THALES

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HSE Report
(Health, Safety, Environment)

Extract from the 2019 universal registration document

CONTENTS

5.1 A CORPORATE RESPONSIBILITY POLICY TO SUPPORT SUSTAINABLE ECONOMIC GROWTH

For more than 15 years, Thales has been proactively implementing a strong corporate responsibility policy based on the highest international standards. The Group is also addressing the demands of its investors and the financial markets for a company that is increasingly successful, innovative and mindful of its responsibilities. These are also the fundamental expectations it has for its customers and employees, which are key to Thales's long-term economic performance.

This is especially reflected in Thales's commitment to the United Nations Global Compact, which it signed in 2003. Thales upholds the Global Compact's 10 principles relating to Human Rights, labour standards, environmental protection and the fight against corruption. These commitments, implemented through agreements and best practices guaranteeing that the Group will conduct business responsibly, helped Thales reach "GC Advanced level" of the Global Compact's Differentiation Programme in 2012.

The appropriateness of the Group's corporate responsibility policy was also recognised by the Dow Jones Sustainability Index (DJSI). In 2019, for the third year in a row, the Dow Jones Sustainability Index (DJSI) ranked Thales as one of the companies in the Aerospace & Defence segment with the most advanced corporate responsibility policy worldwide. Similarly, the non-financial rating agencies MSCI and Ethifinance (Gaïa rating) gave Thales a rating of AA (for the fourth consecutive year) and an index of 83/100 for its corporate responsibility policy, acknowledging the Group's sustained efforts in this area.

On the environmental front this year, Thales received a B rating from the Carbon Disclosure Project.

Lastly, Thales publishes an integrated annual corporate responsibility report which aims to provide all stakeholders - employees, customers, suppliers, business partners, local communities, public authorities, NGOs, etc. - with details about how the organisation interacts with its ecosystem and uses capital to create this value in the short, medium and long term. In this document, Thales sets out our ever-growing commitment to the Sustainable Development Goals defined by the United Nations in 2015.

The integration of Gemalto's business activities in April 2019, which are now included in the Digital Identity & Security (DIS) Global Business Unit, has had no impact on the main thrusts of Thales's corporate responsibility policy, which remain unchanged. However, the significant change to the new scope of business has resulted in a clear shift in the values of some indicators as well as the decision to redefine certain assessment criteria.

The corporate responsibility policy is promoted at Group level by the Company Secretary; the Senior Executive Vice-President, Human Resources; and the Senior Executive Vice President, Chief Operating and Performance Officer. It is coordinated by the Executive Committee and monitored at board level by the Strategic and Corporate Social Responsibility Committee.

In 2019, Thales started to think about how to involve even more managers in the implementation of its CSR strategy by making CSR objectives a factor in their annual variable compensation. Accordingly, the Group's Executive Committee has defined a list of managerial CSR objectives for 2020 in line with the six components of the Group's CSR strategy (diversity and inclusion, workplace health and safety, climate change, environmental protection, business ethics and duty of care), as set out in its Non-Financial Performance Statement.

With this new system, Thales will be able to better integrate CSR into the duties and daily decisions of its managers to ensure the overall improvement of the Group's non-financial performance, fuelled by its *raison d'être*: "Building a future of trust together".

5.2 RISKS TAKEN INTO ACCOUNT FOR THE NON-FINANCIAL PERFORMANCE STATEMENT

In 2018, to identify the main risks that would also be published in the Non-Financial Performance Statement, the Group conducted a risk identification and risk mapping exercise with the participation of the main Corporate support functions[1] and the assistance of an external consulting firm (see 2018 Registration Document).

In 2019, this working group met again to assess the impact of the change in the Group's scope on the six risks selected for the Non-Financial Performance Statement after the acquisition of Gemalto in April 2019. After analysing these risks, the working group decided to keep them, since the change in scope had not generated any significant change in the typology of CSR risks to which Thales is exposed.

The six risks selected on that basis relate to:

1. diversity and inclusion,
2. protection of the health and safety of employees,
3. environmental impacts of the Group's activities,
4. anticipation of environmental standards in product design[2],
5. compliance with rules of ethical business conduct (especially the fight against corruption and influence peddling)[2],
6. vigilance concerning supplier compliance with corporate responsibility issues.

Risk identification	Risk monitoring and management
1. Diversity and inclusion	
In a more globalised cultural and technological environment, increasing team diversity and developing a more inclusive corporate culture are key ways to support innovation and creativity thanks to a broader range of approaches, perspectives and ideas. A lack of diversity could affect the Group's ability to properly account for major technological changes and respond to changes in customer expectations. This could in turn have a negative effect on its competitiveness and profitability.	Since 2016, proactive targets have been introduced Group-wide to strengthen diversity and inclusion in the broad sense of the term. These targets are covered in a quarterly scorecard (see section 5.4.2). In an effort to encourage team diversity and employee inclusion and ensure differences are respected, the Group has adopted a dedicated governance system structured around a Steering Committee, a Diversity and Inclusion Council and a central Diversity and Inclusion department. In terms of gender diversity and professional equality, the Group has been rolling out negotiated action plans in France since 2004 under agreements signed with trade unions. Since 2009, Thales has been a signatory of a European agreement called IDEA, which includes gender equality commitments. The Group's initiatives in this area are discussed in greater detail in section 5.4.2.
2. Workplace health and safety	
Some of Thales' activities could expose its employees, visitors or subcontractors to various physical risks (electrical, chemical, radiation, railway worksites, work at height, etc.). These activities require compliance, wherever the Group operates, with a wide range of different regulations relating to the work environment and industrial safety in order to ensure a safe and healthy workplace for all employees concerned. Failure to comply with these requirements or insufficient measures to protect the health, safety and quality of life at work of the employees for which the Group is responsible could expose it to sanctions, a deterioration in its operating performance, and may damage its reputation or attractiveness.	Thales has set up a dedicated framework aimed at preventing risks related to workplace health and safety both at the Group's facilities and its external sites. Thales has worked to analyse the risks related to substances and products handled as well as anticipate major global health crises. The Group Human Resources and Health, Safety and Environment departments have introduced tangible measures to prevent risks related to workplace health and safety and improve quality of life and well-being at work (see section 5.4.3). The risks to which employees and outside contractors may be exposed are assessed and monitored on a regular basis throughout the Group. Cross-functional and multi-disciplinary steering committees created to eliminate or reduce these risks meet several times a year (see section 5.4.3).

[1] Representatives from the Finance, Health, Safety & Environment, Human Resources, Purchasing, Audit, Risks & Internal Control, Strategy & Marketing, Ethics & Corporate Responsibility, and Communications Departments (Thales Foundation), plus the Company Secretary and corporate management.
[2] These three risks are outlined in chapter 3, Risk Factors.

Risk identification	Risk monitoring and management
3. Environmental impacts related to the Group's activities	
Emissions generated by the Group's business activities have the potential to affect the environment, while the use of Group products by customers may contribute to the production of greenhouse gases that contribute to global warming. However, the Group's exposure to these risks of environmental damage is limited to the extent that its core business is engineering and software development. That said, should some of its industrial operations fail to comply with environmental laws and regulations, the Group would be exposed to sanctions, damage to its image and potentially, refusal by some customers to do business with Thales. Furthermore, the risks resulting from climate change (natural disasters, supply chain disruption, market instability, etc.) could have a negative impact on the Group's performance and its business model.	Thales updates its environmental risk analysis on a regular basis according to its business activities, processes for assessing significant impacts, scientific and technical developments as well as new challenges and regulatory changes. To support this analysis, which also includes the Group's corporate social responsibility and is performed at least once a year, the Group has introduced a framework and resources at all its locations to control and limit the environmental impacts of its business activities (see sections 5.5.2 and 5.5.3). Total provisions for environmental risks totalled €5 million at 31 December 2019. In 2019, to reduce the impact of product use as regards energy efficiency and a low carbon footprint, the Group implemented a strategy for a low-carbon future in order to cut back on greenhouse gas emissions across its value chain, in line with the 2°C trajectory of the Paris Agreement, with targets set for 2023 and 2030. The Group assesses the progress it has made in achieving these targets each year. Lastly, in recent years, Thales has performed regular assessments and worked to reduce its sites' exposure to natural disasters (floods, hurricanes, fires, water stress, etc.) in order to make it less vulnerable to the effects of climate change.
4. Anticipation of environmental standards in product design	
Changes in environmental regulations may rule out certain technical or technological solutions, particularly for certain suppliers or subcontractors. This may result in the need to qualify and implement alternative solutions. It may also result in changes to the supply chain or the upgrading of industrial resources, with the costs and timescales associated with such changes. Regulatory differences between countries and constant changes to regulations also make it more difficult for Thales to verify the compliance of solutions that are released to market, and could put the company at a competitive disadvantage. Commitments made by some sectors relating to managing and reducing their carbon footprints, such as Corsia in the aeronautic industry, could also be passed on to equipment suppliers and cause Thales to pay taxes and/or compensation. Lastly, some customers' expectations may exceed regulatory requirements alone and in some cases lead to solutions that are technically impossible or to substantial additional costs.	The Group has promoted a responsible product policy for several years. Based on regulatory monitoring, it produces an analysis of environmental risks and their impact on the supply chain, product design and conditions for accessing various markets that it updates on a regular basis based on new challenges and regulatory changes (e.g., REACh in Europe, use of chemicals, etc.). These factors relating to regulations or to meeting customer needs are passed on to suppliers and the supply chain through contracts and/or specifications. Solutions for replacing hazardous substances are being developed ahead of regulatory deadlines. To be able to meet the Group's commitments regarding eco-design and reducing the carbon footprint of the products it sells, Thales has adopted an eco-design approach. See section 5.5.2.2 for more details.
5. Compliance with rules of ethical business conduct (especially the fight against corruption and influence peddling)	
Thales's business encompasses a variety of sectors in more than 50 countries. Failure to comply with applicable laws and regulations relating to ethical business conduct, especially the fight against corruption and influence peddling, may have serious legal and financial consequences for the Group and severely damage its reputation.	The Group's anti-corruption compliance programme, which has been in place for many years, was further strengthened in 2018 and 2019 to take account of recent legislative and regulatory changes, especially those resulting from France's Sapin II law. The Group's anti-corruption policy is described in section 5.6.1.
6. Vigilance concerning supplier compliance with corporate responsibility issues	
Thales's purchases account for approximately half of its revenues. These purchases are made worldwide from around 19,000 active suppliers (Thales' historic scope plus the DIS GBU) of all sizes, many of whom have their own subcontracting chains. Despite the Group's increased vigilance, it is difficult to guarantee that all stakeholders in the upstream supply chain are fully compliant with laws relating to social, environmental and ethical responsibility. Should any of them fail to comply, the Group's business, image and profitability could be affected.	Monitoring and management of this risk are included in the Duty of Care Plan (see section 5.7.3.2) pursuant to law No. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting companies.

The Non-Financial Performance Statement also includes the disclosures required under Article L. 225-102-1, III, paragraph 2 of the French Commercial Code. These include disclosures about the consequences of the company's business activities and the use of the goods and services it produces on climate change, its corporate commitments to sustainable development, the circular economy, the fight against food waste and food insecurity, respect for animal welfare and responsible, fair and sustainable food, collective agreements signed within the company and their impact on the company's economic performance and employees' working conditions, initiatives aimed at combating discrimination and promoting diversity, and measures taken for people with disabilities. See the related summary table in section 8.6.

5.3 NON-FINANCIAL PERFORMANCE SCORECARD

Issue/Risk	Policies	Key performance indicator	2018 Outcomes [a]	2018 Outcomes [b]	2019 Outcomes [c]
1. Diversity and inclusion	**Thales's commitment: Bring out the best in everyone** *"At Thales, I work in teams that are open to diversity and value our differences and backgrounds."* **Cross-functional initiative taken by the Executive Committee as part of the Group's Ambition 10 strategic vision** Being a global leader with a strong local presence means embracing diversity in all its forms: gender, age, origin and nationality. A truly diverse, global organisation has an additional advantage when it comes to competitiveness and attracting retaining top local talent. Diversity stimulates innovation and creativity thanks to a broad range of approaches, perspectives and ideas. Inclusion, which presupposes the acceptance of diversity and recognition of its importance, will improve Thales's collective performance.	% of women among new hires		32%	33
		% of women in top positions		16.5%	17.2%
		% of Management Committees with at least three female members		49%	50%
2. Workplace health and safety	**Thales's commitment: Be attentive to everyone** *"At Thales, my manager trusts me: he empowers me and ensures my well-being."* *"At Thales, I have all the resources and support I need to maintain a healthy work-life balance."* **Thales's commitment: HSE policy** *"Thales is committed to providing a safe and healthy working environment for its employees at its own sites and at external sites."*	Absenteeism rate		2.4%	2.56%
		Frequency rate of accidents at work	2.22	2.01	2.32
		Severity rate of accidents at work	0.053	0.048	0.057
		Percentage of employees working at an OHSAS 18001/ISO 45001-certified site	83%		77.5%
3. Environmental impacts related to the Group's activities	**Thales's commitment: HSE policy** *"Thales is committed to safeguarding the environment by limiting impacts (energy, climate, natural resources, etc.) and preventing pollution risks."*	Change in energy intensity (in TOE/hours worked)			-4.6%
		Reduction of direct operational emissions [d] Absolute value compared with 2018			-1.8%
		Reduction of indirect emissions [e] Absolute value compared with 2018			-1.7%
		Recycling rate of non-hazardous waste	57%	58%	60%
		Percentage of employees working at ISO 14001- certified sites	89%		84%
		New developments incorporating eco-design			pending
4. Anticipation of environmental standards in product design	**Thales's commitment: HSE policy** *"Thales is committed to designing, purchasing, producing and providing solutions, products and services that meet health, safety and environmental requirements."*	Percentage of Product Line Architects and Product Line Managers trained in or made aware of eco-design			5%
5. Compliance with rules of ethical business conduct (especially the fight against corruption and influence peddling)	**Thales's commitment: zero tolerance for corruption** *"Ethical conduct, integrity and compliance with regulations must be the rule for all Group employees throughout the world and at all levels of the company."* (extract from the Code of Ethics)	Number of operational entities that assessed risks of corruption		113	108[f]
		Anti-corruption training[g]		4,563	9,920
		Alerts received via the Group's alert system *including alerts about possible acts of corruption*[h]		15 None	34 4
6. Vigilance concerning supplier compliance with corporate responsibility issues	**Thales's commitment: Get all its suppliers to support its approach to corporate responsibility** *"Thales establishes relationships of mutual cooperation with its suppliers, based on mutual loyalty."* (extract from the Code of Ethics) Thales requires its suppliers to comply with commitments relating to Human Rights, labour standards and environmental protection.	Supplier performance in the areas of corporate responsibility (labour standards, the environment, corporate governance, business ethics and export control) (average score out of 10) Supplier performance in areas of corporate responsibility (average score out of 10)		8.7	8.7
		Percentage of class A[i] suppliers assessed in terms of their environmental maturity		84%	N/A[i]

(a) 2019 scope after the integration of Gemalto's business activities – Data provided for comparison purposes, where available, in accordance with Article R. 225-105-1 of the French Commercial Code.
(b) Thales pro forma scope with integration of Gemalto's business activities.
(c) Thales historic scope before integration of Gemalto's business activities.
(d) Direct operational emissions: Internal operations (Scope 1, 2 and 3 – business travel).
(e) Indirect emissions: Scope 3 purchases of goods and services and use of products and services sold.
(f) DIS not included (these assessments are made via the Yearly Attestation Letters that are produced at the beginning of the year). The decrease in the number of entities evaluated is due to the disposal of activities.
(g) Comprising 5,197 e-learning sessions and 4,723 face-to-face sessions in 2019. The sharp increase in the number of training courses is due to the systematic and fast deployment of a new mandatory anti-corruption training module for the departments that have been identified as the most at risk.
(h) Of the four alerts concerning allegations of possible acts of corruption, all four were closed after internal investigations confirmed that there were no acts of corruption.
(i) All suppliers accounting for 80% of purchasing volumes.
(j) The classification of suppliers was significantly revamped in 2019 and the A, B and C classes were eliminated. The percentages referring to class A are therefore not available for this financial year. The new indicators linked to Responsible Purchasing targets will be published in the 2020 Universal Registration Document (see Section 5.7.3.1.2).

5.4 HUMAN RESOURCES GEARED TOWARDS COMPANY PERFORMANCE

5.4.3 Offer a safe and healthy work environment

One of the Group's key priorities is to provide a safe and healthy work environment for all employees, in compliance with applicable law, by monitoring procedures, preventing health and occupational risks and training employees. To this end, Thales is committed to being attentive to everyone's needs, making sure that employees have the trust and support of their managers and benefit from resources that allow them to have a healthy work-life balance.

Thales is committed to a proactive, responsible approach to prevention and protection for the safety of the Group's employees. This commitment, included in its ethical principles, is reflected most notably in the policy to reduce health and safety impacts and risks in its activities worldwide, in its products and at the various levels of the organisation.

Within the Group, the Human Resources and Health, Safety and Environment Departments share the vast domain of quality of life at work and health and safety (H&S). They define health and safety strategies, policies and processes. They coordinate the best practices applied in-country and also implement practical measures to ensure workplace risk prevention, health and safety.

Actions undertaken to offer employees a good quality of life and well-being at work

- **Guarantee a work environment that is respectful of employees**

Creation of a network of advisers for harassment and sexist behaviour

In 2019, Thales created a structured network of advisers on sexual harassment and sexist behaviour at the various entities in France. This network comprises 11 operational sponsors on the companies' management teams who support prevention and awareness-raising initiatives in partnership with the 18 designated advisers at the companies and the 46 designated on-site advisers, who are responsible for receiving alerts, providing guidance to employees and implementing awareness-raising initiatives.

Personal data protection

In 2019, Thales continued to implement its programme to comply with the General Data Protection Regulation (GDPR).

To ensure that the personal data of employees and customers are processed in accordance with this regulation, the Group has established a policy on the protection of personal data and set up a dedicated framework comprising:

- at Group level: the appointment of a Data Protection Officer (DPO) and Data Protection Correspondents (DPC) in each Corporate department;
- at the local level (company or country): the appointment of Personal Data Representatives (RDP) in various departments, together with correspondents.

As part of the Group's digital transformation, many human resource management tools have been renewed or are being renewed. This has provided the people in charge of data protection at Thales with the opportunity to ensure the new processes comply with GDPR provisions. They conducted privacy impact assessments in 2019, in particular for the deployment of the new payroll and administrative file management tool for employees in France.

Lastly, training employees in personal data protection is a high priority for Thales. In 2019, it offered employees two types of e-learning:

- a general e-learning module on the principles of data protection;
- specific modules, by department, illustrated with real-life cases. At the end of 2019, 73% of the HR department had completed their specific training.

- **Pursue constructive labour relations**

In all areas of common interest, Thales promotes cooperation with its employees and their representatives and provides them with high-quality information, in particular by supporting and encouraging dialogue with employees. This cooperation has helped develop a high-quality working environment for all Group employees.

Specific forums for employee dialogue

Thales has a European Works Council made up of 39 members from the 13 main European countries, representing 61,779 employees in Europe.

The European Works Council met three times in 2019.

After signing two unanimous collective agreements in 2018 on Labour Relations[(1)] and Elected Employee Representation[(2)], in 2019, Group entities in France created the Social and Economic Committee, a new employee representative body, and appointed local representatives.

This organisation and the appointment of local representatives demonstrate the Group's commitment to pursue structured, constructive and sustained labour relations with its social partners.

Dynamic social dialogue

At the end of 2019, a total of 82% of Group employees worldwide were covered by collective agreements. 2019 was marked by the signing of two new structural agreements for the Group in France that reinforced the social protection floor shared by all Group employees:

- the Agreement on the dependency plan signed on 19 April 2019, which aimed to improve guarantees and strengthen coverage against the risk of dependency for all Group employees in France;
- The France Group Agreement, signed on 24 April 2019 with the goal of promoting professional development and employment through proactive initiatives, implements a proactive approach to employment and skills at the Group to enable all employees to secure their professional development and increase the visibility of their career paths and mobility opportunities. It will also

(1) Agreement on social dialogue, trade union rights and career development of employee representatives, signed on 13 December 2018.
(2) Agreement on elected employee representation and local representatives, signed on 13 December 2018.

enable companies to adapt their workforces to the needs of their business activities through an approach of active employment management.

- The France Group Agreement on individual employee mobility, signed on 25 November 2019, promotes individual mobility within the Group by creating support measures for all Group employees in France, regardless of which entity they work for.

Monitoring of employee commitments

Group entities regularly conduct commitment surveys with their employees. These surveys are used to measure how supportive employees are of the Group's strategy and values and gather their opinion on key issues such as well-being at work, management and career management.

In 2019, the Group's Talent & Culture teams examined the timeliness of setting up a Group-wide commitment survey. This survey should be launched in 2020.

- **Offer top-quality working conditions**

Convinced that the quality of life at work is key for the Group's long-term performance and the commitment, well-being, loyalty and attraction of talent, the Group has reaffirmed its willingness to continue to put the improvement of the quality of life at work at the centre of a genuine, organised and structured social project based on a continuous improvement approach.

Working time that makes it possible to have a healthy work-life balance

Each country adapts its working hours to applicable laws, regulations and agreements. At the end of 2019, a total of 94% of Group employees were employed full-time; part-time contracts generally reflected a choice by employees.

In 2019, Thales continued its initiatives to promote parenthood and work-life balance. For instance, in 2019, 426 children of Group employees (2018 scope[(1)]) in France were given spots at the company's day care centres (compared with 381 in 2018). Some sites in France also offer concierge services to their employees.

It also includes the proper use of digital tools and the right to disconnect, which is a decisive factor in the quality of life at work for employees, their work-life balance, and their personal lives. For example, Thales LAS France brought in the cognitive science consulting and research firm Cog'x to raise employee awareness about switching off through an approach that takes how the brain functions into account.

Actions taken to foster quality of life at work

In 2019, the various Group entities in France continued to carry out actions provided for in the applicable collective agreements and initiated in 2018 relating to quality of life and well-being at work and telecommuting.

"Quality of life at work" weeks, employee opinion meetings (170 individual and collective opinion sessions were held in 2019), training sessions and awareness-raising campaigns about the right to disconnect were some of the initiatives implemented at all Group entities in France.

In 2019, more than 500 managers took a course called "Managers: key players of quality of life at work" given by Talent & Culture International Learning. This course incorporated elements of the Thales Group's agreement on quality of life at work, signed in 2018.

As from 2020, workplace health and safety will be included in the CSR objectives that may be used to calculate the annual variable compensation of a large number of managers.

Actions taken to guarantee the workplace health and safety of employees

5.4.3.1 Preventing hygiene, health and safety risks at work

5.4.3.1.1 Policy and corporate governance

Risk policy and analysis

Since March 2016, Thales has reaffirmed its commitments to risk prevention and employee protection through one of the three fundamental priorities of its Hygiene, Health, Safety and Environment (HSE) policy. These commitments have featured among the Group's ethical principles for over 15 years.

This proactive, responsible approach to preventing risks and ensuring employee health and safety is coordinated by the Group's Hygiene, Health, Safety and Environment (HSE) Department. It has been implemented at the operational level in countries and GBUs through a series of concrete actions relating to a culture of prevention and the strengthening of managerial skills related to industrial hygiene and workplace health and safety (WHS). In 2019, the Group's Executive Committee defined an HSE vision and adopted new objectives for 2023, thus confirming this policy and reinforcing its implementation. This policy has two key areas of focus that are independent of compliance with applicable regulations and the anticipation of future regulations:

- provide a safe and healthy working environment for its employees and subcontractors on its own premises and at external sites;
- design, purchase, produce and provide solutions, products and services that are responsible when it comes to health, safety and environmental requirements.

Thus, as from 2019, the Group has included the performance of its tier 1 subcontractors in its own consolidated personal safety performance.

Health and safety risks are the subject of an annual self-assessment by each of the Group's operating entities that is coordinated by the Group Risk Supervision Committee. This ensures that good WHS management practices are implemented at external sites and worksites, which may lead, if necessary, to an annual improvement plan drawn up with the Group's experts.

A dedicated HSE structure

In order to keep improving its performance in terms of hygiene, health, safety, the environment and risk prevention, Thales has created a global network of HSE managers working in its organisations:

- a network of "Site/Operations HSE" managers at country, entity and site level, bolstered by a property management network of company premises;

(1) Before the integration of Gemalto.

- a dedicated network of “Products and Services HSE” managers at Group Business Unit and business line levels, bolstered by correspondents from cross-functional departments (engineering, industry, purchasing, services, bids and projects).

Cross-functional and international HSE Steering Committees meet twice a month. These committees are in charge of developing the HSE policy, coordinating the network and ensuring that prevention standards are rolled out. They define the key relevant actions and the feedback for improving the HSE culture. Operational management relies on these networks, which are coordinated within dedicated job families, to increase momentum and boost skills, determine recruitment and training needs, anticipate future developments and challenges and share them within a community.

Other operational and cross-functional departments (human resources, occupational health, industry, engineering, purchasing, etc.) are also involved in this work to ensure that policies on the prevention of workplace hygiene, health and safety and environmental risks are consistent.

The community of members of the extended international HSE network organises seminars once a year for sharing, feedback, implementation and best practices that underpin the Group’s HSE policy. This meeting, held via a two-day web conference in 2019 (recorded as a podcast and associated with a collaborative sharing platform), brought together nearly 180 HSE managers from around the world.

In addition, the Group’s Executive Committee verifies the progress of HSE performance objectives on a quarterly basis through an international summary scorecard covering health, safety and environmental factors.

Integration of Gemalto’s facilities

In 2019, special attention was paid to the integration of the former Gemalto facilities into the Group’s HSE network and to the management of health, safety and the environment. The corporate HSE teams and the newly integrated teams shared their culture, practices and experiences to ensure the successful transition and identification of the actions necessary for the 15,000 new employees to adopt the Group’s HSE policy. The work carried out highlighted many similarities and synergies that will facilitate the adoption of common objectives for 2023. The Group has developed a roadmap and an action plan to integrate the new sites in terms of HSE management, including:

- adoption of Thales’ HSE policy and development of synergies;
- adoption of a Group-wide reporting system and implementation indicators for monitoring performance;

This roadmap, introduced in 2019, will continue in 2020 and will make it possible from now on to manage and consolidate HSE performance consistently at Group level.

5.4.3.1.2 Maintaining skills and risk awareness

Training

Knowledge of operational risks and related prevention measures is crucial for managers and employees to maintain the right level of vigilance, as well as maintain their awareness of risks, measures to manage them and the appropriate behaviours to be adopted.

Thales’s HR and HSE departments implement and maintain training courses on hygiene and workplace health and safety throughout the Group. They are implemented at the local level based on specific needs identified at individual premises or job sites or on programmes defined at the corporate level.

To underpin knowledge and skills relating to health and safety, dedicated training modules are delivered throughout the Group by in-house trainers, HSE managers or specialist independent bodies. E-learning modules are also available to all employees through the Thales Learning Hub. This catalogue, which was entirely revamped in 2019 (especially for ergonomics), now has additional specific modules on electrical risk, working at height, as well as a training module on road risk. These training courses are aimed at hygiene, health, safety and environment managers and different job families (purchasing, design, operational managers, etc.) and generally all Group employees.

The training courses involve:

- general workplace safety training courses (introduction and on-the-job training, fire safety, first aid, etc.);
- specific training courses on risks encountered (electrical, chemical, radiation, ergonomic, psychosocial, etc.);
- training courses on tools (risk analysis, regulatory monitoring, standards, audit and inspection techniques);
- training courses on management and best safety practices;

As an example, in 2019, more than 150,000 safety training hours were provided at the Group.

To improve support for managers and employees on HSE issues, in 2019, the Group defined a specific training program for HSE managers aimed at developing their operational leadership skills in this area, with a particular focus on support for local managers. Additionally, it also organised “HSE culture” training sessions for local management committees at certain units in France, the United Kingdom and Germany to strengthen HSE buy-in and improve the HSE culture on those facilities. Following the success of these initiatives, an “HSE Masterclass” was designed with an HSE culture consultant and will be launched at all sites from 2020.

Awareness - Communication

Programmes on awareness and communication, defined and promoted either locally by HSE managers based on specific needs or at Group level, are another way of making sure all employees are aware of potential risks and how to deal with them. For instance, the Group publishes a quarterly HSE newsletter and broadcasts an annual awareness campaign focusing either on a specific or more generalised risk. For example, for the past four years, it has addressed the following topics: best practices related to tripping risk, material handling risk, road risks, or good managerial practices to integrate hygiene, health and safety and the environment into everyday practices).

Lastly, a dedicated HSE portal is available to all employees on the Group intranet.

5.4.3.1.3 Risk management and operational control

Management on the ground

Thales has integrated the management of risks related to occupational safety into its Group management system, which can be accessed by all employees, at all Group entities, including DIS entities worldwide.

The dedicated process requires the implementation of a safety management system at all sites to ensure that risks are avoided, managed and limited, while complying with the general principles of prevention for the operational activities carried out.

Integrated into the different processes governing the Group's activities, it defines best practices and methodological guides and specifies the rules that must be followed at all levels of the organisation. It also defines the risk management and alert procedures in the event of an accident.

Thales produces risk analyses at all its sites and updates them on a regular basis according to its business activities, scientific and technical developments and emerging challenges. These analyses enable the Group's operational departments, with the support of HSE experts, to:

- check that the business activities carried out and the products used or placed on the market are compliant to ensure that facilities meet safety standards at all times;
- ensure that employees are not exposed to specific risks but know how to manage them if they are, and ensure that collective and individual means of protection are available;
- monitor business activities to make sure they are not likely to affect people and/or the environment through technological accidents;
- analyse and anticipate the impact of new regulations;
- make sure that employees and external partners adhere to instructions and procedures, including through the organisation of emergency scenario drills;
- integrate hygiene, health and safety into on-the-ground management.

Risk assessments and analyses of legal requirements and compliance obligations are based on active regulatory monitoring and formally documented at all Group facilities, as well as at external sites.

Furthermore, the deployment of lean culture combines HSE aspects with operational practices: team coordination, site inspections and improvement actions. At the same time, the Group's HSE experts provide support for the application of HSE standards at sites and worksites and also support employees to ensure consistency and monitoring on the ground, by drawing on the ISO 45001 management standard. For example, as at 31 December 2019, 77.5% of the Group's global workforce (consolidated with former Gemalto sites) worked on a site or in an organisation certified in this management standard (formerly OHSAS 18001).

Performance related to workplace health and safety (NFPS):

Number of employees working at OHSAS 18001/ISO 45001 certified sites in 2019: **77.5%**

- **CHANGE IN THE NUMBER OF EMPLOYEES WORKING AT OHSAS 18001/ISO 45001 SITES**

(a) Drop in the % after the integration of Gemalto.

Employee performance reviews and continuous improvement

Certified sites carry out internal audits so they can share best practices on an ongoing basis and improve the Group's HSE management systems. In 2019, the Thales's United States companies qualified 12 new in-house HSE auditors. Monitoring audits are carried out by external bodies to ensure an external review. The Group has reinforced its internal tools by introducing a system to assess HSE maturity. It has been in use at all entities since 2017 and will be adopted by the former Gemalto sites as from 2020. This tool bolsters HSE culture and the commitment of managers and employees so as to strengthen the performance of the Group and that of its partners. HSE maturity self-assessments are conducted at all industrial facilities and are supported by assessments made by a team of 22 qualified auditors. These assessments have been conducted at 30% of Group sites worldwide, representing 46% of premises and worksites considered the most at-risk since 2017.

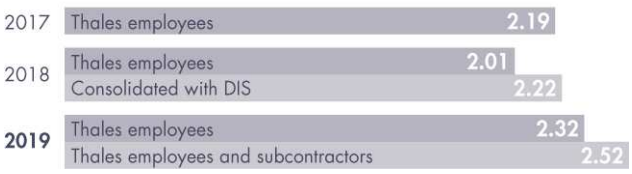
In addition, personal health and safety performance of Group employees, including former Gemalto sites, is monitored quarterly by the Group's Executive Committee and Operations and Operational Performance Committee (number of workplace accidents and achievement of accident reduction targets, accident severity and technological risk prevention).

The Group is mourning the tragic deaths of two of its employees in 2019. The first one was in France while the employee was commuting to work by bicycle, and second one was during an assignment in South America. These two tragic accidents led to specific internal communications aimed at increasing awareness about commuting to work and the security and support procedures for employees on assignment.

Performance related to workplace health and safety (NFPS):

Frequency rate of accidents at work worldwide: **2.32** in 2019 (**2.53** with subcontractors)

- **CHANGE IN FREQUENCY RATE (WORKING DAYS LOST DUE TO ACCIDENTS AT WORK)**



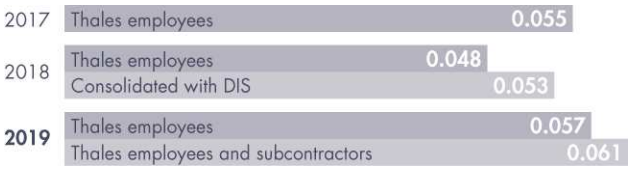
With regard to accidents at work, the frequency rate stood at 2.01 for 2018, a net improvement and relative decrease since 2012. The rates differ substantially for each country, depending in particular on the activities taking place there. This rate was reconsolidated at the end of 2018, after the integration of the former Gemalto facilities and now stands at 2.22. It dropped slightly in 2019 to 2.32.

The accident frequency rate was also consolidated in 2019 by including subcontractors who work permanently on our premises and at our worksites. This enables Thales to check whether safety practices are being properly developed in light of how

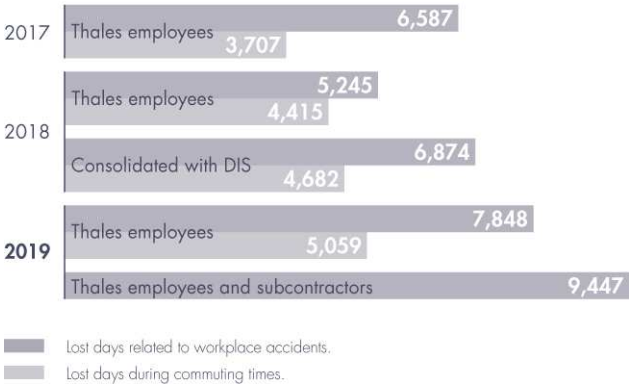
operations are conducted. Although this consolidation is not yet exhaustive in all countries, it impacts the Group accident frequency rate, raising it to 2.52.

Performance related to workplace health and safety (NFPS):
Severity rate of accidents at work worldwide: **0.057** in 2019 (**0.061** with subcontractors)

- **CHANGE IN SEVERITY RATE**



- **CHANGE IN THE NUMBER OF DAYS LOST**



The severity rate of accidents at work was 0.048 in 2018 and 0.053 for the entire Group after consolidation following the integration of the former Gemalto facilities.

In 2019, the severity rate of accidents at work was 0.057 (0.061 with the integration of subcontractors), which was a slight increase compared with the previous year.

49.3% of Group sites did not have any days of absence due to accidents at work in 2019, and therefore had frequency and severity rates of zero. For example, Thales Middle East celebrated its excellent performance in Qatar by rewarding the country's best project team, which logged four million hours worked without a lost-time accident on the Doha metro project. In June, its Qatari customer rewarded the Lusail Trail project team for the maturity of the safety culture it demonstrated throughout the project.

Furthermore, despite the inherent difficulty in defining the concept of occupational illness in various countries, the Group nevertheless consolidates this information for its entire scope of operations, as this figure is probably a little underestimated compared to the French definitions of occupational illness. The information on occupational illness is therefore for informational purposes only. There were 1,077 lost days in 2019.

Performance is managed by monitoring targets renewed for the period between 2019 and 2023, set by the Group's Executive Committee for all its entities:

Safety and security goals	2023 target 2019-2023 period	2018-2019 results
Maturity		
Completion rate of the assessment of the operational maturity of industrial sites	100%	100%
Workplace accidents		
Reduction in lost-time accidents (Tf1[(a)] for Thales employees)	- 30%	+ 4.5%

(a) Frequency rate of accidents at work with subsequent lost work time.

To support the achievement of these targets, in 2019, the Group defined an "HSE culture" roadmap which provides for the following (in addition to training of HSE managers and the deployment of the "HSE Masterclass" workshops mentioned above) for a period of four years:

- the reinforcement of actions to help all employees develop a sense of ownership regarding the importance of HSE issues;
- support of teams in implementing best practices on the ground.

5.5 A COMMITTED APPROACH TO MEET ENVIRONMENTAL CHALLENGES

5.5.1 General policy on environmental issues

5.5.1.1 Long-standing commitments renewed and strengthened

In line with its values, social responsibility strategy and *raison d'être* for building a future of trust for everyone, Thales has been committed to a proactive and responsible approach to environmental protection. This commitment, written into the Code of Ethics, has been a driver for the Group for over 15 years and is reflected in a policy to reduce the environmental impacts and risks of its various business activities worldwide and its products at all levels of the organisation. Over and above ensuring compliance with applicable regulations and anticipating future regulatory changes, the policy has four key areas of focus:

- preventing impacts on people and the environment from the Group's activities;
- factoring the environment into product policies and services;
- significantly reducing the Group's own carbon footprint, as well as that of its customers and civil society; and
- fostering a spirit of innovation with regard to the environment.

To turn its commitments into action, the Group has set performance targets since 2007. These targets were renewed by the Group Executive Committee at the beginning of 2019 and set for a five-year period (2019-2023) with an extension until 2030 for greenhouse gas reduction targets.

Thus, in line with its commitments and as announced, the Group has strengthened its environmental strategy through its new strategy for a low-carbon future, with ambitious targets that involve its entire value chain. This policy can be consulted on the Thales website and is set out in section 5.5.2.1.

The Group is also organised to manage the anticipated gradual replacement of hazardous substances banned for use which could result in the obsolescence of our products.

Performance related to environmental impacts in connection with the Group's activities and anticipation of environmental standards in product design (NFPS):

- **2019-2023 TARGETS**

	2019 target	2023 target	2030 target	2019 result	2018-2019 result
Natural resources					
Recycling rate of non-hazardous waste		75%		60%	
Eco-design					
New developments incorporating eco-design		100%		Indicator pending	
Percentage of Product Line Architects and Product Line Managers trained in or made aware of eco-design		75%		5%	
Climate					
Energy intensity (TOE/hours worked)	-3%				-4.6%
Reduction of direct operational emissions [(a)]		-20%	-40%		-1.8%
Reduction of indirect emissions[(a)]		- 7%	-15%		-1.7 %

(a) Expressed as an absolute value compared to 2018.

Detailed values are given in the table in section 5.5.3, "Environmental indicators".

5.5.1.2 Shared momentum

5.5.1.2.1 Global organisation

Aiming to consistently improve its environmental performance and prevent risks, the Group has set up an organisation that reflects its challenges: a Group Health Safety Environment (HSE) Department that is responsible for defining its strategy, policy, processes, methods and associated standards, and for supervising and monitoring their implementation across the Group and coordinates a dedicated global HSE network. This organisation is described in section 5.4.3.1.1.

5.5.1.2.2 Awareness, training and involvement of employees

E-learning modules are available to educate Group employees on the basic aspects of environmental risk control, general themes such as eco-responsibility or specific issues such as managing chemicals, labelling hazardous materials or issues related to climate change. To further support environmental knowledge within the Group, the various job families (environment, purchasing, design, sales, etc.) are offered additional training modules through the Thales Learning Hub.

The Group HSE Department also takes part in the various conventions organised by other business lines to explain HSE commitments, targets and action plans described according to operational teams as well as their implications on the overall Group.

In 2019, the Group paid special attention to raising the awareness and training of managerial teams on rolling out the HSE 2023 vision, to the commitment of management committees to climate issues and the roll out of the Group's low-carbon future policy.

5.5.1.2.3 Relations with stakeholders

Thales is committed to communicating in a totally transparent way with local authorities, as well as with its local neighbours and civil society, sharing its challenges with them. Procedures are also in place to receive, deal with and communicate alerts and requests swiftly. It is also possible to send questions to the Group's HSE Department using a dedicated e-mail address.

To meet the requirements of its stakeholders, civil society, investors, rating agencies and customers, Thales provides its environmental data on its website and also participates in reporting for the Carbon Disclosure Project(1) the Dow Jones Sustainability Index(2) and the MSCI (see Chapter 5.1).

In the course of its partnerships, particularly with schools, Thales promotes the preservation of the environment through programmes on climate change and natural resources, or by working with universities.

2019 was also an opportunity to showcase Thales's actions regarding the environment and workplace health and safety at international events such as the Paris-Le Bourget International Air Show and Vivatech. There were also discussions organised by the Canadian newspaper "Les Affaires" in Montreal.

Thales's teams around the world have also made commitments to protect the environment through local and volunteer actions. For example, in 2019, there was a beach-cleaning initiative in Doha, an innovative way to organise work called smart working in the United Kingdom, which allowed employees to cut down on commuting trips and optimise the use of buildings, as well as dialogue with local authorities to develop environmentally friendly modes of transport and safe traffic lanes for accessing the Thales Bordeaux campus.

Lastly, the Group's HSE teams have been contributing to the work of the International Aerospace Environmental Group and the Thales Executive Vice-President for Health, Safety and Environment chairs the Environmental and Sustainable Development Commission of the French Aerospace Industries Association (GIFAS).

5.5.1.3 A moderate and controlled environmental footprint of our business activities

5.5.1.3.1 Continuous improvement and prevention process

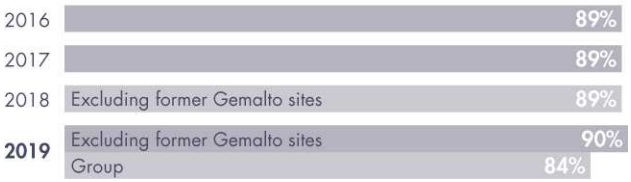
Thales has integrated the control of environmental impacts and risks in its Group management system, which is available to all employees and in all entities worldwide.

The Environmental Management System has been implemented at all sites as part of a dedicated process for ensuring the management and limitation of environmental risks and the impacts of operational activities (buildings, industrial facilities, equipment and worksites), the supply chain (purchases, supplier audits) and products delivered (product policy, design, bids, projects and services).

Integrated into the different processes governing the Group's activities, it defines best practices and methodological guides and specifies the rules that must be followed at all levels of the organisation. It also defines the risk management and alert procedures in the event of an accident.

Performance related to environmental impacts in connection with the Group's activities and anticipation of environmental standards in product design (NFPS):
Employees working at ISO 14001 sites in 2019: **84%**

- **CHANGES IN THE NUMBER OF EMPLOYEES WORKING ON AN ISO 14001 SITE**



At the end of 2019, 84% of the employees of the Group as it is currently organised who had integrated DIS sites were working on an ISO 14001-certified site. This means they manage the environmental impacts of products. Excluding DIS sites, this proportion was 90% in 2019. An annual audit schedule has been defined. Audits are conducted by the internal audit teams (audit policy, maturity assessment) as well as by external auditors for ISO 14001 certification or preventive inspections from insurers.

In addition, to provide support to sites, the eHSE risk management software suite was adapted to changes in standards, particularly in relation to taking into account of challenges of stakeholder demands, risks and opportunities related to environmental analysis and the effectiveness of actions and the associated resources.

Using a single tool, it allows all Group entities to report, record and manage action plans related to any environmental incidents or accidents that occur.

(1) Carbon Disclosure Project: a not-for-profit international organisation that enables companies, cities, countries and regions to measure and manage their environmental impacts and allows investors and political decision-makers to make more informed decisions by explaining the consequences of climate change to them.

(2) DJSI: Each year, the Dow Jones Sustainability Index rewards companies with the best performance according to economic, environmental and social criteria.

5.5.1.3.2 Environmental risk mapping

The risk of environmental impacts related to the Group's activities and the risk that product design may not keep up with environmental standards (see section 5.2, Risks Selected for the Non-Financial Performance Statement) are some of the risk factors that may impact the Group's financial position. For many years, Thales has conducted regular analyses and updates of environmental risks to keep pace with changes in its business activities, scientific and technical developments and emerging challenges and opportunities.

This analysis, incorporated into a risk map, is intended to:

- ensure that activities and products are compliant;
- ensure that employees and local residents are not exposed to health and environmental risks;
- check that activities do not present a threat to the environment;
- analyse and anticipate the impact of new regulations, including on product design.

Risk mapping consolidates an overview of areas for improvement, which are addressed via action plans either at Group level or locally. Since 2007, the Group's Risk Assessment Committee has overseen an annual evaluation of the risk management system by each of the Group's operational entities, leading, if necessary, to the development of an improvement plan in collaboration with Group experts. In consultation with the Group's global HSE Committee, it has made it possible to update the summary of the materiality of the impacts for the Group.

To enhance its analysis of the risk of damage to Group sites, Thales pursues an active prevention engineering policy with the support of external partners. The aim is to identify accidental strategic risks that could trigger a major loss and severely disrupt the supply chain, such as fire, industrial incidents, natural disasters, environmental damage, machinery breakdown and water damage. The prevention visits conducted on nearly 160 sites (2018 scope[1]) lead to recommendations aimed at reducing the probability of incidents or limiting their consequences.

The risks of material damage related to natural disasters and water stress (risks associated with climate change) are also analysed (see section 5.5.2.1.1).

Management of environmental risks also encompasses disposals or acquisitions of assets, in respect of which it is important to limit the type, value and duration of any guarantees provided or risks acquired.

Materiality of impacts	Industrial type activities	Tertiary type activities	Comments
Greenhouse gas	Low	Low	The Group's industrial activities are not energy-intensive. emissions (scope 1 and 2)
Soil pollution	Moderate	Insignificant	
Energy consumption	Low	Insignificant	
Production of non-hazardous waste	Low	Insignificant	
Production of hazardous waste	Low	Insignificant	Given its industrial activities, the production of hazardous waste is limited and represents only 20% of total waste production.
Water consumption	Low	Insignificant	
Emissions in water	Low	None	Service sites discharge their sanitary waste water into local utility networks like any other municipal resident. Industrial sites collect and process their waste water before discharge.
Atmospheric emissions	Insignificant	None	

5.5.2 Reduce the environmental impact across the entire value chain

5.5.2.1 Meeting the challenge of climate change

5.5.2.1.1 Adapting to climate change

The approach adopted by Thales for adapting to climate change is designed to reduce the Group's vulnerability to the effects of climate change such as the impacts of natural disasters (storms, floods, etc.), earthquakes, fires or the depletion of resources.

Over the past few years, Thales has assessed the exposure of Group sites to natural disasters as part of annual site visits focused on prevention. This analysis consists not only of identifying the potential risks of flooding, storms, earthquakes, and extreme drought but also of identifying the consequences of these events in terms of environmental impact, property damage, business continuity, etc.

Thales has mapped its risks related to water at around 160 sites worldwide, excluding Gemalto sites. This map will be updated in 2020 to include Gemalto sites. The analysis of existing and future risks included the social dimension (access to water and sanitation, availability of water for local inhabitants), economic aspects (conflict of use) and environmental concerns (water

[1] 2018 scope before the integration of Gemalto
[2] Agreement of French companies for the climate.

consumption relative to the level of water stress in the river basin). Only 10 sites out of more than 160 are located in vulnerable areas. The majority of them are offices, whose low water consumption only has a very minor impact.

In 2019, the Group had to deal with two events linked to climate/ natural disasters, which caused flooding at its facilities in Cannes, France and Rydalmere, Australia.

Thales is also involved in the study being conducted jointly by AFEP (French private companies association) and French think tank the Shift Project to analyse energy and climate scenarios. The study will be accompanied by a set of recommendations that will be issued to companies. A total of 15 AFEP members are involved in the study, which aims to produce a factual assessment of the situation based on shared observations to gain more understanding of climate change, which will be a major topic of reporting for companies, including Thales, in the years to come.

5.5.2.1.2 Commitment to a low-carbon future

As a continuation of its past actions, Thales has affirmed its commitment to a low-carbon future, thus solidifying the declarations made during the "Business Proposals for COP21" in 2015 and later during the French Business Climate Pledge[(2)] in 2017 and 2019.

The strategy for a low-carbon future, adopted in November 2019, is based on three pillars:

1 Reduce direct emissions and emissions from products

Thales aims to reduce its greenhouse gas emissions ambitiously with targets expressed in absolute values aligned with the 2°C trajectory and by involving its entire value chain[(3)]:

- 40% reduction in operational direct emissions in 2030 *(internal operations, employee mobility*) with an interim target of 20% in 2023;
- 15% reduction in indirect emissions in 2030 (*purchasing, use of Thales equipment by customers*) with an interim target of 7% in 2023.

2 Offer our customers innovative and eco-responsible functions and services that will enable them to reduce their own greenhouse gas emissions

- by developing smart traffic management solutions (rail, road, sea and air), that will reduce emissions;
- by optimising the energy efficiency of the digital world with the development of solutions designed to be energy-efficient by design for digital data science, algorithms and artificial intelligence.

3 Contribute to the best understanding of climatic phenomena thanks in particular to the development of dedicated spatial systems

The progress relating to these targets is measured according to 2018. There will be regular monitoring and an annual mapping of the Group's carbon footprint.

The strategy for a low-carbon future adopted by the Group was determined using the certified and globally recognised methodology of the Science-Based Targets Initiative (SBTi). This international initiative was launched by the World Wildlife Fund (WWF), the World Resources Institute (WRI) and the Carbon Disclosure Project (CDP). It is also recognised by the Task Force on Climate-related Financial Disclosure (TCFD) established by the G20. The application of this methodology is a voluntary initiative used to determine greenhouse gas reduction targets that are consistent with the 2°C climati c scenarios in relation to pre-industrial levels set out in the Paris Agreement during COP21 in 2015.

This policy calls for the commitment of all the company's employees, who are responsible for applying and deploying it in their day-to-day operations in the organisation.

The targets of this strategy as well as the related action plans were formulated in collaboration with multidisciplinary working groups for each of the main sources of the Group's greenhouse gas emissions (operations, products, purchasing and mobility).

The Group conducted many awareness-raising and training sessions for its senior managers and support functions in 2019 to facilitate the implementation of the policy (over 600 people involved). It also created specific governance bodies to oversee the achievement of the objectives set out above:

- creation of a Group carbon supervisory board with representatives from the the Group's Executive Committee, Human Resources Department, the HSE Department, Finance teams, Global Business Units, Ethics, Integrity and Corporate Responsibility Department as well as representatives from each carbon steering committee;
- creation of four carbon steering committees for each strategic source of emissions: operations, products, purchasing and mobility, headed by a sponsor for each of these areas. The steering committees report to the Group Supervisory Board.

This policy also applies to the activities of the former Gemalto sites, which were gradually integrated in 2019 and have joined the other Group sites for the consolidation of performance.

5.5.2.1.3 Reduce the carbon footprint of our operations

The Group's operational emissions (direct emissions), which take into account emissions related to energy consumption (electricity, fossil fuels and renewable energies) of Scope 1 and 2, total 230 $ktCO_2$. Scope 3 emissions relating to employee mobility (business trips) total 91 $ktCO_2$.

In 2018, the group set itself the target to reduce energy intensity by 3% (per hours worked) and exceeded its target with a reduction of 4.6% during the period between 2018 and 2019. The Group also decreased its ratio of energy efficiency to sales by 13% (energy consumption/sales) between 2015 and 2019.

In 2019, the Group reaffirmed its commitment to reduce these emissions by 20% by 2023 and 40% by 2030 with reference to 2018 and in absolute value.

Reduce our energy consumption

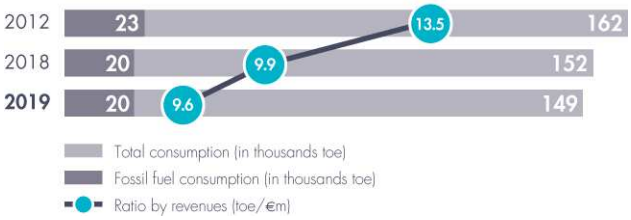
In recent years, Thales has implemented initiatives to reduce its energy consumption and use of chemicals, which will in turn reduce greenhouse gas emissions and pressure on resources related to its activities. In 2019, we carried out an in-depth review in order to develop specific action plans to reduce energy consumption by country. Seven countries, covering nearly 90% of

(3) The "2°C trajectory" means a reduction in greenhouse gas emissi ons that is compatible with the targets of the Paris Agreement to limit global warming to 2°C, with a methodology based on the recognised standard of Scien ce Based Targets.

operational emissions, created working groups (made up of operations, property management, human resources and HSE departments) to work together to create the action plans to be implemented as from 2020.

To boost this momentum, various audits were conducted at some of the sites with the highest consumption and have led to reduction programmes. This is the case in Australia, for example, and in France, where a programme involving specific audits and energy performance initiatives has been rolled out since 2018, leading to the identification and planning of more than 240 energy performance actions in 2019 for a theoretical gain of 30 GWh. These actions will continue to be rolled out in 2020.

- **CHANGE IN ENERGY CONSUMPTION***



* At constant 2012 scope.

Some Group entities have been awarded ISO 50001 certification for energy management systems. At the end of 2019, a total of 32 sites were certified, encompassing 24% of the Group's workforce. 22 sites had also obtained a building environmental performance certification (HQE, BREEAM, etc.) encompassing 16% of the Group's workforce.

The Group's carbon footprint has also been reduced by restricting the use of fossil fuels (gas, fuel oil and coal). Fuel consumption in relation to revenues continued to fall in 2019 (down 17.3% compared with 2015). The share of electricity from renewable energies rose by 2% to reach 24% (including former Gemalto sites).

Refurbishing and renovating certain buildings to higher ecological standards continued, as was the case for example in the new Group premises in San Jose in the United States (surface area divided by four, new work organisation, use of the best possible techniques available to reduce the environmental footprint of buildings). Along with energy, products with high global warming potential, used mainly in refrigeration systems, were subjected to monitoring and reduction plans.

Lastly, to limit greenhouse gas emissions, many sites have continued to replace high-emitting refrigerants with equipment containing less emitting refrigerants and have implemented action plans to limit leaks and, in some cases, even replaced the less efficient equipment. This helped reduce emissions by 26% between 2015 and 2019. In 2019, SF_6 only accounted for 3% of CO_2 emissions due to refrigerant fluids, versus 11% in 2017.

Reduce the carbon footprint related to employee mobility

As part of its policy for a low-carbon future, Thales has made a commitment to reduce emissions related to employee travel across the globe, whether for commuting or business trips. Emissions related to business trips are valued at 93 $ktCO_2$ in 2018 and 91 $ktCO_2$ in 2019, representing a 2% drop (including business trips by newly integrated Gemalto employees).

An action plan has therefore been developed to propose safe and eco-responsible alternatives to employee travel.

Work organisation

One of the priority focuses is the revamping of work organisation by proposing alternatives to employee travel such as telecommuting, co-working and the flex office. These solutions optimise the use of space, promote efficient remote working solutions that enable the holding of meetings via videoconferencing, prefer the organisation of remote conferences through simultaneous broadcasts on the internet (webcasts), all the while guaranteeing dynamic and strategic discussions.

Business travel

For all professional trips that cannot be avoided, the Group encourages the use of modes of transport with low carbon footprints (train, energy- efficient vehicles, etc.). It is currently studying ways to enable employees to share their trips through dedicated online platforms.

Commuting

Furthermore, one of the approaches under consideration to reduce the carbon footprint of employee commuting is to optimise employee travel to and between existing and future Thales sites, in order to guarantee accessibility via eco-friendly modes of transport (bicycles, public transport, electric vehicles, car-sharing and carpooling) while ensuring employee safety.

Company car policy

France, which accounts for about half the vehicle fleet, has adopted a new car policy that will be gradually applied in 2019 and will enter into full force in 2020. The preferred models are those that emit less than 120 g of CO_2/km. Diesel engines are excluded for all small vehicles or for employees who travel less than 15,000 km/year and all models qualify for petrol engines since July 2019.

5.5.2.1.4 Reduce our indirect emissions

The Group's indirect emissions include emissions related to the purchase of goods and services as well as emissions related to products and services sold (scope 3). In 2019, the Group made a commitment to reduce these emissions by 7% by 2023 and 15% by 2030 in absolute value against a 2018 baseline.

Reduce emissions related to the purchase of goods and services

As part of its policy for a low-carbon future, Thales has undertaken to reduce its emissions related to its purchases of goods and services (scope 3).

Emissions related to the purchase of goods and services were valued at 2,384 $ktCO_2e$ in 2018 and 2,289 $ktCO_2e$ in 2019, i.e. a 4% drop (excluding purchases of the newly integrated DIS entity. It will be integrated into the analysis in 2020). The method used is the method of financial emission factors associated with each Group purchasing category.

An action plan has been developed to reduce emissions related to its supply chain, in particular by establishing dialogue with its suppliers, in order to:

- gradually gather real data about greenhouse gas emissions related to the production of the goods and services purchased;
- know and carry out actions to reduce the carbon footprint of these purchases;
- prefer the use of suppliers with a low carbon footprint, in particular through a responsible purchasing policy (see section 5.7.3.1).

In addition, as a member of a dedicated working group within the International Aerospace Environmental Group (IAEG), Thales took part in the drafting of a sector methodology guide for calculating emissions related to the purchase of goods and services and capital goods.

Reduce emissions of our products and services sold

In 2019, continuing the work launched in 2017, Thales fine-tuned and completed its methodology for valuing the CO_2 emissions of its products and services sold. It did this by updating the number of standard scenarios of use of equipment, as well as the number of platform models differentiating between built-in equipment and equipment that is periodically transported.

The estimates of CO_2 emissions related to the use phase of products placed on the market in 2019 were 14.5 million tCO_2eq with an uncertainty of 15%.

The update of 2018 emissions using this refined methodology stood at 14.7 million tCO_2eq with a similar uncertainty.

The 2018 and 2019 values do not integrate the impact of products from the DIS GBU, the models for which have not been finalised, but will be integrated in 2020.

5.5.2.2 Environmentally friendly product and system solutions for customers

Thales has embarked on a process to develop eco-responsible products and systems that meet different needs, specifically:

- compliance with and anticipation of environmental regulations for the purpose of managing obsolescence and the associated industrial risk;
- creation of value for customers and differentiators for the market through innovation;
- reduction in environmental impacts and compliance with the Group's commitments.

The three main guidelines of this process are:

- consideration for the environment throughout a product's life cycle;
- the development of features to improve customers' environmental performance;
- the development of products that strengthen the management and understanding of environmental issues.

The process is combined with other key processes undertaken by the Group, which include the Product Policy, Engineering, Industry and Purchasing. The Group is also developing methods and tools to help product designers and architects make eco-responsible choices, leverage environmental information and verify that chosen solutions comply with regulatory requirements.

Life cycle and environmental impact analyses of products performed in previous years have shown that for most of them, beyond the necessary replacement of hazardous substances, it is the use phase that generates the greatest impacts, especially in terms of CO_2 emissions. The analyses also showed that actions to reduce CO_2 emissions generally lead to a reduction in other environmental impacts, thus identifying the real areas of intervention.

For products built into mobile platforms, the main parameters in terms of environmental impact were the nature of the movement (within the aerospace, naval, rail, etc.) and its characteristics (service life, percentage of time spent in motion, etc.). This was largely due to the impact of the weight being moved and, to a lesser extent, the platforms' consumption. For fixed products, the predominant parameter was energy consumption.

Performance related to the anticipation of environmental standards in product design (NFPS):
Percentage of Product Line Architects and Product Line Managers trained in or made aware of eco-design **5%**

Creating awareness of environmental issues and taking these into account in new product development are an essential part of eco-design policy. In 2019, the Group provided training tools and sessions to various Group entities that reached several hundred employees. Furthermore, we are currently rolling out sessions more specifically focused on making those responsible for the Group's product policies take environmental impacts into account.

5.5.2.2.1 Innovation and eco-design throughout the product life cycle

The way we account for environmental challenges in how products are developed must also create value for customers (improved operating conditions, reduction of total ownership costs, optimisation of end-of-life management) in order to be a part of an overall sustainable process. This aspect is being addressed specifically through the product policy and the eco-design initiative that has been put in place, which is aimed at reconciling value proposition with reduced environmental impact. In the case of most Thales products, environmental impact mostly occurs during the use phase of equipment and systems at customer sites.

Research conducted in recent years to characterise Thales's main products has identified two priority areas for improvement:

- the use of sustainable resources for product design and manufacturing, with a particular focus on hazardous substances in newly developed products;
- the reduction of the energy consumed and CO_2 emitted during the product use phase.

A cross-functional Steering Committee, coordinated by the HSE Department and comprising HSE coordinators from all the GBUs, ensures responsible management that the Group's Executive Committee monitors quarterly.

Performance related to the anticipation of environmental standards in product design (NFPS):
New developments incorporating eco-design: indicator pending

Due to the variety of the Group's business and the very large number of products in its portfolio and under development, the basis for calculation was not finalised in 2019 and actions are being implemented for 2020.

The table below presents examples of products whose environmental impacts have been reduced using the measures discussed above:

Improvement type	Product	Action and results obtained
Reduction in the weight of moved equipment, and the use and length of cables	Expansion of **efforts regarding weight and equipment** in the Aerospace segment.	The Multi-Application Critical Controller (MACC) has been specially designed to meet the needs of auxiliary systems to cover all systems through a single box. Replacing five LRUs with a single LRU helps reduce both weight and raw material use by more than 60%.
Revisions to equipment architecture	**Integration and miniaturisation of RESM** (Radar Electronic Support Measurement) systems for surface vessels.	For the second time, the weight of the latest generation used for frigates of intermediate size (frégates de défense et d'intervention - FDI) will be reduced by nearly 50%. Overall, the weight will have been reduced to a quarter of what it was less than 20 years ago. The length of the cables for these systems has been reduced by a factor of three. These gains are reflected in a reduction in ships' weight and consumption, which amount to several hundred tonnes of fuel and CO_2 after 20 years of operation. The Test Bedding Capability Review was completed at the end of 2019.
	Reduced **weight of flight-control computers**	The architecture of the A320 flight controls was compared to that of the previous version, enabling a transition from the use of nine computers to only six, while improving safety and reliability. This has allowed for a weight reduction of 24 kg (i.e., more than 30%) and a 7% reduction in associated consumption.
Power supply through renewable energy	Using **solar panels to recharge the batteries** of the G012 radar sensor	This mobile, autonomous radar is battery operated and requires around 100W of power. Solar panels may be used to charge the batteries, offering a particularly advantageous battery life which avoids the CO_2 emissions caused by the use of the power supply of a vehicle or another energy source.
Environmentally friendly innovation	**Multiple innovations geared towards the environment with the *Stratobus* project.**	Launched in 2016, *Stratobus* is a standalone geostationary stratospheric platform with numerous applications. It runs on solar energy only and does not require a launcher to be put into position. It is made from recyclable subsystems and the use of hydrogen or helium considerably reduces the risk of pollution in the event of an accident. It features many innovative technologies. In 2019, testing was successfully completed for innovative, extra light, flexible, high-yield photovoltaic modules. All of the disruptive technologies have been laboratory tested and the transition to a larger scale is continuing in 2020. The development of the *Stratobus* is scheduled to be completed in 2021 and a maiden flight of an operational model is planned for the end of 2023.
Use of recycled or bio-sourced plastic	**SIM cards, bank cards and card readers**	New manufacturing processes have been developed allowing for recycled plastic to be used for the first time to manufacture our products (PET[1] recycled before being released into the ocean and PS[2] recycled from electronics). Development as well as prototyping phases were completed in 2019. The start of production made it possible to manufacture more than 1 million cards out of recycled PET in 2019. This complements our offering of bank cards made from bio-sourced plastic.

5.5.2.2.2 Innovative solutions for sustainable mobility

The solutions Thales offers to air and ground transportation operators are designed to optimise operating efficiency for customers while limiting environmental impact (reducing fossil fuel consumption and helping to reduce the emission of pollutants such as carbon, sulphur and hydrogen oxides).

In another area, the development of simulators, beyond just being an approach to eco-design, makes it possible to reduce the number of flight hours required for pilot training.

Also in the field of operator training, Thales has developed equipment that can be mounted on weapon systems that allows for the full engagement of trainee troops while preserving the target. This prevents the unmanned aerial vehicle (UAV) used to simulate the scenario of each training from being destroyed.

Thales is a founding member of the Movin'On LAB, a Think and Do Tank made up of key players in the mobility ecosystem. Thales contributes to several of these focus groups by using its expertise in the areas of digital and cybersecurity to promote sustainable mobility.

Aeronautics

For over 30 years, from flying to air traffic management, Thales has been developing features that improve performance and lower environmental impact during all phases of flight:

- navigational aids to optimise flight paths, take-off and landing phases (especially taxiing) that take weather conditions into account, thus reducing noise, emissions and consumption;
- systems for smoother air traffic management with less waiting time in airport stacks.

The programmes undertaken to achieve these goals are described in the table below.

[1] PET: Polyethylene terephthalate.
[2] PS: Polystyrene

Programme	Impact
The **European SESAR programme** coordinates **R&D in the Air Traffic Management domain** and highlights major challenges facing air traffic, such as increasing the safety and capacity of air space and airports; reducing environmental impact; optimising road networks; sharing information with all stakeholders; and capitalising on ground-to-air exchanges.	Thales helps with **flight optimisation by providing more accurate information about an aircraft's position, for which software functionality was certified in 2018**. In 2019, Thales unveiled PureFlyt, a fully connected next-generation flight management system. PureFlyt will improve aircraft performance and responsiveness during complex flight phases. The system will also allow for real-time calculation of new trajectories or rapid response to programme changes, helping to reduce fuel consumption. Tests with pilot companies began in 2019 and the first results are expected in 2020.
In 2018, the European Union's Global Navigation Satellite System Agency (GNSS) officially launched the **EDG2E project (Equipment for Dual Frequency Galileo GPS and EGNOS**) with a consortium led by Thales.	The goal is to **optimise aviation navigation with the Galileo constellation**. The new EGNOS contract signed at the end of 2019 will allow the development of **new advanced features such as the geographic extension of SBAS** (Satellite-Based Augmentation System) coverage.
Also in 2018, Thales signed the **OneSKY programme in Australia**, which will offer a **global solution for controlling civil and military air traffic across 11% of the globe**.	One of the goals of OneSKY is to reduce environmental impacts by ensuring better air traffic management resulting in reduced fuel consumption. It is also expected to reduce CO_2 emissions and noise levels around airports. A review of the system's preliminary design has been finalised.
Thales is one of the partners working **in "Aviation X Lab", an aviation-specific collaborative innovation incubator** based in the United Arab Emirates.	Launched in November 2019, one of the Lab's two leading challenges is "*Carbon negative aviation: solution to radically reduce CO_2 emissions*".

Railways

In an increasingly urbanised world where 75% of the population is expected to live in cities by 2050, creating the conditions for sustainable mobility is one of the most effective and fundamental factors that goes beyond merely fighting to control CO_2 emissions.

Domain	Impact
Urban mobility	Thales provides systems to operators that simplify access to transport through interconnections, improve traffic flow, reduce consumption and increase network capacity. Artificial intelligence improves the understanding and prediction of passenger flows to optimise the transport offering and associated energy use.
Major railway lines	Thales continues to promote the development of the European Rail Traffic Management System (ERTMS) with the aim of making it an essential component of road to rail freight transfer like the systems delivered in Switzerland for the Lötschberg and Gothard tunnels.

The Thales signalling systems are evolving towards more decentralisation with the development of individualised object controllers (switches, signals) capable of directly steering actuators (part of the switching system). This leads to the use of fewer safety relays (3w per relay) and more importantly, reduced cable requirements.

Solution	Impact
Thales is working toward **a unified European specification of the automatic system** for train driving (in the European Shift2Rail Joint Undertaking)	By making **real-time, secure information exchange** between the railway system and the train driver possible, the systems **optimise driving and reduce CO_2 emissions**. This technology is key for future autonomous trains. Following the acquisition of Cubris, **more than 4,000 driver-assistance systems** have been deployed (DK, SW, UK, DE, FIN) that optimise train driving and CO_2 emissions.
D-Cube Concept	Developed by Thales Middle East to be applied to transport projects, the D-Cube concept reduces the carbon footprint of the deployment and maintenance phases by reducing car journeys between sites and depots, paper documentation, and by optimising cable management (90% reduction in scrap cable).

Smart cities

Data analysis makes cities function more efficiently. Thales's solutions collect data on such parameters as water and energy consumption, subscriptions to various public and private services, and transport users, allowing city authorities to improve residents' quality of life and reduce their environmental footprint. Through its data analysis solutions, Thales helps city planners and managers:

- leverage massive connected city data reservoirs to better understand and anticipate the needs of residents and offer them services that make their lives easier;
- inform users via traffic information systems, giving motorists and train passengers information on traffic conditions in near-real time;

• manage day-to-day operations more effectively and facilitate the coordination of various stakeholders, especially in the event of an emergency. These solutions also improve the environmental efficiency of cities with regard to water and energy consumption, transport use, etc.

5.5.2.2.3 Understanding the effects of climate change

Thales has been involved in the development of satellites, optical instruments and high-performance radar to monitor the environment and climate change since 1974. As such, it is a key player in observing the earth, understanding climate change and monitoring the environment.

Some of these observation methods are also being used for control and prevention. They make it possible to manage of fishery, agricultural and forest resources better and are supplemented by monitoring systems set up on ships and aircraft. Examples of some of the specific items that are being monitored so that action can be taken as needed to protect the environment include:

- pollution and tracking of pollution movements;
- forest fires and beach erosion;
- deforestation;
- illegal exploitation of mines or natural resources;
- improving maritime transport security.

They also include the entire family of geostationary weather satellites, optical measuring instruments, the ERS and COSMO-SkyMed radar satellites, altimetric satellites, and instruments used in oceanography and radars for monitoring ice. Today, Thales Alenia Space is in charge of the Sentinel radars S1 (A, B, C & D) and oceanographic S3 (A, B, C & D) and Jason CS S6.

Objectives	Project
Study of the topography of oceans and continental surface waters	SWOT **(Surface Water and Ocean Topography) is a major breakthrough in a segment with very high strategic, economic and societal stakes**. In oceanography, the satellite will provide measurements of ocean surface and wave height with higher resolution than its predecessor Jason satellites, **resulting in more accurate models of the interactions between oceans and the atmosphere**. The hydrology mission will evaluate continental surface water to study changes in water storage in wetlands, lakes and reservoirs, as well as flow rates in rivers. This system will be the world's first platform with controlled re-entry of the satellite at the end of life, leaving no debris in orbit, **in compliance with the law on space operations that will definitively enter into force in 2020. SWOT received preliminary approval for compliance with this law in December 2019. The launch of this satellite is scheduled for the end of 2021** on a Falcon 9 launcher.
Report on greenhouse gas emissions	**Between 2012 and 2016 under the** BridGES industrial chair **and then** from early 2018 under the Trace industrial chair, **which succeeded it, Thales Alenia Space conducted research with climate scientists, most notably from France's Laboratory of Climate and Environmental Sciences (LSCE) and Dynamic Meteorology Laboratory (LMD)**, on optimising space mission concepts related to modelling **(inversion, transport and radiative transfer models).** This will allow high precision measurements of anthropogenic greenhouse gas emissions t the scale of a single industrial site to that of an entire country, and to ensure the effectiveness of emission reduction policies. Thales Alenia Space also conducts **research with the French National Centre for Space Studies (CNES), the European Commission** (the ongoing CHE: H2020 project) and internal development projects.
Measuring anthropogenic CO_2 emissions	**The programme that will position Europe as a major (and independent) contributor to** anthropogenic CO_2 emissions measuring is CO_2M**, the future Copernicus mission that is still being designed**. It will be the only CO_2 **imager with a swath width of approximately 200 km. Its advantage over other probes is that** it will be able to cover considerably more anthropogenic emissions in a single sweep. **After an A/B1 phase, Thales Alenia Space** is preparing, in partnership, a **proposal for the phase B2/CD** of CO_2M-Copernicus.

5.5.2.2.4 Obsolescence and replacement of hazardous materials

The increase of and changes in environmental regulations have led to the restriction - and, in some cases, prohibition - of the use of certain substances. This has led to the growing risk that it may become impossible to manufacture or provide through-life support to a system or piece of equipment. For this reason, Thales has taken a proactive approach to its processes and practices which involves anticipating risks and implementing the measures required to manage them, with particular attention paid to technologies requiring the use of substances on the European REACh regulation Candidate List.

This approach relies on centralised regulatory monitoring that is constantly increasing in scope. The resulting information is then summarised and disseminated in the form of an alert stating the priority and criticality of the issue to all the Thales stakeholders concerned. It includes the collection of data on substances directly concerned by the regulations and which are present in the components and sub-components used in the products and solutions developed by the Group. All of these data are entered into Thales's central database (accessible to all Group entities) and in the PLM (product life cycle management) and ERP (enterprise resource planning) systems of these entities. An analysis tool developed by Thales enables the cross-referencing of all of this information to ensure compliance with regulations and perform the impact analyses needed to anticipate the risk of obsolescence.

Thales has developed replacement plans to keep obsolescence risks under control. These investigations into replacements, produced internally or with manufacturing partners, aim to assess the performance of alternative industrial processes and ensure that manufactured products remain compliant with technical requirements. In some cases, it is necessary to redesign products and interfaces and rescope industrial tools, a process that takes place over several years.

Performance related to the anticipation of environmental standards in product design (NFPS):
Industrial processes affected by the replacement of chromates - adherence to schedule regarding the cut-off date

In the case of chromates, for example, Thales began researching replacement processes in 2013 for more than 30 industrial processes used in its applications, making sure that its subcontractors would have the ability to handle them. To date, Thales has allocated more than €7 million to researching and rolling out replacement solutions for equipment and systems. It monitors the actual progress of these replacements, which were between 50% and 100% complete at the end of 2019, depending on the

segment, to ensure completion by the required deadline. The Group also evaluates exposure to the potential risks linked to other substances such as lead and cadmium.

For rare situations without any appropriate technical solution at this time, Thales makes sure that it is covered by REACh authorisation dossiers and keeps track of decisions taken by the European Commission as well as compliance with the conditions of use linked to these authorisations.

5.5.2.3 Sound resource management

5.5.2.3.1 Moderate use of raw materials

Thales designs, develops and supplies equipment, systems and services in aeronautics, space, transport, security and defence. The raw materials consumed are natural resources and various materials used by Thales and its subcontractors to manufacture products.

Research into new technologies and the design of new equipment involve restricting the use of materials to cut down on size and weight and to facilitate dismantling (see section 5.5.2.2.2) and finding replacement solutions for substances that are the most toxic to human health and the environment (see section 5.5.2.2.4). These requirements are conveyed to suppliers of the equipment and components that Thales assembles at its sites. The manufacturing processes are also optimised to limit loss of materials and amounts of discharge and waste.

For example, using standard dimensions to produce plates and structural sections leads to fewer “shavings”. Moreover, Thales has been using additive manufacturing (also called 3D printing) since 2017 to manufacture parts for the space sector. There are ongoing studies to expand the scope of use of this technique, particularly in aeronautics. This technology, combined with the use of topological optimisation tools, limits the quantity of materials used to address a given need. It also makes it easier to repair parts and optimises service offerings.

Thales has reduced the use of materials such as wood, cardboard and plastic by limiting and reusing packaging, both for supplying Thales sites and for transferring equipment from one site to another.

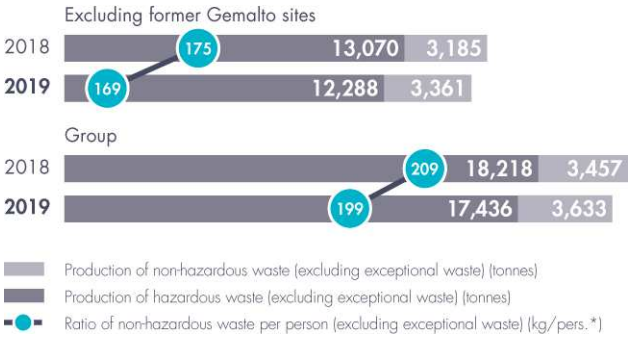
Thales also pays close attention to the availability of critical resources and responds to surveys conducted by European and French authorities. Thales has also reduced the use of materials such as wood, cardboard and plastic by limiting and reusing packaging, both for supplying Thales sites and for transferring equipment from one site to another.

5.5.2.3.2 Reducing, reusing and recycling waste

Thales’s responsible waste management commitments have sought to reduce the quantity of waste the company produces, limit the amount of waste sent to landfill and optimise recycling. These commitments have helped reduce total waste production per person by 5% between 2018 and 2019 (excluding exceptional waste), with a 6% drop in gross production (excluding former Gemalto sites) and 4% for the entire consolidated Group.

The landfilling rate also dropped between 2012 and 2019 from 25% to 14% (all waste including exceptional waste, excluding former Gemalto sites). When Gemalto sites are included, the rate dropped from 19% to 17% between 2018 and 2019.

- **CHANGE IN WASTE PRODUCTION EXCLUDING EXCEPTIONAL WASTE***



* Based on the average annual headcount on site, including permanent employees, temporary employees, trainees and service providers permanently on site and excluding employees on permanent assignment or based at external sites.

As a result of measures taken, 80% of all waste was recovered and 60% of non-hazardous waste was recycled in 2019 (excluding exceptional waste).

To achieve this, various measures related to selective waste sorting, the search for recycling channels or optimum treatment channels and campaigns to change habits and behaviour (printing policy and reusing cardboard and other packaging, for example) have been introduced. These measures are aimed at reducing waste production and improving waste treatment. For example, the amount of paper and packaging waste fell by 3.4% compared to 2018.

Certain Group sites reuse packaging either for supplying Thales sites or for transferring equipment from one site to another.

Hazardous waste has also been a specific target. Dedicated areas for collection and storage have helped to manage this type of waste prior to disposal. The quantity of hazardous waste (excluding exceptional waste) has fallen by 17% since 2015. However, it increased Group-wide by 5% between 2018 and 2019. This increase primarily stems from:

- defective sewage treatment plants at two sites, which led to the disposal of this sewage as hazardous wastes at an external plant instead of being treated on site;
- an increase in waste electrical and electronic equipment after old machines were replaced at numerous sites.

Lastly, the majority of Thales sites have opted for food service companies to manage their corporate restaurants, therefore the Group does not have a direct impact on food waste. Nevertheless, Thales, works with these partner companies to set up responsible handling solutions that encourage less food waste, as does all its partners.

5.5.2.3.3 Preserving water

Water is a vital resource to be protected. Accordingly, since 2000, Thales has been engaged in a far-reaching programme to reduce its consumption by, among other things, dealing with leaks, centralising the management of its networks, replacing water-intensive equipment, optimising industrial processes and recycling water for reuse in industrial processes. Risks linked to water management have not been identified as material at Group level.

Furthermore, for the first time in 2019, Thales completed the CDP's water security questionnaire, which helps assess how current and future water management risks are being accounted for, at both strategic and usage levels, including water reduction targets. Thales obtained a B- grade, which corresponds to the industry average.

Change	2012-2018	2015-2018	2018-2019
Water consumption (m^3)	-13%	-2%	+0.3%[a)]

(a) Same after consolidation with Gemalto's consumption in 2019 .

The Group's overall consumption is down 13% since 2012 (excluding former Gemalto sites), confirming the collective efforts made by all sites (including the Mulwala site, which alone accounts for 32% of the Group's water consumption). These achievements are due to increased employee awareness and to making widespread use of best practices. Water consumption between 2018 and 2019 is stable, despite the integration of Gemalto.

5.5.2.4 Limiting emissions and managing industrial risks

5.5.2.4.1 Impact of our industrial activities

Industrial wastewater discharge	Thales's activities generate little in the way of industrial wastewater: 94% of wastewater is discharged from seven sites and 67% comes from the Mulwala, Australia site alone. Consolidated (excluding former Gemalto sites) wastewater discharges have fallen by 21% compared with 2012 as a result of ongoing plant optimisation, continuous modernisation measures, and wastewater recycling and reuse. The DIS sites account for less than 1% of the Group's industrial wastewater discharges.
Industrial atmospheric emissions	In general, Thales's activities do not generate atmospheric emissions, except for activities at a few specific industrial sites or activities linked to site operations (for example, heating). A few sites release industrial atmospheric emissions which are channelled and treated where necessary (with filters, scrubbers, etc.) and regularly checked. This primarily relates to solvents. The quantities of solvents used are limited. A total of 80 (out of 180) sites purchase solvents, with eight of those sites accounting for 86% of purchases. The Mulwala site alone accounts for 71% of these purchases and 81% of emissions resulting from the manufacture of propellants requiring a large quantity of solvents. In 2019, the commissioning of a new process at the Mulwala site led to increased production and consequently a significant 39% increase in associated emissions compared to 2018. It should be noted that several sites have stopped using solvents or replaced them with detergents.
Combating noise and odour pollution	While Thales's activities generate very little noise or odour pollution, measures are still put in place to limit them. Cooling systems are the most common sources of noise pollution, and precautions are taken to limit noise levels associated with this equipment. Sound levels are checked periodically. The few sites where noise is a particular issue are equipped with acoustic attenuation systems, or only conduct noise-generating activities at specific times. The increased use of computer simulations for pyrotechnic testing, for example, also helps to reduce noise. Thales's activities do not generally generate odours, with the exception of five sites. The three sites that generate unpleasant odours have installed systems to capture atmospheric emissions that are regularly checked.

5.5.2.4.2 Land use and pollution prevention

Since 1998, the Group has implemented a responsible pollution risk and soil erosion management policy. Few sites have shown significant signs of contamination, and where contamination has been identified, it is usually due to earlier industrial activities (some of which are independent of Thales and related to past acquisitions). If any new situations of contamination are discovered, they will be handled consistently with this investigation and responsible management policy.

When available techniques allow, steps are taken to clean up pollution. The impact on available resources and the environment is then reduced to a minimum by using on-site treatment rather than transferring pollution to another site.

The water table is periodically monitored at industrial sites and sites located in industrial areas. The cases in question are monitored in a coordinated manner by the Group's HSE Department in conjunction with the Legal Department.

The Group considers environmental criteria when choosing locations for its sites, looking at climate and geological risks, the impact of its activities on the human and natural environment, and land use. The objective is to optimise compatibility between the Group's activities and the environment. Some activities, such as pyrotechnics, require a specific site due to the risks those activities generate and need to be bounded by extensive security areas and suitable geology. These areas account for approximately 79% of the area occupied by the Group (two sites in Australia and one in France). However, steps are taken to enhance their ecological value either by promoting biodiversity or by converting them into pasture or farm land. Excluding pyrotechnic sites, the Group's other sites are mainly located in industrial zones, which make up 51% of surface area.

5.5.2.4.3 Industrial risk management

Only one Group site in Europe is a Seveso upper-tier establishment. Three other sites are classified Seveso lower-tier, while two sites in Australia are classified as high industrial risk. Safety management systems (including measures such as a major accident prevention policy, a contingency plan, and a risk assessment and the associated risk management scenarios) are in place and are regularly inspected by the country HSE departments and regulatory authorities in accordance with applicable regulations. After the Lubrisol accident in Rouen, France, the Group assessed the regulatory status of the only four Seveso sites owned by Thales in Europe.

The insurance and compensation policies for victims of accidents, including technological accidents for which the Group may be liable, cover all sites insured by the Group, including Seveso-listed sites. Risks arising from accidents (such as fire or pollution) are managed locally, with the support of the relevant Group departments, if necessary. Accident prevention and management procedures, as well as procedures for handling specific complaints, are in place for such cases. An accident reporting tool makes it possible to analyse accidents that do occur and draw suitable lessons from them. In 2019, only eight incidents occurred, but none had a significant impact on health or the environment.

5.5.2.5 Protecting biodiversity

The preservation of species, their habitat and ecosystems, the preferential use of areas dedicated to flora and the protection of historical and natural heritage are taken into account in all decisions to help protect the environment. As early as 2006, Thales drew up a preliminary inventory of its sites in France located near or within protected areas and, at certain sites, assessed the impact of business activities on biodiversity and the degree to which the site depends on the surrounding ecosystem services provided by nature. It then consolidated this information into a map of biodiversity-related risks for Group sites located in the most vulnerable areas. Although the overall impact of the Group's activities on biodiversity is low, the Group encourages its sites and employees to continue to promote action to protect biodiversity. Inventories are carried out at some sites by volunteers or in partnership with local authorities or biodiversity protection agencies, and *ad hoc* management measures are put in place.

Several Australian sites have had habitat management plans in place for several years now.

Numerous sites have outdoor features to preserve the natural habitat and protect fauna (with bird boxes, beehives, feeders, species surveys by an expert, etc.) or reintroduce native tree species, thereby guaranteeing a balance of habitats in terms of biodiversity and offering a relatively safe and protected habitat for a wide variety of plants, fungi and animals.

For sites with large areas of plains or forests, special precautions are taken to protect fauna and flora by promoting environmentally friendly and natural techniques for mowing and grazing and by eliminating crop protection products. Other sites raise employee awareness through photography exhibitions on forests, agroforestry and the species that can be found on site.

5.5.2.6 Disputes and environmental alerts

Thales was not cited in any environmental dispute that gave rise to compensation in 2018 and made no generic guarantees in relation to the environment. In addition, seven sites were the subject of a letter, request or environmental complaint (as defined by ISO 14001) from local authorities, employees or third parties. These have either been or are being dealt with. At 31 December 2019, total provisions for environmental risks at Group level amounted to €5 million.

5.5.3 Environmental indicators

The table below includes a number of items for assessing trends in Thales's environmental performance on a comparable basis. In 2018, the scope comprised 29 countries and 181 sites. This scope represents 94% of revenues and 95% of the Group's workforce. 2018 is the base year for all 2019-2023 goals. This chapter was reviewed for fair presentation by Mazars. Most of the indicators included in the table below are subject to a moderate assurance conclusion, the list of which is presented in the detailed opinion in section 5.8 Independent Third Party Report.

	Units	2015-2018 change	2018 Review w/o former Gemalto	2018	2019	2018-2019 change
Energy						
Electricity consumption	Thousand toe	0.3%	131	164	162	-1%
Electricity consumption per revenues	Toe/€m	-11%	8.5	9.5	9.3	-2%
Fossil fuel consumption	Thousand toe	-3.4%	20.4	21.6	21.1	-2%
Fossil fuel consumption per revenues	toe/€m	-15%	1.32	1.26	1.21	-4%
Total energy consumption	Thousand toe	0.50%	154	188	185	-2%
Total energy consumption per revenues	toe/€m	-11%	9.98	10.96	10.69	-2.5%
Total energy consumption per hours worked	toe/thousand hours worked	-	-	1.46	1.39	-4.6%
Water						
Water consumption	Thousand m³	-2%	1,502	1,771	1,776	0%
Water consumption per revenues	m³/€m	-14%	97.1	103.2	102.4	-1%
Waste						
Total waste production(a)	Tonnes	2%	15,278	21,675	21,069	-3%
Total waste production per revenues(a)	Kg/€m	-10%	0.99	1.26	1.21	-4%
Ratio of non-hazardous waste(a)	%	8%	79	82	72	-12%
Non-hazardous waste per person(a)	Kg/pers.	4%	166.8	209.2	198.7	-5%
Non-hazardous waste recycling rate	%	-8%	59%	58%	65%	12%
Non-hazardous waste recycling rate(a)	%	2.7%	58%	57%	60%	5%
Hazardous waste recycling rate	%	112%	40%	38%	45%	18%
Industrial discharge						
Industrial wastewater discharge	Thousand m³	12%	627	629	566	-10%
Atmospheric emissions (solvents)	Tonnes	-65%	325	351	488	39%
CO_2 emissions directly related to operations						
CO_2 emissions from energy use	Thousand tonnes CO_2	-0.3%	186	207	202	-1.8%
CO_2 emissions from energy use per revenues	T CO_2/€m	-12%	12.1	12.1	11.6	-2.8%
CO_2 emissions linked to Kyoto Protocol substances and R22	Thousand tonnes CO_2	-29%	25	25	26	5%
O/w CO_2 emissions linked to SF_6	Thousand tonnes CO_2	-81%	1.3	1.3	0.7	-46%
CO_2 emissions from business travel	Thousand tonnes CO_2	-2%	77	93	91	-2%
CO_2 emissions from business travel per revenues	Kg CO_2/€m	-14%	5.0	5.4	5.2	-4%
Direct CO_2 emissions from operations	Thousand tonnes CO_2	-4%	290	327	320	-1.8%
Indirect CO_2 emissions						
CO_2 emissions from the purchase of goods and services	Thousand tonnes CO_2	-	-	2,384	2,289	-4%
CO_2 emissions from the use phase of products sold	Million tonnes CO_2	-	-	14.7	14.5	-1.4%
Indirect CO_2 emissions	Million tonnes CO_2	-	-	17.084	16.789	-1.7%
CO_2 scope according to GHG Protocol						
Scope 1 (gas, fuel oil, coal, substances, mobile energy sources)	Thousand tonnes CO_2	-14%	75	79	78	-1%
Scope 2 (electricity, steam)	Thousand tonnes CO_2	1%	138	155	152	-1.5%
Scope 3 (business travel, purchase of goods and services, use phase of products)	Thousand tonnes CO_2	-	-	17,176.8175	16,879.874	-1.7%
TOTAL SCOPES 1, 2 AND 3	**THOUSAND TONNES CO_2**	**-**	**-**	**17,411.31**	**17,109.216**	**-1.7%**
TOTAL SCOPES 1, 2 AND 3 PER REVENUES	**TONNES CO_2/€M**	**-**	**-**	**1.014**	**0.986**	**-2.7%**
Other disclosures						
ISO 14001-certified sites		-	118	-	138	-
Staff concerned as percentage of total workforce	%	-	89%	-	84%	-

(a) Excluding exceptional waste.

5.7 AN ORGANISATION THAT IS PROACTIVE TOWARDS ITS STAKEHOLDERS

5.7.3 Incorporating the challenges of corporate responsibility in the supply chain

Thales designs and produces integrated solutions consisting of equipment, sub-systems or full systems, most of which are developed with the help of external partners. For example, purchases account for nearly half of the Group's revenues and, in a reflection of the Group's industrial footprint, more than 80% of purchases come from France, Europe and North America.

The quality and reliability of the supply chain therefore actively contribute to Thales's added value and to customer satisfaction, and as a result, the company has to adopt a responsible approach to this issue.

(a) Including €1.4 billion from the DIS GBU – formerly Gemalto.

5.7.3.1 Sustainable procurement

5.7.3.1.1 A stringent procurement policy

Thales's procurement policy is designed such that the company works with a base of efficient, reliable suppliers who strictly comply with the domestic and international laws and regulations that apply to them, including international trade rules (export control, for example) and environmental, personal health and safety, ethical and social obligations. This policy and the Group's procurement procedures are applicable to all suppliers and sub-contractors.

It is based on ten sustainable procurement practices specified in the Responsible Supplier Relations Charter, which Thales signed in 2010. The aim of the charter is to develop a balanced relationship based on trust between suppliers and customers with full knowledge and respect for their respective rights and obligations. To this end, the Group has also appointed an internal mediator to liaise with suppliers to avoid or quickly resolve potential conflicts that could arise with them. The Thales internal mediator's actions are also in line with the initiatives carried out by the mediator of the French Aerospace industries association, GIFAS.

In France, Thales's commitment in this area was recognised in 2012 when it received the "Responsible Supplier Relations and Procurement Label" from Le Médiateur des Entreprises (the national French business mediation department) and the *Conseil National des Achats* (French purchasing board). Awarded for a period of three years, this label recognises companies committed to forging structured, collaborative relationships with their suppliers. Thales has received this label for the 2012-2015 and 2015-2018 periods and applied for renewal in 2019.

In 2019, Thales also published a document detailing its sustainable procurement commitments, which are an essential part of its corporate responsibility policy.

In 2019, Thales also formalised its sustainable procurement commitments, which are central to the Group's corporate responsibility policy.

Lastly, as part of Thales's strategy to build a low-carbon future, the Group Purchasing Department has defined a number of goals to be reached by 2020, 2023 and 2030 in order to reduce the carbon footprint of its supply chain (see section 5.5.2.1.3).

5.7.3.1.2 A responsible supply chain

Thales requires its suppliers around the world to adhere to its corporate responsibility approach by signing an Integrity and Corporate Responsibility Charter that requires them to uphold the principles of Thales's Code of Ethics, the principles of the United Nations Global Compact and OECD guidelines.

In 2019, Thales began to share the new version of this Charter with its suppliers. The Charter is intended to establish a relational and collaborative framework based on essential principles, such as human rights, employment practices, combatting corruption and influence peddling, managing conflicts of interest, the protection of information, the protection of the environment, compliance with health and safety rules, attention paid to ethics, etc.

As the rollout of this new Charter began at the end of the year, 2019 should be considered a transition year; specific data will be available when the figures for 2020 are published.

Thales suppliers must also complete a self-assessment questionnaire that evaluates their corporate responsibility performance (nine questions on labour standards, five on environmental protection, two on corporate governance, one on ethical business conduct and one on export control). They are awarded an overall score which indicates their non-financial performance.

Year	Number of suppliers that have signed the Purchasing and Corporate Responsibility Charter	Supplier performance in the areas of corporate responsibility (labour standards, the environment, corporate governance, business ethics and export control) (average score out of 10)
2019	17,000	8.7
2018	15,610	8.7
2017	12,700	8.3
2016	10,500	8.7
2015	7,660	8.8

Moreover, as part of the selection process, potential suppliers are asked to complete a self-assessment enabling them to measure the maturity of their environmental management and commit to a process of continuous improvement. This self-assessment may be verified during supplier audits conducted by Thales, which may also lead to a request for an improvement plan or even prompt Thales to decide to remove a supplier from its list if certain essential criteria are not met. In this regard, Thales has already been working closely with certain suppliers for a number of years to jointly define and implement progress plans.

To achieve the goal of a responsible supply chain, the Group Purchasing Department set an objective of assessing the environmental management maturity of all its class A suppliers (group of suppliers accounting for 80% of purchasing volume), as well as each of its new suppliers, by the end of 2018. At year-end 2019, it had assessed 11,800 supplier facilities. However, supplier classification changed significantly in 2019 and the A, B and C categories were abandoned; the percentages referring to class A are therefore no longer available for this financial year.

New indicators related to the "Sustainable Procurement" goals will be published in the 2020 Universal Registration Document.

Year	Number of supplier sites assessed for environmental maturity	Class A suppliers assessed for environmental maturity
2019	11,800	N/A (a)
2018	10,400	84%
2017	7,500	67%
2016	4,900	60%
2015	2,400	50%

(a) To achieve the goal of a responsible supply chain, the Group Purchasing Department set an objective of assessing the environmental management maturity of all its class A suppliers (group of suppliers accounting for 80% of purchasing volume), as well as each of its new suppliers, by the end of 2018. At year-end 2019, it had assessed 11,800 supplier facilities. However, supplier classification changed significantly in 2019 and the A, B and C categories were abandoned; the percentages referring to class A are therefore no longer available for this financial year.

During calls for tenders, environmental responsibility is one of the procurement requirements and is included in the weighted criteria for supplier selection.

These initiatives, which are aimed at developing a more responsible supply chain, are fully in line with the implementation of France's law on contracting companies' duty of care (see section 5.7.3.2).

To assess the capacity of its suppliers to address these key challenges, the Group has improved the management of its supply chain risks by setting up specific tools such as enhanced questionnaires, due diligence, etc., specifically with regard to the duty of care and anti-corruption and influence peddling compliance programmes; supplier commitment to addressing these corporate responsibility challenges is a major component of the long-term relationships established with Thales.

Just as for the new Charter, since the rollout of these specific tools for improving supply chain risk management began at the end of the year, 2019 should be considered a transition year; accurate data on these issues will be available when the figures for 2020 are published.

SPOTLIGHT: SPECIAL ATTENTION PAID TO CONFLICT MINERALS

Although Thales is not subject to section 1502 of the US Dodd-Frank Act, since it is not listed on the US financial market, the Group still exercises due diligence when it comes to conflict minerals to meet customer expectations and comply with its commitments.

Thales submits these queries to its supply chain to ensure that the origin of the metals covered by these regulations (tin, tantalum, tungsten and gold) can be verified to the greatest extent possible.

In 2019, Thales organised a survey to identify suppliers likely to use these metals in their manufacturing processes to check whether they have a policy on conflict minerals and/or an appropriate mechanism for answering questions on the matter.

If requested by a customer, Group entities fill in and provide the "Conflict Minerals Reporting Template" form.

Performance related to ensuring supplier compliance with corporate responsibility issues (for 2019) (NFPS)

Supplier performance in the area of corporate responsibility (*average score out of a total of 10*): **8.7**

This performance serves as a foundation for the multi-year targets set for the upcoming period from 2020-2023 that have been finalised in conjunction with internal stakeholders.

Sustainable procurement: Goals for 201945-2023	**2023 target**
Percentage of new suppliers committed to the principles of Thales's new Integrity & Corporate Responsibility Charter	100%
Percentage of new suppliers assessed among those considered as "at risk" according to the duty of care mapping	100%

(a) 2019 is transition year.

5.7.3.2 Duty of care plan

France's law No. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting companies requires the implementation of "reasonable vigilance measures to identify risks and prevent serious violations of Human Rights and fundamental freedoms, the health and safety of persons and the environment resulting from the activities of the company or those of the companies it controls, directly or indirectly, as well as the activities of subcontractors or suppliers with whom the company has an established business relationship, when such activities are related to this relationship".

Article L. 225-104-1 paragraph 4 of the French Commercial Code requires that the requisite vigilance measures be grouped together in a "duty of care" plan that contains the following:

1. A risk map to identify, analyse and prioritise risks (see section 5.7.3.2.1).
2. Procedures for regular assessment of the situation of subsidiaries, subcontractors or suppliers with whom the company has an established business relationship, in respect of the risk map (see section 5.7.3.2.2).
3. Appropriate measures to mitigate risks or prevent serious violations (see section 5.7.3.2.3).
4. A mechanism for issuing or collecting alerts on the existence or occurrence of risks (see section 5.7.3.2.4).
5. A system for monitoring the measures implemented and assessing their effectiveness (see section 5.7.3.2.4).

Thales formed an internal, multidisciplinary working group to define its duty of care plan, also drawing on the work of the industry-specific trade associations of which it is a member. (French Aerospace Industries Association, GIFAS).

5.7.3.2.1 Risk map related to the duty of care

Thales worked to identify risks that could potentially seriously violate Human Rights (child labour, forced or clandestine labour, wages below legal minimums, sexual harassment and/or violence in the workplace, failure to comply with the ILO's rules on the maximum number of work hours and/or rest, failure to comply with the principle of equal treatment at work, failure to respect employees' privacy), the health and safety of workers (lack of prevention or monitoring of serious work accidents, the lack of an emergency policy in the event of an accident in the workplace, the absence of a policy or monitoring of health and safety in the workplace), as well as the environment (significant pollution due to industrial activities, non-compliance with regulations on hazardous products).

The risk assessment was conducted based on the Thales operations described in section 5.2 and on the activities of its suppliers and subcontractors with which Thales maintains an established commercial relationship that could present a serious risk in each of the risk categories cited above (e.g., operations that pollute or are hazardous for human health or the environment, services related to the management of manufacturing sites, temporary or construction work, etc.) and at-risk countries identified using the external benchmarks of the Environmental Performance Index (EPI), the International Trade Union Confederation (ITUC), and the Global Slavery Index.

5.7.3.2.2 Procedures for regularly assessing the situation of subsidiaries, subcontractors or suppliers with which an established commercial relationship is maintained

The situation of Group subsidiaries whose activities could potentially seriously violate Human Rights, the health and safety of persons and the environment is evaluated using an internal control questionnaire, the Yearly Attestation Letter (YAL), which is sent out annually by the Audit, Risks & Internal Control Department to the Group's operating entities (108 questionnaires sent out in 2019). The YAL questionnaire was updated in 2019 to incorporate the risks covered by the duty of care law.

The situation of the suppliers and subcontractors with which Thales maintains an established commercial relationship whose activities could potentially seriously impact the aforementioned areas is the subject of a preliminary, systematic and in-depth assessment by the Thales Purchasing Department supported by an expert service provider in this field. This assessment consists of responses to several detailed questionnaires prepared in collaboration with the International Aerospace Environmental Group and the French Aerospace Industries Association (GIFAS), the provision of supporting documents (Code of Ethics, compliance process for suppliers or subcontractors, etc.), and the collection and comparison of data by consulting specific external databases that allow for a more detailed estimate of the level of risk of serious violations of Human Rights and fundamental freedoms, the health and safety of persons and of the environment.

5.7.3.2.3 Description of the procedure and appropriate actions to mitigate risks or prevent serious harm

The duty of plan provides that the activities of Thales, its suppliers and subcontractors that present a risk of serious harm to Human Rights, the health and safety of persons and the environment are subject to specific and proportionate preventive and attenuation measures adapted to the level of risk identified.

The Thales activities covered by duty of care are the subject of prevention policies deployed by employees at the Group that are described in sections 5.4 (prevention of hygiene, health and safety risks in the workplace), 5.5 (prevention of environmental risks) and 5.6 (actions to promote Human Rights and fundamental freedoms).

The activities of its suppliers and subcontractors are covered by a specific process managed by the Thales Purchasing Department with the support of the Legal and Contracts Department and the Group's Department of Ethics, Integrity and Corporate Responsibility. Depending on the level of potential risk assessed, Thales may decide not to enter into a business relationship or to end a commercial relationship with a supplier or subcontractor, or set up an action plan designed to correct situations that might generate risks of serious impacts from the supplier or subcontractor, including a) systematic signing of the Thales Integrity and Corporate Responsibility charter for Partners and Suppliers, inspired by the Code of Ethics of the International Forum on Business Ethical Conduct (IFBEC) developed by the primary European and American operators in aeronautics and defence, b) the adoption of specific contractual obligations, and c) site audits conducted by an external service provide or by the Thales Purchasing Department.

5.7.3.2.4 Mechanism for issuing and dealing with alerts

Thales reviewed its internal alert system to bring it into compliance with France's law No. 2016-1691 of 9 December 2016 on transparency, anti-corruption and economic modernisation and law No. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting companies.

This process led to the expansion of the alert system to receive all internal or external alerts falling within the scope of these laws.

The updated alert mechanism was presented to Thales's main representative trade unions in 2018.

5.7.3.2.5 Procedures for monitoring the measures of the duty of care plan

The measures in the duty of care plan are assessed through a report and the indicators described in sections 5.3, especially: rates of frequency and severity of workplace accidents, percentage of employees working at OHAS 18001, ISO 45001 and ISO 14001-certified sites, the number of suppliers that have signed the Procurement and Corporate Responsibility Charter (17,000 in 2019 versus 15,610 in 2018), the evaluation of supplier and subcontractor corporate responsibility performance, and changes in the number of alerts received via the Thales alert system in 2019 (34 in 2019 versus 15 in 2018).

5.8 METHODOLOGICAL NOTES

5.8.2 Environmental data

Scope of consolidation

The scope of consolidation of environmental data is based on the financial consolidation scope. However, due to restricted activity and/or workforce or the absence of operational control by Thales, certain establishments have not been included.

For this report, the 2019 indicators are provided on a comparable basis with 2018.

Only companies meeting the following criteria are included:

Equity interest and operational control

- Thales equity interest of 50% or more;
- Thales exercises operational control over the company.

Subsidiaries and joint ventures not meeting the above criteria are not included in Thales's environmental reporting.

Activity/workforce

- **"establishment/site" carrying out an activity covered by Operating Model 4,** regardless of headcount;
- **"establishment/site" carrying out an activity covered by Operating Model 3,** with a headcount of more than 50;
- **"establishment/site" carrying out an activity covered by Operating Model 2,** with a headcount of more than 100.

The instruction "Definition of HSE Management System levels" provides details of the operating model levels (classified according to type of activity: industrial, semi-industrial, tertiary).

Changes to the scope of consolidation

- Disposals/acquisitions: company to be included as soon as one full calendar year has elapsed and if the company meets the scope selection criteria.
- New business: company to be included as soon as one full calendar year has elapsed and if the company meets the scope selection criteria.
- Inter-site transfers: data taken into account in the reporting:
  - of the departure site from 1 January Y to the date of transfer,
  - of the arrival site from the date of transfer to 31 December Y.
- Intra-Group merger: integration of data for the absorbed entity for the period from 1 January Y to the date of absorption into the data of the absorbing entity.

Reporting procedure

The Group-wide reporting system includes an environmental reporting procedure with instructions for each successive stage of data entry, validation and consolidation. It also defines the roles of each person involved and promotes the recording of data (traceability, archiving, etc.).

Indicators

Environmental concerns change over time. Environmental performance indicators therefore have to evolve to remain aligned with developments and reflect the Group's policy priorities. Different interpretations of certain indicators can lead to conflicting data from different countries. Thales is therefore adapting the indicators to make the environmental reporting system more efficient, building on lessons learned from previous years and refocusing the reporting effort on current and future environmental concerns. The indicators are described in the reporting tool. Information is also available on the calculation of the carbon footprint.

Reporting tool

An environmental reporting and management tool for the entire scope of consolidation of the Thales group is available on the corporate intranet. This tool consolidates the data from each entity, country and geographic area, and for the Group as a whole. It checks data consistency and suggests country-specific units of measurement, conversion factors, etc. The same tool provides access to the rules for data entry, validation and consolidation defined in the reporting procedure.

Analysis of performance

For easier analysis of results, the Group reporting system incorporates the following principles:

- changes in scope specifically related to disposals and acquisitions. For each family of indicators, a gross figure is given (e.g., water consumption in cubic metres) and a ratio supplements the information to account for changes in scope (e.g., water consumption per person);
- Group targets are set for a given period. During that period:
  - changes in performance are assessed on a like-for-like basis (i.e. at constant scope of consolidation),
  - coefficients such as emission factors for CO_2 emissions are constant;

- with respect to former Gemalto sites, the 2018 data were obtained from extrapolating 2019 values (for sites included in the 2019 Group reporting scope), since the benchmark for the Gemalto indicators in 2018 was incomplete and the Gemalto sites that met the Thales reporting criteria did not all report in 2018;
- if emission factors are modified at the start of a new period, the performance data for the reference year are recalculated using the new coefficients;
- the principles and methods for reporting data are described in the methodological guides to environmental reporting and calculation of CO_2 emissions, which are available in the Group reporting system.