 standard. Rafael was awarded a "diamond rating" by the Israeli Standards Institute for the compliance of 15 management systems with quality standards.

The company's quality policy is available to all employees, it is distributed via internal communication channels, and its assimilation is ensured by the implementation of quality procedures and annual quality improvement plans.

### Rafael Has Several Approaches Regarding Quality Management Processes:

**Continuous improvement:** annual quality improvement programs at Rafael. The programs set goals, targets and relevant indicators for essential issues such as customer centricity, project management, the design process, tools and infrastructure, procurement and logistics and human resources. Divisional plans are derived from the annual plan and are monitored on an ongoing basis.

**Total quality:** quality processes are integrated in all organizational activities and in all aspects of project management and system engineering from the proposal stage and throughout the product's life cycle while coordinating with the client and regulatory authorities.

**Integration of management systems:** quality, environmental protection, safety, occupational health and safety, and the quality of shipping and land transportation systems - creating a management infrastructure and the integration of processes in these systems increases their efficiency, raises their level and facilitates a managerial and integrative focus for all processes.

**Integrated engineering:** an approach used from a project's initial stages to shorten time to market (TTM), improve production processes and lower costs.

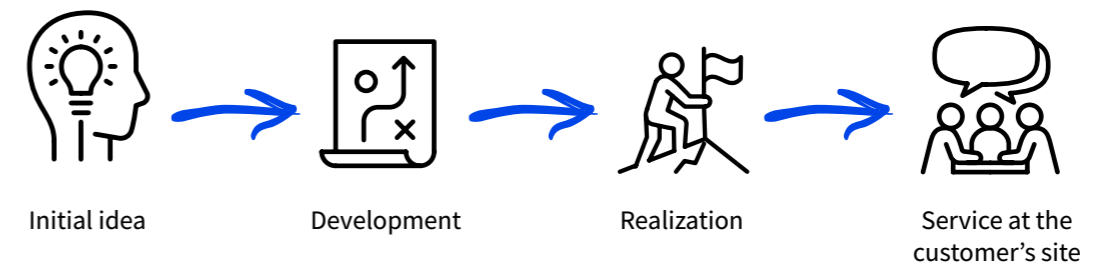
Rafael's process approach, which is constantly identifying and assessing risks, allows for the identification of factors that may lead to a deviation from planned results and the implementation of necessary prevention and control activities.

## Quality Stages In A Product's Life Cycle

Rafael has the unique ability to engage in a systemic project from the initial concept stage, through development to implementation and customer service. Quality management is integrated in all phases throughout the project's life cycle and throughout the organization while coordinating with the customer's requirements. The quality system is involved in contract and proposal review processes where the customer's requirements are examined and risks are identified, through design and development planning and the definition of verification and validation points. This includes design surveys and engineering change management, in the purchasing and supplier phase and all stages of production control processes. Even when the product is released to the customer, compliance with their requirements is checked. This includes verifying the existence of all required parts and documents, the absence of damage or foreign bodies, as well as marking and labeling in accordance with requirements.



### Systematic Projects







## The Organizational Structure of Rafael's Quality System

Those responsible for quality at Rafael are deployed throughout the company's organizational and operational hierarchy with the aim of adapting the quality management system to customer requirements and applicable standards, managing product quality and processes throughout the product's life cycle as well as implementing improvement processes in cross-organizational management processes while continuously working on the assimilation of a quality culture in the company.

The system includes designated quality bodies and office holders operating in two main sectors:

### Organizational

Operating a quality system as an independent agent

### Professional

Activation and assimilation of tools, procedures, methods and experts on quality issues

Activities in both sectors are combined and measures are taken to ensure maximum effectiveness.

### Designated bodies in the quality system that serve as professional bodies and service providers:

**The Calibration Center** - the professional body that defines calibration regulations at Rafael and oversees their implementation. The center's calibration laboratories are certified by the National Laboratory Accreditation Authority to the ISO 17025 standard.

**Components and Materials Quality Engineering Center** - Rafael's main professional body which outlines policy for electronic and mechanical component and material engineering. The center's activities include the formulation, development and maintenance of a professional infrastructure for component quality engineering, evaluation of new components, component acceptance tests, procurement and standardization.

**Reliability and Safety Center** - The central body that provides services for all Rafael units for issues relating to reliability and safety of systems. Deals with the formulation, development and maintenance of a comprehensive professional infrastructure for matters of reliability, availability, safety and maintenance.

**Environmental Engineering Center** - The body provides all Rafael units with environmental engineering services and operates the company's environmental engineering laboratories. The center is also certified according to ISO 17025 for product support at various stages: development, production and testing.

**Quality departments** - in production plants, divisions and the supply chain, these departments handle quality assurance issues, where operations are focused on 3 sectors: quality engineering, examination and inspections, and infrastructure..

**Quality bodies in the engineering and development and technological divisions** - serve as a professional agency in engineering, design and testing phases.

The quality system and its operators have extensive powers, and it is independent in its decisions and independent of development, production, operation and service factors.



## Quality Training

The training center consolidates training necessary for quality, safety and occupational health, environmental protection and safety and transportation and land traffic system quality issues. It provides guidance for quality personnel as well as technicians, engineers and managers from other fields as needed. The majority of officials in the quality system participate in courses that grant quality degrees and certification: Certified Quality Engineer (CQE) Certified Reliability Engineer (CRE) Certified Quality Manager (CQM). Quality training is not limited to quality personnel. Courses and seminars are given to technicians, engineers and managers from other areas and other Rafael employees.

## Preventing The Use of Counterfeit Components and Materials

Counterfeit components and materials are a central issue in the aerospace defense sector to which Rafael belongs, due to the fundamental consequences that may result from the presence of such items in products. As part of the company's quality processes, and in order to prevent counterfeit components or materials from entering the supply chain and Rafael products, the company has a procedure to prevent the use of counterfeit components based on the guidelines of the SAE standard AS5553. The procedure contains risk management methods, prevention processes that include quality requirements for procurement and product verification, and overall management that includes preventing the entry of counterfeit components or materials into the supply chain.

Components or materials that are suspected or verified as counterfeit are handled through a Material Review Board (MRB). When an item has been verified as counterfeit, an alert is issued to the quality and engineering authorities. In addition, the information is also distributed to the item's supplier, including a decision to reject the component and destroy it. If necessary, a Supplier Quality Committee convenes to decide whether to continue working with the supplier.

## Constant Quality Improvement Management Surveys

In order to maintain and improve high quality levels, a periodic review of quality management systems is performed, by management, or an agency appointed by it, in accordance with the 9100 AS standard. The review's purpose is to ensure the continuity and effectiveness of the quality management system over time. The review includes an assessment of improvement opportunities, decisions regarding required changes and improvements in the management system and its processes, including updating policy and quality goals.

At least once every six months, the management of each division holds a discussion on quality issues which examines the effectiveness of quality management processes and defines process improvement targets. In addition, once a year a quality summary for the entire company is distributed to management and the quality system, which includes highlights provided by the respective divisions, managerial elements and companywide infrastructure factors and reference to the effectiveness of quality management processes.

# Commitment To Protecting The Environment

Rafael sees the protection of the environment as a central value for the company and its stakeholders, including employees, neighbors, municipalities and authorities, customers and suppliers, especially due to its being a government company that is committed to the Israeli public. Because of this, Rafael operates according to principles of sustainable development and with an ongoing goal to reduce as much as possible its environmental impact and its use of resources.

Rafael faces considerable challenges to realize this goal as the company is an industrial manufacturing company. However, it is a challenge that the company is meeting successfully through its commitment to continuous improvement. Environmental protection is a consideration from development and production phases and through to the storage stage and transportation to the customer. Over the past three years, Rafael has invested approximately NIS 36 million in environmental management. The majority of operations dealt with the treatment and reduction of waste, energy efficiency and treatment of atmospheric emissions.

Environmental protection at Rafael is guided by the environmental policy defined by the company's management. This policy is reviewed and updated periodically as needed and is embedded in Rafael's corporate culture through procedures, websites on computer networks, publications and trainings to increase awareness among stakeholders, including employees, visitors, neighbors and suppliers.

The policy is implemented by the environmental protection system whose goal is to ensure efficient and proactive environmental management while complying with all legal requirements and constantly improving environmental performance. It includes environmental protection offices, safety and environmental protection engineers, a poisons management system and managers of production facilities. The head office develops procedures and guidelines on environmental issues, analyzes Rafael's environmental performance, leads in the implementation of green technologies and

technologies with a reduced environmental impact, provides an environmental response in emergency incidents and liaisons with regulatory agencies. Engineers in the safety and environmental protection system coordinate and approve work processes and risk surveys to ensure optimal environmental protection and compliance with regulations and laws.

In addition, an internal communication program encourages Rafael employees to identify with the company's environmental protection programs and activities. ... All new employees undergoes dedicated environmental protection training. In addition, every employee whose role has an effect on the environment, for example those working with hazardous materials, undergoes dedicated training and refresher courses related to their job function.

Rafael implements the requirements of ISO14001 for all products and services provided to the company's customers, for all its activities, from initial development stages and on through production and final delivery. The company operates in accordance with all local and national laws and regulations. Rafael is committed to preventing environmental damage and to the continuous improvement of its environmental performance, including recognition of natural resources as a public resource. Rafael manages environmental protection issues through an environmental management system, encourages suppliers and subcontractors to use such a system, and conducts random inspections of suppliers in order to determine their compliance with requirements while providing recommendations for improvement.

## Design For The Environment

One of the most effective ways to reduce a product's environmental impact is to design them, from the outset, in a fashion that takes possible environmental impact into account with the aim of reducing it. This is known internationally as "Design for the Environment". In the initial stages of Rafael's product planning, the chemical composition of materials and their compliance with environmental regulations is examined. "The Rafael's Designer's Guide," provides instructions on how to implement environmental protection requirements during development of the company's products. This includes restrictions and prohibitions on the use of certain materials and production processes, and the offering of alternative, environmentally friendly materials and technologies.

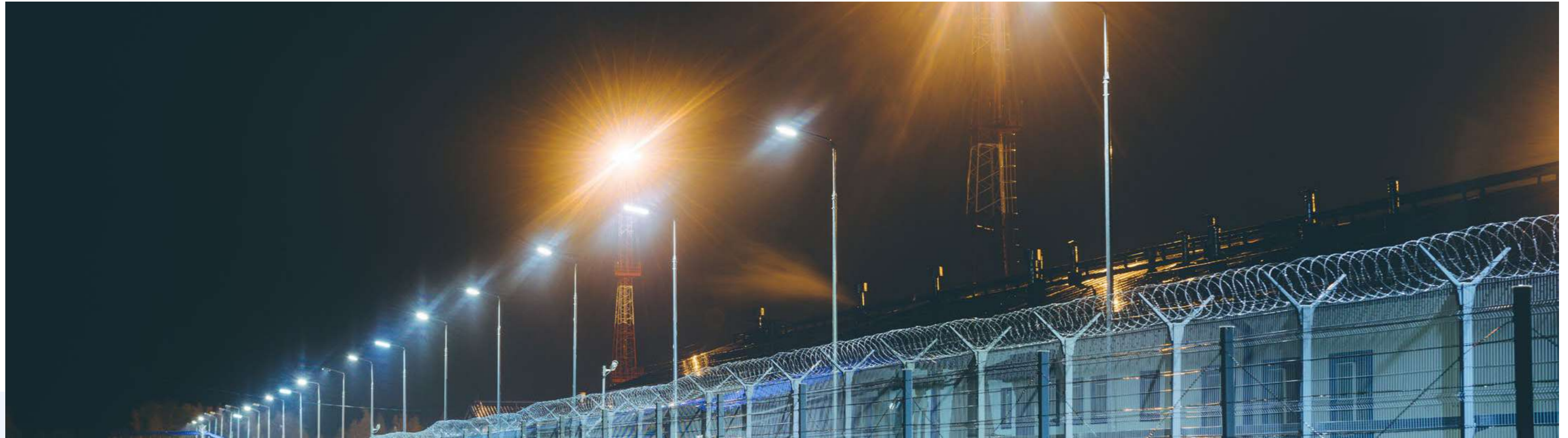
When managing a product or service's life span, health, safety, environmental quality, accessibility, information transparency and other social responsibility considerations are taken into account at all stages of planning, production, distribution, storage, use and end of product life, to ensure no harm is caused to the environment or people.

## Preserving Nature

There are two nature reserves within Rafael facilities: one on the coast near the David Institute, and the other the "Winter Pool" at the Leshem Institute. Rafael works to protect these reserves and prevent damage to their biological diversity. In addition, academic studies are being carried out to preserve the pools and maintain the region's unique biodiversity.

Rafael operates a quarterly program to clean the beach of waste washed up from the sea. In addition, we are prepared to respond to pollution events originating from the sea, similar to the "Tar in a storm" event of February 2021 where huge amounts of tar washed up onto Israel's shoreline. In response to this incident, a cleaning team consisting of Rafael employees, in cooperation with the Ministry of Environmental Protection, worked to clean the beach of tar in a thorough and professional manner.





### David Institute Perimeter Fence Lighting Replacement Project

"Light pollution" is artificial light at night that potentially harms an area that should not be lit, or that is excessively lit. This could disrupt the essential natural mechanisms of animals and plants, including those active at night, thus damaging the biodiversity of the area being lit. In order to reduce light pollution caused by lighting installed on the David Institute's perimeter fence, Rafael initiated a pilot program in 2019 - which included inspections by an ecologist to identify, characterize and define the biological diversity of species at the sea line and the institute's fence, during day and night. Subsequently, an optimal lighting system was defined, which takes into account low power consumption, the height of lighting columns, light intensity and required illumination distances and that will prevent light pollution,. As a result, fence lighting was replaced during 2020-2021. This helped preserve the area's biodiversity as well as providing added value due to reduced electricity consumption.

### Coastal Strip Border Fence Upgrade And Replacement Project

During 2021, the old fence at the northern and southern borders of the Rafael complex was dismantled to be replaced by a fence with greater resistance to the environmental conditions of a marine environment (salt, moisture and winds) and that blends more harmoniously into the landscape. When designing the fence, sea water flow regimes were taken into account in order to reduce its environmental impact. The project was executed in coordination with the Ministry of Environmental Protection and cost some NIS 2.5 million.

### Environmental Risk Assessment

Rafael implements a structured process for assessing risks using a dedicated risk management procedure for work, transportation safety and environmental protection. The process applies to all activities carried out under Rafael's responsibility that involve risk factors: research and development activities, infrastructure construction, production, testing, examination and operation, maintenance and service, demonstration, training and use, knowledge transfer, upgrading and disposal.

Rafael's risk management procedures are unique in that each risk is assessed separately in relation to the risks involved for people, equipment and the environment. In doing so, Rafael guarantees a thorough and rigorous assessment of the environmental impact of each operation. For example, in order to minimize the risks of using a new substance whose effect has not yet been proven or is unknown, Rafael consults with experts,

consults professional literature, and more. Also, in the various production processes, Rafael applies the best available technological methods, thus helping minimize the environmental impact of its activity.

In 2020-2021, Rafael was not fined or prosecuted for environmental violations.

# Energy

As an industrial manufacturing company, energy management is an essential issue for Rafael. The company undertakes to establish and maintain energy management systems with the aim of improving energy performance, achieve energy savings and increase the efficient utilization of natural resources to reduce greenhouse gas emissions whilst continuing to provide a suitable solution for all the company's energy needs.

In December 2018, a company energy survey was implemented and in February 2021 the survey was updated (executed once a year). This is part of Rafael's commitment to the ISO 50001 standard and its ongoing efforts to identify potential areas for energy savings and the formulation of energy saving recommendations.

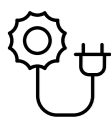
In addition, in order to effectively manage energy in the company and to identify energy saving opportunities, Rafael has been certified by the Israeli Standards Institute since 2015. Certification is reviewed and renewed yearly.

## Energy Consumption

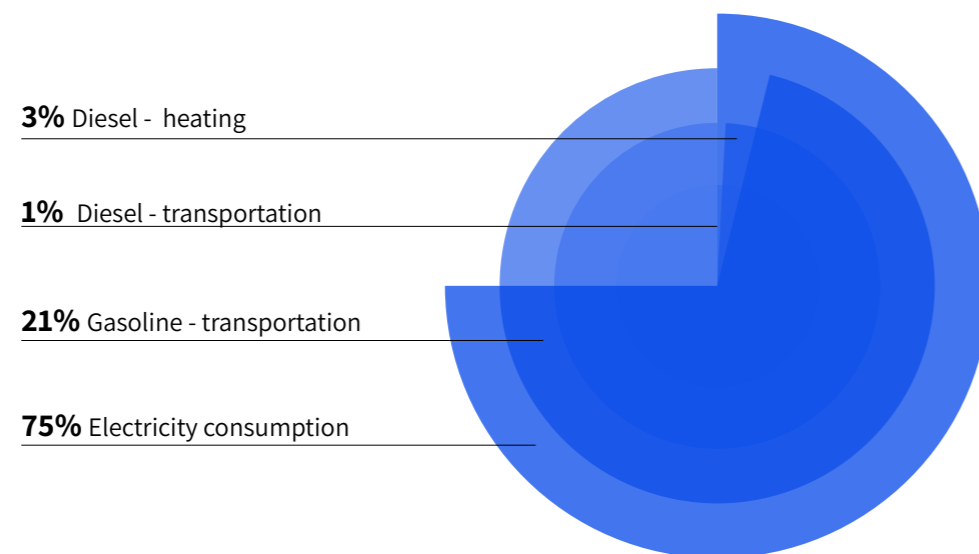
Rafael's energy sources are electricity and diesel. As of 2021, the David and Leshem Institutes have the highest energy consumption with remaining consumption being divided between the other institutes and branches. From 2020, monitoring began of energy consumption at external sites (branches) including the following sites: Tel Aviv, Jerusalem, Be'er Sheva, Terdion and Shlomi (as of 2021).

Rafael's highest energy consumption levels include air conditioning, production machinery, server rooms, indoor and outdoor lighting and air compressors. Rafael's electricity is purchased from a private producer, Dorad, which produces electricity using natural gas. Diesel fuel is used primarily for heating and generators and gasoline is used by the company's vehicle fleet.

When examining Rafael's energy efficiency index in relation to a built-up area, it can be seen that during the reporting period, a decrease of approximately 2% was measured in 2021 compared to 2020. Also, the company's absolute energy consumption increased by 5% in the same period due to increased activity.



The company's energy consumption 2021



The company's energy consumption 2020-2021 in gigajoules (GJ)

Source	2020	2021
Diesel - heating	28,851	20,994
Diesel - transportation	17,625	9,885
Gasoline - transportation	137,682	147,291
Electricity consumption	498,114	522,400
<b>Total</b>	<b>682,271</b>	<b>700,569</b>

## Operations To Reduce Energy Consumption

Between 2020-2021, over 3 million NIS was invested in operations to reduce the organization's energy consumption. Operations included:


- Purchase of energy efficient machinery, equipment and facilities.
- Conducting efficiency and productivity tests of chillers, air conditioners and air conditioning pumps, replacing old systems and repairing leaks. During this period, about 60 split air conditioners were replaced, resulting in savings of some 100,000 kWh per year.
- Boiler combustion efficiency test.
- Replacement of outdoor lighting with economical LED lighting.
- Optimization of air conditioning and lighting usage resulting in annual savings of approximately 300,000 kWh.
- Improved monitoring of electricity consumption and the installation of electricity meters in new buildings.
- Reducing the use of diesel fuel and switching to electrical water heating systems. An additional advantage of this move is diesel fuel storage will no longer be needed thus negating the danger of diesel leaks and the use of polluting fuel.

# Greenhouse Gase and Pollutant Emissions Into The Atmosphere

Rafael is aware of the increased need to reduce greenhouse gas emissions that contribute to accelerated climate change. It manages these emissions intelligently through periodic and regular monitoring, maintenance and measurement activities. The company's main sources of greenhouse gas emissions are electricity and fuel consumption in production and shipping processes.

## Greenhouse Gas Emissions

In 2021, 60% of Rafael's carbon footprint originated from electricity consumption (total 2), 27% from refrigerant gases and the remainder from transportation and other sources.

 **Details of greenhouse gas emissions in tons CO2e:**  
Per ton of greenhouses gases in relation to SqM built up area.

	2020	2021
Greenhouse gases intensity	0.18	0.18

## Reducing Transportation Emissions


Vehicles purchased for Rafael employees have a low air pollution index and employees who are entitled to receive a company car have the option of choosing a hybrid vehicle. Also, dozens of electric vehicles and forklifts were introduced for internal use to replace gasoline and diesel-powered vehicles .

The percentage of hybrid vehicles in 2021 was approximately 34% of all company cars and leased vehicles, and their proportion in relation to the total number of vehicles including work tools and mechanical engineering equipment was 22%.

Rafael conducts air quality tests of vehicle exhaust systems during periodic servicing at the company's vehicle service centers. In addition, the company operates an extensive shuttle system that includes approximately 780 shuttle lines used by 4,600 commuters daily. Rafael encourages employees to use the shuttle system thus saving many tons of emissions that would have been emitted if the employees had come to work with private cars.

Figures for greenhouse gas emissions are reported voluntarily once a year to "Dirug Ma'aleh."

We plan to replace a significant portion of our vehicle fleet with electric or hybrid vehicles whose greenhouse gas and pollutant emissions (SO2) PM NOX are much lower than those of the current fleet.

 In 2021  
**60%**

Of Rafael's carbon footprint was from electricity consumption

## Management Of Pollutant Emissions Into The Atmosphere

As an industrial manufacturing company, Rafael uses hazardous materials. However, the company continuously works to improve production and mechanization processes, to change work methods if necessary or to replace materials to reduce hazardous emissions. Two production lines have undergone such a conversion process with a hazardous material being replaced by one less dangerous for the environment and the workers.

As part of a 2019 emissions reduction project Rafael put into service 2 "scrubbers" - facilities to deal with acids which reduce the use of these materials by at least 98% through a chemical neutralization reaction process.

Volatile organic substances (VOCs) are a large and diverse group of substances in a gaseous state at ambient temperature that are used widely in industry. Some of these materials may have a negative effect on human health. As part of Rafael's efforts to reduce its environmental impact, and in response to the requirements of the Clean Air Law, actions were taken to significantly reduce emissions of substances from this group.

An example of operations to reduce such emissions is Rafael's cessation of use of a specific material in two separate initiatives. In one production line, the hazardous

material was replaced with another material and the entire system was converted into a closed system with no emissions into the air. In another facility, the need for the specific material was re-examined and, as a result, work methods were changed, and a new structure was erected at a cost of millions of shekels and new work methods implemented that completely eliminated the need to use this material. Both initiatives illustrate Rafael's policy to reduce emissions at source as much as possible in order to prevent the use and emission of hazardous materials into the air.

In addition, the company has ongoing Leak Detection and Repair (LDAR) activities to detect emissions resulting from the unintended leakage of materials from pipes and operations necessary to replace equipment and as part of an annual maintenance plan. Sensors are also installed for the real time detection of leaks at different locations.

In addition to emission reduction operations by reductions at source, we are establishing end-user facilities to treat air emissions in a proactive and preventive manner to prevent the emission of VOCs. In 2022, the David Institute began construction of an emissions treatment plant for volatile organic substances, which is expected to be completed in early 2023, at an expected cost of approximately NIS 12 million.



**12 million NIS**  
The expected cost of treating emissions from volatile organic substances that began at the David Institute in 2022 and is expected to end in early 2023.

In 2020, there was an increase of 8% resulting from Rafael's increased activities. From the calculation of emissions in relation to the company's built-up activity area, it can be seen that the intensity of greenhouse gas emissions remained unchanged between 2020 and 2021.

## Water Consumption

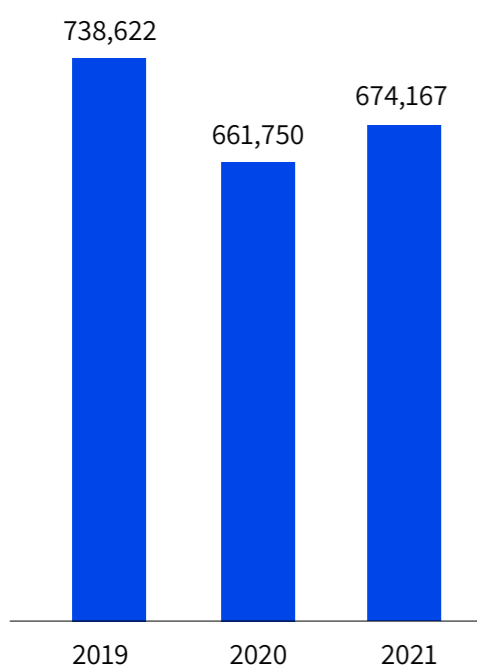
Water in Israel is a scarce resource and is a prime concern for Rafael. Rafael uses water for industrial purposes, for drinking water, for air conditioning, irrigation, and for sanitary purposes and is constantly striving to reduce its water consumption. To facilitate this the company implements careful monitoring and measurement of water consumption including the monitoring of usage in different sectors within the company whilst identifying possible weak points that, if addressed, could lead to a reduction in water consumption. In addition the company monitors facilities and processes that use large amounts of water, with the aim of reducing usage as much as possible and also recycles large amounts of water for reuse. The water used by Rafael is supplied by local water corporations.

Between 2019 and 2021, there was an increase of some 12% in the company's water consumption. This followed a major leak during January and February of 2021. Some 24% of Rafael's water consumption in 2021 is attributed to this leak. Following conclusions drawn from the leakage, actions were and are being taken to manage and reduce water Rafael's water consumption including:

- Installation of water meters in all new buildings constructed for Rafael to identify abnormal consumption and locate faults.
- Installation of internal water meters in central buildings to detect leaks and facilitate the early treatment of faults.
- Promotion of a pilot program for the installation of water controllers that can be read remotely using RF technology for the continuous management of the company's water consumption.



Fresh water consumption (in cubic meters)



### Sanitary Wastewater Treatment and Purification

Rafel operates two facilities for the purification of sanitary wastewater that operate in accordance with the requirements and guidelines of the Ministry of Environmental Protection and the Ministry of Health.

**The David Institute sewage treatment plant** - an upgraded sewage treatment plant that was renovated about a decade ago at a cost of tens of millions of shekels, treats some 600 cubic meters of waste water per day and includes a primary collection pool and an emergency collection pool, filtration and disinfection systems and a computerized control system. The facility treats non-industrial sanitary sewage which is treated to a tertiary level and then transferred to the "Mateh Asher" regional effluent reservoir for reuse as agricultural irrigation water.

**The Shadma Institute wastewater treatment plant**

is a sanitary wastewater treatment plant that purifies approximately 24 cubic meters per day to a secondary level. The facility underwent localized upgrades in 2021 and the wastewater it purifies is used for the irrigation of vegetation in the area with the approval of the Ministry of Health.

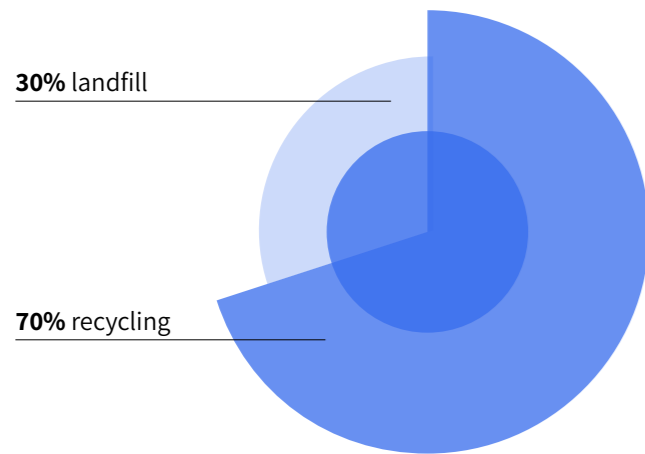
At the Leshem and Giva Institutes, sanitary wastewater only is discharged into a regional wastewater collection and treatment system and later used for irrigation.

Industrial wastewater is collected, removed and treated at sites licensed for the management of hazardous materials waste.

# Waste

Rafael recognizes the importance of responsible waste management, and primarily, the need to reduce it. Rafael's waste management and treatment system includes the separation of different types of waste classified by their different treatment methods. The aim is to recycle and reuse as much waste as possible. For example, waste from trimming trees is shredded and spread as fertilizer throughout Rafael facilities. Waste that cannot be recycled is separated and treated in accordance with Ministry of Environmental Protection guidelines and transferred for treatment at authorized sites. As part of the Packaging Law, an agreement was signed with the Tamir Recycling Corporation to handle packaging for recycling starting in 2022.

Composition of waste treatment - 2021



Non-hazardous waste materials in 2021 (tons)

Waste type	2021
Residential waste	1,614
Mixed solids	1,017
Construction waste	182
Total waste - landfill	2,813
Metals	4,781
Electronic	962
Wood	503
Cardboard	214
Paper	72
Garden, tree	37
Plastic	11
<b>Total waste for recycling</b>	<b>6,580</b>
<b>Total waste</b>	<b>9,393</b>

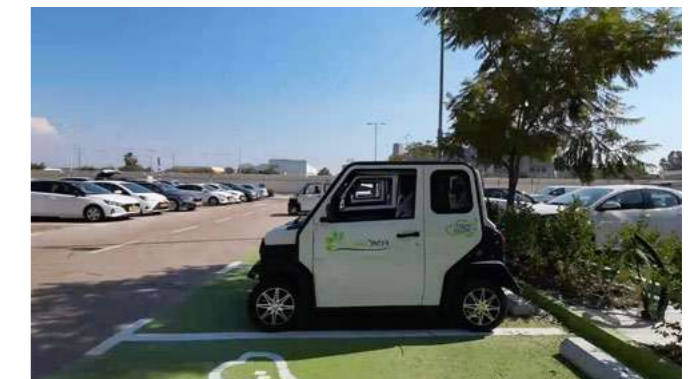
## "Rafael Thinks Green" Project

This is a multi-year project that Rafael promotes to reduce the environmental impact of its employees. Measures were implemented to reduce the amount of waste generated and to improve the waste separation system and recycling streams.

- Approximately a hundred recycling containers for bottles and cans and 6 orange recycling bins for packaging were placed throughout Rafael complexes and near building entrances.
- Eliminating the option to order drinks in small bottles that produce more waste.
- Reducing paper waste by switching to an electronic pay slip instead of a paper one. To date, approximately half the employees have chosen this option. In addition, two-sided printing was set as the default on all Rafael printers.
- Increasing the number of publications and communications on recycling and increasing awareness among employees.
- Steps to reduce food waste in Rafael the donation of leftover food by the catering provider in cooperation with the "Collect (Leket) Israel" organization.
- Reducing the use of disposable utensils in the catering system and at coffee stations: stopping the use of straws, switching to paper bags, using biodegradable plates in the cafes, using disposable biodegradable utensils in multi-participant events. These steps are of great significance as Rafael has 27 catering facilities serving over 150,000 people per month as well as 377 kitchenettes with 331 coffee machines.

## Initiatives During 2022-2023

- Distributing reusable utensils to employees and embarking on a campaign to reduce the use of disposable utensils.
- Move to the use of disposable, biodegradable utensils in coffee areas and food courts.
- Placing recycling bins near dining rooms and outdoor eating areas and advertising their location to employees.



## Hazardous Waste Materials

The management of hazardous materials waste is the responsibility of the company's toxics department in accordance with legal requirements and Rafael's toxics permit. Toxic waste is stored at designated storage sites and includes separation according to risk groups, standard signage, the presence of emergency equipment and more. All hazardous waste materials are transferred to authorized sites for treatment in accordance with regulatory approval.

In 2021-2022, Rafael will build a new site for the collection and concentration of hazardous waste materials until its removal to an authorized facility. The site is built with the most advanced and innovative design while maintaining all regulatory requirements and meeting all the conditions of Rafael's business license. It will begin operation during 2023. The new facility enables inventory management and the concentration of waste until removal for treatment.



RAFAEL'S HAZARDOUS WASTE DATA (TONS)

Waste type	2019	2020	2021
Hazardous waste - landfill	1,690	1,879	737
Hazardous waste - recycling	130	120	728
<b>Total Hazardous waste</b>	<b>1,820</b>	<b>1,999</b>	<b>1,465</b>





# Employees - The Human Resource

Rafael's employees are the company's most valuable asset, and they are responsible for making it the leading company it is today. The company's three goals are: to be a business committed to excellence and profit, to serve as a center for defense technology research and development, and to be a central pillar in the security of Israel as well as an integral part of its economic and social development. This gives Rafael employees a sense of purpose and mission. In today's changing employment environment, Rafael works to retain employees by providing fair employment conditions, providing equal opportunities to employees from diverse sectors, and promoting their personal and professional development.

## Managing Human Resources

Rafael launched a new human resources strategy in 2018 that aims to support the company's general strategy as well as serve the following purposes:

- Strengthening Rafael's reputation as an organization at the forefront of innovation and technology.
- Provide employees with a response that creates a positive employee experience.
- Enhancing each employee's sense of value and encouraging their professional and personal development.
- Taking a differential view of each employee and determining the most appropriate and relevant evaluation for them.



Rather than focusing on task management, Rafael shifted its focus to growth and managing people. It is the Human Resources Department's responsibility to support the managers, who are responsible not only for the performance of employees in their tasks but also for supporting them throughout their tenure with the organization.

As a result, a human resources strategy was developed based on the relationship between the employee, their manager, and Raphael as an organization and which focuses on three main areas:

- **Employee experience** - to provide all employees with a meaningful and satisfying work experience, to provide employees with optimum conditions for perform their work, ensuring that employees receive clear and accessible information about the benefits and social conditions they are entitled to under the law and beyond, ensuring that information and processes are transparent, information sheets are available, procedures are updated, automated processes can be monitored by the employee/manager, as well as advanced work environments customized to the employee's needs.
- **Growth** - Rafael creates a challenging and exciting work environment for its employees. By building career paths, strengthening learning cultures, and developing managers, employees are able to advance to the next stage of their development.
- **Performance** - By treating each employee as an individual and evaluating and rewarding them individually, Rafael encourages excellence, increases organizational flexibility, and strengthens a collaborative culture.

Rafael's strategy is based on 12 vectors, each of which has its own action plan and success indicators:

1. Employee experience and the work environment
2. The quality of management and the empowerment of managers
3. Recruitment, mobility and retention of employees
4. Employee development
5. Personal and organizational learning
6. High performance and personal excellence
7. Assimilation of Rafael's values into the organizational culture
8. Personnel planning, productivity and labor economy
9. Strengthening business perception
10. Process and organizational efficiency
11. Benefits, wages and labor relations
12. Human resources metrics

Human resources at Rafael is managed through a dedicated system that works together with divisional human resource managers who nurture Rafael's human capital, and guide, advise and implement processes in the various units. The guiding principle of Rafael's human resources management is to ensure that the abilities and skills of Rafael employees are realized by respecting their independence of thought and their aspirations for personal development, as well as their contribution to the company's success.

## Human Resources Includes The Following Units:



### Employee Experience Management

The unit treats employees as customers, from hiring until retirement (from hire to retire) and defines the services that the system should provide employees.



### Core Population Management

Building an infrastructure for the development of Rafael's future managers and the optimal staffing of key positions from an organizational and systemic point of view in accordance with Rafael's needs and in response to changes that have arisen.



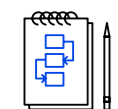
### Measuring Human Resources

A systems and analytics unit allows every manager to access and use information regarding their employees and make informed decisions accordingly.



### Wages, Benefits and Work Relations

The unit is responsible for defining and implementing a salary strategy and policy, compensation and benefits, managing labor relations with workers' committees and overall responsibility for the development and implementation of collective and personal labor agreements within the company



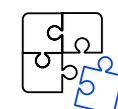
### Methods and Processes

The unit maps human resource processes and promotes automation processes where necessary, to reduce bureaucracy and optimize them.



### Recruitment and Mobility

Identifying the most qualified candidates, both internal and external, to fill each position in the most efficient manner, assisting managers in selecting the most suitable candidate based on an accurate job description, ensuring a respectful, transparent, and unique candidate experience that maintains Rafael's "employer branding".



### Organizational Development and Learning

Guiding learning processes, employee development and career guidance, internal organizational communications, preparing for the digital age, and implementing remote work procedures.



## Direct Employment

At the end of 2021, Rafael had approximately 8,000 employees, of which 7,902 were full-time and the rest part-time, an increase of approximately 3% compared to 2020. The majority of the company's employees are between the ages of 30 and 50, and this ratio remains the same in 2021 compared to 2020. In addition, there has been an increase in the number of employees under the age of 30.

Employee numbers does not include students working in the company. The recruitment unit is in constant and close contact with all universities and the majority of colleges in Israel. Rafael places great importance on the employment of students and the majority of students are hired as full-time employees upon graduation. In 2021, we admitted 227 students as Rafael employees.



Rafael employees \*by full-time and part-time positions and gender\*

	2019			2020			2021		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Full time employees	1,800	5,914	7,714	1,817	5,895	7,712	1,930	5,972	7,902
Part time employees	55	79	134	46	48	94	42	75	117
<b>Total employees</b>			<b>7,848</b>			<b>7,806</b>			<b>8,019</b>

### Percentage of women in Rafael by rank

	2019	2020	2021
Senior management	20%	21%	20%
Management - intermediary	23%	23%	24%
Non-managerial employees	24%	24%	25%

### Percentage of company's employees by age group

Age	2019	2020	2021
Above 50	31%	28%	25%
30 -50	67%	69%	69%
Below 30	2%	3%	6%

\*No student jobs



# Employees Terms of Employment And Benefits

Rafael implements fair employment policies and good employment conditions for all its employees, and the company pays particular attention to the employees' rights and their well-being.



## Employee Benefits

Rafael's salary and benefits policies are based on two important values - fairness and the encouragement of excellence and innovation. These values are reflected in a number of processes used to determine an employee's salary and benefits. Many of the benefits provided to Rafael employees, such as transportation, catering, and expenses, are uniform and outlined in collective agreements.

The company's employees enjoy additional benefits, including collective and group health insurance, pension arrangements with preferential terms, the possibility of vehicle leasing and loans on favorable terms, a consumer club with significant discounts on a variety of leisure attractions and products, as well as exhibitions showcasing products from Israeli suppliers in preparation

for the holidays . In addition, the company gives gifts to mark employees' life events such as weddings and birthdays, as well as a full wage benefit on 8 national holiday evenings during the year and shortened working days with full pay on Hanukkah and Purim.

Once a year, every employee receives a "salary and benefits" booklet, which consolidates personal information including a variety of activities, benefits and information regarding the various components of the employee's earnings during the previous year. The booklet also provides information regarding participation in training, awards for excellence, the main points of the employee's pension portfolio and insurance plan.

## Assistance To Employees During A Crisis

A company's commitment to its employees is tested not only during normal day-to-day activities, but especially in times of crisis, when its employees need the company's support and flexibility more than ever. Rafael is well qualified to pass this test. In order to assist employees who find themselves in need of financial assistance, the company operates a number of dedicated services and funds:

- **Aid Fund** - operates in accordance with regulations and reimburses members for medical expenses, psychological treatment, nutritional counseling and other costs that other health insurance does not cover. Membership in the fund must be renewed once a year and costs each employee NIS 100. Rafael pays an identical amount for every employee who is a member of the fund.
- **Sick day fund** - provides financial assistance to employees who have joined the fund and who are absent from work due to a prolonged illness and who have no remaining sick or vacation days. Employees who choose to participate in the fund contribute one sick day per year and, if necessary, after exhausting their sick day quota, they can use sick days accrued in the fund.

## Support For Employees During The Corona Epidemic

During the Corona crisis, and in an attempt to ensure business continuity while at the same time maintaining employees well-being, the company expanded the range of programs and arrangements designed to support the combination of work with leisure and family life. Despite the sensitivity involved because of the areas in which the company operates, , Rafael began allowing its employees to work from home where this was possible and continued to do this even after the pandemic ended. This is based on an understanding that part-time work from home allows for a better balance between home and work.



- **"Mutual Aid" fund** - the goal of the fund is to help employees who find themselves in situations of severe financial distress. The fund provides a grant or an interest-free loan that will be deducted from the employee's salary.
- **Internal social services** - help identify employees and families in distress or crisis. Assistance includes guidance, mentoring, and linking to community resources, depending on the type of treatment required: social, health, mental or financial. In the case of employees suffering from a prolonged illness, a Human Resources Department representative , together with other elements in the company and from outside, provide assistance and guidance to the employee to assist them in maximizing their rights and those of family members during this period. The company has an assistance procedure for employees in distress due to illness or who have lost the ability to work. The responsibility for identifying a situation in which an employee or a family member needs assistance and help rests with the employee's direct supervisor.

The Corona epidemic resulted in a significant increase in psychological and social problems, including loneliness and social distancing from family and friends, as well as loss of financial and personal security. Rafael understood that the mental and physical health of its employees is critical to both them and the company, and therefore continued to operate and even expand its employee support services.

## Male and Female Employees Who Are Parents or On Maternity Leave

As part of Rafael's commitment to its employees and their personal and family needs, and in order to allow parents of young children to leave work early, Rafael has a working mother/ father arrangement which allows any parent who has at least two children up to the age of 12 or one child up to the age of 8 to leave half an hour before the end of the official working day at Rafael's expense and without affecting the employee's salary.

Rafael has a high rate of parents returning to work after maternity leave and remaining with the company as shown in the table below. The table shows that Rafael provides conditions which enable new parents to continue working.



Maternity leave

	2020		2021	
	Women	Men	Women	Men
Total number of employees who took maternity leave	185	6	204	3
Total number of employees who returned to work after the end of their maternity leave	185	6	204	3
Total number of employees who returned to work, after the end of their maternity leave and who wanted to continue working 12 months after	153	6	167	2

## Dialogue With Employees

Rafael considers a continuous and open dialogue with its employees to be an important value. This dialogue is carried out through several channels throughout the years that the employee is with the company. These include a variety of communication channels, including a new recruitment survey, a survey for those finishing their work with Rafael and feedback processes. These measures help the company to gauge employee satisfaction, their level of connection with the company and the organization's resilience.

Rafael also has an officer responsible for employee complaints. Rafael employees can contact the officer and raise concerns in different ways on a variety of issues that include misconduct at work, harassment and other complaints.



## Connection and Resilience - From Measurement To Action

During 2021, the company carried out a survey: "Integrating Connection and Resilience - from Measurement to Action." The survey is designed to provide senior management and all company managers a snapshot of the moods and attitudes of employees following two challenging years of the Corona pandemic. Another aim was to provide managers with tools to create employees connections with the company.

### The project included:

1. Building an assimilation program and the implementation of a company-wide survey
2. Formulating a picture of the existing situation as opposed to the desired one.
3. Integrating 'Connection and Resilience' by the creation of action plans following the organizational survey and its implementation.

67% percent of Rafael's employees participated in the survey. As a result, an overall organizational concept was formulated called "People First" and an action plan with practical and quick systematic solutions was developed that will give employees and managers an improved work experience. Following the analysis of the survey's results a number of focus points were defined at the organizational level. These were presented to the CEO and a work plan was established that was integrated into Rafael's strategic management plan.

Following the survey, management training and tools were prepared, including: a manager's kit that includes recommendations for optimal communications with employees, work with the management team and the employee team and development of a work plan, preparation of an operation bank with 12 management goals for developing and improving connection, and over 60 ideas for implementation.

The plan for implementing survey findings includes five



key areas:

- Compensation, development and career
- Hybrid work
- The employee experience and the work environment
- Reducing bureaucracy and streamlining processes
- Strengthening the management track

The survey "Integrating Connection and Resilience - from Measurement to Action." won the Israel Human Resources Association 2021 award for excellence .

### Periodic Feedback Meetings

Every year Rafael holds feedback and evaluation meetings for employees with more than four months seniority (including students, soldiers and reservists). These meetings, between the employee and his supervisor, are held to coordinate the employee's expectations regarding their role and performance over the past year. Meetings are held with maximum transparency to reinforce positive behavior and to focus on issues for improvement, to strengthen organizational connection by encouraging motivation and harnessing the employee to the unit's goals. The discussion is an opportunity to take joint responsibility, to map the development of the employee's career and promotion, as well as an opportunity for the employee to express their feelings towards issues that concern them.

The meetings are recorded and saved in a dedicated portal. This makes possible, throughout the year, a developmental discourse and continuous examination of all the topics that came up in the meeting as part of the "personal development space ."

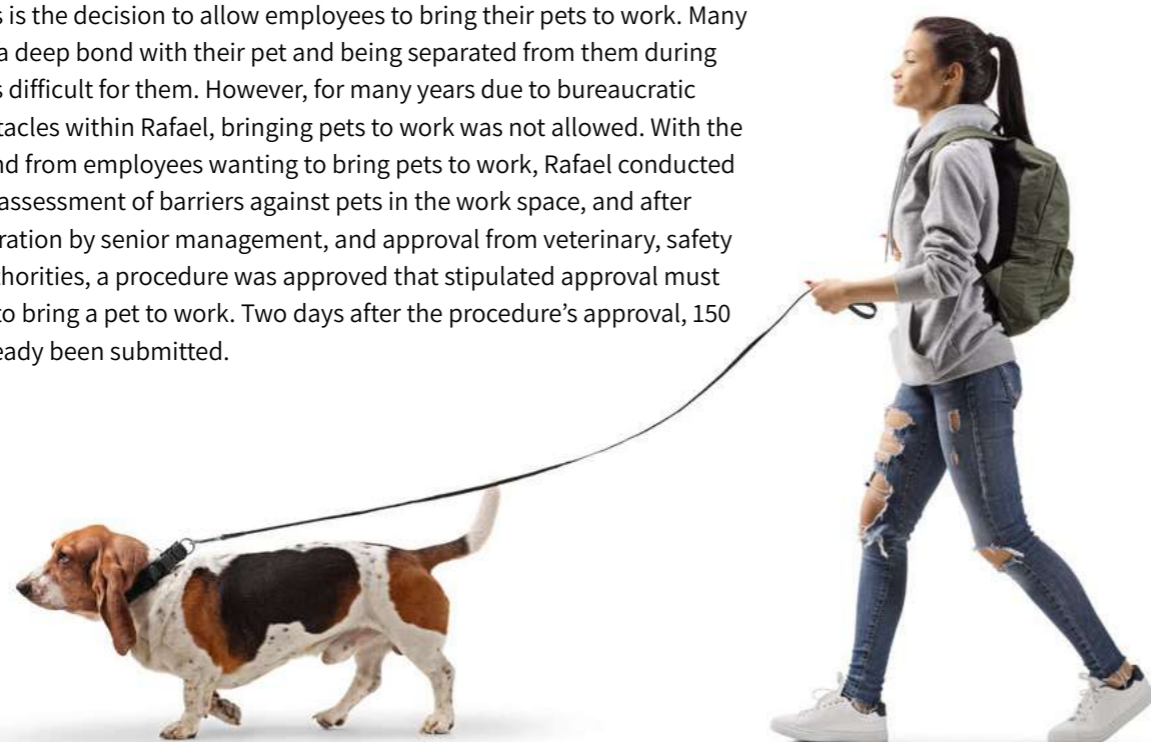


## Round Table Discussions With Employees

Following the connection survey, a round table meeting was held in which employees raised questions and gave suggestions for management in line with the concept of "managerial presence," which is a tangible physical presence of management together with the employees, with the aim of creating an open and constructive dialogue.

## At Rafael We Listen - So You Can Bring Dogs

An example of a change that emerged from listening to employees in roundtable forum discussions is the decision to allow employees to bring their pets to work. Many dog owners have a deep bond with their pet and being separated from them during the working day is difficult for them. However, for many years due to bureaucratic and logistical obstacles within Rafael, bringing pets to work was not allowed. With the increase in demand from employees wanting to bring pets to work, Rafael conducted a comprehensive assessment of barriers against pets in the work space, and after extensive consideration by senior management, and approval from veterinary, safety and insurance authorities, a procedure was approved that stipulated approval must be given in order to bring a pet to work. Two days after the procedure's approval, 150 requests have already been submitted.



## Workers Union

Rafael has collective labor agreements with two representative workers' organizations: the New General Union and the Research Faculty Organization. Additionally, there are employment relationships based on personal employment agreements. About 90% of the company's employees are unionized in the research workers' organization and the New General Union, and the rest are employed under individual contracts.

As part of the company's significant decision-making processes, employee representatives participate based on the company's management concept in which employees have a significant and important role in the decision-making process and the belief that it is essential to hear their positions, claims and concerns, if any, regarding planned processes. If there is a need for an organizational change, Rafael's management holds talks with employee representatives from managements initial decision to implementation - with full transparency towards employees and their representatives.

## Employee Retention

Rafael has many long-term projects and products that combine skills and knowledge from different fields, and which require the unique expertise accrued in the organization through long term learning processes. The constant need to be at the forefront of technological knowledge results in fierce competition from other companies for the best employees. Therefore employee retention is a significant challenge for Rafael. The employee experience as seen in an employee's connection with the company is a strategic need for the company and makes a vital contribution to the creation of organizational resilience.



### EMPLOYEE TURNOVER RATE BETWEEN 2019-2021 IN PERCENTAGES

	Age group	2019	2020	2021
Female	Under 30	0.6	0.8	0.8
	30 - 50	2.1	2.3	3.1
	Above 50	0.4	0.6	0.6
<b>Total female</b>		<b>3.1</b>	<b>3.7</b>	<b>4.5</b>
Male	Under 30	0.4	0.4	0.5
	30 - 50	2.4	1.7	3.9
	Above 50	2.6	3.2	2.5
<b>Total male</b>		<b>5.4</b>	<b>5.3</b>	<b>6.9</b>
סה"כ	Under 30	1	1.1	1.4
	30 - 50	4.5	4.0	7
	Above 50	2.9	3.8	3
<b>Total</b>		<b>8.5</b>	<b>9</b>	<b>11.4</b>

To identify the root causes of an employee's decision to leave Rafael, two measures are taken. Every employee who gives notice of their intention to leave the company is given a questionnaire which asks them to give their reasons for leaving the company. A sample of those leaving are selected for a face-to-face interview. An analysis of responses to the questionnaire is used to draw conclusions

for reducing the turnover rate by improving the employees perceptions of connection with the company and addressing the aspects that led to their leaving the company.



## Promoting Diversity and Inclusion

Diversity in employment is based on the concept that the composition of employees in the organization should reflect the diversity of the populations that make up society as a whole. As a company that respects the values of corporate responsibility (ESG), Rafael attaches great importance to encouraging the inclusion of employees from a variety of populations, whose numbers in Rafael do not necessarily represent their percentage in the general population. If possible, Rafael strives to give these populations affirmative preference in the recruitment process.

Rafael also places emphasis on the inclusion of all its employees and the acceptance of diversity in any form, so that each employee is given the opportunity to express

themselves and maintaining their uniqueness, without any demands, even hidden ones, from the organization to play down or assimilate into the organization.

The importance of encouraging diversity in employment and diversity inclusion is also rooted in Rafael's aspiration to provide its employees with a rich work environment. This provides a high potential for innovation, creativity and boldness as well as contributing to increasing an employee's sense of connection and pride through their identification with the important values that Rafael promotes and represents.

Rafael has established a long-term plan for the diverse populations within the company - ultra-Orthodox, Druze, workers of Ethiopian origin and workers with disabilities. The program also addresses gender equality.

## The Ultra-Orthodox Cyber Branch In Jerusalem

Rafael operates a facility in Jerusalem which is responsible for securing systems such as Iron Dome and Windbreaker, and missiles such as Spike and Python, from cyber-attacks, and also to prevent the disclosure of classified technology should it fall into enemy hands. This unit is unique in that all of its employees come from the ultra-Orthodox community.

This is a classic hi-tech space, but as you walk in there you see black hats and coats hanging from the wall. None of the employees in this unit went through the classic high-tech route, which also includes serving in the IDF, and many never dreamed of working in such a challenging environment.



At the seminary I was drawn to the real world, I studied programming and electronics and discovered that it interested me. But after school it wasn't easy to find a job, and I was very happy to discover this place and be accepted.

S. is one of ten ultra-Orthodox women working at the cyber unit. She is 24 years old and graduated with a degree in computer science from the Tal Institute in Jerusalem, a religious academic college for women that combines studies in technology and Judaism.



There are different challenges here than in other high-tech companies and this spoke to me.

H, 53, is one of our veteran employees at the cyber unit. With 10 children, he is far from the classic high-tech employee or cyber expert. But this didn't prevent him from working at several high-tech companies, until he heard about the Jerusalem unit.



Rafael knows how to show flexibility, how to treat ultra-Orthodox workers differently when they come to social events or vacations. Here, when there is an activity that does not suit the ultra-Orthodox, Rafael knows how to create alternatives for us. Even in secular high schools, not everyone comes out ready to work in high-tech. In the ultra-Orthodox public as well, you have to know who to choose and identify who has potential. But it's there like everywhere else. In the end, recruiting ultra-Orthodox workers can't remain a slogan. The manager and the recruiter should be there with 100% commitment, and as more ultra-Orthodox enter the world of high-tech, they will bring more ultra-Orthodox who will follow in their footsteps.

S. A Rafael employee at the Jerusalem cyber unit



## Employee Training and Development

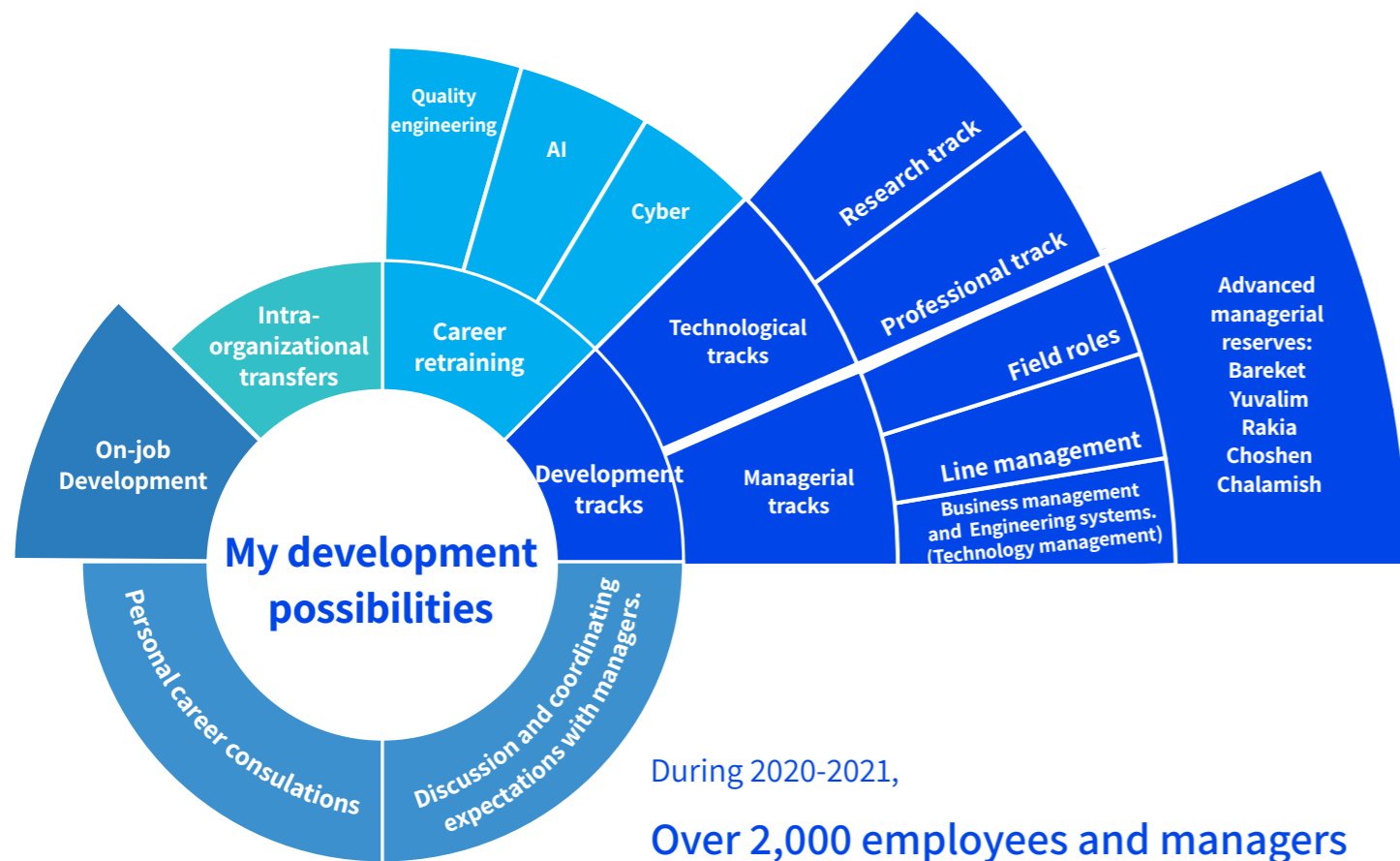
As a leading, groundbreaking company in its field, Rafael offers a challenging, technological work environment that is among the most advanced in the world with the potential to grow together with first-rate knowledge experts.

Rafael's employees and managers are a significant part of its success, and the company has as one of its core values, maximizing and exploring all avenues for the growth and development of its employees.

By virtue of its size, its professional diversity and the quality of its human capital, Rafael creates a diverse work

environment and great scope for developing diverse career paths.

Rafael's concept of development encompasses a broad spectrum, one that offers employees a variety of alternatives for development in several career paths: management reserve plans, reskilling programs for desirable professions, integration into technological and management paths, and diverse possibilities for development within their job and mobility across the organization.



During 2020-2021,  
**Over 2,000 employees and managers** participated in programs.

In addition, training programs took place at Rafael using the "Key Manager" module whose aim was to improve the ability of managers to function in a competitive, Challenging and dynamic environment. This through focusing on employee development as a strategic lever to improve recruitment and preservation of the human resources that the company needs.



Average study hours per employee

	2019	2020	2021
Managerial training	10	5	10.5
Technological training	13	7	13
Safety training	5	2.3	2.5
<b>Total</b>	<b>28</b>	<b>14.3</b>	<b>26</b>

In 2021 there were  
**165,417** hours of in-company study  
That is on average  
**26** study hours per employee





## Encouraging Postgraduate Studies

As of the end of 2021, some 300 Rafael employees were studying for advanced degrees at leading academic institutions in Israel and 12 are studying for doctorates at leading universities abroad. Rafael finances their tuition fees and the time needed for their studies and provides students abroad with a complete support package.

### Rakia Program

The program is aimed at training employees for a transition to senior management in Rafael's core position. It does this by creating a learning environment where participants experience the challenges of senior management, expand their knowledge of Rafael, study case analyses, share knowledge within the group and provide new knowledge from a variety of sources. The program is an opportunity to create a joint learning and working group as the foundation for an active peer network.

The training process is based on the Life Long Learning concept, continuous learning by participants from their entry into the program until they are appointed to their next position. The process is spread over two years and includes core training consisting of 8 modules that deal with the following topics: complexity and strategy, leading and managing change, a business game based on an adapted Rafael scenario, multidimensional management, developing a managerial identity and managing people and culture.

At the end of core training, learning continues but changes: four peer learning units, one per quarter, cover different topics. The aim of the peer learning is to create a group and an intimate learning environment that allows those in the program to share knowledge, insights and experiences as a basis for professional, personal and organizational development.

About 37 managers took part in the training, with over half of them already appointed to their next position.

### School For Procurement Officers

An ongoing annual learning program covering the worlds of procurement intended for all the company's procurement officers and contract managers.

The program focuses on the processes, systems and skills required to establish a sense of service and partnership. It was developed as an innovative digital "learning capsules" format, once a week, on a fixed day, for two hours. The program was spread over one year and was based on internal resources, knowledge, and experience from the purchasing unit in particular and Rafael in general.

The program's goals are:

- Learning and strengthening professionalism to develop professional consensus, new ideas and innovation in the work methodology.
- Establishing a knowledge base of specialist expertise in various procurement fields.
- Collaboration and strengthening of interfaces within the procurement unit.
- Strengthening the connection between the unit's management and the unit.
- Empowerment, connection and development through internal learning.
- Preservation and documentation of knowledge.



## Cultivating Rafael's Future Female Work Force

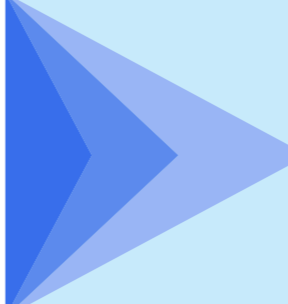


In Israel there is a continuous shortage of workers with technological training, especially in the periphery, and among women. The percentage of women in academic technological and engineering studies is significantly lower than their proportion in the population. This is one of the most important factors that affect the company's ability to achieve its goals.

To meet this challenge, Rafael developed, through a process of creative thinking, the Rafael Next Generation project. This sows the seeds to answer the challenge: a project aimed at encouraging girls to pursue technological careers. The project is motivated by Rafael's desire to build a female management track that will be open to graduates of technology faculties. This is based on exposing girls in the 9th grade who are about to choose a high school major to technological professions, thereby increasing the likelihood that they will adopt this career path in general, and Rafael in particular.

As part of the program, female scientists from Rafael act as mentors for students, conduct tours to show the different technologies in use at Rafael, the company's scientific work environment, and give lectures to introduce various scientific topics. The program is currently available in 17 schools in 11 local authorities in the northern region, and some 400 female students participate every year, with approximately 100 female engineers who volunteer in the project.

Students selected for the program are nominated by the schools who are able to identify potential candidates. and the opportunity to change or strengthen the perception of women in technological professions. Program participants come to the company's facilities, to the scientist's work environment, hear their personal and professional stories, and are exposed to the worlds of aeronautics, space, chemistry and software, and to groundbreaking projects.



The program is available at **17** high schools in **11** local authorities in the north.

There are some **400** participants every year and approximately **100** female engineers work voluntarily in the project.





## From A Spark Of Inspiration As A Girl - To A Senior Manager - Dikla's Story

**Dikla** joined Rafael 14 years ago as a process engineer at the chemical plant. She says that as a child growing up in the north of Israel, she disassembled and assembled a radio and batteries. In the 11th grade, she received a scholarship to further her technological education, and she remembers being told by Rafael's VP of Human Resources: "If you want it, this is the place for you."

She completed her academic studies in chemical engineering at Ben Gurion University in the Negev and after 6 years of working at Teva returned to the north and from there to Rafael. Dikla describes the engineering environment as a very masculine one where most of the women's positions are staff

positions. "On the other hand, I like being in the field, climbing on equipment and facilities, being a living example of the abilities each of us has."

Dikla was later promoted to plant management and five years ago she was promoted to be the head of the inspection department for manufacturing plants and process development. She is responsible for two chemical plants with a great deal of technological equipment and a third plant that serves as an integration plant for one of Rafael's defense systems, "Windbreaker." In total, Dikla manages about 50 employees, most of them mechanical and electronic engineers, of whom about 20% are women.



As a woman, I feel a heavier responsibility for my employees, including their moods. Perhaps thanks to being a female manager I manage to combine the two areas, on the one hand the softer area, where I am more sympathetic, and on the other hand I never compromise on quality. The most important thing to me is that the team succeeds, I have no ego and I don't care who gets to the finish line and onto the podium.

In Rafael you can go from hierarchical management to project management. When I stood up and said I was looking for a change, I was offered several positions, including some technological ones. There is a plenty of room here to develop and enjoy yourself at the same time.

Dikla, process engineer at a Rafael chemical plant



## Assistance In The Retirement Processes

Rafael has a retirement center that provides a professional and sensitive response to employees in the process of retirement or leaving the company. Every employee who leaves the company, either through resignation, retirement or layoffs, receives all the information necessary to exercise their rights derived from the collective agreement or individual contract - whichever applies to them. This information is provided through dedicated information sheets or in a personal meeting, as needed. This center also acts as a consultation center for managers and human resources staff who are required to respond to employees who are in the process of retirement or termination of employment.

The center offers Rafael-financed retirement preparation courses, counseling for exploiting National Insurance rights, pension rights and taxation aspects, as well as links to volunteering, educational and leisure organizations. Also, some of the retirees continue to contribute their skills and experience to Rafael in many different ways, either as volunteers or freelancers, according to the company's needs and the wishes of the retiring employees. Both employees and Rafael benefit from the opportunity given to retirees to continue contributing their skills and experience.

In addition, the company assists employees in their pension planning, including helping increase awareness of the importance of pension savings through lectures, information sheets and information sessions, pension planning consultation, a dedicated area for the subject on the corporate portal, and trains experts on the subject from the human resources department.



## Preventing Sexual Harassment

Sexual harassment and harassment on a sexual basis violate human dignity, freedom, privacy and equality between the sexes, as well as working relationships. They are completely contrary to the law and to Rafael's policy of zero tolerance for sexual harassment in all of its operations. Rafael works in all the avenues available to it and according to law, to educate and explain this issue in order to prevent cases of sexual harassment among its employees or employees working in its premises. The company also encourages an atmosphere that allows sexual harassment complaints to be submitted without fear and provides effective investigation and treatment within the framework of the law.

**As part of the company's efforts to create a safe environment in the workplace, Rafael does the following:**

- Appoints a trained sexual harassment prevention officer.
- Set up a complaints hotline .
- Formulates regulations for the prevention and treatment of sexual harassment in the organization in line with the company's unique characteristics.
- Integrates the topic into orientation and training for new employees that also refers to the prevention of harassment in the work space.
- Participation of all company employees in training activities of at least one hour on the zero tolerance and prohibition for any and all forms of sexual harassment and its prevention at least once in the previous year. As part of the training, company managers are reminded of their responsibility to play an active and leading role in the prevention of sexual harassment.
- Integration of instructional software to prevent sexual harassment.
- Publication of complaint investigation procedures on the corporate portal and in informational material, including an interactive presentation adapted to the organization's needs, rulings, and clear messages from the company's management on the subject.
- Details of the sexual harassment prevention officer and points of laws for the prevention of sexual harassment in the workplace are placed in locations accessible to all employees.
- Regular communication regarding the importance of the issue to managers and employees and subcontractors.
- Evaluation of the implementation of all legal provisions by Rafael employees.



# Health and Safety

Rafael places the utmost importance on employee safety in all of its operations and invests heavily in creating a safe working environment, even going beyond legal requirements.

Rafael's managers and employees work to fulfill Rafael's mission while committing to safety levels designed to prevent injury to employees, visitors,

customers, users, the environment, neighboring populations and property, ensuring that they meet all legal requirements. As an industrial company that develops and manufactures combat systems, Rafael and its employees are often involved in activities that involve safety and environmental risks. In addition, the company operates

many different subsidiaries and manufacturing plants globally and implements high safety standards in all of its activities both in Israel and abroad.

Rafael is responsible for providing its customers with operationally safe combat systems and ensuring that risk levels involved in their use, including logistics, storage, maintenance, training, operational use and disposal, will be acceptable. Therefore, product safety engineering is a central concern alongside work and testing safety.

Rafael pays attention to safety in all areas of its activity, including research and development, infrastructure construction, production, testing, inspection and operation, maintenance and service, demonstration, training and use, the transfer of knowledge, upgrades and disposal. Safety practices are integrated into the core of the company's activities while encouraging the creation of an organizational culture of safety as a way of life at all levels of management. The company sees transparency as a central component for improving safety and encourages a culture of reporting as a lever for improvement and learning lessons.



## Safety Management

Rafael's occupational health and safety system is committed to promoting and implementing health & safety issues in the company and maintaining a culture of safety that enables the achievement of Rafael's mission, whilst maintaining a minimal level of risk in the company's activities and ensuring the supply of products at the levels of safety required by the user.

The system is headed by the company's chief safety engineer, part of the company's senior management who reports directly to the CEO. The safety system includes the safety division, divisional safety engineers, professional safety engineers and other safety bodies. The company also uses external consultants who provide additional assistance in specific areas.

Rafael meets the following safety standards:

- **ISO 45001** - Occupational health and safety
- **TI 9301** - Traffic safety and quality management system
- **ISO 14001** - Environmental Management System

Rafael encourages a culture of safety for managers who set a personal example, rewarding employees who excel in safety, encouraging active involvement of employees in risk management processes, investigating safety incidents and implementing their recommendations and activities to strengthen safety awareness in general and proactive safety in particular.

### Rafael's safety concept

The early involvement of all safety agencies and an emphasis on safety throughout the entire work process and product lifecycle - from the development of new technology, through to product production, its maintenance and use, in accordance with the following principles:

- Predict** - future eventualities and formulate possible modes of action.
- Analyze** - risks professionally and comprehensively based on knowledge and insights from learning processes and research founded on binding requirements.
- Enable** - activity based on risk analysis through the provision of applicable solutions and an overall mission vision.

### Safety incident reporting process

Safety management at Rafael is supported by computerized data collection and analysis systems, with a user-friendly interface that includes a comprehensive dashboard. The interface displays relevant indicators for each unit, including contractors and foreign workers, and generates alerts accordingly. The system's goal is to create an accessible, transparent, and easy-to-use reporting environment that makes safety information accessible to all those elements within the company who are responsible for drawing conclusions and learning from safety incidents. Every incident reported in the system must be reviewed by the relevant management chain following which all corrective actions and the implementation of conclusions drawn from the incident are also reported. Employees, including foreign workers, who report a safety incident receive an update, as part of the process, on actions taken resulting from their report.



## Measuring and setting goals for safety incidents

Rafael promotes an intra-organizational dialogue on safety issues and encourages the reporting of incidents that could have caused harm "(almost got hurt)" as the company considers the reporting of safety incidents as an important factor in accident prevention.

The following table displays trends regarding the number of incidents, and reflects the improvement in Rafael's safety data between 2019 and 2021\*:

- **A 19% decrease in industrial accidents** (accidents at a workstation that happened while working) for Rafael employees and a 2% decrease in industrial accidents for contractor employees, and on average, an 8% decrease in the number of industrial accidents for all employees (Rafael employees and contractor employees together.)

In addition, a significant decrease of 22% can also be seen in the relative index which examines the ratio of industrial accidents to Rafael employees.

- **A positive increase of 43% in the reporting of "almost hurt" incidents**, which reflects success in the assimilation of the importance of reporting. This upward trend is also reflected in the decrease in accidents: when more "almost hurt" incidents are reported and the hazard fixed, accidents are avoided.

	2019	2020	2021
Industrial accidents Rafael employees	53	37	43
Industrial accidents contractor employees	104	71	102
Industrial accidents for all employees	157	108	145
Industrial "almost hurt" incidents	243	244	348
Ratio of near miss incidents to industrial accident incidents for all employees	1.55	2.26	2.40
Ratio of industrial accidents to Rafael employees normalized in the thousands	6.43	4.28	4.99

This improvement, and the decrease in accidents in relation to "almost hurt" events is also reflected in the ratio between the two, which has increased positively and significantly, from 1.55 to 2.40.

Annual goals are set for the ratio between the number of reported "near miss" incidents and the actual number of accidents. Rafael set a long-term goal for continuous improvement of at least a 10% percent increase in the ratio of near-miss incidents by encouraging reporting by all employees and assimilating it into the company's safety culture.

In 2022, Rafael developed a safety culture index that is expected to be implemented as a pilot in 2023. The main topics in this index are safety training, risk management, safety incidents, safety checks and the levels of management awareness of safety issues.



\* The table also takes into account students involved in an industrial accident working for the company – Industrial accident - a work accident that occurred at a workstation while working.

## Promoting Safety At Rafael

### Investigation and learning

In safety management processes, an emphasis is placed on the investigation of work accidents and occupational health. Investigations are carried out according to a specific procedure that addresses how the investigation will be conducted, the compilation of its findings, conclusions and recommendations for improvement, and monitoring the implementation of recommendations. The investigation report is distributed and brought to the attention of all interested parties, and following it, if necessary, safety procedures and instructions, risk management procedures and relevant training are updated. Investigation and learning are carried out via platforms that encourage knowledge sharing.



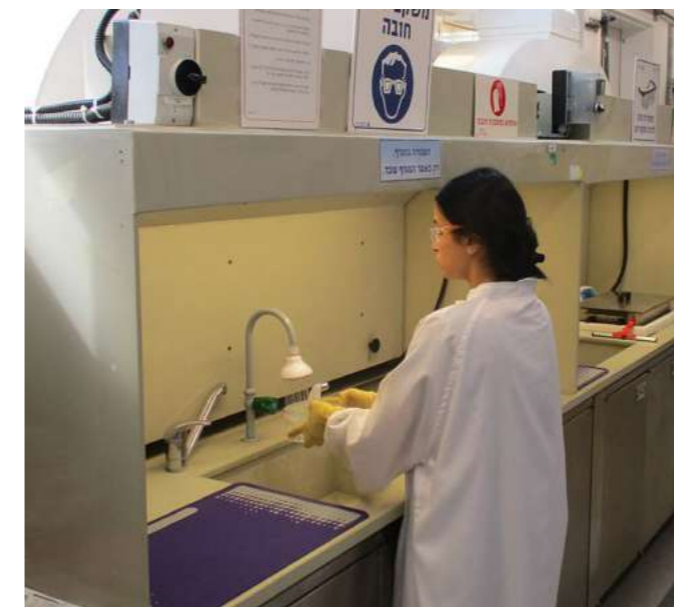
**Noise control and reduction in work stations** – based on a two-year plan for noise tests in work stations where workers are exposed to noise. According to test results, recommendations are given to minimize noise levels. A few years ago, a unique project that provided anatomical headphones to workers in a noisy environment was started at all Rafael facilities.

### Procedures and measures to promote safety

**Work stations** are designed according to the strictest national and international standards of comfort and safety to maintain employees health.

**Regular monitoring of materials and processes** - as required by occupational safety and health regulations for workers working with materials and processes as per an annual monitoring plan.

**Construction work and installation of equipment and systems** - are implemented by expert planners and experienced professionals, in accordance with all relevant laws, including the Planning and Construction Law and in accordance with Israeli and international standards for equipment and systems. Work with a high-risk potential is carried out with remote monitoring, while effectively protecting workers.



### Measures to assimilate a culture of safety

- Theoretical and practical training and certification for employees
- A prioritized safety committee for contractors and professional knowledge communities on safety issues
- Inspections and safety surveys in the different units
- Internal safety procedures that require specific actions to address defined risks.
- Collaborative learning through platforms that encourage communication and knowledge sharing: website, professional learning forums, annual safety conferences and informal meetings for professional learning.
- Promoting a safety culture index in Rafael



## Encouraging safety among suppliers and contractors

Rafael considers suppliers and contractors employed in all its activities to be an integral part of its operations and therefore obliges them to adhere to the same safety standards as the company's employees. The policy encourages suppliers and subcontractors to implement EHS management systems by integrating safety appendices into contracts, supplier inspections and source audits. All those entering a company area undergo safety training suitable for the purpose of their visit, their work tools are checked, as well as their compliance with the requirements and the certifications they require to perform their duties at Rafael. Contractors work is managed and supervised by a designated contractors safety committee.

## Sharing professional knowledge

Rafael believes in sharing knowledge through discussions and forums with parties both inside and outside of the company in order to provide mutual enrichment regarding safety issues and their assimilation. Rafael safety officers bring to the table a mass of unique knowledge based on years of experience.

- **Contact with relevant stakeholders** - Rafael maintains frequent contact with institutions and state authorities on safety issues, including the Occupational Health and Safety Administration, the Institute for Safety and Security, Home Front Command, the Ministry of Environmental Protection, the Ministry of Transport and the Standards Institute.
- **Professional conferences** - with comparable defense industries that promote the sharing of safety knowledge.
- **Professional forums** - with comparable industrial companies and institutions such as the Israeli Safety Forum to promote industrial safety.
- **Internal professional committees and knowledge** - communities that deal with safety aspects unique to Rafael such as: electrical risks, hazardous materials, high pressure systems and lasers.

# Managing Safety Risks

Safety risk management is an essential process in Rafael's overall safety planning for its operations and products as it proposes corrective actions whose implementation result in improvements in safety levels for the operation or product. Rafael managers and employees are responsible for ensuring that in all activities and products that are Rafael's responsibility, safety levels will exist that prevent harm to employees, users, the population, property and the environment, and that all activities will be carried out in accordance with all legal requirements.

A risk management procedure defines the way this process will be carried out. It determines issues and activities for which safety risks must be managed; assigns responsibility for risk management; presents risk management methods and their adaptation to typical activities; assigns responsibility for the execution and control of any required corrective activities ; defines a method for applying risk management insights and lessons regarding a specific activity to similar activities; suggests formats for risk management reports using familiar methods.

Any employee at Rafael can initiate a risk management process, but the responsibility for initiating such a process rest with heads of department and above who will be assisted by unit safety engineers. They must identify all the facilities, processes and activities that are in their area of responsibility and that have the potential for a safety incident and all factors that are defined as harmful factors. Implementation of the risk management process by the employees in each department, rather than by an external party, assists in the assimilation of a safety culture due to employees participation and the importance of their professional knowledge and experience.

The process identifies and assesses risk factors and subsequently proposes, manages and monitors the implementation of corrective actions for the risk, in order to eliminate or reduce the likelihood of the risk materializing, and, if it does, reduce its severity. Corrective actions are planned based on the following hierarchy: elimination of the risk factor, replacement of the risk factor with one that is less of a risk, use of engineering measures (such as remote work), administrative measures (procedures, posters, instructions, trainings, etc.) and personal protective equipment.

Rafael implements a methodological process based on the American military standard, mil-std, 882, by which the risk factors are identified, the severity and likelihood of their occurring is assessed in relation to existing safety measures after which the specific activity is approved.



# Employee Health

Rafael considers maintaining and promoting its employees' health to be of the utmost importance and with this in mind takes a variety of steps:

## Reports and Monitoring

- **Conducting preliminary medical surveys and occupational monitoring** - according to annual planning that complies with legal provisions, Rafael's policy and risk assessments.
- **Hazardous substances** - a dedicated system for reporting employees who come into contact with hazardous substances and that coordinates all of the employee's exposure to such substances during their work and forwards reports to an occupational clinic, where the occupational health protocol for each employee is compiled.
- **Diagnostic monitoring** to examine exposure during tests to materials, noise, dust, etc., and, based on the findings, examining alternatives to minimize exposure by changing existing work methods, technological efficiency and the use of new materials. The findings of such monitoring processes are distributed to the various units and the occupational clinic in order to supervise the employee's health.
- **Internal Mechanisms and indicators** regarding employees' occupational health that Rafael has developed to measure medical competence.



## Accessibility

- **Access to health services for employees** - Rafael operates a dedicated clinic that coordinates all occupational medical issues, including medical examinations before new employees begin work, follow ups after reports of employee exposure to hazardous substances, medical examinations and providing a medical opinion following such examinations.
- **Periodic tests and treatments** - assessing employees' health through regular tests including weight, blood pressure, cholesterol any required periodic vaccinations administered by the various health funds within Rafael complexes.

## Raising Awareness

- **Promoting fitness and health** - Rafael offers its employees discounted entry to a variety of private fitness clubs. In addition, the company offers sports classes such as yoga, Pilates and TRX in designated rooms at all the company's premises. The company also organizes sports days and group health training, and also supports the activities of Rafael sports teams, including cycling, soccer and basketball.
- **Encouraging a healthy diet** by offering healthy dishes in the dining room, healthy nutrition courses and nutritional counseling.
- **Raising awareness of health issues** through internal communications.



# Responsible Procurement

Rafael's influence on the economy and environment is also reflected in its responsible conduct towards its supply chain. Rafael purchases services and products worth billions of shekels from suppliers every year, and considers that any service, product or process that is not at the core of the company's operations must be purchased from external suppliers.

However, Rafael goes beyond that and emphasizes that the conduct of its suppliers, whom it sees as its partners, must reflect the company's values. Rafael works to ensure that its suppliers operate according to principles, procedures and appropriate values in the fields of society, the environment and corporate governance (ESG) including issues such as workers' rights, environmental protection, social involvement in the community, business management ethics and compliance with Israeli Standard 10000. Priority in Rafael is always given to procurement from local suppliers, in particular from the periphery or businesses that give preference to employees from underemployed or disadvantaged populations. In 2021 Rafael's procurement system won the Israel Forum for Operations and Supply Chain award as the best procurement organization in Israel for that year. Among the considerations for the award: the organizational structure and its suitability to achieving procurement goals, the procurement processes and its digitization, methods for managing competitions and tenders, suppliers evaluation, the management of supplier infrastructures and their quality systems, and special procurement efficiency projects.

Procurement is a part of the operations division, which contributes to Rafael's vision by fulfilling the customer's procurement needs in an optimal and professional manner, under the procurement policy, while ensuring that price, schedules, and quality are optimized in accordance with the procurement policy. All of the company's needs and procurement quality are the responsibility of the procurement unit, including mechanical, electronic, and computer technologies. also supervises.

## Scope of Procurements

In 2021, the company's purchases in Israel was some NIS 3.8 billion, which is about 58% of the company's total purchases. The company had approximately 2600 local suppliers - similar to the previous year. Approximately 45% of the volume of local procurement in 2021 was purchased from suppliers outside of the central region (north of Hadera and south of Gedera). Decentralizing procurement in this fashion also provides employment and income for Israeli businesses, located in areas where success is sometimes difficult to achieve. Thanks to this view, Rafael provides quality employment and job security throughout the country to approximately 30,000 people directly and indirectly.

Some 3.8 Billion NIS

Scope of the company's purchases  
in Israel in 2021



## Maintaining The Rights of Service Contractor Employees

Rafael is active in maintaining the rights of service contractor employees in areas stipulated in the Law on Increasing the Enforcement of Labor Laws (2011). The company does this on several levels in order to ensure that service contractors who employ workers in its facilities comply with relevant labor laws and regulations. Steps taken include:

- Periodic inspections of the working conditions and wages paid to the contractor's employees by a certified wage inspector.
- Checking the economic structure of agreements with Rafael to ensure that the contractor's contract does not involve them in a loss, which could lead to a violation of their employees' rights of.
- Call to encourage employees' to contact Raphael if there is a suspicion of a violation of workers' rights. This is published both on central bulletin boards in the various work areas and also by sending a physical letter to each employee once a year.
- If there is suspicion of a violation, the contractor/supplier is required to provide a response and ensure that, if necessary, the violation is corrected. If disputes arise, a legal opinion will be sought regarding the compliance of personnel contractors with labor laws and, if necessary, their methods for dealing with employee rights violations .

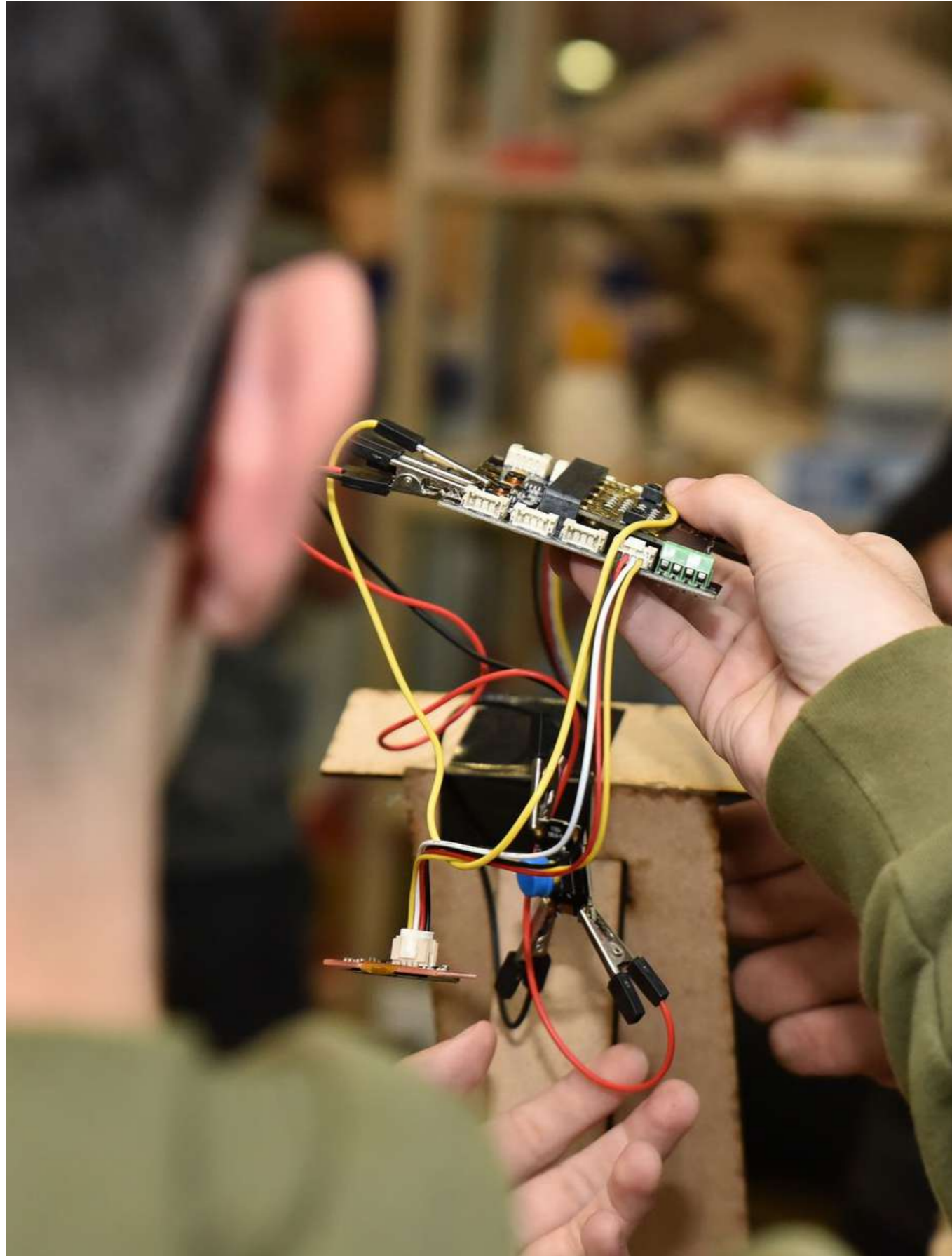
## Dialogue With Suppliers

As part of its dialogue with stakeholders, Rafael maintains regular communications with its suppliers through a dedicated portal Through which, 2021, suppliers posted 104,105 questions to Rafael.

**Improving response to suppliers** - through a change in work procedures and the implementation of a new supplier dashboard, the purchasing unit has been more precise in responding to the needs of customers and suppliers while creating transparency and convenience in the work process. In addition, over time there has been a significant improvement in response times from initial posting to orders in most procurement groups thanks to the digitization of procurement systems.

**Helping suppliers during the covid19 pandemic** - Rafael's suppliers also suffered the consequences of the Covid19 crisis which affected their production capabilities and their ability to meet agreements. With the understanding that this was an extraordinary crisis that affected suppliers, and the entire world, and in order to allow suppliers to prosper during this challenging period, Rafael maintained continuous contact with its business partners, updated them on changing work routines, and responded to many requests to reopen agreements, to renegotiate prices and to change delivery dates. To this end, we established a dedicated hotline in the procurement unit that responded to many needs related to the crisis: we provided suppliers with information regarding all requirements to continue operations and work during the pandemic, we distributed "essential supplier" certificates that allowed suppliers free passage even during lockdowns, and we handled requests to cancel fines for arrears and more.





## Promoting Procurement Quality In The Supply Chain

### Promoting suppliers procurement quality

Rafael invests in the quality of the procurement process throughout its supply chain both with its suppliers and among its owners and procurement employees. Procurement quality is measured at the supplier's end through supplier inspections, product acceptance tests and training and improvement activities carried out together with strategic suppliers.

As part of Rafael's continuous improvement processes with its suppliers, in one case we worked with a supplier after many deviations in parts quality were found in several projects. The supplier was suspended until a joint learning process was carried out with Rafael and an exact work plan was defined with Rafael's purchasing unit. As a result of this activity there was a dramatic improvement in the quality of the supplied products and the supplier's quality scores.

Another supplier that had an influx of new personnel, a joint work plan was defined, and work processes were improved, which included assistance from Rafael. Following the implementation of these processes there was a significant improvement in the relevant indices.

Additionally, as part of the environmental management policy and principles of sustainable development, Rafael encourages its suppliers and contractors to operate an environmental system. As part of periodic discussions with central suppliers, they are required to provide details of

their activities to protect the environment and whether they are certified to any standard of environmental quality. In addition, the general conditions of each purchase order require that the supplier must "comply with the provisions of any law in connection with environmental protection and quality in Israel and wherever the supplier operates... and for this purpose, it must act in accordance with the provisions of any law in order to prevent any damage, disturbance, nuisance, to an individual, the public or the environment, as a result of the use of materials, goods, items, products, processes, production methods and more." Suppliers also undertake to act beyond the requirements of the law as necessary "to prevent environmental pollution in the processes they use and to use environmentally friendly supplementary materials and packaging."

### School for Rafael purchasing agents

In 2021 the School for Rafael purchasing agents began operations. Purchasing agents were exposed, during 7 months of training, to some 60 hours of varied content in purchasing related areas including negotiations, regulations, insurance, the law on tender obligations, etc. Specific training was also given for procurement at Rafael in areas such as procurement quality processes, supplier certification processes, supplier rankings, procurement audits and training for subcontractor managers.





# Rafael As A Leader For Economic And Social Change

## Main figures

**2,500**

Employees volunteer in  
the community

**52**

Social projects

**12**

Local authorities  
partner in activities





# Promoting Society and The Community

For more than two decades, Rafael has been working for the community and society through many voluntary activities in more than 12 local authorities, in dozens of diverse projects. Some 2,500 Rafael employees participate in these activities and volunteer weekly and sometimes even daily. Rafael's volunteering spirit is embedded in the company's employees and managers, who are constantly initiating and striving to expand Rafael's influence in the community.



We as a company are not only measured by our ability to develop systems and technologies, but also measured by our ability to live in the space, environment and society in which we operate. Relationships with the community is one of Rafael's strengths. This practice, which has been part of our culture throughout the years, is something we are proud of and is an integral part of the Rafaelian DNA. Employees contribute from their own time, while thinking creatively and constantly looking for where they can contribute and help more. I hope we will continue to do this every year, all year round.

Major General (Retired) Yoav Har-Even, CEO Rafael



## Operational Model

Rafael's model for managing community relations together with the employees, managers and partners in the community includes three guiding principles:

### 1. Sphere of Influence

Rafael strives to foster local economic and social development in the geographical areas adjacent to its facilities and the residential areas of most of its employees. The aim is to strengthen local communities with the understanding that it is possible to have a positive influence over time.

### 2. The Nature of Community Activity

Activities are adapted to the core business of Rafael and its employees and focuses on promotion of technological education for different populations.

### 3. Partners

Rafael has partners in the community who are an integral part of planning and implementing community activities. Dialogue with our partners is an ongoing process and is examined periodically in a focused manner when new and renewed initiatives are discussed.

## Employees Volunteering

Rafael employees volunteer in their free time in 50 different projects defined by the company which provide a logistical framework and professional guidance including resources to facilitate volunteering. Each project is assigned a leader from among the volunteers who is responsible for recruiting additional volunteers, formulating an annual work plan and implementing it.

Rafael has established four main areas for its activities in society and the communities in which it operates:

- |   |  |   |  |
|---|--|---|--|
| <p><b>1.</b><br/>Promoting technological and scientific education</p> | <p><b>2.</b><br/>Promoting and strengthening at-risk populations</p> | <p><b>3.</b><br/>Volunteering with children and adults with special needs</p> | <p><b>4.</b><br/>From Holocaust to Revival</p> |
|---|--|---|--|





## 1. Promoting Technological and Scientific Education

Rafael employees work to strengthen and promote technological and scientific studies by young people in middle and high school with the aim of strengthening technological studies in Israel and, as a result, also helping the education system, the IDF and Israel's industries.



### A Cyber Project With The “Magshimim” (Fulfillment) Association

Service in an IDF cyber defense military unit and elite IDF intelligence units has become a gateway to possible success in the high-tech world and social mobility for those who have completed their army service. However, most those who serve in these units come from the central region. Rafael aims to promote the inclusion of outstanding students from the periphery in these units as well.

For this reason, Rafael joined with the Magshimim association, which together with elite IDF technology units, the Rashi Foundation and the Ministry of Education have developed a training and enrichment program for high school students participating in this important project. The project provides outstanding high school students with knowledge, methodology and experience in software engineering and cyber while still in high school, with

Rafael employees serving as mentors in the program and assisting the students in their studies.

Before being drafted into the IDF's Cyber Command, the program's top graduates are employed by Rafael in a “Cyber Situation Room” which regularly monitors cyber-attack attempts against Rafael and in the development division in order to provide them with knowledge and practical experience that will serve them in their military service.

### “Magshimim+”

Within the Magshimim project, a group of outstanding students was formed known as “Magshimim +”. This includes 12th grade students who participate in a more intensive and concentrated study program (“bootcamp”) where they study different topics from the worlds of cyber and software at the highest level, including communication

investigations, encryption implementation, Data Science, mobile and web development, and more.

The purpose is to challenge this elite class with extreme, high-level tasks, in order to encourage them to study independently and carry out an in-depth investigation of complex issues in the development and cyber worlds. Rafael is the only company among Magshimim partners that operates “Magshimim +.”

### “Summer School” – Haifa

A unique program developed with Haifa's education departments Excellence Unit that aims to encourage students from the city's technological reserve. Students meet with Rafael engineers during the Passover and summer vacations for a week where they are exposed to exciting and complex engineering challenges from the worlds of mechanics and artificial intelligence. To date, over 700 students have participated in the program.

### Rafael Ms

The project brings together students who have completed the 8th grade and confronts them with technology from the worlds of mechanics, electronics and software used in Rafael's various systems through demonstrations, lectures, hands-on experience, a construction project and more. At the end of the semester, students present the “Rafael Head” project, which was designed and inspired by the “Rube Goldberg Machine.” Students learn about teamwork, cooperation and self-learning.

### Rafael AI

A project intended for students finishing the 9th grade who have an affinity to and are interested in the world of software. Students meet with mentors during four concentrated days where they are given enrichment lectures and experiment with a complex programming task incorporating aspects of AI.



## 2. Promoting and Strengthening At-Risk Populations

Rafael aims to advance youth and adults who are on the fringes of society through frameworks that provide them skills and then mentors them as they begin a normative and full life. In order to promote this aim, Rafael maintains basic and advanced technological activities in boarding schools for those at risk and in local authority and municipal social service departments.

### Nirim Youth Village

The therapeutic youth village - Etgar Nirim is a boarding school for at-risk youth named after late first sergeant Nir Krichman a soldier in the Israeli navy's 13th flotilla's commando unit. It was established in 2003 by Nir's friends, most of them officers and soldiers from his unit and it is supervised by the Youth Sponsorship Authority. About 100 boys and girls between the ages of 14-18 who are defined as extreme at-risk youth live in the village, studying in a high school established in the village with a personalized curriculum for each one. They are required to take a theoretical-scientific matriculation examination and are encouraged to serve in the IDF in a meaningful role and express social involvement, with the aim of bringing them into Israeli society as equal and contributing citizens.

The village is unique in the challenging approach that characterizes its activities. Based to the field therapy

model, students participate in challenging treks that involve navigation, survival skills, abseiling and sea activities. Rafael has been closely involved with the village for the past decade and its employees are involved in social activities and accompany technological enrichment activities there.

### Shelter For Battered Women

In Haifa a shelter for women who are victims of violence serves as an emergency home for women and children who were forced to leave their homes due to the violence they experienced. Rafael employees are involved in a variety of activities to strengthen the life skills of the women. The goal is to help them return to society with abilities that will help them to advance and develop themselves. Rafael volunteers also lead social, individual and group activities with the women and their children.





### 3. Volunteering With Children and Adults With Special Needs

#### Volunteering In Special Needs Schools

Rafael is involved in volunteer community activities at Beit Kessler and Ma'on Atidot, primarily in activities centered around Israeli holidays and festivals, as well as activities with disabled children at the Regavim and Nitzanim schools.

"Regavim" is a school in Kiriyyat Haim, near Haifa, for girls and boys who require special education, who have emotional, behavioral and academic difficulties as well as severe hearing impairments. Volunteers provide organizational advice to the school's management and hold social activities throughout the year.

"Nitsanim" is a school in Acre for children and youth with moderate, complex and severe mental disabilities. As part of the project, the volunteer team holds a supportive social activity once a month on Fridays.

#### Development of Aids For People With Disabilities

Rafael employees apply their sense of innovation and their technological knowledge not only for the development of advanced combat systems but also, totally voluntarily, for the development of aids for people with disabilities in order to facilitate and improve their daily functioning.

#### Restart Foundation – Makers For Heroes

An inspiring program that brings together teams of "makers," people with a creative ability to invent, from the best companies in Israeli industry, to develop technological solutions that do not, as yet exist, to help wounded and disabled IDF soldiers and veterans cope with the challenges they face on a daily basis.

As part of the program, a number of "culmination" days are held and every year complex projects that have reached the threshold requirements of the Restart program are chosen by Rafael's chief scientist to be built by selected units within Rafael.



### The Sivan Team To Be The Champion Attacker



**Sivan Abarbaya Levy**, 29 years old, married + a dog, from Ramat Gan. About nine years ago, she became blind during her military service as a medic and instructor of reserve soldiers at the Home Front Command. After a while, she discovered goalball and joined the women's team. Sivan represented Israel in the Paralympic Games in Rio and continued to compete and play in many tournaments. Today she is a management student and not on the team, but her love for goalball remains, and she continues to train and compete in the Israeli league.

**The challenge: To be the champion attacker.**

A very important part of goalball is the attack formation where the ball is thrown to the opposite side. Sivan trains a lot and strives to progress. Improving speed and power when throwing the ball are the main indicators of progress. Sivan was looking for a training solution that would give an indication of the strength of her throw when throwing in different styles. Throwing a ball contains many components from the movement of the body and the speed of the hand swing to the type of court and the material it is made of. The more accurate the index, the more accurate and improved the shot will be, thus also improving the player's abilities.

### 4. From Holocaust To Revival

Rafael has made a unique contribution to building Israel's deterrent and protective capacity and we find deep meaning in the transition from the dark days of the Holocaust to the revival and strength that is manifested in the State of Israel. We are dedicated to spreading the message "Never again!" Rafael employees volunteer at day centers for Holocaust survivors where the activity focuses on writing their life story, group social activities and assistance with simple everyday technological operations.

The company has also adopted the Ghetto Fighters House - the first Holocaust museum in the world, and company volunteers assist the museum staff in various technological challenges.

In addition, periodically an employee delegation goes on the March of Life in Poland. Members of the delegation study and prepare for the trip and to process their experiences after, all accompanied by a Holocaust survivor.

### Measuring Impact

As with any system managed by Rafael, we try to measure the short and long term effectiveness of community projects and their impact on the communities in which we operate. Measurement is challenging because success requires reference to a variety of aspects such as: educational achievements, student participation in activities, fulfilling needs that have arisen in the local municipality - the welfare department, the education department and more.

The promotion of scientific-technological education is the most significant level of voluntary activity at Rafael, and about half of Rafael's projects in the community are dedicated to this area. That's why we focus on quantitative measurement for scientific-technological projects and the immediate impact on students.

## Employee Contributions

Rafael, as a government owned company, is prevented from making donations. However, a need arose from within the community and the employees to establish an infrastructure where employees could donate their own money to a central fund and authorize the company's management and employee committees to direct the funds to those places where they are needed, within the framework of Rafael's community activities.

#### Passover Food Bank For The Needy

Rafael employees get together and contribute funds for the purchase of food for the needy before Passover. The food is distributed in coordination with principals of the schools and institutions where Rafael operates throughout the year and Rafael volunteers are mobilized to personally distribute the food to the homes of those in need.

#### Contributions To Hospitals

Rafael also has a fund for employee donations targeted at hospitals and the "Ezra Le Marpeh" (Help to Get Well) fund managed by Rafael workers committees and management, which helps in the purchase of medical equipment for hospitals in the north.





# Developing Israel's Periphery

## Quality Employment and Employment Opportunities

### Employment Project For People With Special Needs



Rafael continues to operate in projects that provide employment for populations defined as having special needs. Projects may require an adjustment to meet the employee's abilities and close supervision, without compromising on high performance levels. The creation of meaningful employment for these populations is essential for their ability to live in dignity and their contribution to Israeli society.

"Atidot" is a government hostel, owned by the Ministry of Welfare and Social Services, where special-needs residents live. The hostel operates an employment center where some 80 residents are employed daily. A decade ago, a dedicated production line for Rafael was established in the residence. The residents are employed in unravelling wires, sorting screws, assembling sub-assemblies and preparing infrastructure for assemblies. The income from this activity is paid to the hostel's residents and used for their personal needs.

The residents employed at the hostel are able to realize their abilities while playing a significant role at the heart of operational activities. The hostel is defined as a Rafael subcontractor with all that implies. Rafael's activities at the Atidot hostel won the company an award from the Minister of Welfare and Social Services.

### Excellence In Industry

A program that aims to promote and strengthen factories in the north by encouraging them to adopt principles of quality and excellence. The program runs alongside the annual National Award for Quality in Industry competition. Rafael, most of whose facilities are in the north and who is the largest employer in the region, feels an obligation towards the north and places emphasis on advancement programs where its ability to influence is significant and the necessity of its contribution is clear.

Rafael's main contribution to the project is the close mentoring and advice given to the factory's management in the development and implementation of a defined work plan to improve the quality of the factory's management and the products it produces. Improvements registered by the factory are presented to the competition's judging committee which awards stars to the factory according to its achievements.

In 2021

## 10 factories took part in the project with Rafael volunteers

being the majority of all volunteers.



### Opening The Shlomi Unit In 2021

As part of the company's strategy to operate a development unit near universities with relevant faculties, Rafael facilities are spread across the country, from Shlomi in the north to the Negev in the south. This includes the company's own sites and affiliates, as well as dozens of its suppliers, both large and small.

The plant in Shlomi is an operational branch of Rafael's extensive production and maintenance activities in the north. It was established in an existing building in the industrial area, and most of its employees live in Shlomi and the surrounding area. In the near future, the plant is expected to expand and open more employment opportunities in the region.



The opening of the Rafael unit in Shlomi is a turning point for the town and the Galilee. It signifies a change in thinking and a recognition of the need to strengthen those towns that are far from Israel's main population centers. Today we are witness to the fact that Rafael operates in exactly this way, strengthening the north and the south and thus planting the seeds of education for future generations.

Head of Shlomi local council, Gabriel Naaman



It's not just business, it's also Zionism. We are a global manufacturing company that supports national security. This is not related to business, it is also related to Zionism. The plant in Shlomi doesn't only produce combat systems, but also works for the community, with the community, and also in education. I have no doubt that we will integrate into community activities as well. I am confident that what you see here is only the beginning, dozens more workers and products will come from here, we are here to stay.

Major General (Retired) Yoav Har-Even, CEO Rafael





# Moting Economic Resilience Throughout The Country

The concept behind Rafael's operations is that any service, product or process that is not at the core of its activities will be provided or produced by external suppliers. Rafael is obligated to act according to the tender law that allows all suppliers in Israel an equal opportunity to participate in and win tenders.

In 2021, the company's purchases in Israel amounted to about NIS 3.5 billion, which is about 60% of the company's total purchases. Some 44% of this amount was from suppliers from outside of the central area, north of Hadera and south of Gadera. In other words, Rafael provides quality employment and job security to approximately 30,000 people directly and indirectly. The company

regards its suppliers as partners and invests in them in a number of ways including, for example, assisting them in internal efficiency programs and in the formulation of high standards of quality.

Rafael's procurement system won the award of the Israeli Forum for Operation and Supply Chain as the best procurement organization in Israel for 2021.

## Cooperation With The Academic World

Rafael also contributes to Israeli society in a variety of ways through its cooperation with academic institutions:

### Raphael Employees As Lecturers

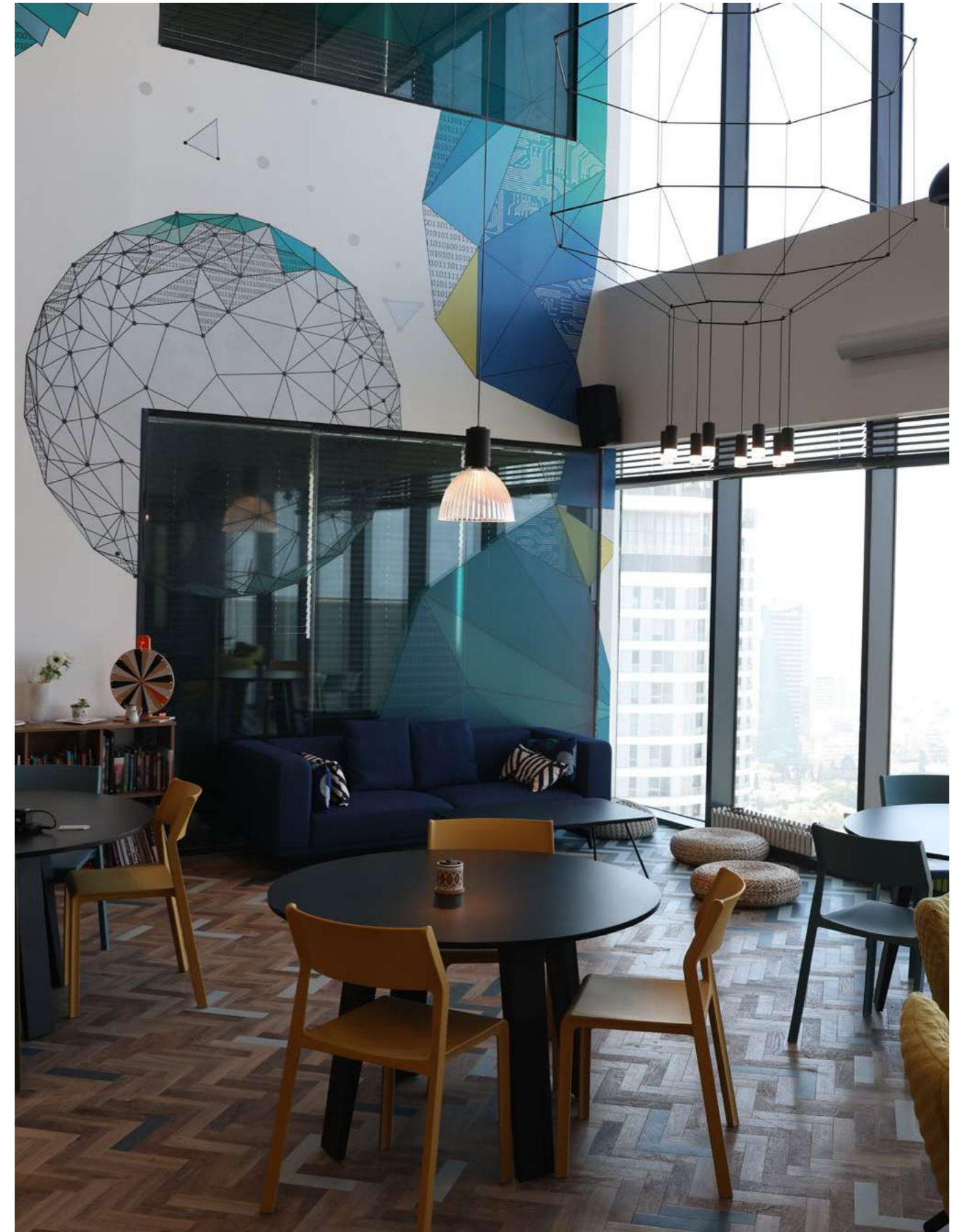
Rafael places great importance on academic research and **Rafael employees, acting as external lecturers, give about 15 courses** at universities in their areas of specialization and share knowledge that exists at Rafael with researchers and students. In cases where the lecturers are not financed by the academic institution, Raphael finances their employment.

### Support For Academic Research

Each year, Rafael finances academic **research to the extent of approximately NIS 2 million in the fields of AI** - aeronautics, materials engineering, electro-optic components, cyber and more. Research results are integrated into the development processes of Rafael's operational systems in a process of mutual fertilization.

### Employing Consultants and Laboratories From The Academic World

Rafael employs consultants from the academic world and thus combines the excellence and knowledge of the Israeli academic world with the company's activities.





# Rafael - A Central Player In The Country's Security

## Main figures

**56**

Israel Prizes

**700** Million  
NIS

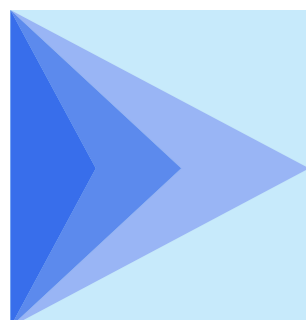
Self-financed R&D

**33**

Knowledge hubs and  
national infrastructures

# A Central Player In The Country's Security

Since its establishment in 1948, as the State of Israel's National Security Research and Development Laboratory under the Ministry of Defense, Rafael has made a decisive contribution, as expressed by the company's vision and mission, together with the IDF and the defense establishment, to maintaining Israel's technological-security advantage and the response to security threats targeting the country and its population. A legacy of over 70 years of groundbreaking technology, creativity, boldness and innovation. The Israeli defense system is Rafael's largest customer and the systems that Rafael has developed protect the lives of citizens and security forces in Israel every day.



"To be a significant pillar in the security of the State of Israel, to be an innovative, growing and profitable global company that develops, manufactures and supports combat systems that are at the forefront of operational needs and technology."



## Israel Security Awards

From its foundation and until today, Rafael has won 56 Israel Security Awards for significant and groundbreaking achievements contributing to the state's security. This prestigious prize expresses the state's appreciation for the company's contribution to its security over the years. The award is given annually to individuals or entities for activities that have contributed significantly to increasing the security of the State of Israel, usually for technological developments. The winners of the prize, which is awarded in a ceremony by the President of the State and the Minister of Defense, are determined by the Minister of Defense whose decision is based on the recommendations of an external jury appointed by him.

Every year the Israel Security Award is given to two or three people or teams whose activities made a significant contribution to the operational field. At least one award is given for a weapon or a combat support system that are not from the intelligence field, provided that the system has a proven contribution in the operational field and is characterized by creativity and originality. Many of the awards are given for classified systems, operations and achievements, but some of them can be published, among them: the award for the "Windbreaker" and "Iron Dome" systems.



## Our systems

Rafael develops and manufactures systems in the field of air, sea, land and space and offers a wide range of innovative solutions that are at the forefront of global technology. The company operates in both the military and non-military security market with a wide range of customers in Israel and around the world. One of the company's advantages is that the majority of the solutions it offers to its customers have already proven themselves operationally.

We are proud of many unique developments led by Rafael, including:

### Air Defense Systems

In recent decades, the State of Israel has undergone wars and military operations, in which thousands of rockets and missiles were launched towards the civilian home front. In Israel, there was a growing and urgent demand for defense systems providing protection from high-altitude weapons. Rafael began to develop, manufacture and market two main systems, "Iron Dome" and "David's Slingshot." In the "Protective Edge" operation (2014) and in the "Guardian of the Walls" operation (2021), the "Iron Dome" system demonstrated an impressive ability to protect the State of Israel's home front and was even adapted to be launched from naval vessels.

However, the threat of drone attacks has risen in recent years, both drones carrying explosives and those designed to disrupt civil aviation. Rafael has begun to develop systems to neutralize this new threat.

### Iron Dome

A short-range air defense system to intercept threats such as mortar and artillery shells, rockets, unmanned aircraft, helicopters and more. The system was developed in a record time of two and a half years and consists of several components: a radar unit, a command-and-control center, and an array of launchers each carrying 20 interceptor missiles. In 2012, the system was awarded the Israel Defense Prize. In 2017, Iron Dome systems were installed on Navy ships, and in 2018, the system was sold to the US Army.

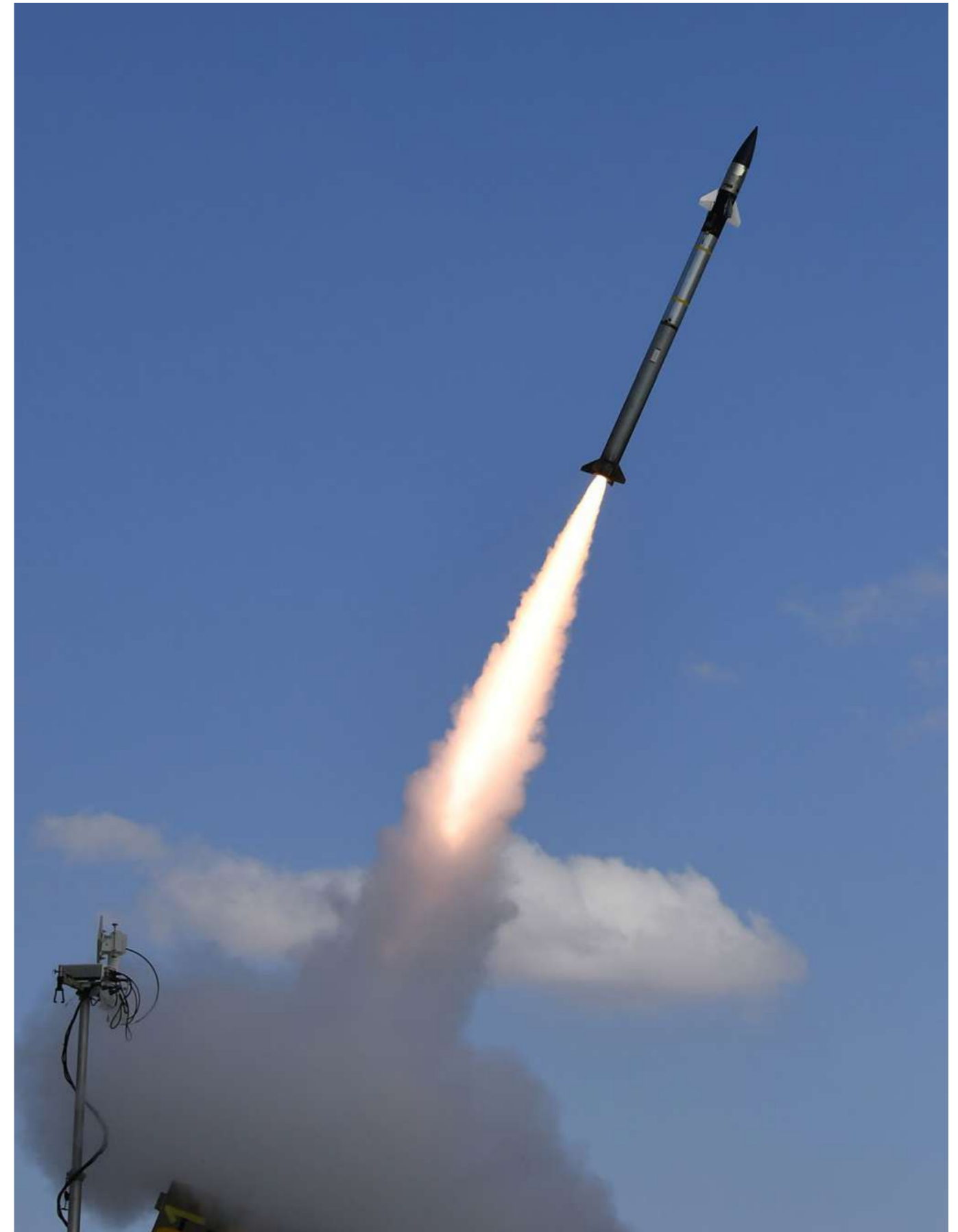
Using its radar, the system performs rapid detection, identification and classification of threats. This information is transmitted to the command-and-control center, where

targets are classified as those likely to hit a protected area and those not. The former are targeted by the system's interceptor missile (Tamir,) which flies accurately towards the target and destroys it.

The system runs advanced artificial intelligence algorithms and performs data analysis to map the rockets' trajectories in order to determine if they should be intercepted, where and when. Thanks to its ability to distinguish and classify threats that endanger the protected area and those that do not, the system significantly reduces costs and prevents the launch of unnecessary missiles. Also, the price of the Tamir missile is much lower than previous systems that were used and were also less efficient. The system can act against multiple threats simultaneously and effectively, in any weather conditions, 24 hours a day. The modular structure of Iron Dome allows integration with a variety of other defense systems and with different components such as radars and launchers.

According to Air Force data, since it began operation in April 2011, Iron Dome has intercepted over 2,500 rockets, with a success rate of approximately 95%, thereby saving lives and preventing damage to property worth millions. Moreover, these high success rates allow life in Israel to continue even during a missile attack and give the country's decision makers the ability to consider their steps in response to attacks, and possibly avoid larger scale conflicts. The Iron Dome system provides Israel with a protective mantle enabling wider political and military freedom of action. Users of YNET, a popular news website in Israel chose the system in 2018, as the best Israeli invention in the 70 years of the state and was proudly shown to President Biden during his visit to Israel in 2022. In 2019 Iron Dome was chosen by Forbes magazine as one of the most important weapons systems of the previous decade.

"Naval Dome", which became operational recently, is the version of the "Iron Dome" system designed for the protection of ships at sea and close to land. The system also provides protection for coastal assets against a variety of threats. The system's capabilities, which include the ability to deal with the mass firing of several missiles at the same time, constitutes a significant addition to the defense capability of Israel's naval forces in their missions, including the protection of strategic assets, Israel's economic waters and the preservation of Israel's maritime superiority in the region.



## David's Sling (previously "Magic Wand")

air defense system designed to intercept ballistic missiles, cruise missiles and other aerial threats from a variety of ranges. The system includes several components: radar used to locate and track the threats; a command-and-control system for optimal mission planning; launchers carrying 12 advanced interceptors; an interceptor missile with extremely high maneuverability. The interceptor, with a multi-stage engine, and which is the only one of its kind in the world that can deal with advanced threats, destroys the threat with a direct hit. The system is based on "open architecture," which allows for its integration with other air defense systems, including individual components such as radar, command and control centers and more.



## Air To Ground Missiles

Rafael's activity in the field of airborne precision guided armament "(missiles)" is carried out by the Surface to Air Administration and the Airborne Systems Administration. These weapons were developed following lessons learned from the Yom Kippur War and the Israeli Air Force's need for missiles for counterattacks against high-value, long range ground targets to avoid the entry of manned aircraft into areas where anti-aircraft defense systems posed a significant threat. The first missile, "Popeye," was introduced into service with both the Israeli Air Force and

other air forces around the world (USA, Australia, and others). Today, the administration produces a family of armaments known as SPICE, which turn a simple aerial bomb, which must be dropped above the target, into a smart bomb, which can be launched from a distance of tens of kilometers and is capable of hitting ground targets with extreme accuracy.

Rafael specializes in the development and production of advanced missiles and armament systems for fighter planes and other aerial platforms. Rafael's systems are installed on the most advanced fighter planes in the world, including those of the Israeli Air Force and other national air forces. The systems, which have been proven on the battlefield in countless hours of operational use, have identification, location, navigation, and attack capabilities, and are based on unique capabilities and a technological heritage spanning decades.



## The HAIL family

"HAIL" systems are a family of aerial armament systems, with autonomous artificial intelligence, the first of its kind in the world - based on advanced image comparison capabilities for accurate target location, and independent of GPS. The Hail systems, or as they are known in English - SPICE systems - have a range of some 100 km with an accuracy of a few meters are divided into three types - "Steel Hail", "Light Hail" and "Small Hail". The HAIL systems have been in operational use with the Israeli Air Force since 2003 and with seven other air forces for several years. HAIL systems have demonstrated excellent operational abilities in countless hours of operational use. The Hail systems won Rafael two Israel Defense Awards - "Steel Hail" in 2008 and "Small Hail" in 2019.



## Maritime Systems

The solutions offered by Rafael for the maritime arena are based on Rafael's core systems and capabilities, which have been adapted for maritime use and which provide a multi-layered solution for the protection of surface vessels. Rafael's maritime systems combine a variety of technologies with extensive operational experience in Israel and abroad. Rafael's maritime solutions are adapted to meet the customer's operational needs and thus provide a comprehensive and integrative solution - for perimeter defense, surface defense and underwater defense.

Rafael was one of the pioneers and one of the first companies in the world to enter the field of controlled naval weapon positions. We began with the development of controlled and stabilized gun positions for the Israeli Navy, and later expanded our operations to include developments for land warfare.

With regard to defense systems for aircraft and ships - in the air and sea, substantial threats have developed, both for fighter planes and ships, from advanced missiles launched from the ground, from ships, from aircraft and ground positions on land and on the coast. These necessitated the development of electronic defense systems for both aircraft and ships.

In the underwater arena as well, there is a need to protect submarines from torpedo systems that are launched from helicopters and ships to sink and destroy their targets. In the underwater defense field, Rafael has the advantage of being a national center of underwater acoustics knowledge, and its products currently have no competition in Israel from other industries.



## Intelligence and Cyber

Rafael is a leader in cyber defense capabilities, intelligence systems, and systems for Big-Data analysis and information fusion and also provides defensive solutions for border control operations and for the protection of strategic facilities and infrastructures. Rafael was chosen by the Israeli government to establish and operate the National Cyber Command (CERT) and also provides cyber and infrastructure protection for Israel Railways and the Bank of Israel's national credit pool. In addition, Rafael's advanced intelligence and cyber systems ensure the highest level of safety and security for infrastructures that are vital to the functioning of the State of Israel.

In 2021, Rafael established the first cyber consortium of its kind in the State of Israel operating in the field of critical infrastructure protection. Rafael leads the consortium with the support of the national cyber system, and it includes 11 leading companies in the Israeli economy all active in the field of cyber protection. Among the 11 companies are the Israel Electric Corporation and the Energy Infrastructures Corporation. The consortium is known as the "Israeli Operational Technologies Cyber Consortium" and offers solutions to protect infrastructures from cyber warfare by hostile parties and is designed to protect critical assets in the fields of transportation, oil and gas, manufacturing, water and sewage, energy infrastructures and more.





## Land Systems and Missiles

Since Rafael establishment as the security research center of the State of Israel, its land systems have played a key role in strengthening the IDF and building its military superiority. The Tammuz missiles developed after the Yom Kippur War have evolved into an array of guided electro-optical missiles, which are sold to dozens of countries around the world. These systems, along with protection solutions, remotely controlled weapons positions, observation and identification capabilities and the "smart trigger" system, lead the IDF towards the future of the modern battlefield. They are the technological and operational infrastructures that enhance ground forces' maneuverability and effectiveness.

In the last decade there has been a fundamental change in the nature of war in the world in general, and in Israel in particular. Symmetric warfare against regular and

organized armies has gradually decreased, and its place has been taken by the asymmetric warfare of regular armies against guerrilla and terrorist organizations. These organizations usually operate in urban areas and among the civilian population, which requires the IDF to use precise weapons rather than statistical weapons such as bombs and artillery shells.

Alongside the continued development and supply of advanced combat systems to ground forces, Rafael established the Center for Innovative Programs, which is tasked with evaluating and developing solutions and systems that will enable the IDF to deal with the full spectrum of dynamic threats it may face in future conflicts. It develops underground systems, advanced navigation capabilities, drones and autonomous, networked systems that will play a central role in multidimensional warfare.



## Windbreaker

The Windbreaker system is a revolutionary system, the only one of its kind in the world that is operational and that protects a tank crew through the accurate identification of threats from all sides (360 degrees). After detection, the system alerts the tank crew and destroys it autonomously through an advanced and unique interception mechanism. This is the only combat-proven system in the world providing protection from anti-tank threats. The system became operational in the beginning of 2011 thanks to the pioneering work of Rafael employees from the late 1980s and has since protected the lives of hundreds of tank crew members.

After Operation Protective Edge, the system won the 2014 Israel Security Award for saving many lives on the battlefield. The system creates a battlefield revolution as it gives tanks the ability to deal with all anti-tank threats thereby strengthening their role as a central combat tool on land and on the battlefield.

In December 2019, "Windbreaker" was named by "Forbes" magazine as one of the 12 protective systems that changed the face of the decade. In 2018, the system was sold to the American Armored Forces to be installed on the Abrams tank and in 2021, it was selected for use on the German Army's Leopard tank and the British Army's Challenger tank.

## Spike

Following the lessons of the Yom Kippur War, from the late 1970s Rafael developed advanced electro-optical missiles. The first version was the Tammuz missile, which was an operational and technological breakthrough that made it possible to strike hostile targets from a long range and with extreme precision without being exposed to the enemy. Since then the company has continued to develop the missile, which is now a unique weapon, the best of its kind in the world. Today, the Spike missile family is used by over 40 countries and can be launched from the air, sea and land.



## Business Sustainability And Emergency Preparedness

### Principles, Importance and Policy

Rafael's policy regarding maintaining the company's sustainability even in emergencies and after disasters stems from a deep understanding of its importance and the company's commitment. The importance of Rafael's continued operation even during a crisis is not just from a business point of view in relation to the company, its customers and suppliers. It also derives from the fact that Rafael is an essential supplier for Israel's security forces whose ability to continue operations becomes more critical and extreme during an emergency. Therefore the company's continued normal operation is essential for the country's security.

Rafael's policy reflects its commitment to comply with all relevant regulatory requirements, with an emphasis on the requirements of the Ministry of Defense, the IDF and of Israeli Standard 24001 "A system for managing the functional resilience of an organization." Rafael is the only major company in Israel that has been certified for this standard, based on the concept of business continuity that requires the formulation of a business continuity plan.

The policy is embedded among the managers, employees and all stakeholders through procedures, exercises, content on the company's internal computer network, its website, publications and employee training. The policy is reviewed periodically, updated and adapted to changing circumstances as needed. It refers to alerts, prevention and protection, response, functional continuity and restoration. Rafael has a system for managing functional resilience whose role is to ensure the continuity of the company's functioning even during emergencies. It is designed to respond to a variety of threats, including security incidents, earthquakes and tsunamis, climatic disasters and substantial damage to infrastructure and energy production and supply.

Rafael maintains an emergency management system whose role is to ensure the company's continued operation, and which provides solutions for the following issues:

- Ensuring the safety and health of the organization's employees, adapting infrastructure to various emergency situations, determining the scope of

supply requirements and securing the production and maintenance of essential products.

- Implementation of the organizational resilience policy among employees, rescue agencies and stakeholders, including encouraging suppliers and subcontractors to manage emergency preparedness.
- Goals and objectives set by management for continuous improvement.

### Organization of Emergency Operations and Business Sustainability

Rafael has an emergency committee that meets regularly consisting of managers and others in senior positions from all of the company's units. It deals with the improvement of emergency preparedness and response processes for civil defense, raw materials inventory, identification of officials and essential suppliers for crisis situations, business sustainability plans including redundancies and production line replacements, appointment of divisional officials, supply and maintenance of products to the IDF. In addition, the company has an annual operations plan that includes updating procedures, audits, exercises and investments for improving infrastructure designed for emergencies.

Rafael has consistent and comprehensive plans and work procedures for the continuity of operations in emergency situations. These define the steps and activities required for advance preparation and prevention, dealing with an emergency incident, incident management, including the operation of an "emergency headquarters" and divisional situation rooms, the adjustment of production and customer support procedures, contact with regulatory authorities and the Ministry of Defense, and finally a return to normalcy and rehabilitation.

Rafael also operates a command and control center whose role is to provide an up-to-date picture of Rafael facilities and their employees in routine and emergency situations. The center activates relevant forces, compiles a situation picture and provides reports from the field to Rafael's management as well as external parties working in cooperation with the company - police, fire service, MDA, Home Front Command and the Ministry of Defense security control center.



### Response to emergencies and business sustainability includes:

- Inclusion of emergency issues and continuity of operations
- Responding to military, safety, environmental, and medical incidents, and emergencies at the David and Leshem institutes as an integrated force
- Maintenance, supervision and professional guidance for the implementation and observance of occupational laws, regulations, standards and procedures.
- Coordination of dangerous activities and experiments at the David and Leshem institutes.
- Providing firefighting and rescue services, testing firefighting equipment and fire prevention.
- Providing emergency and occupational medical services.
- Planning and implementing occupational courses, advanced training and instruction.
- Taking actions and measures to prevent incidents and emergencies.
- Coordination and mutual cooperation with foreign and national security agencies.

Using professional, diverse and innovative equipment, the rescue and emergency department strives to prevent injuries to people, property and the environment. This includes medical evacuation vehicles with the same response capability as an intensive care ambulance, an advanced medical simulator for the independent training of medical teams, methods for dealing with hazardous material incidents, rescue resources, communication systems, advanced personal protective equipment and fire engines. Rafael's "Leviathan" type fire engine is the largest of its kind in Israel and sometimes assists in efforts to extinguish fires in the Haifa area and was of significant

help during the extensive fires in the Jerusalem mountains in 2021.

Training for Emergencies As part of Rafael's preparations to continue functioning in emergency situations and to strengthen our partnerships with Home Front Command, the fire service, MDA, the Ministry of Defence and the police, we hold joint working meetings and exercises, including systemic exercises in which we work jointly with official agencies and train for a wide range of conflict scenarios and mass casualty incidents.

As part of Rafael's preparations for the exercise, a special, designated destruction site was set up at the David Institute to practice rescue operations from debris. Drones were used to obtain a real-time picture of the situation, and rescue and emergency personnel, fire and medical teams, and Raphael's fire engines and ambulances, which are on constant alert to provide a first response, were activated. The war scenario practiced by the forces tested a number of capabilities, including integration with frontline command forces, management and control of the incident on four command levels, rescue from debris and dealing with a mass casualty incident.

During the exercise, a special Rafael robot was used to handle explosive objects. The robot team routinely takes care of explosive tests performed at Rafael and in an emergency it assists rescue forces when clearing fallen objects and scanning buildings. The robot has additional capabilities such as photography, that involve no risk to people. As part of the exercise, a simulated missile strike caused the collapse of a building and suspicious objects were identified in the rubble. The robot moved the suspicious objects away from the destruction site to a protected area and enabled rescue operations to continue in a safe manner.

# Indexes



# GRI Index

Indicator number	Indicator name	Source	Location
<b>The Organization and Its Reporting Practices</b>			
2-1	The organization's details	ESG Report	8-15
2-2	The percentage of employees who received anti-corruption training	ESG Report	37
2-3	The entities that appear in the organization's sustainability reports	ESG Report	37
2-5	External auditing of report	ESG Report	No auditing performed
2-6	Activity and products in the company, the value chain and other business relationships	ESG Report	16-30
2-7	Workforce head count	ESG Report	67
<b>Governance &amp; Ethics</b>			
2-9	Corporate governance structure and composition	ESG Report	40-41
2-10	Determining the composition of board of directors	Annual report 2021	Chapter 1. Restrictions and supervision of company activities, Regulation 21, Page 47
2-11	Role of the Chairman of the board	Annual report 2021	Chapter 1. Restrictions and supervision of company activities, Regulation 21, Page 47
2-12	Role of the board in supervising the management of ESG impact	ESG Report	40-41
2-13	Delegation of powers to manage EGS impact	ESG Report	40-41
2-14	The board of directors role in reporting sustainability issues	ESG Report	40-41
2-15	Processes to prevent conflicts of interest among board of directors members	ESG Report	41
2-16	Description of the process for communicating important issues to the board of directors in economic, social and environmental fields and the number of issues reported	ESG Report	41
2-17	Increasing the board's knowledge of ESG issues	ESG Report	41
2-19	The company's compensation policy	Annual report 2021	Chapter 2, Principles of Accounting Policy, Note 3, page 33
2-20	The company's method for defining compensation	Annual report 2021	Chapter 2, Principles of Accounting Policy, Note 3, page 33

# GRI Index

Indicator number	Indicator name	Source	Location
<b>Strategy, Policies and Practices</b>			
2-22	Statement on sustainable development strategy	ESG Report	4-5
2-23	Statement on responsible business conduct	ESG Report	42-43
2-24	Implementation of the statement for responsible business conduct	ESG Report	42-43
2-26	Mechanisms for obtaining advice and raising concerns regarding ethics issues	ESG Report	44-45
2-27	Compliance with laws and regulations	ESG Report	42-44
2-28	The company's participation in organizations and associations within the industry and others	ESG Report	36
<b>Stakeholder Engagement</b>			
2-29	The organization's approach to dialogue with stakeholders.	ESG Report	34-35
<b>Employment &amp; OHS</b>			
2-30	Collective labor agreements	ESG Report	72
<b>Materiel Topics</b>			
3-1	The process for defining essential issues	ESG Report	32
3-2	List of essential topics	ESG Report	32
<b>Economic Performances</b>			
201-1	Direct economic value created and shared	Annual report 2021	Chapter 2, Financial statements, page 6-11
201-3	The company's commitment regarding retirement/employee compensation and pension plans	Annual report 2021	Chapter 2, Financial statements, Note 20, page 54
<b>Indirect Economic Impacts</b>			
203-2	Significant indirect economic effects	ESG Report	90-93
<b>Procurement Practices</b>			
204-1	Policy, procedures and actual percentage in relation to local procurement	ESG Report	90-93
2-22	Statement on sustainable development strategy	ESG Report	6-9

# GRI Index

Indicator number	Indicator name	Source	Location
<b>Anti-Corruption</b>			
205-1	Description of how to detect corruption risks, including the percentage and number of units where inspections were carried out to detect corruption related risks.	ESG Report	42-43
205-2	The percentage of employees who received anti-corruption training.	ESG Report	42-43
205-3	Description of how identified corruption cases are handled.	ESG Report	42-43
<b>Energy</b>			
302-1	The organizations energy usage	ESG Report	54-55
302-3	Amount of energy consumed in the organization	ESG Report	54-55
302-4	Reducing the organization's energy consumption	ESG Report	54-55
<b>Water and Effluent</b>			
303-1	Managing water as a shared resource	ESG Report	58-59
303-2	Sewage and effluent management	ESG Report	58-59
303-3	Use of potable water	ESG Report	58-59
303-4	Sewage and effluent	ESG Report	58-59
303-5	Water usage	ESG Report	58-59
<b>Biodiversity</b>			
304-1	Description of activities to enrich biological diversity in areas controlled by the company and near them	ESG Report	51-52
304-3	Description of habitats where protective or restoration operations have been carried out	ESG Report	51-52
<b>Emissions</b>			
305-4	Intensity of the organization's greenhouse gas emissions	ESG Report	56-57
305-5	Description of initiatives to reduce greenhouse gases emissions and the results achieved	ESG Report	56-57
305-6	Description of actions taken to reduce emissions of substances that deplete the ozone layer	ESG Report	55
305-7	Air pollutant emissions	ESG Report	56-57

# GRI Index

Indicator number	Indicator name	Source	Location
<b>Waste</b>			
306-1	Waste production and effects	ESG Report	60-64
306-2	<ol style="list-style-type: none"> <li>1. Actions taken to prevent the creation of waste and its effects as a result of the company's activities throughout the value chain</li> <li>2. If the waste generated as a result of the organization's activities is managed by a third-party company, a description of the actions taken to ensure that the third party follows the procedures.</li> <li>3. The processes used to collect and monitor waste figures</li> </ol>	ESG Report	60-64
306-3	Waste generated	ESG Report	60-64
306-5	Waste transferred to landfill	ESG Report	60-64
<b>Employment</b>			
401-1	New employees and employee turnover	ESG Report	77
401-2	Exclusive benefits for full-time employees	ESG Report	68-69
401-3	Maternity Leave	ESG Report	70
<b>Occupational Health &amp; Safety</b>			
403-1	Occupational health and safety management system	ESG Report	82-89
403-2	Hazard identification, risk management and incident investigation	ESG Report	82-89
403-3	Existence and number of disease prevention trainings for employees, their families and the community	ESG Report	82-89
403-5	Employee training regarding workplace safety and security issues	ESG Report	82-89
403-6	Promoting employee health	ESG Report	82-89
<b>Training &amp; Education</b>			
404-1	Hours of training in relation to the number of employees	ESG Report	76-77
404-2	Skill management and career completion programs	ESG Report	81
404-3	Percentage of employees receiving professional employee feedback and organizational development tools	ESG Report	71



# GRI Index

Indicator number	Indicator name	Source	Location
<b>Diversity and Equal Opportunity</b>			
405-1	Diversity of management bodies and employees	ESG Report	67
<b>Freedom of Association and Collective Bargaining</b>			
407-1	Description of steps taken to guarantee employees freedom of association	ESG Report	72
<b>Local Communities</b>			
413-1	The nature, scope and effectiveness of actions designed to manage the company's effects on communities and community development programs	ESG Report	96-107
<b>Public Policy</b>			
415-1	Description of essential issues inherent to the organization's participation in public policy development and lobbying	ESG Report	44
<b>CUSTOMER HEALTH AND SAFETY</b>			
416-1	Stages in a product life cycle where safety and health aspects of the product are examined	ESG Report	46-49
416-2	Description of health and safety conduct as per regulations and voluntary codes	ESG Report	46-49
<b>CUSTOMER PRIVACY</b>			
418-1	Description of cases, based on law, standards and codes, where the privacy of customers/visitors was violated or information about them was lost	ESG Report	None

# SASB Sector Level: Aerospace & Defense

**Table 1. Sustainability Disclosure Topics & Accounting Metrics**

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	Response
<b>Energy Management</b>	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	RT-AE-130a.1	ESG report P.55
<b>Hazardous Waste Management</b>	Amount of hazardous waste generated, percentage recycled <sup>2</sup>	Quantitative	Metric tons (t), Percentage (%)	RT-AE-150a.1	ESG report P.60
	Number and aggregate quantity of reportable spills, quantity recovered	Quantitative	Number, Kilograms (kg)	RT-AE-150a.2	0
<b>Data Security</b>	(1) Number of data breaches, (2) percentage involving confidential information	Quantitative	Number, Percentage (%)	RT-AE-230a.1	0
	Description of approach to identifying and addressing data security risks in (1) company operations and (2) products	Discussion and Analysis	n/a	RT-AE-230a.2	ESG report P.34
<b>Product Safety</b>	Number of recalls issued, total units recalled	Quantitative	Number	RT-AE-250a.1	N/A
	Number of counterfeit parts detected, percentage avoided	Quantitative	Number, Percentage (%)	RT-AE-250a.2	N/A
	Number of Airworthiness Directives received, total units affected	Quantitative	Number	RT-AE-250a.3	N/A
	Total amount of monetary losses as a result of legal proceedings associated with product safety	Quantitative	Reporting currency	RT-AE-250a.4	0

**Table 1. Sustainability Disclosure Topics & Accounting Metrics(Cont.)**

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	Response
<b>Fuel Economy &amp; Emissions in Use-phase</b>	Revenue from alternative energy-related products	Quantitative	Reporting currency	RT-AE-410a.1	Data is unavailable at this time
	Description of approach and discussion of strategy to address fuel economy and greenhouse gas (GHG) emissions of products	Discussion and Analysis	n/a	RT-AE-410a.2	Data is unavailable at this time
<b>Materials Sourcing</b>	Description of the management of risks associated with the use of critical materials	Discussion and Analysis	n/a	RT-AE-440a.1	Data is unavailable at this time
<b>Business Ethics</b>	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	Quantitative	Reporting currency	RT-AE-510a.1	0
	Revenue from countries ranked in the E or F Band of Transparency International's Government Defence Anti-Corruption Index	Quantitative	Reporting currency	RT-AE-510a.2	N/A
	Discussion of processes to manage business ethics risks throughout the value chain	Discussion and Analysis	n/a	RT-AE-510a.3	ESG report P.44-45

**Table 2. Activity Metrics**

<b>Activity Metrics</b>	Production by reportable segment	Quantitative	Number	RT-AE-000.A	N/A
	Number of employees	Quantitative	Number	RT-AE-000.B	8,019





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