

Management Report

1. NON-FINANCIAL PERFORMANCE STATEMENT 2019

1.1. BUSINESS MODEL

In a world undergoing profound demographic and geographical changes, mobility needs are constantly increasing, as new constraints and demands begin to take shape. Drawing on the strengths of a business model that has stood the test of time over its 90 years in the construction and maintenance of transportation infrastructure, today Colas is transforming itself to deliver tomorrow's mobility infrastructure and solutions while identifying and addressing key CSR⁽¹⁾ issues through all its activities.

To ensure that infrastructure can continue be used over the long term, its maintenance requirements are taken into account at the design stage. In the case of transportation infrastructure (streets, roads, railways, airports, etc.), maintenance and transformation of existing structures account for around 90% of the market and translate into a large number of small projects (averaging €172k each). Every year, to complete these thousands of projects, Colas relies on its extensive network of local business units.

It is also essential to have access to a sizable inventory of equipment of all kinds, both stationary and mobile, distributed across all the Colas' geographies. To ensure that the best and most productive use is made of these costly assets, Colas strives to secure a sufficient volume of business in each region, within a medium-to long-term perspective.

Colas' operations require considerable human resources, including a high proportion of workers, who make up about 60% of all staff. Colas is committed to offering its employees in all regions satisfactory working conditions that are sufficiently attractive to potential future recruits. Employee engagement can only be secured by affirming and putting into practice the core values of ethics, safety and respect for human rights.

On the basis of these observations, Colas has developed a business model founded on the following principles:

- conducting its business activities by means of long-term, local operations on a human scale all over the world;
- taking a decentralized approach that lets its business units adapt to local conditions (technical, human resources, weather-related, etc.);
- allowing its business units and their clients to benefit from the pooled expertise of a major group.

To enhance this business model, Colas has developed complementary areas of expertise and business activities:

- new, large-scale construction projects require planning and decision-making expertise in areas such as engineering, financing, management, and project performance, supplementing the skills and know-how traditionally associated with the Group's business activities. These new areas of expertise are brought together within the Colas Projects entity, which serves as a support function for the entire network of long-established Colas business units. In connection with major projects, Colas Projects teams also explore the potential for technical and organizational improvements, which thus take their place among the network's competencies;
- to offer clients and users the best possible mobility conditions, it is essential that Colas understands and manages the value chain upstream of its construction activities: by doing so, Colas has, over the years, developed strong positions in the production of aggregates and the processing and distribution of bitumen-based products. Thanks to its unique expertise in these two activities, Colas lays claim to a long history of innovation. Furthermore, the integration of aggregate and bitumen production activities with construction and maintenance activities means that Colas is better positioned to manage their impacts (by way of carbon footprint analyses, for example);
- lastly, to optimize and consolidate its presence in certain regions, particularly islands and other remote areas, Colas offers services that supplement its core activities, including civil engineering, water and energy distribution, environmental engineering, building operations, etc.

While building and maintaining transportation infrastructure satisfies an essential human need, it must not be done without taking the attendant environmental issues into consideration: the impact of thermal engines, consumption of natural resources (aggregates, hydrocarbons, etc.), ecosystem fragmentation, disappearance of undeveloped land, etc. Fully aware of the challenges involved, which are tied in a more general sense to the energy transition away from fossil fuels and environmental sustainability, Colas is taking action to adapt its activities. To this end, Colas is drawing on its business model to adapt to local conditions as well as on its ability as a global group to capitalize on positive feedback and come up with breakthrough innovations.

(1) *Corporate Social Responsibility.*

Mobility issues are emerging as one of the most complex challenges facing human society today⁽²⁾, whether they relate to interactions between modes of transportation, the many purposes for which infrastructure is used, or the rapidly evolving behaviors or expectations of users. The result is that the industries in which Colas operates are being called to account. Without favoring one mode of transportation over another, Colas aims to serve all of them, depending on the choices made by decision-makers in the public sector, and to promote the most efficient and sustainable solutions. Colas is thus moving forward with its transformation, through which it aims to gradually become a single-source provider of responsible and integrated mobility solutions, particularly with respect to smart roads and sustainable cities⁽³⁾. To deliver on this strategy, Colas is drawing on the collective intelligence of all its teams and is setting up partnerships with players in areas such as services and digital technology.

The rapidly evolving competitive environment in which Colas operates is also becoming more complex. As a global leader in the public works sector, Colas competes with major French and European companies (such as Eurovia and CRH) both in France and internationally. Colas is also aware of increased competition from companies in fast-growing emerging countries (e.g. Turkey, China and Brazil), particularly in developing parts of the world. Lastly, in new markets such as sustainable cities, we are witnessing the arrival of new entrants from the digital sector (e.g. Alphabet, Cisco and Orange) positioning themselves as stakeholders in the transformation of cities, living conditions and transportation.

Transportation infrastructure brings out the usual contradictions of sustainable development: on the one hand, it meets an essential need of humans in society but, on the other, it entails negative consequences for stakeholders. To reconcile these contradictions, Colas is focusing its efforts on several issues that are specific to its business activities:

- **optimization of life cycle costs:** For the payer or the user, it is much less costly in the long run to perform regularly scheduled maintenance on transportation infrastructure rather than to rebuild it after leaving it to deteriorate over a number of years. Optimization of life cycle costs over time delivers many sustainability benefits: energy savings, reductions in material throughput, fewer accidents, greater user satisfaction, more efficient transportation systems, etc. Colas, which generates most of its revenue through its activities in infrastructure maintenance, also offers a range of solutions allowing infrastructure owners to lower their overall ownership costs, or even to operate their infrastructure as a service, as in the “Road as a Service” (RaaS) model;
- **circular economy⁽⁴⁾:** Aggregates, rocks, sand and gravel are the most used raw materials in the world, with a per capita consumption of about five metric tons per year. Only water consumption for all human needs exceeds this figure. Moreover, it is estimated that transportation infrastructure accounts for nearly half of the total aggregates used. Reducing material throughput is therefore a key issue for Colas. These reductions may be achieved by recovering materials from demolished infrastructure (concrete, asphalt mix, etc.), but also by reusing waste or by-products from other domains: incineration clinker, blast furnace slag, plastic waste, refinery bitumen (which has replaced the mineral tars from gasification plants used in the previous century), war debris, etc. This contribution to the local closed-loop material cycle, and more widely to the circular economy, is making Colas a leader in recycling worldwide. Recycling is also a major issue in terms of energy: given the volume of materials they use, all Colas activities are inherently energy intensive, from the extraction and transportation of materials to their application. Through recycling, together with scheduled maintenance, Colas is significantly reducing its energy footprint;
- **protection of nature⁽⁵⁾:** Although some Colas businesses have large land footprints (gravel pits and quarries for the extraction of aggregates), Colas is especially concerned by the footprint of the linear infrastructure that it builds or maintains. The latter contributes to ecosystem fragmentation, and it also opens up access to natural habitats that can then be occupied by human populations, resulting in the artificialization of these environments. This phenomenon is a major sustainability challenge facing society, particularly in less developed areas of the world. Colas does not have leverage to reduce the footprint of existing structures, whose maintenance represents most of its business. As these structures have already contributed to the artificialization of the environment, it is preferable to proceed with their upkeep and improve their efficiency rather than building new structures. As regards aggregate extraction sites, there are hardly any countries today where it is possible to open such sites in well-preserved natural environments. Reducing material consumption through recycling and taking account of the surrounding biodiversity nevertheless remain key societal acceptance factors for Colas;
- **social progress⁽⁶⁾:** In the world’s increasingly complex economies, a growing social challenge is to facilitate the access or return to employment of lower skilled workers and ensure a path to social inclusion for them. Any society will have difficulty achieving consensus if it fails to offer its citizens opportunities to work and reach their goals in life on their own. Today, Colas is one of the rare companies able to promote social integration and advancement through its job offers, even for lower skilled workers. Colas promotes teamwork and a sense of the practical, and aims to foster an entrepreneurial culture. It gives priority to local employment, invests in training, and provides a range of career development opportunities for its employees. Colas thus makes a unique contribution to improving social cohesion in the regions and communities where it operates, and particularly in less developed countries.

(2) UN Sustainable Development Goal 9 (SDG 9): Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

(3) UN Sustainable Development Goal 11 (SDG 11): Make cities and human settlements inclusive, safe, resilient and sustainable.

(4) UN Sustainable Development Goal 12 (SDG 12): Ensure sustainable consumption and production patterns.

(5) UN Sustainable Development Goal 15 (SDG 15): Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt reverse land degradation and halt biodiversity loss.

(6) UN Sustainable Development Goal 8 (SDG 8): Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

- **safety:** Personnel involved in all Colas activities (Colas employees, temporary staff, subcontractors, etc.) are exposed to safety risks. Managing these risks and reducing the number of accidents require an ongoing commitment and constant vigilance. Colas must also address the issue of road safety, which is a major concern for people everywhere. Year after year, Colas strengthens its actions to improve safety in its operations (training, risk prevention, audits, etc.) with the aim of making safety a fundamental component of its culture;
- **ethics and frugality:** Public procurement and orders from large and highly structured companies (highway companies, railway operators, mining companies, etc.) make up the bulk of Colas' business. There is considerable competition in these activities, especially since differentiation is limited by the specifications of these clients as well as their tendency to choose the bidder with the lowest price offer. The resulting low margins create a real imperative for frugality, but also high risks in terms of business ethics: corruption, favoritism and anti-competitive practices. As it does for safety, Colas acts with resolve to ensure that ethics remain an essential pillar of its corporate culture. Colas also devotes particular attention to its operating costs, in order to maintain its competitiveness, but also to guarantee its ability to allocate budgets for innovation and the development of new products and solutions.

1.2. Responsible development policy

Colas' approach to responsible development (see www.colas.com) is based on the dual conviction that its businesses help fulfill essential needs and aspirations, and that they must be conducted in a responsible manner. Colas has to take into account the expectations and contradictions of contemporary society, including social cohesion, climate change, transportation and housing needs, improving living conditions, energy transition and resource management.

As the cornerstone of this approach, Colas has implemented its overall responsible development policy based on a number of priorities rooted in the notions of risks and opportunities, whether specific to its business lines or required from all business sectors. In most cases, Colas performance indicators and goals are set worldwide. This approach seeks to foster a deep and lasting culture of continuous improvement in the field, across the 800 construction business units and more than 3,000 materials production units listed in the non-financial reporting software.

In 2019, considerable efforts were focused on updating this policy, resulting in a reformulation of the priorities for Colas in the area of responsible development. These priorities emerged from an iterative and collective risk mapping exercise. This process has helped in assessing the impacts of Colas' activities and business lines in the regions where it operates and on society at large, but also in determining areas for improvement and action lines for all segments of CSR, while taking into account the UN's 17 Sustainable Development Goals, more than half of which directly relate to Colas' business:

3. Good health and well-being;
5. Gender equality;
7. Affordable and clean energy;
8. Decent work for all;
9. Industry, Innovation and Infrastructure;
11. Sustainable cities and communities;
12. Responsible consumption and production;
13. Climate action;
14. Life on land.

1.2.1. Retooling the responsible development policy

Colas' CSR policy was revised at the end of a two-year process as part of the One Colas Responsibility project: the One Colas process first helped restructure and communicate the Colas global business strategy and followed up with a number of key projects, One Colas thus functioning as an incubator for business-specific or cross-business projects aimed at transforming Colas.

1.2.1.1 ASSESSMENT OF INTANGIBLE CAPITAL

As a first step, it was considered interesting and enlightening to draw an economic connection between CSR and Colas' intangible value, thus helping to shape CSR policy, in particular by selecting angles likely to strengthen this capital.

The total value of the Colas Group was determined using the "Reference Value" method developed by the French consultant Goodwill-management on behalf of France's Ministry of Economy and Finance. This method examines four key factors for every company: the quality of governance, the macroeconomic context, financial health, and intangible capital. Intangible capital is assessed on the basis of eight assets, thus getting very close to an estimation of a company's CSR quality: clients, human capital, brand power, organization, environment, know-how, partners and suppliers, and information systems. This study found that Colas has a value significantly higher than its market capitalization.

The following strengths were noted:

- a solid and stable client portfolio and a range of activities that serve Colas well in its markets;
- strong human capital, with competent, engaged and loyal employees;
- considerable flexibility and responsiveness in decision-making processes, together with a high capacity for adaptation to local realities;
- effective environmental management made possible by a worldwide network of environmental officers and well-adapted tools;
- global leader in its industries by a recognized expertise.

But this study also revealed several areas for improvement, some of which had already been targeted by One Colas action plans:

- good-quality brand, but lacking a strong global visibility;
- supply chain management processes that are not yet sufficiently mature;
- information systems in need of infrastructure consolidation.

1.2.1.2 MATERIALITY ANALYSIS AND STAKEHOLDER CONSULTATION

The identification and prioritization of the most critical responsible development issues for Colas, made possible *via* its CSR materiality mapping, was based on several reference systems by interfacing internal data (business model, existing policy, risk mapping exercise, etc.) with various external systems (ISO 26000, Article 225-102 of the French Commercial Code, GRI, etc.). This analysis pointed to five broad categories for CSR issues:

1. Governance and regions;
2. Products and solutions;
3. Human capital;
4. Ethics;
5. Environment.

Taking this first materiality mapping as its starting point, Colas went on to consult its stakeholders, both internal and external, in France and other countries, using crowdsourcing platforms, in order to better understand their expectations and embed its commitments within a continuous improvement approach. The French- and English-language platforms collected 6,500 votes and nearly 800 verbatim responses of all kinds during a period running from May to December 2019. A total of 550 stakeholders took part— 62% in France, 18% in North America, 13% in Europe excluding France, and 7% in Africa and Asia—aptly reflecting the distribution of Colas locations around the world. By using this means of communication, a large number of respondents were able to be contacted, despite the questionnaire's length, demonstrating the interest generated by this type of approach.

The results presented below do not purport to be exhaustive. Only the salient points in each category are reported, based on the proposals having received the highest number of votes. There were two key takeaways from this survey, across all five categories: the first is that a CSR policy should be based on guidelines shared throughout Colas, in sync with the One Colas strategic plan, and the second is that many employees consider themselves to be Colas ambassadors.

- **Governance and local context.** Two issues in particular drew the attention of stakeholders:
 - *the flexible adaptation of CSR policy to local contexts* sparked many comments in the environment and human rights fields. Concerns raised in relation to the environment for this category include making environmental protection and recycling core values for Colas, implementing a proactive environmental approach at all work sites so that all employees are bound together by the same environmental vision, finding solutions reconciling the activities of both construction and production sites with the restoration of natural habitats, setting overall targets wherever the location, recovering waste, and using alternative materials. For stakeholders, the topic of human rights must be considered in its totality, in line with the idea that these rights are universal and must be upheld in the same way everywhere in the world;
 - *the involvement of stakeholders* facilitates the social acceptance of both construction and production sites, and the integration of local actors over the entire life cycle of each project is essential. Comments underscore the importance of making sure this dialogue is always encouraged, to create the necessary conditions for the intelligent and sustainable mobilization of all Colas resources. The structured dialogue approach currently in use appears to be one of the keys to Colas' success and its capacity for adaptation because it allows for the detection of weak signals at the right time, while one of the prerequisites for this dialogue is the fact that all Colas construction sites and production facilities take pride in leading by example;
- **Products and solutions.** For this category, which looks at issues in the value chain, comments focus on concerns relating to suppliers and service providers, and especially those involved in setting up a quality assurance process with these partners, along with taking a multi-tiered approach and the implementation of CSR criteria in purchasing processes. In addition, including elements of carbon footprint analysis in bidding processes drew considerable feedback.
- **Human capital.** Comments stressed the importance of diversity, whether in relation to professional backgrounds, religious beliefs, cultures, gender, or other aspects. Diversity is seen as bringing collective strength, encouraging openness and tolerance. Managers and their teams must be conscious of differences without falling into the trap of setting quotas. An important part of the discussions revolved around quality of life in the workplace. Younger generations, in particular, place a great deal of importance on the work-life balance and are encouraging Colas to make progress in this area. It is also recommended that teams receive more support with respect to digital transformation efforts to ensure better management of their workload.

- **Business ethics.** Responses are unanimous in this area and the principle of zero tolerance appears as the only acceptable one to actively fight corruption, while training of all personnel is seen as essential to reach an optimal level of compliance.
- **Environment.** Acting on the materials required for road works, such as bitumen and aggregates, by setting higher recycling targets and by adopting circular economy principles, is a growing concern for stakeholders. It is seen as important to recycle more at construction sites to reduce raw material consumption, limit the openings of new quarries, focus R&D on the post-fossil fuel future, and increase the volume of recycled asphalt pavement in mix designs. In addition, respondents discussed working on the moderation of energy consumption across all Colas business activities, thus reducing greenhouse gas emissions, the need to put in place studies looking at ways to reduce consumption or recover excess energy, raising the awareness of these issues among both management and employees in general and improving their effectiveness, and introducing innovative solutions for clients. Stakeholders taking part in the survey also showed a strong commitment to biodiversity issues.

As a result of this exchange with stakeholders, Colas restructured its responsible development policy:

- Governance of responsible development;
- Value chain and innovation;
- Human capital;
- Ethics and human rights;
- Environment and carbon;
- Local roots and adaptation.

However, Colas considers that the following themes do not raise material issues, in view of the nature of its activities and its business model: food waste and food insecurity, animal welfare, and responsible, fair and sustainable food choices.

1.2.2. Governance of responsible development

The stakeholders' consultation has revealed a need to clarify who does what: the role of organizational silos, the setting of objectives, decentralization, risk, control and reporting, etc.

1.2.2.1. PRINCIPLE OF DELEGATION

A debate emerged during the stakeholders' consultation between those in favor of flexibility in adapting to local conditions and adherents of a more firm and uniform policy. This is a persistent debate at Colas, where it has always been necessary to achieve a balance between cohesiveness, on the one hand, and decentralization, which ensures the best possible adaptation to local realities, on the other. CSR issues, including human rights, ethics, safety and the environment, tend to intensify this debate: although it is not acceptable to discount the cross-cultural relevance of certain universal principles, these principles cannot always be applied in the same way everywhere. For example, freedom of religion and corporate neutrality toward religion require distinctive approaches in their application, depending on the country. Similarly, the broad range of the Colas' activities (production of materials of all kinds, road works and railway projects, water and energy distribution, construction and renovation of buildings, environmental cleanup, etc.) necessarily leads to different approaches when it comes to the environment, safety, and so forth.

To settle this debate, Colas decided to refer to the principles of recent French laws: the Sapin 2 law⁽⁷⁾ and the duty of vigilance law⁽⁸⁾. These two laws require heads of large corporations to identify their major risks in the areas of ethics, safety, human rights and the environment, to define action plans, and to set up systems to monitor the implementation of these plans as part of a continuous improvement approach. This is a top-down, centralized and uniform responsibility, which cannot be delegated or tempered depending on circumstances. These two laws have introduced new reporting requirements, particularly at the level of Colas' parent company. This document includes a brief review of the main points at the start of the sections relating to compliance, safety, the environment, and human rights.

In all areas of CSR, it is relatively easy to distinguish remaining issues relating to the company's routine operations that can be delegated and adapted to local circumstances. To provide a framework for this delegation, Colas sets out general policies to maintain overall coherence and organizes the reporting of indicators and targets so as to monitor progress at its affiliates. These reports can in turn result in adjustments to the corporate policies in these areas.

Some of these points are discussed in more detail in 1.2.7, "Local roots and adaptation." It is essential to recall that adaptation to the areas where Colas operates is a core value in itself, and is also one of the strengths of its business model, as seen above in the evaluation of its intangible capital.

(7) *Sapin 2 law: Law no. 2016-1691 of December 9, 2016, which applies to all corporations operating in France, and strengthens their obligations relating to transparency and anti-corruption measures.*

(8) *Duty of vigilance law: Law no. 2017-399 of March 17, 2017, which applies to the worldwide operations of corporations with a presence in France, and strengthens the responsibilities of parent companies in the areas of health and safety, the environment, and human rights.*

1.2.2.2. CSR ORGANIZATION

As CSR has a part to play in all areas of a company's operations, it can be tempting to set up a specific department for this purpose, whose aim would be to break down silos. This is not the choice made by Colas, which prefers to clearly define a governance approach structured around its main cross-business functions:

- **Corporate functional and control departments to disseminate and coordinate a policy for the affiliates:** nearly all of the departments and teams at the Colas headquarters are responsible for overseeing the aspects of Colas' sustainable development policy within their purview throughout their networks in the affiliates, in close coordination with operational managers. The approach to the distribution of tasks continues to be refined, as it has been for energy and carbon emissions, which involves the participation of the Technical/R&D, Equipment and Environment departments. Other examples include human rights, with the Human Resources, Security and Purchasing departments taking part, and business ethics, which brings together the Legal and Human Resources departments;
- **A CSR team** to keep abreast of developments relating to CSR topics, to draw lessons so as to recommend improvements in the responsible development policy and actions and to organize reporting procedures (compiling indicators and writing up the annual non-financial performance statement). This team is part of the Responsible Development and Innovation Department;
- **A decision-making body** who adopts policy changes, pushes key priorities, and approves the new risk taking decisions (new location in a country or bid for a major project). At Colas, this body is the Executive Management Committee, which is chaired by Colas' Chief Executive Officer and may delegate a portion of its work to specialized committees under its responsibility or that of the Chief Executive Officer (examples include the Commitment Committee and the Country Risk Committee). The formal involvement of the Executive Management Committee is essential to ensure the participation of Colas' operational divisions.

A key objective of this approach to CSR is to reinforce the notions of indicators and targets by providing guidance and instruction with the active support of operational managers, while limiting numbers to well-defined, clearly understood priority issues: resisting the undue proliferation of indicators is a point often raised by Colas' internal stakeholders.

1.2.2.3. DIALOGUE WITH STAKEHOLDERS

Colas has a decentralized organizational structure, with operations in a wide range of businesses and geographic areas. Relations with stakeholders are many and varied. They take place at the corporate level when an overall approach is needed, but may also be pursued in a decentralized manner. The survey conducted via a crowdsourcing platform in 2019 showed the power of this type of tool in its ability to reveal the full range of viewpoints and in giving shape to discussions. However, as it is still difficult to engage with some external stakeholders using this type of tool, exchanges with them will be pursued through extensive interviews. Further work will be carried out in 2020 to develop an approach for regular exchanges with Colas stakeholders, including those currently less well represented, and to reduce representation biases. It is important to remember that Colas has a multitude of stakeholders, representing diverse perspectives, in some 50 countries, as a result of its very local business activities:

- more than 70,000 construction projects per year, with several million potentially impacted local residents and users;
- more than 800 construction units and 3,000 materials production units around the world, in close proximity to several tens of thousands of local residents;
- more than 120,000 suppliers and partners;
- over 100,000 clients;
- over 57,000 employees;

Without even breaking down the number of government agencies, NGOs of all sizes, media outlets, scientific partnerships, and so forth, these figures clearly illustrate the impossibility of forming a committee of representative stakeholders (whether at the central level or that of an affiliate) and the need to use a range of approaches: opinion polls and surveys, targeted interviews, panels, social media, crowdsourcing platforms, etc.

Stakeholders' polling via a crowdsourcing platform

Consulting Colas stakeholders by means of crowdsourcing platforms offers the dual advantage of being able to reach a large number of people around the world and giving them the opportunity to freely discuss Colas' CSR issues. The selected approach offered those who registered on the platform the possibility to vote and comment on the assertions presented. It allowed for the gathering of quantified opinions and explanations in the form of verbatim responses. It should be noted that no comments were moderated. A report on this exercise is to be issued in early 2020 and a satisfaction survey will be sent to all respondents. Cap Collectif, a French civic tech firm, helped Colas carry out this project in

record time. Between the signing of the contract and the activation of the crowdsourcing platforms, only six weeks were needed to prepare this consultation, in compliance with the data protection principles of the GDPR⁽⁹⁾, in French and in English, without experiencing any major bugs. This type of agile, web-based solution, had until recently been used mainly by local authorities or the French government to survey citizens. Colas is one of the first private companies to use this type of tool and open up a discussion of this kind with its stakeholders. Those between the ages of 25 and 34 are strongly in favor of this means of consultation, as this group alone accounted for more than 40% of respondents.

At the same time, more targeted actions will continue to be pursued:

- in France, satisfaction surveys have been carried out every year since 2017, among Colas' public and private sector clients. To date, over 6,000 questionnaires have been sent out, with an overall response rate of about 25%, with public sector clients responding at 67% and private sector clients at 33%. Their level of satisfaction is good overall (54%), although there is definitely room for improvement;
- Colas' Human Resources Department regularly surveys its global workforce (see 1.2.4, "Human capital");
- in certain scientific fields, Colas joins stakeholder communities, to assess the toxicity of bitumen fumes, for example (government agencies, researchers, trade unions and joint union-employer bodies, and bitumen producers) or in support of biodiversity (via the Strategic Steering Committee of the FRB⁽¹⁰⁾, a genuine forum bringing together nearly 200 stakeholders divided into five working groups), as described in the following sections, and takes part in technical forums on roads, railways, bitumen, etc.;
- dialogue with local residents, government agencies and elected officials around Colas' operating sites around the world is managed through a formal program (see 1.2.7, "Local presence and adapting to local needs");
- Colas is also developing increasingly sophisticated digital tools for its construction projects, in order to give local communities and users the opportunity to engage in fully transparent dialogue with the construction teams, the client and local authorities (see 1.2.3, "Value chain and innovation").

1.1.2.4. TRANSPARENCY AND COMMUNICATION

It is not enough to merely gather opinions from stakeholders. They also need to be kept informed with complete transparency on all matters, including disappointing developments or those requiring remedial action. This non-financial performance statement is one of the outcomes of this renewed effort to promote transparency, fully in line with a long-standing practice at Colas, which has always favored day-to-day actions on the ground rather than flashy communications.

In this area, a point examined very closely by stakeholders relates to tax optimization between countries by multinational corporations. Colas has always taken the position that its taxes should be paid where its business is generated, as a key dimension of its policy promoting local roots and responsibility in the areas where it operates. In practically all countries, the Colas business activities are financed in large part with public funds and it would thus be doubly inappropriate for Colas to try to avoid paying taxes in the countries where it works. Each year, Colas provides information on the tax amounts paid in the various countries where it operates through its country-by-country reporting (CBCR), submitted each year to French tax authorities by Bouygues, the main Colas shareholder.

1.2.3. Value chain and innovation

Meeting clients' expectations is central to the Colas culture. All of the quality management approaches – ISO 9001, 6 Sigma, Operational Excellence, etc. – take into account the need for a value chain continuum effectively linking the client to suppliers, partners and subcontractors, which results in the emergence of a genuine ecosystem, in which actors must align the quality of their offerings to reach the desired level of clients' satisfaction. The quality of a company's products and services closely depends on the quality of the products and services it buys from upstream firms. This continuum actually extends further,

(9) [European] General Data Protection Regulation, applicable with effect from May 25, 2018.

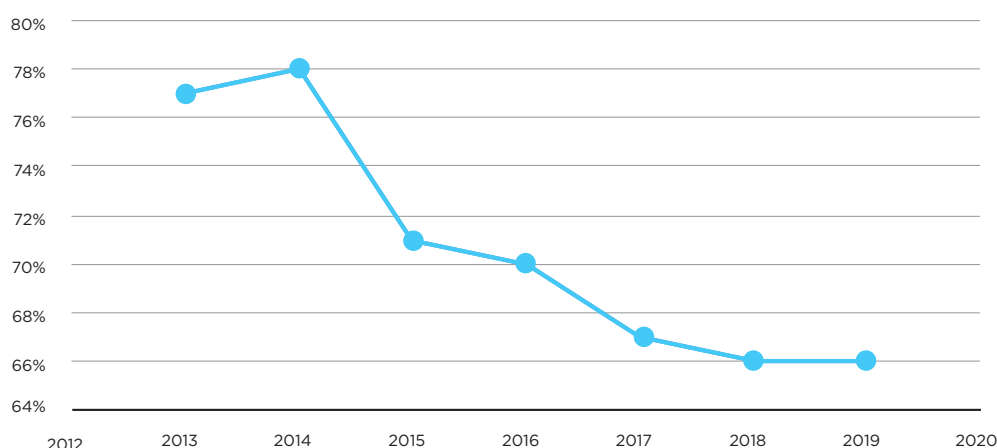
(10) Foundation for Research in Biodiversity, a French organization in direct relation with the United Nations' body on this issue, IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services).

because a client's satisfaction often depends on the satisfaction of its own customers and stakeholders. It is the reason Colas cannot ignore the satisfaction of infrastructure users, the final consumers of its services, even if these users are not contractual stakeholders of Colas.

With respect to CSR, this concept of a business ecosystem has begun to take shape more clearly. A company can only meet the expectations of its stakeholders if it connects with and brings on board its entire ecosystem. This point is central to various national and international guidelines, such as the UN Global Compact, the French duty of vigilance law, international legislation on human rights, etc. In terms of ethics, this leads Colas to examine its practices on the basis of a new symmetry: ensuring a level of consistency of discourse and behaviors, particularly from a contractual standpoint, towards its clients as well as its suppliers. These are the considerations that have prompted Colas to bring together within this section questions relating to responsible purchasing and innovation, following an initial analysis of its clients' expectations.

1.2.3.1. QUALITY AND CLIENTS' SATISFACTION

As mentioned in 1.2.2.3. "Dialogue with stakeholders," client satisfaction is difficult to gauge using a formal process with public sector clients, but the surveys, although incomplete, reveal genuine room for improvement. At Colas, the grand ambitions for ISO 9001 at the end of the 20th century were met with insufficient progress: this observation led many to criticize the unwieldiness of a system with diminishing returns, which explains the gradual downtrend in the quality certification coverage at Colas:



An approach more focused on concrete actions has now been engaged. Today, Colas' quality policy can be described as follows:

1.2.3.1.1. Quality

Maintaining the quality of Colas' solutions and the construction projects it carries out is based mainly on the work of the Technical/R&D Department's teams and its network in the affiliates. This is a long-standing role for these teams, which has proven to be effective, reaffirming the technical skills and reliability of Colas around the world.

Owing to the very local nature of Colas' businesses, the technical network is comprised of more than 1,000 employees and rests on two pillars. The first pillar includes all the technicians working in the affiliates, whose mission is to respond quickly to the problems faced by operating entities in the field on a day-to-day basis. The second pillar is the Campus for Science and Techniques (CST), located in the Paris region, the world's leading private R&D center in the field of transportation infrastructure. Its responsibilities include technical support and expertise for affiliates, the development of products and processes, as well as the integration of mobility solutions as part of infrastructure projects. Moreover, the CST also serves as a meeting point for all Colas know-how and coordinates the technical network.

The head of Colas' Technical/R&D Department supervises the continuous improvement of this network and has put in place an audit framework, in collaboration with Colas' Audit Department, to carry out controls and implement a formal monitoring procedure. To date, about 35% of operations worldwide have been audited. Within the European Union, many products, including aggregates, asphalt mix, bituminous binders, concrete and paint, are gradually being brought under the CE marking system, a quality assurance standard managed at Colas by the laboratories of its technical network.

Above and beyond this traditional approach to the quality of products and structures, the Technical/R&D Department monitors the safety of its structures exposed to stability risks as part of Colas' Duty of Vigilance, which may involve calculation notes, design specifications, or on-site monitoring of construction projects. In particular, this approach addresses extensive embankments, retaining walls, large engineering structures and buildings.

1.2.3.1.2. Operational excellence

In terms of management systems, three main approaches are being used at Colas:

- ISO 9001 systems, which are still very prevalent in some affiliates;
- the 6S program, inspired by Lean Six Sigma, in phase with onsite reality (see inset below). 6S is being rolled out gradually around the world, initially at maintenance workshops, where it benefits from an outstanding level of adoption by teams and has shown a genuine capacity for stable transformation over time. At the same time, the US-based affiliates have launched their own 6S program for asphalt mixing plants, binder plants, and laboratories. It is a very demanding, but highly practical, program for daily activities, and is resulting in profound changes in the working environment and practices. It is clear that this concrete formal approach suits Colas teams better than the more conceptual one encouraged by ISO 9001;
- an approach put in place in Mainland France ten years ago to compile best practices for operational excellence and develop a system for sharing and disseminating them.

In all three cases, the key to success rests in the direct adoption by operational managers rather than delegation to quality experts. Today, this commitment has generated great strides, because operational executives have worked directly on the fine-tuning of the tools, which they have then adopted in their day-to-day work. 6S is the most compelling example of this commitment by the actors themselves.

6S, a Colas initiative in the United States

6S (which sounds like “success” in English) is a program launched in 2012 at the US-based Colas affiliates. Based on the standardized 5S process, a sixth “S” was added for “Safety,” a central issue for Colas⁽¹⁾. First applied in workshops, the aim of the program was to reconcile the considerable differences between impeccable and unacceptable workshops.

Despite the very demanding nature of the method, the program proved to be a nearly instant success, with the following key benefits:

- It is a daily discipline: the workshop must be impeccable every evening;
- It is an approach that engages every workshop staff member, with precise tasks with a pragmatic “who does what” approach;

- It is a source of pride: employees enjoy showing off their workplace to their families;
- It is coordinated by an internal project team, inspired by firm convictions, with responsibility for a rigorous internal certification and enthused by passing on concrete instructions and sharing best practices.

Today, this program is being rolled out to other types of sites in the United States and the figures speak for themselves:

- 45 workshops (73%);
- 28 asphalt mixing plants (25%);
- 5 plants and/or storage facilities for asphalt binders (33%).

1.2.3.1.3 One Colas cross-business operational programs

Three overall efficiency programs have been kicked off under the strategic One Colas project:

- **One Colas Quarries** for aggregates-related activities. This program’s objectives are to optimize the portfolio of quarry sites, improve the performance of operations, increase the volume of sales, and develop new activities. This program, which is currently being rolled out, involves an ambitious human resources dimension, targeting the 4,000 employees who work in these activities;
- **One Colas Bitumen** for bitumen-related activities. In an increasingly global bitumen market, this program’s objectives are to secure sources of supply and strengthen Colas’ presence across the value chain: bitumen supply - transportation - storage - distribution - transformation. This program is supported by a cross-business organizational structure that is in the process of being put in place;
- **One Colas Plants** for asphalt mixing plants. This program is currently at the design stage.

Each of these three programs aims to build a shared reference framework to be used at all operations worldwide to assess and improve performance.

(1) 5S is a workplace organization method that originated in Japan, focusing on continuous improvement in the performance of tasks. Developed as part of Toyota’s production system, it gets its name from five actions to promote efficiency and effectiveness used as watchwords or simple principles:

- Seiri (整理, “sort”): remove all unnecessary items;
- Seiton (整頓, “set in order”): put all necessary items in their optimal place;
- Seiso (清掃, “shine”): keep the work area clean;
- Seiketsu (清潔, “standardize”): establish procedures and schedules for the first three “S” practices;
- Shitsuke (躰, “sustain”): maintain and update the procedures to keep 5S running smoothly.

1.2.3.1.4 BIM

Building Information Modeling (BIM) is gaining prominence as the universal language for building and infrastructure projects. A very powerful tool whose standardization is a vast project involving the participation of thousands of specialists around the world, BIM makes it possible to create a digital twin of the structure being built that is multi-dimensional (3D, costs, time, waste, nature of materials, etc.) and interoperable between all actors, whether they work in design, construction, maintenance, or even operations. It is bringing about a genuine digital transformation in the construction industry: governments and major private clients have not erred in promoting this tool for their large projects. In Colas' view, BIM is becoming the universal language of the construction and civil engineering sectors and the use of two-dimensional technical drawings will soon be a thing of the past.

This common language allows for the sharing and transmission of design methods and solutions everywhere in the world. In business lines for which local specificities protected actors in the past, BIM is the gateway to international standards. As a worldwide player, Colas must lead the way by embracing this technical transparency in its workplace ecosystems.

As part of this digital transformation, Colas is highly sensitive to the opportunity represented by BIM to improve collaboration between all of a project's stakeholders and to take better account of the usages of a structure throughout its entire life cycle. At Colas, the BIMbyCO team develops cross-business solutions and promotes an open and collaborative perspective on BIM, which offers a real opportunity to curtail the far too frequent conflicts at work sites and optimize stakeholder satisfaction across multiple factors (costs, deadlines, ergonomics, safety, adaptation to users, upkeep, etc.). BIM is thus becoming an authentic shared management system.

The BIMbyCO team, which serves a dual role as mission control and proponent, develops the digital model and its associated processes for all Colas business lines in accordance with a central, global strategy, but also within the affiliates, thanks to a network of 35 correspondents. Initially, BIM was mainly used for building projects. During this early stage, Colas was a key player in extending its use for civil engineering structures such as railways, roads and pipelines, as well as pollution cleanup and demolition projects.

Today, the team has expanded its areas of expertise to include City Information Modeling (CIM), which takes the intelligent modeling concepts of BIM to a broader level, in order to propose new uses and services to the various actors in a region, community or city, taking advantage of the same digital twin technology. Colas has thus entered into a partnership with the regional authority for Île-de-France, which aims to become Europe's first smart region, offering to lend its support for the joint development of uses for CIM. Lastly, the need to take better account of usages led Colas to test its new solutions using algorithms compatible with BIM, as is the case for the design of the Flowell® dynamic luminous signaling solutions.

This innovative work has been recognized with several prizes, and most recently the following:

- a BIM d'Or award in 2018 for the SRD refinery cleanup project in Dunkirk. This world-first application of BIM to subsoil issues was hailed for the quality of associated technical developments and the vision of collaborative transparency that was central to that development;
- a BIM d'Argent in 2019, in partnership with Bouygues Construction, in the "Infrastructure Projects" category, for the upgrade of the Les Lavandes roundabout in Marignane, a city near Marseilles in the south of France. In order to respond to the rise in airport traffic and welcome the 12 million annual passengers expected by 2025, the Les Lavandes roundabout, located near the Aix-Marseille airport, needed to be redesigned. For this design-build project, a BIM agreement was put in place to define the objectives and roles of each participant. BIM has been embedded in all business processes to ensure interoperability and the proper compilation of models so as to create a project composite one. Project monitoring is also carried out using BIM, which facilitates the verifications of interconnections. Each business process has its own independent model and their compilation makes coordination reviews more efficient. The new roundabout is expected to be delivered in March 2020.

1.2.3.2 WHAT COLAS' CLIENTS EXPECT

Across the varied range of its businesses and despite the differing characteristics of the areas where it operates, Colas has noted that its clients, whether in the public or private sectors and whether local or global, are conveying expectations with regard to the environment and society to an ever greater extent, and are increasingly addressing these concerns in the design of their projects and in their specifications. Social expectations tend now to be more pronounced, expressed by growing demands for a better living environment, particularly in urban areas (desire for a more soothing city where green spaces and alternative transportation modes are not short changed, vision of the city as a complete ecosystem including water, waste recycling, biodiversity, etc.), beyond mere performance-based considerations for infrastructure.

Against this backdrop, Colas observes that calls for bid relating to its core businesses (roads and railways) frequently now request environmental engineering services, such as the preservation or rehabilitation of natural habitats, restoration of degraded habitats, management of natural resources, management of ecosystem functions and services, reestablishment of ecological continuity, limiting land artificialisation, combating invasive species, etc. (see 1.2.6 "Environment and carbon").

Colas' end customers are the users of the infrastructure it builds or maintains, and Colas' clients – notably its public sector clients and especially local elected officials – are highly receptive to their wide-ranging expectations. Safety issues are a particularly strong focus: road and railway safety is a key concern due to social awareness in all countries and it is one that Colas regularly addresses in its technical solutions and with Aximum, its safety and signaling affiliate. New mobility infrastructure solutions involve practically no risks or direct impacts on the health of users, in contrast to automobile traffic, for example.

Survey of concrete expectations for the sustainable city

In 2019, the Colas Marketing Department launched a study to gauge clients' actual interest in issues relating to the natural and living environment in densely populated urban areas.

Through 25 interviews conducted in two pilot areas (the cities of Lyon and Nantes in France), the study revealed the environmental priorities of local decision-makers and their concrete areas of application. Protecting the environment is an obvious long-term responsibility and orientation for local authorities. Although a consensus is emerging in relation to areas such as transportation, green spaces and biodiversity, industrial site remediation, recycling, and the preservation of resources, priority selection depends on multiple local factors, linked to the history, culture, geography or topography of urban areas. For example, the city of Nantes focusses on greening priorities as part of urban renewal projects, whereas in Lyon the environmental question has brought the topic of water management to the forefront, and green spaces are considered from a more functional perspective, as a means to counteract urban heat islands.

In all configurations, the quality of the use of urban space resulting from municipal choices is central to acceptability for residents and is also a key aspect for an area's attractiveness. City dwellers have expectations for a more soothing urban experience, with greater attention paid to the urban landscape and a capacity to rethink the city and its flows by taking account of new practices and mobilities. They perceive the city's cultural and natural heritage as inseparable. The sustainability of urban environments thus emerges as an issue at the crux of a number of contradictory precepts that can turn a city into a constant work in progress.

For the business activities pursued by Colas, the study identified a set of key concrete expectations:

- Permeable surfacing solutions;
- Solutions not using hydrocarbons (post-oil era);
- Alternatives to asphalt mixes for surfacing;
- Warm and cold mixes;
- Increased longevity and lower maintenance costs for infrastructure.

In awarding contracts, clients still exhibit a certain reluctance to weight these issues more heavily so as to select the most capable bidder from a CSR perspective. Price constraints remain strong and the fear of being accused of favoritism is a persistent feature. This means Colas has very limited freedom to modify its products and its projects since, in most of the countries where it operates, it is prohibited from proposing alternatives to public tenders' base solutions; large clients' purchasing departments follow a similar trend. In France, however, it is possible to propose alternate bids, albeit often limited ones and only for certain contracts, while private sector clients remain more receptive. In the United Kingdom, and more generally in countries with laws and regulations of British inspiration, the tradition for tenders with performance criteria should help give rise to bidding processes taking the total cost into account. However, budgetary constraints and a short-term vision often gain the upper hand and pose an obstacle to these generally healthy contractual developments. There is thus a bit of room for innovation to help move the market forward and this is an area in which Colas has always been involved to a considerable extent.

1.2.3.3 R&D

Research is an integral part of Colas' DNA. It was the invention of a bitumen emulsion called "Cold Asphalt" 90 years ago that gave birth and its name to Colas.

Connected with Colas' mission of developing infrastructure solutions that promote responsible mobility, Colas' key priorities in terms of R&D and innovation seek not only to meet the social expectations of clients and society in general but also in support of its environmental policy as regards its products, by favoring the use of more environmentally friendly techniques and substances. Colas' approaches to innovation and R&D have therefore long been about bringing more comfort, mobility and safety to users, while limiting negative environmental impacts. The methods used to develop these new products and solutions combine eco-design with life cycle assessment (LCA).

1.2.3.3.1 Road safety

Colas R&D works in a number of areas to respond to road safety challenges, in particular:

- producing a range of high-performance surfacing that provides better tire grip (textured and/or draining products to limit skidding in rainy weather or reduce braking distance);
- improving visibility (work on road markings in cold or wet weather and at night);
- manufacturing road safety equipment (Aximum safety and signaling affiliate).

1.2.3.3.2. Noise

To address noise pollution, Colas develops high-performance mixes (such as Nanosoft®, Rugosoft® and similar products), which can reduce vehicle rolling noise levels by as much as 9 dB. A total of 375,400 metric tons were produced in 2019, compared with 393,600 metric tons in 2018 – a decline of around 5%, reflecting fluctuations in construction contracts not driven by any specific factors.

1.2.3.3.3. Adapting to climate change

In order to adapt to climate change and its constraints, Colas is developing new products by adjusting the formulations for existing products, experimenting with alternative binders and new materials, or implementing breakthrough ideas.

Colas has launched a program of academic discussions around the formation of urban heat islands to understand the complex interactions and retroactions characterizing this phenomenon, which is a concern for all the world's major downtown areas. Concurrently, Colas continues to pursue a rigorous experimental program to characterize the thermodynamic properties of building materials and is ready and willing to participate in the full-scale measurement and experimental programs launched by several municipal authorities. This is an area in which collaborative solutions spanning water management, big data, urban planning, materials science, human and social sciences can be developed – it represents one of the key building blocks of tomorrow's sustainable cities. Among its many projects, the Campus for Science and Techniques is working on surfacing materials with high draining power, able to absorb rainwater to a greater extent, thus contributing to urban cooling.

More generally, as Colas has locations in all the world's climates, it is able to transfer techniques and know-how already developed in warmer regions and areas that have long been prone to windstorms and hurricanes.

1.2.3.3.4. Green chemistry

Research is carried out to optimize eco-friendly binders and surfactants by applying the 12 principles of “green chemistry”⁽¹²⁾, notably by introducing bio-sourced components from forest and marine resources, reducing production temperatures and limiting greenhouse gas emissions. This work focuses on using waste and renewable raw materials that neither interfere with the production of human food (to avoid the risk of pushing up oil and cereal prices) nor undermine wild ecosystems (e.g. by deforesting for vegetable oil production): the problem is that the sole replacement of bitumen with a binder derived from vegetable oil would require the dedication of the equivalent of roughly one-third of the European Union's total cultivated area. In addition, to reduce chemical risk Colas promotes and commissions toxicological characterizations on the products resulting from these alternative chemical technologies, for example to detect potentially harmful substances like endocrine disruptors.

1.2.3.4. INNOVATIVE AND SUSTAINABLE SOLUTIONS FOR A BETTER LIVING ENVIRONMENT

Innovative solutions rolled out by Colas or being tested through pilot projects focus on improving the fluidity of traffic in cities, helping urban residents get around their cities more easily, and addressing the issues faced by local authorities by taking energy and environmental constraints into account. These innovations thus improve the living environment and safety of city dwellers. Colas is also present in the urban transformation and urban greening markets. The MobilitybyColas entity develops and offers practical and powerful digital solutions meeting new mobility requirements for local authorities as well as urban residents. One of its priorities is to better respond to these requirements and to favor multimodal solutions without increasing proportionally the surface area covered by infrastructure (thus limiting growing land artificialization).

1.2.3.4.1. Wattway

Photovoltaic power generation is considered one of the main renewable energy solutions under the global energy transition, but it requires vast available surfaces exposed to the sun. This is particularly acute in densely populated or agriculture-heavy countries: roof surfaces alone are not enough to produce the power levels required, and solar farms, although highly efficient, run up against issues of competition for land use (agriculture, natural spaces and landscapes). With its innovative Wattway solution, Colas provides access to a sizable surface area, with the potential to meet some of a country's needs in terms of solar power without impeding other types of land use.

Launched in 2015, Wattway was the winner of a “Solutions Climat” award, presented at the COP 21. The “Solutions Climat” jury, comprised of experts in resource efficiency and climate action, awarded Colas its “Coup de Cœur” award for large companies in the “Mitigation” category. Wattway is a patented French innovation, the fruit of five years of research by Colas and INES⁽¹³⁾. It is the world's first photovoltaic road surfacing solution that generates electricity from clean and renewable solar energy, while providing a safe surface for all vehicular traffic. Since the launch of this solar road solution, about 40 pilot projects around

(12) As defined in 1998 by Paul T. Anastas of Yale University and John C. Warner of University of Massachusetts Boston.

(13) Institut National de l'Énergie Solaire (the French National Solar Energy Institute).

the world have demonstrated Wattway's robustness. These projects of various sizes have been developed to test multiple uses: powering street lights or urban furniture (in Mainland France, Reunion Island and the United Kingdom), powering electric vehicle charging points, generating additional energy for buildings (offices, town halls, etc.) in France, Canada, the United States, Japan and Luxembourg, and supplying energy to local power grids in Monaco, France and the Netherlands. These experiments under real and highly varied conditions have resulted in further improvements in performance and resilience for the solution. In 2019, Colas began marketing Wattway Pack, the first step before the wider release, for large-scale applications, of this photovoltaic surfacing solution suitable for all types of vehicular traffic.

Wattway Pack, a turnkey solution providing energy autonomy for roadside equipment

Colas has capitalized on the lessons learned from its pilot projects and has developed a new generation of photovoltaic panels that are more resilient and economical, with a performance improvement of over 20%. Wattway Pack is a turnkey solution consisting of between three and 12 traffic-ready photovoltaic panels that can be used to produce, provide and store renewable energy, in full autonomy, for roadside equipment. This system is particularly well suited to areas lacking a connection to the grid, but also in cases

where connecting to the grid is technically challenging and costly. It can directly power charging stations for electric bicycles or scooters, connected urban furniture, surveillance cameras, variable message signs, etc. Wattway Pack represents a major step toward the goals of the "smart road" and the additional features to be offered via the integration of electronics in road surfaces. In April 2019, the Wattway Pack solution was certified by the Solar Impulse Foundation.

1.2.3.4.2. Flowell: dynamic luminous signaling for smart, modular roads

Similarly, Flowell, created in 2017, optimizes the use of existing roads under growing traffic thus avoiding the parallel growth of the surface area dedicated to transportation infrastructures. This is a luminous, dynamic, scalable and modular signaling system that aims to optimize urban space, traffic flows, safety and the coexistence of multiple forms of transport. Flowell makes it possible to organize the shared space of roads and city streets thanks to a device based on dynamic control of light-emitting signaling. Installed on existing roads, Flowell offers a great degree of flexibility and adapts the infrastructure to the needs of both urban and rural communities in real time. Flowell streamlines traffic on existing roadways by giving priority to certain users over specific time periods.

For example, communities can turn parking spaces reserved in the daytime for deliveries into car parking spaces at night. They can also create temporary drop-off spaces around schools, and secure pedestrian crosswalks by enhancing their visibility and that of pedestrians with light-emitting markings. Several trial sites have been deployed to test the solution in real conditions. The goal is to benefit from the experience of communities and users as to the relevance of its applications, ease of use and integration in urban areas. For example, a zebra marking at bus stop that lights up when school buses arrive is currently being trialed in the Vendée region of France. In Mandelieu-la-Napoule on the French Riviera, an intersection known to be hazardous was equipped with the solution. Driver behaviors were studied before installing the Flowell solution and measurements have been conducted since. A marked change was observed, with calmer driving, greater awareness of risks, and thus enhanced safety for pedestrians.

1.2.3.4.3. ANAIS: Roads as a Service

ANAIS is a made-to-measure solution intended for the authorities of relatively large areas (French administrative departments, Swiss cantons or US counties, for example) that enables them to anticipate maintenance needs for their road networks and optimize infrastructure costs. Built on preexisting preventive analysis methods for road networks such as SURE and ISRI, ANAIS adds a digital dimension. It is an innovative tool to support decision-making processes for the management of infrastructure. Onboard data collected on near misses enables the geolocation of road sections in need of attention and continuous analysis measures the impact of works for the improvement of road safety. This service is currently being made available for the preventive management of the road network in France's Eure-et-Loir administrative department.

1.2.3.4.4. Moov'Hub: Mobility as a Service

Currently under development at the Paris-Saclay research campus, Moov'Hub is an integrated digital solution for mobility services created by Colas that covers a range of needs, from permitting the dynamic management of urban parking to making traffic run more smoothly and addressing concerns raised by local authorities. The Paris-Saclay development authority, in partnership with the Paris-Saclay administrative entity, is one of the organizations testing the rollout of this shared and innovative service that combines mobility concepts and digital technologies. Moov'Hub is first and foremost a smartphone application allowing users to obtain information in real time about the availability of public or private parking places as well as the associated services (fees, hours, electric charging stations, etc.), directions to reach a parking place meeting their needs, or suggestions for alternative mobility solutions in the event of traffic congestion, with the ability to pay for the selected means of transportation via this unique application. Moov'Hub is thus designed for local authorities, giving them a tool for the regulation of public space, optimizing the management of unoccupied parking places and mobility flows in an urban environment.

1.2.3.4.5. Qievo

The proliferation of work sites in large metropolitan areas (new sustainable districts, installations of mobility infrastructure, etc.) is having a considerable impact on traffic and quality of life. Digital technologies can offer powerful solutions for reducing congestion in construction work zones and surrounding areas, while addressing issues relating to the acceptability of these work sites for urban residents. With Qievo, Colas aims to offer a complete and dynamic tool that gives users a real-time overview of logistics flows around work sites. This digital platform boasts a unique interface and has a dual objective: optimizing traffic flows entering and exiting work sites and limiting nuisances for local residents and users, by guiding trucks to follow specific routes, thus reducing traffic congestion. Qievo is currently in use in Lyon's Part-Dieu district, where some 50 construction projects have been launched simultaneously to transform the services and living environment of this densely populated urban area surrounding one of France's main rail hubs.

1.2.3.5. GOVERNANCE OF INNOVATION AND PARTNERSHIPS

The Sustainability and Innovation Department guides the governance of innovation by proposing, organizing and implementing projects. Complementing its efforts, the Colas Innovation Board (CIB), a governance body reporting to Executive Management and bringing together representatives of the Executive Management Committee as well as Sustainability and Innovation Department staff, sets out the main strategic objectives of innovation and takes decisions on important issues. About a hundred innovation projects proposed by affiliates worldwide, focused on different areas, from improvements in working conditions for workers, energy efficiency, and transportation optimization to the use of digital technologies on work sites are now being coordinated at the Sustainability and Innovation Department level. Aside from monitoring progress, the Sustainability and Innovation Department also ensures that input and feedback from the potentially interested affiliates is being taken on board. This structured governance is particularly attentive to the proper management of the phases between the proof of concept and the ready-to-market product, which can be an especially complex process given Colas' business activities, where product life cycles are long, experimentation is vital given the range of climates and conditions of use, volumes are very high, and price sensitivity is a major concern.

At the corporate level, Colas continues to develop numerous partnerships in France and around the world, to further build its knowledge and expertise, and also to adapt its business activities to tomorrow's challenges, in several areas:

- academic partnerships are entered into with universities and schools (including the University of Birmingham in the United Kingdom, the University of Alberta in Canada, the École Centrale engineering school and ESTP Paris in France, MIT in Boston, National University of Ireland Galway in Ireland, along with academic organizations and institutes such as the French Institute for Industrial Risk and Environment (Ineris), the French Alternative Energies and Atomic Energy Commission (CEA Tech), the French National Institute for Solar Energy (INES), the Foundation for Research on Biodiversity (FRB), the French Institute of Science and Technology for Transport (IFFSTAR), as well as the Centre for Studies and Expertise on Risks, Environment, Mobility, and Urban and Country Planning (CEREMA)) for scientific or research and development projects;
- partnerships with innovation agencies are being developed:
 - with start-up incubators such as Via ID (innovative mobility solutions),
 - with start-ups in the context of innovation projects; examples include the partnership with RB3D to develop ExoPush (see box below), implementation of a high-volume data processing platform with Dawex, work with Wisebim in the area of BIM, and work with Apilab and BeeOdiversity to protect the genetic diversity of bees and the use of beehives as a general bioindicator, etc.;
- partnerships with local authorities for experimentation, such as Colas' participation in the project conducted by Sidewalk Labs (an Alphabet company) with the City of Toronto;
- partnerships with other large corporations in various industry sectors, which include several collaborative projects with Michelin, in areas such as recycling and future road uses, and with Volvo for the testing of technologies to enhance safety around machines used at work sites;
- partnerships with innovation or competitiveness clusters within the construction industry to move the sector forward in terms of digitization and the traceability of information, but also to work on digital and ecological transformation (Constructlab, Cap Digital) or conduct full-scale experiments to test innovative solutions (eLyon Euréka Confluence, Transpolis);
- partnerships with organizations developing standards like the French national research project MINnD to promote the use of BIM for infrastructure;
- with business foundations like Ferec (the Collective Research for Construction and Infrastructure Business Foundation), which supports research in the public works sector through its national and pan-European projects;
- etc.

RB3D and Colas: a partnership for innovation between an SME and a large corporation

RB3D is an SME specializing in the development of collaborative robots (cobots) for carrying heavy loads and working with tools. These wearable robotic devices bring strength and endurance, enabling workers to perform their jobs more effectively, helping them complete arduous manual tasks while preventing musculoskeletal disorders (MSDs).

Colas is an investor partner of RB3D for the development of the ExoPush, an exoskeleton specifically designed

for paving workers who rake and smooth asphalt mix. With this partnership, Colas aims to reduce strain for its workers, while RB3D is given the opportunity to market a new product.

A total of 79 ExoPush devices are currently in use at Colas locations in Mainland France, and tests of the device are underway in seven other European countries, Canada and Morocco.

1.2.3.6. RESPONSIBLE PURCHASING

As mentioned in the introduction, a company cannot view its corporate social responsibility uniquely as tied to its own operations. The right balance must be achieved between partners who respect each other's specificities and autonomy in order to put in place a responsible upstream ecosystem. The keys to this kind of relationship are dialogue and the identification of essential CSR issues, so as to avoid losing focus and getting irritated because of minor ones.

The responsible purchasing policy put in place by Colas is aligned with its overall responsible development policy. It is also pragmatic in its orientation and reflects Colas' various purchasing segments and its range of business activities, as well as its decentralized culture. This policy addresses the constraints involved in working with a very large number of suppliers (more than 120,000 direct suppliers), the risks associated with differing types of expenses depending on the region, and the potential for Colas to exert influence on its key suppliers. The aim is to establish a framework for the development of lasting and balanced relationships between Colas and its purchasing stakeholders.

The CSR objectives to which the Colas Group's Purchasing Department committed may be divided into the following three types:

1.2.3.6.1. Implementing a comprehensive approach to responsible purchasing

Defining the notions of supplier, subcontractor and service provider together with the decision-makers concerned: the definition of these notions allows for the determination of CSR criteria that can be applied to suppliers, subcontractors and service providers as well as the coordinated actions that will be assigned to them. The results of this exercise will need to be cross-validated with the risks identified in the course of the risk mapping exercise, the purchasing categories, and the specific characteristics of each geographic area. These ideas will be formalized as part of the risk-mapping exercise before mid-2020.

Design of the approach:

- the objective of the methodology applied in addressing CSR issues in the area of purchasing is to assess not only the net risks as a whole, but also those related to the Duty of Vigilance so that action plans may be put in place both in a global manner and in accordance with the specificities of the areas where Colas operates. This analysis is adapted to the various purchasing segments and their characteristics. The mapping of CSR risks is currently being carried out and will be sent to each affiliate for comments and modifications by end-March 2020;
- a top-down approach is necessary for the launch of the risk mapping exercise with the various affiliates. This exercise must be supplemented by a bottom-up approach, in order to provide feedback on the CSR risks identified out in the field and the related action plans;
- this mapping will be used in the first half of 2020 to develop a formal program that includes the adopted principles and processes. It will be communicated not only to the Purchasing teams around the world, but also to any employees likely to enter into contracts with suppliers, subcontractors or service providers;
- action plans will be put in place in the next phase (second half of 2020), to be rolled out by purchasing category at the Colas Group level and depending on the specificities of the areas where Colas operates;
- these action plans distinguish between two groups of suppliers, subcontractors or service providers:
 - those managed by the Purchasing teams, whether centrally or at the local level, because they are covered by a framework agreement or because their criticality brings them under the purview of Colas' Duty of Vigilance, for example,
 - those not directly managed by Purchasing;
- input and outcome indicators will be introduced to round out this system (by the end of 2020 or early 2021).

The CSR aspects identified as material in the course of this mapping exercise will become an integral part of the Colas Group's Purchasing procedure.

Approach adapted to the areas where Colas operates: to provide a framework for purchasing actions involving the second group of suppliers, subcontractors or service providers mentioned above, a guide outlining the principles for the responsible procurement of products and services with regard to human rights, environmental performance, labor standards, and anti-corruption will be distributed by the end of 2020 or early 2021.

Balanced relations with suppliers: the following two subjects are especially important in this regard:

- **Economic dependence:** Colas has asked its affiliates to carry out supplier risk assessments (example for the transport of materials: a driver uses his own truck and works mainly with one or more Colas business units in the same region). If a supplier is found to be at risk, the process consists in reporting the information to the head of the affiliate and implementing an action plan. This plan may result in no measures being applied for various reasons or in the identification of the actions needed to reduce the dependence. (At present, no information system is in place across the Colas Group that would allow for the detection of economic dependence, whether at the affiliate, country or corporate level.);
- **Payment periods:** the Finance and Accounting departments are currently working on a method to ensure that payments are triggered automatically when the invoice matches the order received. Some contracts are being reviewed to avoid discrepancies between the purchase order and the invoice. As an example, this is the case for equipment rentals: discounts are offered depending on the number of days of use, which may result in discrepancies between the purchase order and the invoice, leading to significant delays for payment. It is for this reason that the decision has been taken to eliminate these discounts for contracts in Mainland France processed through the Purchasing information system. In line with the continued rollout of this information system, decisions will be taken on a country-by-country basis with the Finance departments at affiliates.

Indicators: beginning in 2021, the implementation of Colas' responsible purchasing approach will be accompanied by the gradual introduction of follow-up indicators and performance indicators in conjunction with a specific information system. Some of these indicators will be used each year in the preparation of Colas' non-financial performance statement. For example:

- as from 2019, and therefore as part of this non-financial performance statement, the following two indicators are included for employees in the Purchasing function: the percentage having signed the Purchasing function's code of ethics and the percentage having completed training in purchasing ethics and compliance. It will be possible to have these indicators audited beginning in 2020.

Audit policy: implementation of the approach will be audited in a number of ways:

- beginning in 2020, the Purchasing Department will set out an audit strategy for the first group of suppliers, subcontractors and service providers, following a test phase;
- beginning in 2021, the Purchasing Department will develop a methodology to monitor the effective application of its recommendations for the second group of suppliers, subcontractors and service providers. The Audit Department will then be in a position to verify the quality of this process during its general audits of the affiliates.

1.2.3.6.2. Capitalizing on existing initiatives

Today, Colas is able to capitalize on a number of existing initiatives in the area of responsible purchasing.

Materials

- apart from bitumen, purchases of materials are carried out locally;
- by looking at the risks associated with these purchases as a whole (bitumen included), Colas will be able to determine its levers for action in working alongside suppliers to better take into account CSR criteria.

Capital expenditure: a CSR questionnaire has been set up by the Purchasing Department and the Equipment Department, which will need to be completed by all suppliers involved in capital expenditure procurement processes in 2020. CSR criteria will be an integral part of the overall assessment of suppliers.

Bouygues Group's CSR Charter for Suppliers and Subcontractors: this document is provided as part of all purchasing transactions, whether under framework agreements or as single transactions. It is also included as part of the specific purchasing terms and conditions. It is therefore an appendix mentioned in contract clauses. It has been disseminated across all regions.

Agreements with subcontractors: work is in progress with the Safety Department, but also with the Colas Projects entity, to extend the approach already in place for rentals of equipment with drivers to other forms of subcontracting.

Taking the carbon footprint into account in all bids for purchases of binder production units, asphalt mixing plants, trucks and other vehicles. This issue is already being examined by the Equipment Department and the Innovation Department. Further in-depth work on this issue will take formal shape as part of Colas' carbon policy, in coordination with all Colas departments involved.

- proactive policy for vehicles and total cost of ownership (TCO): lower fuel consumption means improved performance;
- partnerships with equipment manufacturers to test machines powered by electricity rather than fossil fuels (e.g. excavators);
- a commitment to continue setting up partnerships with manufacturers to test new machines.

Taking into account safety and quality of life in the workplace

- partnership with Volvo and the *École Polytechnique Fédérale de Lausanne* (EPFL) to develop a "safety bubble" around site machines;
- initiative with equipment rental providers in France to include exoskeletons in their range of accessible tools, thus contributing to the more widespread availability of these devices;
- ergonomic assessment of drivers' cockpits in construction equipment, as already in place at Colas Suisse.

Work clothes: as part of the project to develop the Colas Group's new work clothes, launched in 2013, Colas focused on ensuring that the manufacturing processes for some of these uniforms met criteria for environmental protection, fair trade, ergonomics, labor relations, etc. (Fairtrade certification from Max Havelaar, non-GMO organic cotton fiber produced in Mali and grown without using toxic pesticides, social services provided to producers, fabric woven in ISO 14001-certified European plants, OEKO-TEX® Standard 100 dyes), all confirmed by audits to verify compliance. At the time, Colas was one of the main French purchasers of organic cotton, thus earning a certain reputation among external stakeholders. Today, the aim is to further strengthen this initiative, extending the approach to workwear manufactured for affiliates located in developing countries, notably including Madagascar and Morocco.

Suppliers employing people with disabilities: in France, Colas already works with many ESATs (organizations that ease the integration of people with disabilities into the mainstream labor market) and EAs (companies with special facilities to provide employment for people with disabilities). In this area, the aim is to capitalize on this experience to increase the numbers in France and develop comparable approaches for other countries.

1.2.3.6.3. Developing the professionalism of employees in Purchasing

Training for buyers (code of ethics and compliance training in 2019, CSR training in 2020):

- every new hire in Purchasing receives the code of ethics upon arrival, which must be signed. To date, about 70% of Colas buyers around the world have signed this code;
- training courses in ethics and compliance, developed in collaboration with the Legal Department, are delivered to all employees in Purchasing, irrespective of their level or responsibility. More than 50% of buyers worldwide received training in 2019 and these courses will be delivered again in 2020;
- set up a specific training course on CSR, covering three main aspects: the overall principles of CSR and responsible purchasing, Colas' CSR policy, and responsible purchasing at Colas.

Continuation of internal collaboration across different teams, including those reporting to the Safety, Technical/R&D, Environment, Legal and Equipment Departments.

1.2.4. Human capital

One Colas HR is a cross-business project under the One Colas program. The aim of this project is to hone the main policies and implement action plans for all Colas affiliates worldwide. It puts the Colas human resources strategy into practice by dividing it into seven main focus areas:

- safety, with the development of a safety culture on a global scale (see 1.2.4.4. "Protecting employees");
- ethics, with reference to the Colas compliance policy, monitoring the adoption and observance of compliance programs in all countries where Colas operates (see 1.2.4.3. "Developing skills");
- values and commitments, whose objectives are to move managerial practices forward and internationalize human resources management (see 1.2.4.2. "Retaining employees");
- human resources management, anticipating future skills needs and supporting employee growth while respecting diversity (see 1.2.4.1. "Attracting and integrating talent");
- digital transformation, to standardize human resources processes worldwide (see 1.2.4.3. "Developing skills");
- building the employer brand, to make Colas a more attractive employer (see 1.2.4.1. "Attracting and integrating talent");
- expand knowledge sharing within Colas, by developing platforms open to all employees worldwide (see 1.2.4.3. "Developing skills").

Colas implements this strategy by rolling out a responsible HR policy across all regions where it operates, based around four priorities:

- **attract and integrate** new talent by surrounding itself with men and women who reflect the plurality of civil society (diversity in terms of culture, ethnicity, age, gender, initial training, etc.); preventing discrimination; implementing dynamic hiring policies for future employees, students and interns; and championing equal treatment and equal promotion opportunities for men and women;
- **retain** employees by implementing actions favoring quality of life in the workplace, ensuring a good work/life balance, offering appropriate compensation and employee benefits, and creating the right conditions for dialogue between employees and management;
- **develop** employees' skills in order to enhance their expertise and give them more responsibility, make them more employable and also enable Colas to improve its economic performance and anticipate changes in its activities;
- **protecting** employees is a key priority. Colas has set itself a key goal in the area of safety: zero accidents. Risk analysis and looking into causality in terms of health and safety allow it to establish appropriate and structured action plans and implement a program based on continuous improvement to prevent accidents and illnesses.

1.2.4.1. ATTRACTING AND INTEGRATING TALENTS

Public works are traditionally a less attractive business sector than others that faces difficulties with recruiting staff regardless of the jobs positions and the skills required. In light of this observation, which is mainly rooted in a poor understanding of the activities involved and the industry's lackluster image, Colas pursues a proactive policy to attract up-and-coming talents, notably by promoting a strong and authentic employer brand and encouraging diversity in all its forms: the company must reflect the plurality of civil society, which is made up of people of all ages from a wide variety of cultural, ethnic and religious backgrounds, with varying levels of education and training, different modes of consumption, etc. In adapting to this reality, Colas is making it a key tenet of its approach to human capital and factoring it into its HR practices.

1.2.4.1.1. A dynamic strategy

The Human Resources department endeavors to making Colas more attractive and diversifying its sources of recruitment in order to benefit from a greater variety of backgrounds in a highly competitive context.

1.2.4.1.1. Hiring

France

The accolades received by Colas through various surveys ranking employers (No. 4 among construction and civil engineering employers in the 2019 ranking of the best employers in France published by Capital and Statista, Top Employer France certification) and its employees' pride in working for Colas are clear hiring advantages for Colas.

Considering the upturn in activity confirmed in 2019, particularly in the Paris region with the Le Grand Paris Express projects, hiring has to respond to needs relating to carrying out construction projects and the implementation of all Colas' functional and operational projects.

Colas' hiring strategy is supported in particular by its many partnerships with schools, which help build strong relationships with students, resulting in offers for internships, work-study positions, and ultimately full-time jobs. In 2019, in addition to developing relationships with engineering schools, university technology institutes and other two-year higher education programs in civil engineering, as well as institutions like Centre d'Égletons, a French civil engineering training school, Colas introduced or continued various initiatives to promote its employer brand, such as:

- a schools ambassador program consisting of gender-diverse pairs (one woman and one man);
- the Bouygues Opportunity Forum, targeting specific engineering and business schools (ESTP, HEC, École Nationale Supérieure d'Arts et Métiers (ENSAM), etc.);
- after-work events, sporting tournaments, etc.

In March 2019, Colas sponsored the ESTP graduation ceremony and entered into new partnerships with the École des Ponts ParisTech, ENSAM, Centrale Lyon, and the École Supérieure d'Ingénieurs des Travaux de la Construction de Paris (ESITC Paris). The November schools forum held at the new Paris headquarters was a resounding success.

In addition, the affiliates regularly hold site visits and get involved with schools in their local area.

Colas hosted around 2,600 interns in 2019, 10% of whom were subsequently hired. Of the 154 interns in the final year of their studies, 36% were hired to full-time positions.

Outside France

A variety of approaches and initiatives are also implemented to recruit candidates for positions: social networks, local agencies, websites, employee referrals, partnerships with schools, etc. As is the case in France, affiliates continue to build ties with schools, primarily through partnerships within their geographic area.

In Africa, partnerships have been established with different schools such as Institut Mohammed VI in Morocco, UCAC ICAM in Cameroon and USTM in Gabon.

In Europe, most countries take part in student fairs and benefit from partnerships with schools and universities. Colas UK has reinforced its apprenticeship policy, setting itself the target of hiring 5% of its staff on apprenticeship contracts by 2020. The UK affiliate launched a specific campaign targeting women, sponsoring events via the Women in Engineering network, including site visits and meetings with management.

Name of indicator	Scope	2018	2019 ⁽²⁾
External recruiting by status (number)	World		
Total France (Mainland + Overseas)		4,173	3,847
– Managers		671	580
– Office staff, technicians and supervisors		1,227	985
– Workers		2,275	2,282
International ⁽¹⁾ (incl. New Caledonia)		18,137	18,610
– Managers		3,082	3,530
– Workers		15,055	15,080
Total		22,310	22,457

(1) Outside France, the total number of employees hired over the year is recognized, regardless of the nature of the employment relationship ("permanent" or "seasonal" employees), including Miller McAsphalt employees.

(2) Not including data for Smac in 2019.

Name of indicator	Scope	2018	2019 ⁽³⁾
Leavers by reason for leaving (number)			
Number of leavers in France (under permanent contracts only) ⁽¹⁾	France (Mainland + Overseas)	3,538	2,969
– Redundancies (all reasons)		1,508	1,259
– Mutually agreed terminations		399	306
– Resignations		958	839
– Other (retirement, death, termination or end of trial period)		673	565
Number of leavers outside France ⁽²⁾ (all reasons and all statuses)	International (incl. New Caledonia)	15,152	16,044
Number of departures (all reasons and all statuses)	World	19,313	19,679

(1) In France, the total number of employees under permanent contracts who left over the year is recognized.

(2) Outside France, the total number of employees who left over the year is recognized, regardless of the nature of the employment contract or relationship ("permanent" or "seasonal" employees), including the employees of Miller McAsphalt.

(3) Not including data for Smac in 2019.

In 2019, new hires by Colas remained stable overall compared with 2018.

This overall stability breaks down as follows, by geographic region, business activity, and type of employee:

- in France, new hires fell by 8% (although remaining nearly stable for hourly workers), including the impact of the Smac sale (at constant structure, the decline was 6.5%);
There was a strong disparity between the Roads business in Mainland France, which saw a 7% drop in new hires (nearly identical for all types of employees), Overseas France, where new hires increased by 15% (for managers and hourly workers), and other businesses, which saw a sharper 30% decline in new hires (mainly at Spac);
- outside France, new hires rose by 2.6% overall, driven by a strong 14% increase for office staff, technicians and supervisors. Hiring of hourly workers continued at a very high level. In North America, Africa and Asia, hiring levels vary very widely, mainly due to seasonal factors.

By geographic region, movements in hiring were as follows:

- in North America, after rising in 2018, hiring levels declined by 10%, notably in Canada, for both management and hourly workers (though still remaining very high);
- in Europe, new hires were up 8%, but this increase was largely driven by Central Europe with the acquisition of Skanska's asphalt production assets in Poland (more than 350 employees), where it is a leading national player in the construction market;
- in Africa, the upturn in business, mainly in Côte d'Ivoire with a major project in Bouaké (Route du Nord), Benin (two new projects in Cotonou and Ouedo), and Gabon (two projects in Libreville and Franceville), entailed a significant rise in new hires;
- in the Indian Ocean region, a sharp downturn was recorded, mainly in Madagascar following the completion of works on the RN5 and the RN6;
- in Oceania, the number of new hires remained relatively stable;
- in South America, there was a significant increase due to the launch of Colvias' operations in Peru and the acquisition of Asfalcura in Chile.

1.2.4.1.1.2. Workforce

Colas' workforce totaled 57,037 at December 31, 2019. However, it should be noted that this figure underrepresents a sizable segment of the workforce in North America, where a large proportion of workers have employment contracts that are suspended during the winter months.

Name of indicator	Scope	2018	2019 ⁽³⁾
Workforce by geographic location ⁽¹⁾ (number)			
	World		
Total France (Mainland + Overseas)		33,702	30,981
Total International		24,295	26,056
– Europe (excluding France)		9,084	10,055
– Indian Ocean/Africa/Middle East		6,353	6,840
– North America ⁽²⁾		7,683	7,734
– Asia-Pacific (incl. New Caledonia)		765	907
– Central America/South America		410	520
Total		57,997	57,037

(1) Workforce as of December 31, which includes all personnel working under an employment contract of any type for a company within the scope of consolidation or receiving direct compensation for their work from said company, excluding those having entered into a business contract (such as a service agreement) with the company.

(2) Including Miller McAsphalt employees.

(3) Not including Smac's workforce in 2019.

As of December 31, 2019, Colas' total workforce was down 1.65% relative to 2018 due to the sale of Smac, which had 3,411 employees at December 31, 2018: 2,840 in Mainland France, and 571 in the rest of the world.

On a like-for-like basis, the Colas total workforce increased 4.5%.

In France (Mainland and Overseas), on a like-for-like basis (i.e. excluding Smac), the workforce held relatively steady, as follows:

- nearly identical in Mainland France road construction affiliates (which make up 78.71% of the workforce in Mainland France);
- down 2.3% in the three non-road affiliates;
- down 3.5% in Overseas France.

In France, the workforce is comprised of 54% hourly workers; 27% office staff, technicians, and supervisors; and 19% managers.

Outside France, the workforce once again grew (up 7%), as it had in 2018 (up 13%):

Colas had 10,055 employees in Europe (excluding France), making it the largest region in the International scope. The region's workforce increased by around 11%, though still with fairly significant disparities between regions: up 99% in Poland (due to the acquisition of Skanska's road assets), 11% in the Czech Republic and 5% in Switzerland but down 4% in Denmark, 10% in the United Kingdom and 7% in Slovakia.

In the Indian Ocean/Africa/Middle East region, the workforce grew by around 8% but with significant differences between countries: significant increases in West and Central Africa, with the workforce in Benin increasing by a factor of 4.5 (from 109 to 489); up 39% in Côte d'Ivoire, 15% in Gabon and 14% in Mauritius; but down 18% in South Africa and 3.5% in Madagascar.

The North American workforce was more or less unchanged. Workforce levels remained stable, but with significant changes throughout the year due to seasonal business fluctuations.

The Asia-Pacific and Central/South America regions, which together account for 5.5% of the total International workforce, saw their workforce increase by 20%, mainly due to the 2019 launch of Colvias' operations in Peru and the acquisition of Asfalcura in Chile.

1.2.4.1.2. Employer brand

Colas' business model, which is based on the operation of many local businesses, offers employees lasting jobs, encouraging them to stay with Colas. The development of the Colas employer brand has four main thrusts: promoting equal opportunities and professional advancement at all levels and fighting all forms of discrimination, paying particular attention to quality of life in the workplace, expanding merit-based compensation and social benefits, and creating conditions conducive to a good dialogue between management and labor.

Today, companies have to reflect the diversity of civil society. Taking account of the wide variety of backgrounds in terms of culture, ethnicity, religion, age, education/training, means of consumption, etc., Colas adapts itself to this reality and factors it into its HR practices.

Colas once again secured Top Employers certification in 2019. This certification consists of five stages and includes in particular an independent audit and assessment of several hundred managerial and HR practices.

Recognizing the importance of brand awareness in boosting its appeal as an employer, in addition to the Colas Careers Hub (www.hubcarrierecolas.com) and the Colas' Careers website, Colas has continued to develop its digital communications strategy and initiated an in-depth review to improve the hiring experience for job applicants, from the online application process to follow-up actions in the talent pool.

In 2019, backed by its strong social media presence, Colas continued its three major employee advocacy programs, rolled out around the world, thus increasing employee social engagement to help promote its employer brand and job offers on professional networking sites:

- Follow-Me, a program providing individualized support on LinkedIn for managers in France and abroad;
- Roadshows, a program of workshops to encourage business unit managers and affiliate managers to share their brand messages on professional networking sites. 2019 was an opportunity to extend roadshow training to all employees with access to Colas Campus (the Colas Group's training platform) in the form of two video e-learning modules: one teaching employees how to grow their personal brand on LinkedIn and the other, Buzzclub, a mobile sharing platform open to professionals working in support functions and young graduates, providing information about potential employee referral programs;
- The Textkernel app, which can be used to submit applications in under a minute from a desktop PC, mobile phone or tablet, continued to be used in 2019. The applicant conversion rate, which measures the number of applicants submitting a resumé after viewing a job offer, thus improved.

Colas also initiated a partnership with Yaggo, a job application platform that lets companies respond to applicants online, ensuring a 100% response rate to applications received while also establishing an individualized relationship in terms of both the form of response and keeping track of applicants with potential.

Lastly, in order to strengthen its employer brand, Colas continued to develop its innovative major advertising campaign, "My Job Story", based on employee commitment. On the basis of video testimonies presenting jobs at all entities, both in France

and abroad, this campaign was developed first and foremost by and for the Colas employees, who are invited to share funny or moving anecdotes from their work environment in interview format. These video clips are filmed locally using smartphones and subsequently adjusted to suit the campaign format. These testimonies are meant to be published on social media as they are created and passed on primarily by employees themselves. All the videos made help paint a stroke-by-stroke picture of what Colas is all about in terms of diversity and social connection, and allow it to communicate its employer brand to potential applicants while also helping to maintain pride in belonging to the company.

Outside France, Colas has made itself more visible and stepped up its communications via LinkedIn Worldwide agreements and more intense use of social media.

Following the second “Colas & You” perception survey conducted in the latter part of 2018, garnering responses from a total of 46,000 Colas employees worldwide, an action plan with four new areas for improvement was launched in 2019:

1. Launch of a safety culture campaign with Dupont de Nemours (see 1.2.4.4.2. “Workforce safety policy”)
2. Raising awareness of compliance (see 1.2.5. “Ethics and human rights”)
3. Promoting the overall compensation policy
4. Optimizing operating methods and processes

1.2.4.1.3. Diversity policy and preventing discrimination

Colas continued to implement its Diversity policy action plan in 2019, notably through presentations and awareness-raising initiatives:

- special focus during training courses for managers and the main business functions: human resources, communications, purchasing and general services;
- facilitating the National Diversity Committee meeting (with Diversity officers from affiliates in Mainland France);
- article in each issue of the e-HR newsletter (five issues in 2019 sent by email out to over 30,000 employees worldwide in French and English);
- a message in the in-house magazine Routes, which is distributed to Colas employees;
- introduction of an e-learning module for managers, “Experiencing diversity together”.

Name of indicator	Scope	2018	2019
Workforce by age bracket⁽¹⁾ (as %)	World		
< 25 years old		6.4	6.7
25-34 years old		21.5	20.9
35-44 years old		26.5	26.3
45-54 years old		28.6	28.1
55 years old and up		17	18

(1) All types of contract (permanent, temporary, seasonal); figures including Miller McAsphalt group employees and excluding – for 2019 – the Smac workforce.

The distribution of ages across Colas is fairly even worldwide, comparable to 2018 levels.

1.2.4.1.3.1. Measures to promote gender equality⁽¹⁴⁾

Gender equality and the prevention of sex discrimination is a topic that prompted many comments during the stakeholder polling process (see 1.2.1.2. “Materiality analysis and stakeholder consultation”). The diversity action plan launched in 2017 remains focused on achieving the three initial objectives:

1. **Attracting more women**, ensuring that there are more female applicants for jobs on offer.

In Mainland France, 15 pairs of ambassadors – each comprising a man and a woman – have been identified. After attending a training day at Colas headquarters, they are invited to speak at forums or during events at schools to tell people about Colas, what it does and career opportunities for both women and men.

Relations with schools have also been rethought to target more women, now supporting an increasing number of cultural and artistic associations (and not just team sports events).

Lastly, the partnership with the nonprofit *Elles Bougent* was renewed in 2019. It aims to bring more young women into scientific and technical professions by reaching out to them as early as junior high school. For Colas, these actions offer an opportunity to raise its profile among potential employees.
2. **Hiring more women in all business lines**. For this target, internal recruiters and partners – namely temporary employment agencies and recruitment firms – are making sure to put forward applications from both sexes for all jobs (whether internal or external hires), and particularly in supervisory roles.
3. **Retaining talented women and supporting their career development**. In 2019, Colas renewed the set of support measures put in place for its female employees. In 2019, 31 female employees were offered either a leadership development training course (*Leadership au féminin*) or a year of mentoring with a Colas or Bouygues manager, depending on their job level and

(14) UN Sustainable Development Goal 5 (SDG 5): Achieve gender equality and empower all women and girls.

requirements. Given their success, these two programs will run again in 2020 and the Leadership training will be adapted to International employees (in both French and English versions).

Furthermore, Colas' gender-diversity network, open to both women and men (i.e. not restricted to women), launched at the end of 2017 and dubbed WE, aims to help develop diversity, notably by working on the representation of women at Colas to strengthen gender equality. This allows its members to discuss and share ideas.

The Steering Committee set up initiates action plans in the areas of combating sexism, breaking down gender stereotypes and creating a more favorable environment for women at work sites to flourish professionally (suitable work clothes, dedicated sanitary facilities, etc.). A number of initiatives were launched in 2019:

- **dispelling gender stereotypes:** in January, Pete Stone, an expert in this area, was invited to give a talk, which was rebroadcast around the world. It was then produced as a 10-minute video (in French and in English), which was widely disseminated. The video is still available at Colas Campus and is screened in particular during onboarding meetings for new hires;
- **fighting sexism:** a campaign to combat everyday sexism, based on anecdotes collected and illustrated by Antoine Chereau was launched in February and continued throughout the year, with one cartoon about every two months (in French and in English). The campaign proved to be a hit with its audience, including outside of France; some of the cartoons were even translated into Hungarian and Malagasy (Madagascar).

A French law has entered into force requiring all companies with more than 250 employees to appoint a reference person to guide, inform and support employees in the fight against sexual harassment and sexist behavior. Colas has set up a network for these reference persons at the national level, who are using the illustrated campaign to combat everyday sexism as a springboard for their actions.

In September, recruiters from Human Resources departments in Overseas France and the Indian Ocean region took a course entitled "Non-discriminatory hiring practices" as part of the Colas training program.

In Mayotte, an agreement was signed on gender equality in the workplace, including commitments in terms of recruitment, hiring, training, promotion, and equal pay.

In France, the law on the freedom to choose one's professional future introduced the obligation for companies to calculate a gender equality index beginning in 2019. For Colas, the calculation of this index, resulting in a score out of 100 based on five indicators involved 17 affiliates with more than 250 employees. Eight of these affiliates achieved a score greater than or equal to 75 (the level below which an action plan must be put in place in collaboration with government authorities). The nine remaining affiliates were not able to calculate the index, due to an insufficient number of eligible staff for the calculation of one of the indicators (the proportion of women among hourly workers was not representative). Given the procedures for the index calculation, scores could therefore not be determined for these companies. Informed of this situation, the government authorities accepted this absence of scores.

Gender equality is a key priority of the human resources policy at Colas UK, involving actions such as the sponsorship of the International Women in Engineering Day and organizing visits to girls schools.

In North America, the Miller group belongs to the Women In Construction association for women in the building and public works sector. At Standard General, a training program on site equipment has been put in place exclusively for women.

In addition, Colas took part in the Women's Forum held in Paris in November 2019, with three staff members attending, including two women.

Name of indicator	Scope	2018	2019
Workforce by gender⁽¹⁾ (as %)	World		
Women (%)		10.8	10.8
Men (%)		89.2	89.2

(1) All types of contract (permanent, temporary, seasonal); figures including Miller McAsphalt group employees and excluding - for 2019 - the Smac workforce.

In spite of all these initiatives, the percentage of women in the workforce was unchanged from 2018. Action plans will be stepped up in 2020.

Name of indicator	Scope	2018	2019
Representation of women at Colas⁽¹⁾ (as %)	World ⁽¹⁾		
– Female office staff, technicians and supervisors ⁽³⁾ (as % of total office staff, technicians and supervisors)		21.9	21.4
– Female hourly workers ⁽³⁾ (as % of total hourly workers)		2.5	2.8
Female managers⁽²⁾	World	11.6	10.4

(1) All types of contract (permanent, temporary, seasonal); figures including Miller McAsphalt group employees and excluding – for 2019 – the Smac workforce.

(2) Number of women managers relative to the total number of managers.

In France, the “Female managers” category is based on employment code criteria, under which managers are defined as being at or above the level of department head.

Outside France, the “Female managers” category is defined as members of a local management body (the body that makes strategic decisions, such as an Executive Committee).

(3) Staff = office staff, technicians and supervisors.

The percentage of female staff and hourly workers was similar to that observed in 2018.

The percentage of female managers decreased slightly, owing to the result outside France. In France, it was unchanged from 2018, while outside France it decreased by one percentage point (from 15% in 2018 to 14% in 2019).

1.2.4.1.3.2. Preventing discrimination

In France, the principle of non-discrimination was reaffirmed in the negotiation of agreements on diversity and gender equality (N.B. this resulted in the signing of an agreement in June 2018).

The importance of non-discrimination is regularly reaffirmed by way of presentations as part of the Colas University training programs, delivered to managers at various stages of their professional development.

Under new legal requirements on the obligation to provide non-discrimination training, a specific training program was launched and completed by around 80 Colas recruiters in 2018. This course was repeated in 2019 in the form of an e-learning module intended for all managers in France (more than 1,000 people), under the title “Working together for diversity.” This module consists of seven units, each addressing a specific discrimination topic: sex, age, national origin, disability, religious beliefs, union membership, and sexual orientation. The course has been adapted so that it can be made available online to recruiters in Overseas France. Launched in November 2019, the rollout of this version will continue in 2020, to raise awareness for the largest possible number of managers on the risk of discrimination, which may even be the result of unconscious biases.

In addition, partnership agreements are signed locally with GEIQs (employer groups for orientation and training) to help facilitate the employment process for people having trouble accessing the job market or returning to work. GEIQs directly hire individuals within these target groups and then make them available to member companies by organizing their schedules to alternate between theoretical training and on-the job work experience. The system has enabled around 40 people to work at Colas affiliates in Mainland France under this type of contract.

In addition, Colas affiliates in Mainland France have extended their involvement in the HOPE project (which helps refugees secure housing and find work), hosting refugees. Since 2018, the aim of this experimental program, developed by the French employment ministry in partnership with FNTP, Afpa, GEIQs and Pôle Emploi, has been to respond to the specific difficulties encountered by refugees arriving in France. Each of them is able to benefit from French lessons, training in worksite prevention and an internship to learn about the company on the field.

In the United Kingdom, Colas Ltd is very actively involved in the implementation of a diversity policy and is working closely with agencies specialized in the professional reintegration of specific categories of individuals: veterans, people with disabilities, long-term unemployed, former delinquents, etc.

In Canada, where harassment is considered as a form of discrimination, various policies have been put in place, such as the Harassment Awareness Policy, to fight discrimination and guarantee employees a welcoming work environment.

In the United States, Colas Inc. has set up an anti-discrimination hotline. In addition, a twofold approach has been adopted:

- creation of a women’s network called Women’s Initiative (WIN) to develop networking and exchanges;
- participation in a forum for women engineers to facilitate their recruitment.

1.2.4.1.3.3. Measures to employ and promote the social integration of people with disabilities

In France, as part of its Disability policy, Colas hires workers with disabilities and also helps raise awareness about the issue among all its employees.

The Handi-alternance campaign was repeated in 2019, in partnership with Cap’emploi and Agefiph, at Colas’ headquarters. A communications campaign had been launched one month before the event, featuring one poster each week, with the aim of dispelling preconceived ideas about people with disabilities. These visual aids were displayed at sites and also disseminated via the social network Yammer.

As partnerships with companies that employ only people with disabilities and provide them with special facilities and support could be further expanded, presentations on using these companies were organized for the General Services committees, the Europe Communication Committee and the France Purchasing Committee between April and June 2019, and for the Assistants function in November 2019 (a total of about 600 people).

The principles of the Colas disability policy are regularly reiterated in the human resources e-newsletter sent to 30,000 employees around the world.

Lastly, human resources managers at several affiliates completed a one-hour awareness module entitled “Keeping our employees in their jobs” made available to them by the Human Resources Department. Between October and December 2019, more than 170 employees were thus made more aware of the Colas disability policy and the role they can play in its implementation.

In Overseas France, the local affiliate on Reunion Island included a feature article in its in-house magazine to raise awareness among its employees about people with disabilities, with a special emphasis on balancing work and disabilities.

Since 2017, Colas UK has been certified as a Disability Confident employer, thus recognizing the initiatives it has put in place in support of people with disabilities.

Name of indicator	Scope	2018	2019 ⁽²⁾
Number of employees with disabilities ⁽¹⁾	France (Mainland + Overseas)	953	874
Number of new hires with disabilities ⁽¹⁾	France (Mainland + Overseas)	24	17
Revenue with companies that employ people with disabilities (in euros)	France (Mainland + Overseas)	1,735,356	1,801,102

(1) Fixed-term and permanent contracts.

(2) Smac workforce not included for 2019.

Despite the measures taken to hire people with disabilities, if the sale of Smac is taken into account, all of the indicators in this area remained stable.

1.2.4.2. RETAINING EMPLOYEES

1.2.4.2.1. Organization of working time

Worldwide, the organization of working time takes into account the seasonal nature of the Colas transportation infrastructure construction and maintenance business. The topic of work-life balance generated many comments in the stakeholder consultation exercise (see 1.2.1.2. “Materiality analysis and stakeholder consultation”).

In France (Mainland and Overseas), the preferred organization of working time is based on annualization and a fixed number of days worked. Annualization and the working time modulation plan - which apply to hourly workers and office staff, technicians and supervisors in Operations - mean that work can be organized according to seasonality, while rewarding overtime. In businesses like Railways and Road Safety and Signaling, where safety requires that work be carried out at night, specific procedures are used for the organization of work. The working hour arrangement applied to managers, which is based on a set number of days worked, is being gradually extended to supervisors. The tool used to manage working time and time off for employees whose working time is counted in days keeps track of days worked, rest days, and leave days on a monthly basis. It is also designed to facilitate ongoing dialogue between managers and employees about their workloads and the work-life balance. In Mainland France, affiliates use temporary employment agencies to fill short-term staffing requirements.

Outside France, the seasonal nature of business also has an impact on the organization of work time:

- in North America, projects are mainly carried out between April and November, with a large proportion of seasonal employees. In the United States and Canada, in many states, weather conditions mean that it is not possible to work on construction sites all months of the year. The approach to staffing is influenced by this seasonality: employees work at Colas business units for six to eight months of the year and are rehired from one year to the next. In Canada, working times during periods of activity are governed by provincial regulations and, for unionized workers, by collective bargaining agreements. A fatigue management policy is in place at most Canadian companies that tracks hours worked and rest periods;
- in Europe, working time is calculated on an annual basis in most countries, in line with the local legislation. This offers flexibility and makes it possible to concentrate work at the times of the year best suited to construction. At the end of the year or when new projects come in, affiliates and their business units publish a schedule of activity for the upcoming year and submit it to employee representatives. In other countries such as the Czech Republic, Austria, Denmark and Iceland, affiliates bring in seasonal staff at the busiest times of the year;
- in Africa, working time is geared to the legislation in force in each country. An overtime rate is paid for hours worked outside normal working times. On certain projects, employees are granted time off at the end of the month.

In certain countries, work times are adapted during the month of Ramadan.

Name of indicator	Scope	2018	2019
Employee working time arrangements⁽¹⁾ (as %)	France (Mainland + Overseas)		
– Hourly		80	79
– Fixed number of days worked		20	21
Number of hours worked⁽²⁾	World	111,508,974	110,173,788

(1) Fixed-term and permanent contracts.

(2) All types of contract (permanent, temporary, seasonal); figures including Miller McAsphalt group employees and excluding – for 2019 – the Smac workforce.

The slight fall in the number of hours worked must be set against the fact that hours worked at Smac (5,600,000 in 2018) were not taken into account in 2019. On a like-for-like basis, the number of hours worked increased by around 4%.

1.2.4.2.2. Conditions for labor-management dialogue and agreements signed with employee representatives

In France, turnout for employee elections to choose members for the new social and economic committees in each affiliate remained high (almost 84%) in 2019. Two collective agreements covering all Colas affiliates in Mainland France were signed in 2019:

- a discretionary profit-sharing agreement signed on June 6. This Colas Group-wide agreement, first introduced in 2010, is based on a combination of two inseparable performance criteria (one financial and the other safety-related). Both criteria have been reviewed, primarily focusing on the safety aspects, which now include the frequency rate for consistency with the new “Dupont de Nemours” approach rolled out in Mainland France. This agreement will apply to fiscal years 2019, 2020 and 2021. The agreement has helped increase employee awareness of safety culture. Apart from its positive impact on economic performance, this agreement also aims to strengthen employee adherence to and involvement in the Colas policy to promote occupational health and safety and prevent risks in the workplace;
- a framework agreement, signed on June 6, setting out the methodology and implementation principles for mandatory profit-sharing at Colas companies in Mainland France in preparation for future agreements to be negotiated within each relevant affiliate. This framework agreement henceforth encourages a standardized approach to mandatory profit-sharing at affiliates in Mainland France, a sense of belonging both to the Colas Group and to the specific affiliate where an employee works, and the sharing of profits at the level of each affiliate.

The agreements signed at affiliates involves primarily employee representative bodies, taking account of the organization of union representative elections at affiliates, which continued in 2019, and the creation of a Social and Economic Committee (merging of the former bodies: works council, employee representatives and health and safety committee).

A number of Social and Economic Committee agreements have been signed in order to define the social mapping of the Colas affiliates (business unit committee and central committee) and organize the implementation and working of these bodies at these different levels.

Name of indicator	Scope	2018	2019 ⁽¹⁾
Turnout for latest elections for members of works councils or social and economic committees, employee representatives, or the combined works councils and employee representatives known as <i>délégations uniques du personnel</i> (as %)	France	82	84
Existence of a staff representative body⁽²⁾ (as %)	International	80	77

(1) Smac workforce not included for 2019.

(2) Number of companies with more than 300 employees at which there is a recognized interface for dialogue (either elected or designated) between management and local staff, divided by the total number of companies with more than 300 employees.

In France (Mainland and Overseas) as of December 31, 2019, labor-management dialogue took place via 274 employee representative bodies, a lower number than the previous year due to the gradual introduction of CSEs (economic and social committees). Turnout for the latest elections remained high (around 84%).

Employee representation in Overseas France is organized the same way as in Mainland France, with meetings and/or committees and locally negotiated agreements. Labor-management dialogue is ongoing, notably in Mayotte, though the environment remains challenging there (it should be noted that an Economic and Social Committee is to be set up on the island in the near future).

Labor-management dialogue is also ongoing in New Caledonia thanks to close relationships and in spite of a context of social tension.

At the Colas' International entities, and particularly in Europe and Africa, three-fourths of companies employing more than 300 people had staff representation comparable to that in France.

In Northern and Central Europe, the quality of labor-management dialogue is satisfactory in all countries, with the main issue still being tensions related to the labor market.

At Colas UK, employee representatives meet twice a year at a forum to exchange information.

In North and West Africa, and particularly in Benin, Côte d'Ivoire, Gabon and Morocco, given differences in legislation governing employee representation, other forms of more direct employee communication have been put into practice such as notices, memoranda and mailings. Information meetings were also held with all managers in these countries in 2019.

In Southern Africa, labor-management dialogue - which is challenging due to economic conditions - is organized around quarterly meetings with trade unions.

In North America, labor-management dialogue takes place via trade unions and industry bodies, with unions acting as a preferred channel for employee dialogue. The affiliates also hold staff information meetings to foster discussion on a variety of issues such as safety, ethics and so on, and to facilitate understanding at different levels of hierarchy within the company.

Name of indicator	Scope	2018	2019 ⁽¹⁾
Number of collective bargaining agreements negotiated, including mandatory yearly negotiations	France (Mainland + Overseas)	168	113

(1) Smac workforce not included for 2019.

Of the 113 agreements negotiated, 55 are related to the renewal and implementation of Economic and Social Councils, 41 to compensation/employee benefits/collective agreements, 8 to organization and work hours, 2 to quality of life at work/diversity/gender equality, and 7 to various issues including standardized labor law.

Digital communication is a growing channel for stimulating dialogue with employees. The Yammer network was expanded with communities for employees working in the same business line, on the same project or in the same geographical area, both in France and abroad. The Colas Share knowledge management platform, launched in 2019, already hosts 13 different communities of experts. In the first half of 2019, an employee portal named My Colas was rolled out across all Colas entities in Mainland France for office staff, technicians, supervisors and managers (totaling around 13,000 employees). My Colas offers a more interactive, personalized experience for employees, notably thanks to new HR services such as the digital safe, self-service options (annual leave and HR) and a communication space (based around the Yammer network and an in-house magazine).

1.2.4.2.3. Agreement relating to quality of life at work

An agreement covering all Colas affiliates in Mainland France relating to quality of life at work was signed in December 2017. Implementation began in 2018 and continued in 2019. The agreement signals Colas' desire to promote work/life balance for its employees by taking concrete action such as offering new ways of organizing workload and reducing time spent traveling. The following measures have been adopted:

- development of remote working in a number of forms: weekly remote working (one or two “fixed” days per week) and monthly remote working (with quotas of between four and eight days per month), with the option for employees to fulfil their remote working quotas either from home or from a Colas site. Roles and activities that must by nature be performed on business premises, due to either the equipment used or the need for a physical presence, are not eligible for this type of working arrangement. By definition, given the specific nature of activities inherent to construction sites, depots, workshops, quarries and industrial sites, and the interdependence between such sites, hourly workers are in principle not eligible for this type of working arrangement. At end 2019, 215 people were working remotely. To begin with, remote working was limited to four days per month and one day per week to avoid disrupting the organization of work for staff. Occasional remote working, a more flexible form of working remotely is particularly suited to operational managers;
- help with children’s homework, with free access to tutoring (from kindergarten to high school, as well as various trade certifications) and “online teachers”;
- childcare through a personal and household service platform;
- option of transferring some unused days off to the Bouygues retirement saving account and/or company savings plans;
- support for employees who are caregivers, backed up by PRO BTP (with a communications campaign run in March/April 2019);
- the “My Family Solutions” information portal launched in June 2019, which aims to simplify employees’ day-to-day lives by offering legal and administrative assistance.

1.2.4.2.4. Compensation and changes in compensation

In accordance with the Bouygues Group’s compensation policy, Colas’ policy is to ensure that all employees worldwide receive total compensation that is fair and appropriate to the specifics of each activity, employee profile and geographical region, and to give employees a stake in the Colas consolidated results.

Colas’ policy is based on the annual guidelines issued by Executive Management, taking into account the economic environment, inflation, the job market and wage negotiations with trade unions and employee representatives. This policy keeps jobs aligned with responsibilities, with attention to equity between men and women, and includes measures for young people, talent

management, and promotions. It rewards achievement and is applied at the individual level. It is a key driver of development and performance that recognizes employees' skills and aims to reward those who achieve or exceed individual and shared targets.

In France (both Mainland and Overseas), where the market is recovering and inflation came in at 1.8% in 2018, a pay increase budget of 3.0% of payroll on a present/present basis (i.e. for employees present over the period from January 1 of year Y-1 to January 1 of year Y) was allocated in 2019.

The variable compensation policy applied by Colas is based on the overall performance of all its entities in France and around the world. The amount paid out by affiliates is based on three criteria: the Colas consolidated results, the affiliate's results and individual performances.

Variable compensation paid to executives and managers is more impacted than that paid to supervisory staff by the entity's financial performance and meeting personal targets. Compensation paid to the Chairman and to the Chief Executive Officer consists of a variable portion linked to financial performance and certain CSR indicators (Prevention and Environment).

Every manager is provided with a pay review tool, plus relevant performance indicators. Managers are thus given all the information they need to review their team's pay levels and can submit their proposals with a single click to the affiliate's validator and then to Colas' headquarters for approval. This information system constitutes a management monitoring tool that provides traceability, efficiency and a seamless approach to employee career management.

It should be noted that the compensation policy in Overseas France is the same as in Mainland France, except in Mayotte, where the French Labor Code entered into force on January 1, 2018, resulting in changes in the amount and structure of compensation.

In line with the overall compensation policy applied by the Bouygues Group, Colas provides employees with very good levels of health insurance, pension benefits and personal risk coverage and allows employees to share in profits by giving them access to the Bouygues PEG (*Plan d'Épargne Groupe*) and PERCO (*Plan d'Épargne Retraite Collectif*) employee savings vehicles and profit-sharing plans.

In the United States, the policy is based on local pay surveys, given the regional differences between its units in western states (Alaska, California, Colorado), central states (Wyoming, South Dakota, Nebraska, Ohio, Arkansas, Missouri, Illinois), and eastern states (Florida, Georgia, South Carolina, Virginia, Pennsylvania, New York). As a result, its employees can be paid at a level in line with the local market.

In Canada, Colas sets pay levels on the basis of local collective bargaining agreements. For unionized employees, pay is set through the collective bargaining arrangements applicable to their businesses.

In Northern and Central Europe, pay policy and employee policy are coordinated with general policy. Given the tight situation of full employment for at least another two years, pay policy is a strategic issue. A salary benchmarking exercise is undertaken each year to assess the company's market position, with the goal of being in line with the market and retaining key talent. The environment and approach in relation to pay are the same in the United Kingdom. In Ireland, a 2017 law (the Sectoral Employment Order) governing pay policy in the building trade entered into force for the first time in 2019, resulting in the rebasing of some employees' salaries.

In Africa, the Colas affiliates in Morocco, Côte d'Ivoire, Benin and Gabon rely on a market benchmark produced by Mercer for each country, as well as best practice. They have reviewed their compensation processes and positioning so as to better assess, guide and retain employees as well as attracting new talent thanks to fairer rules rewarding performance. A performance review and rating exercise was undertaken for all managers (a similar exercise is underway for office staff, technicians and supervisors).

In Southern and East Africa (South Africa, Kenya, Zambia and Namibia), salaries are rebased in accordance with local collective bargaining agreements.

Name of indicator	Scope	2018	2019 ⁽²⁾	Change
Average annual wages by status⁽¹⁾ (in euros)	France (Mainland + Overseas)			
- Managers		62,144	63,316	+ 1.89 %
- Office staff, technicians and supervisors		37,338	38,492	+ 3.09 %
- Hourly workers		27,084	27,701	+ 2.28 %

(1) Permanent contracts.

(2) Smac salaries not included for 2019.

Average annual wages in France have seen steady year-on-year growth. It should be noted that pay has risen across all categories, though more specifically for middle management and workers.

1.2.4.3. DEVELOPING SKILLS

Continuous improvement is a core principle of employee policy at Colas, which aims to foster employees' social and economic development. The concept of social mobility⁽¹⁵⁾ has traditionally been embedded in the construction and public works sector, with the following benefits:

- **for employees**, enhanced skills and improved organizational arrangements, enabling them to grow personally, boost their employability⁽¹⁶⁾, enjoy improved quality of life at the workplace and find meaning and interest in their work;
- **for the business**, a tailored and enhanced skills base resulting in greater agility and a competitive edge.

1.2.4.3.1. Career management

The mobility policy pursued by Colas has long been a key element in its approach to career development for the Colas employees. It aims to facilitate transfers between different functions and/or regions within the Colas Group to help meet employees' professional and/or personal goals and the staffing requirements of the business. One of the challenges of this policy is making the development of talent fit Colas' performance and growth.

Transfers between affiliates/countries or within affiliates/countries applies to all employees both in France and abroad. The principles and key rules are presented in the Colas Mobility Charter, which is available on the e-colas intranet. It states specifically that the process for each transfer should be based on a partnership between the employee, the manager and the Human Resources Department. It also indicates that special arrangements should be put in place to assist with transfers, which includes expatriate assignments and secondments, as well as outright transfers.

Changes were made to these mobility support programs to make them clearer and more transparent, better suited to the personal and professional needs of employees and their family. They also address factors that can hamper mobility, such as a spouse's job and housing costs. They now include a common set of assistance packages (including moving costs, contribution towards the cost of finding a new home, etc.), plus specific and optional forms of financial assistance that may vary according to employee status.

Nomades, a jobs bulletin board accessible on the e-colas intranet, displays internal job offers, which also appear, alongside others, on the Bouygues Group's Mobyctic platform.

Affiliates - particularly those outside France - often have their own information tools about opportunities available to employees.

In addition to these traditional intranets, the introduction of the Yammer enterprise social network has given rise to communities of employees within a given job family (Purchasing, Sales, etc.), within which targeted job opportunities all over the world are posted.

The Bouygues Group's Opportunity forum was a huge success, enabling Human Resources staff from Bouygues' five business segments involved in job mobility to meet many employees seeking information about the Group's various business lines with the aim of a potential transfer, whether geographical or functional.

The study into key jobs initiated in 2018 also continued, in cooperation with the Colas affiliates. This will eventually allow for the creation of an enhanced jobs reference framework including all associated skills in order to provide better visibility with regard to possible career trajectories and therefore allow for better development of career paths, particularly within the framework of job transfers. The documents will be made available to all staff and managers and will help them with their career planning.

Through the "One Colas" corporate plan, the Colas Executive Management has reaffirmed its desire to internationalize its talent base by recruiting staff from international backgrounds, offering career development guidance to Colas employees worldwide, and promoting career mobility between different geographical regions.

"Careers Committees" are now firmly established within affiliates' and countries' practices. They provide a forum for thinking about how best to develop and support talented individuals, as well as facilitating succession planning for key Colas managers and identifying new talent each year.

In Mainland France, a policy to support career paths has been defined and implemented as part of the workforce planning system (GPEC) agreement signed between Colas and its employee representative partners in December 2016 for a period of five years (2017-2021), with the aim of developing and reinforcing career management. At the heart of this approach is the individual discussion interview, a valuable opportunity and a key tool in building career paths. The "Point Carrières" scheme spearheaded by the Colas Human Resources Department continued in 2019 to listen to employees' aspirations, offer jobs and better anticipate their career development.

(15) *Social mobility: where a business line or company helps its employees develop both socially and economically.*

(16) *Employability: ability to acquire and maintain the skills needed to find or hold onto a job.*

1.2.4.3.2. Integration of young managers

In France, some young managers joining Colas complete an in-the-field orientation program, for example allowing young works engineers to train alongside teams on construction sites before gradually being given responsibility. The “Tour de France” program offers new hires three to four internships at different affiliates, or even a tour of the region within the same affiliate. In 2019, 40 Tour de France opportunities were available.

Consideration is being given to whether some of these internships could be completed outside Mainland France.

New managers then take the first Colas University seminar, usually during their second year with the Colas. The aim is to develop autonomy, responsibility, teamwork and knowledge of Colas. Career development towards management responsibilities is then achieved rapidly within the Colas various business lines.

In 2019, Colas set up a platform promoting “Tour de France” offers with the aim of: boosting the program’s appeal, improving recruitment levels and providing applicants with more visibility as to their orientation process at Colas; giving voice to young people who are currently completing or have already completed this orientation process; and modernizing the application process through the use of video interviews, allowing applicants to introduce themselves and share their motivation from wherever they are in the world.

Efforts to integrate young people are also reflected by hires under the International Volunteers in Business (“VIE”⁽¹⁷⁾) program in technical roles as well as support and management control functions; a total of 17 young people were integrated in 2019.

1.2.4.3.3. Training policies

The Corporate Training Department is involved in rolling out One Colas through a program aimed at ensuring that management embodies the Colas corporate values and associated human commitments on a day-to-day basis. This training will cover a total of 2,000 employees between 2019 and 2020.

Colas has an ambitious policy of investing in training to support the competency development of all its employees, irrespective of their status, their position, and the region in which they work.

This policy is supported by formal training plans rolled out by Colas affiliates across 99% of all operation worldwides. These training plans put into action the development priorities set by Colas’ Human Resources Department, including training in technical fundamentals, managerial skills, and most importantly in safety and prevention, the leading category in training investments.

With the aim of becoming more internationally focused, Colas’ Training Department is developing a training catalog covering the whole of the Colas Group, to which programs rolled out in each country will be added.

The Colas Share knowledge management platform, which was launched in 2019 and has been translated into the Colas 14 working languages, improves the sharing of expertise. By linking to the Colas Campus platform, it enables all Colas Training managers to network, access all training content and share both best practice and feedback.

Colas Campus renewed its training on prevention and ethics:

- **safety:** the “Safety for new recruits” training became an established part of the Colas long-term training offering in 2019. This compulsory awareness training for all new Colas recruits in Mainland France is a one-day event held at a works center. It covers the risks inherent in Colas’ activities and the most effective ways to safeguard against them. In 2018, nearly 1,800 employees completed this training in Mainland France. Colas is also careful to ensure that its safety culture is shared with managers who must act as ambassadors for that culture, notably through a training program delivered in conjunction with Dupont de Nemours;
- **ethics:** all training programs have been reviewed and a new serious game campaign, dubbed “Fair Play”, was launched worldwide, aimed at 3,200 employees. Moreover, sessions on ethics and compliance have been added to all Colas University courses in English and French (cf. Section 5.2, “Actions taken to prevent corruption and encourage fair business practices”).

New content has been added to the Colas Campus training platform covering a wide variety of topics such as cybersecurity, non-discrimination and diversity. A catalog of business line tutorials is also in the process of being developed with the aim of helping staff progress towards operational excellence in specific areas of activity such as earthworks, industries, applying mixes, etc. The first modules went live on the platform at the end of 2019. They can be accessed in all countries and will eventually be translated into all Colas’ working languages.

(17) *International Volunteers in Business (“VIE”) is a French government program that enables participants, under certain conditions, to undertake an assignment (which may be scientific, technical, commercial, humanitarian, etc.) at a French firm located outside of France. Applicants must be aged between 18 and 28. VIE postings are paid.*

1.2.4.3.3.1. Mainland France

Across the whole of Mainland France, 3.7% of total payroll was invested in training, equating to 33,592 training actions and 503,245 training hours (N.B. training figures in this report are those of 2018). Training actions and training hours increased relative to 2017 due to increases in hirings, internal transfers and promotions, resulting in a greater need for upskilling.

In 2018, the four Colas University courses had 356 participants, guiding them through the key stages of their professional development. Of these, 51 came from international affiliates. APIL University was set up in 2018 for English-speaking managers, and plans are in place to merge it with University 3 training in North America in 2020.

Prevention and safety training made up 49.6% of total training hours. The second most common area of training (17.1%) was general training related to the Colas hands-on activities (for superintendents, foremen, team leaders, etc.). Colas also made a significant contribution to boosting the technical expertise of its staff (12% of training hours).

Breaking down training hours by status, 52% of training hours were delivered to hourly workers, 26% to office staff, technicians and supervisors and 22% to engineers and managers. This breakdown is the same as in previous years.

Colas Campus hosted more than 6,000 French-speaking employees, equating to around 10% of Colas' total workforce.

1.2.4.3.3.2. International

The main international training projects are as follows:

- **in the United States**, a specific training program to disseminate the Colas safety culture was rolled out in conjunction with Caterpillar at Branscome, including in particular comprehensive training for the Executive Committee, professional training for three in-house trainers specializing in safety, and the development of *ad hoc* programs dedicated to each category of employees. On ethical issues, an online training system designed to raise awareness of compliance rules in force was rolled out via the PathWays training platform (see 1.2.5.2. “Actions taken to prevent corruption and encourage fair business practices”). Furthermore, a major leadership training program aimed at local management (Supervisor Development training) was implemented at Delta;
- **in Canada**, in addition to the already extensive range of training offered by Colas Canada Training, various corporate training academies or “institutes” have been set up at companies such as McAsphalt (McAsphalt Institute of Training) and Miller (Miller Institute of Excellence), highlighting the fact that employee skills development remains a key priority in this geographical region. Safety training is a particular area of focus, directly linked to the “Goal Zero” accident prevention policy in place across North America. This is evidenced in particular by the partnership between McAsphalt Industries and the Canadian Center for Health and Safety aimed at offering tailored programs covering, *inter alia*, the prevention of all types of risk (e.g. working with electricity, working at height, etc.) and safety management;
- **in the Morocco, Central Africa and West Africa region**, training policy is aligned with the Colas Group in terms of overall direction and budget. It hinges around safety, ethics, technical and management skills, information technology, and country-specific obligations. Training requirements are identified through annual performance appraisals, needs expressed by managers for their teams, and careers committees. In Morocco, training courses linked to personal development was launched, lasting between four and 12 days. Employees are encouraged to sign up for Colas Campus training and Colas' e-training platform is promoted;
- **in the United Kingdom**, Colas UK worked to completely overhaul its management training programs in 2019. At the same time, the affiliate embarked on an ambitious project to support new recruits during their first few months with the company (known as onboarding). Plans are in place to roll out online training modules on the Colas Campus platform in the first few months of 2020;
- **in Ireland**, HR teams are implementing a policy of continuing professional development aimed at increasing management involvement in upskilling. The policy aims in particular to structure annual processes to better align the affiliate's strategic goals with employees' career aspirations;
- **in Southern Africa**, there has been a significant push in the area of training in new technologies and techniques affecting Colas' core activities (fundamental road construction techniques, bitumen, safety, etc.);
- **in Central and Northern Europe**, training plans are drawn up annually using input drawn from succession planning and careers committees. Particular emphasis is placed on developing management and leadership skills through corporate training offerings put together within each of the countries making up this region. Alongside this, other training priorities are safety and technical skills. The following are also of particular note:
 - the rollout of a new contract management program aimed at young engineers,
 - the launch in the Czech Republic of a Leadership Academy and a Site Manager Academy, covering 43 and 204 employees respectively;
- **in the Overseas France/Indian Ocean region**, a new safety training e-learning module was launched for truck drivers and equipment operators, and an online test on “Basic roadwork techniques” was put in place in Mauritius for supervisors in Operations;
- **Australia**: Colas Australia rolled out leadership training aimed at training all managers and including a 360-degree assessment, as well as general ethics training for all employees aligned with Colas guidelines, with a specific module for senior managers.

Name of indicator ⁽¹⁾	Scope	2017	2018
Existence of a formal training plan⁽²⁾ (as %)	World	99	99
Number of employees trained	World	34,320	37,608
Number of days of training	World	116,952	114,904
Number of personnel who entered apprenticeship contracts during the year	France	503	566
Number of who entered vocational training contracts on during the year	France	303	261

(1) Figures related to training are consolidated in fiscal year Y for the period Y-1. They do not take into account information about the Miller McAsphalt group for 2017 or Smac for 2018.

(2) Outside France, this refers to the number of companies with more than 300 employees where a training plan exists.

In 2018, 37,608 Colas employees worldwide received training and a total of 114,481 days of training were delivered across all Colas companies.

1.2.4.4. PROTECTING EMPLOYEES

An employer's first duty is to look out for its employees' physical and mental integrity. Colas' activities are potentially hazardous, particularly when undertaken in areas under live traffic (refer to Colas' business model). Conversely, reducing risks relating to health and accidents is good for families and society in general, thus generating positive externalities⁽¹⁸⁾. With the aim of developing a health and safety culture across all its construction and materials production sites around the world, Colas has identified two areas of focus:

- **workplace health and safety:** taking into account all known types of chronic or accidental risk (risks related to impact with heavy trucks or machinery, carrying heavy items, noise, dust, bad weather, exposure to chemicals, use of hazardous tools and machinery, psychosocial issues, harassment, security, drugs and alcohol, musculoskeletal disorders, etc.) as well as ongoing monitoring of emerging risks;
- **road safety:** since its main activity is the construction and maintenance of all types of road infrastructure, Colas has a duty to undertake specific actions in this area. Colas' commitment to road safety is reflected in frequent initiatives to increase awareness of road risks among employees around the world.

Safety is thus a priority issue at the highest levels of the company: it now forms one of the criteria explicitly used in calculating variable compensation for managers and affiliates' CEOs.

To support its actions in this area, Colas has signed up to a number of charters (e.g. in France, a charter signed with the Government and CNAMTS⁽¹⁹⁾, regularly renewed since 1997), is involved in various road safety competitions (such as the one run by the Royal Society for the Prevention of Accidents in the United Kingdom) and organizes an annual Safety Week for all Colas employees worldwide, focusing on road safety as well as safety issues relating to Colas worksites, while managing and coordinating a network of around 100 prevention specialists in the field.

It is important to emphasize that the impact of these actions extends beyond Colas: they benefit not only Colas employees but also their families and friends (through sharing best practice) along with all road users. Colas cares not only about reducing the negative impacts of its activities, but also about significantly expanding its positive impact, thus benefiting its employees and society as a whole. One example of the long-term concrete actions Colas has implemented in this area is its employee first-aid training policy, which has been in place since 2006: Colas places a major emphasis on first-aid training at all its sites worldwide. As of now, 40% of Colas employees have learned life-saving techniques. This training benefits employees as well as everyone around them, including their families and friends.

Name of indicator	Scope	2018	2019 ⁽¹⁾
Total number of employees trained in first aid (at end of period)	World	20,067	23,049

(1) Smac workforce not included for 2019.

The number of employees trained in first aid continued to grow strongly (up nearly 15%) after declining slightly in 2018.

(18) Positive externalities: actions carried out by the company that have a positive impact outside the company at zero cost to their beneficiaries.

(19) Caisse Nationale d'Assurance Maladie des Travailleurs Salariés (National Health Insurance Fund for Employees).

1.2.4.4.1. Road safety policy

While Colas' Road Safety Charter, agreed with the Road Safety Commission (DSCR) and CNAMTS, covers all Colas employees in Mainland and Overseas France, the Colas Preventive Road Safety Policy has gradually been extended to all countries where Colas operates, in accordance with local cultures and rules.

1.2.4.4.1.1. Road safety prevention program

In France, the Road Safety action and prevention program in place within Colas relies on affiliates and business units' strong commitment to implementing local initiatives, at the behest of Executive Management.

Each affiliate (in Europe) has its own Road Safety Steering Committee and each business unit reporting to an affiliate appoints a Road Safety Officer tasked with implementing and coordinating the program.

The initiative, rolled out in the field by more than 500 Road Safety Officers, is based on a program ("SCOPE") focused on raising drivers' awareness of safe driving rules, organization of travel, the vehicle fleet (purchase and maintenance, and active and passive safety equipment) and the environment (road infrastructure, traffic plans, etc.).

This program uses audiovisual media, driving audits, post-accident analysis resulting in corrective action, and statistical tools for analyzing and monitoring accident rates at French business units and affiliates.

More than 30,000 employees have received SCOPE training since the program was introduced.

Over 15,000 driving audits have been undertaken by either Road Safety Officers or specialized training centers.

Raising employee awareness on road safety issues also entails the following:

- designing and disseminating communication tools within affiliates to boost the program's impact (posters, comic strips, videos, CD-ROMs, quarterly newsletter for Road Safety Officers, etc.);
- regularly reminding staff of Highway Code rules (including those covering the use of mobile phones) during site safety briefings;
- training using simulation software;
- awareness days in partnership with local stakeholders (training centers, prevention specialists, police and other law enforcement agencies, etc.);
- giving out breathalyzer tests as part of efforts to prevent drinking and driving;
- First aid training, etc.

The "avoidability" of accidents is systematically highlighted, notably through feedback following accidents.

Awareness of road safety issues also encompasses the following:

- improving site organization and how travel is managed;
- improving management of the vehicle and equipment fleet (maintenance, vehicle equipment including reversing aids, etc.).

These various measures are supplemented by an emulation system that incentivizes affiliates and business units to demonstrate their assertiveness and inventiveness: the French Inter-Affiliate Road Safety Challenge. The trophy is awarded each year to the affiliate that has achieved the best performance based on five criteria taking into account accident frequency rates (whether at-fault or no-fault), severity and year-on-year changes in accident rates.

The program's effectiveness is largely dependent on internal communications, not only to share experience and promote best practice but also to disseminate targeted messages from Executive Management.

1.2.4.4.1.2. Changes in the number of accidents and the vehicle fleet

Colas has set itself targets to reduce losses, a goal shared by all affiliates (Colas saw a 45% reduction in road accident frequency worldwide between 2004 and 2019). The global workplace accident frequency rate held steady between 2018 and 2019.

In accordance with each country's laws and regulations (e.g. *Commission Nationale de l'Informatique et des Libertés* in France, GDPR in the European Union), onboard telematics in vehicles is set to be gradually extended in the future. Positive results, such as a significant reduction in speeds, have already been obtained at Colas Rail Ltd (United Kingdom) following discussion with involved drivers about the risks of excessive speed, supported by data collection.

1.2.4.4.2. Workplace safety policy

The Colas safety policy is built around four priorities:

- compliance with rules;
- training and information;
- a safety-first approach to project and process design;
- follow-up of action plans.

Significant actions in 2019 included the following:

- the OneSafety approach with DSS (DuPont Sustainable Solutions) launched in January 2019 at a pilot affiliate, Colas Centre-Ouest. All managers, from the CEO down to foremen, were coached in key management skills and how to adopt a collaborative approach when discussing safety with their teams. Initial feedback has been positive and the program will continue to be rolled out to other affiliates in 2020 and 2021. The aim is to turn a corner in terms of safety;
- the rollout in Canada of the Goal Zero process already in place in the United States, in partnership with Caterpillar Safety Services;
- the Safety Culture program launched at Spac together with ICSI (French industrial safety culture institute);
- “Safety Culture” days in Mainland France for all newcomers to Colas. More than 1,900 employees were trained last year;
- virtual reality training on crush hazards as part of the prevention days for newly hired employees;
- “Accident risk” projects, including in particular a project with Volvo Construction Equipment whereby both operators and pedestrians are alerted if they enter a prohibited area close to machinery. This system uses artificial intelligence to recognize human presence. Other approaches are also in testing (see 1.2.3.5. “Governance of innovation and partnerships”).

1.2.4.4.3. Health policy⁽²⁰⁾

Colas pursues specific health-related initiatives on a range of topics:

1.2.4.4.3.1. Musculoskeletal disorders

Musculoskeletal disorders probably constitute the chief health risk in the public works sector; Colas has long responded to this issue by providing physical activity risk prevention training and making available ExoPush powered exoskeletons to help reduce strain for asphalt paving teams. More than 90 units have been rolled out or are in testing in France, Belgium, Switzerland, Denmark, Australia and Central Europe. These ExoPush exoskeletons were designed jointly by engineers, workers and experts from Colas to help operators manually handling asphalt mixes and thus improve their working conditions. The benefits to workers are an improved posture (much more vertical than with a non-assisted tool) and a lower heart rate (cf. 1.2.3.5. “Governance of innovation and partnerships”).

1.2.4.4.3.2. Noise

The large amounts of heavy machinery used on public construction sites means employees are inevitably exposed to noise. This issue was the main subject of the 2019 Safety Week, which highlighted the dangers of noise and the importance of always wearing hearing protection, which is compulsory at all Colas worksites (including construction sites, quarries and plants). The purpose was to remind all staff that noise is hazardous above 80 dB(A), that it has harmful effects on the human body and that hearing loss is irreversible. This Safety Week ran at all Colas sites worldwide, involving the whole 57,035-strong workforce. The film “Noise” (which won a gold award at the Fimbacte festival, in the “responsible communication” category) was shown at all Colas sites, with the campaign rounded out by video quizzes presented by managers, a summary booklet for all employees, and posters.

1.2.4.4.3.3. Ultraviolet radiation

The risk of exposure to ultraviolet radiation from the sun’s rays is inherent to outdoor work; Colas makes sure all site staff are aware of the need to wear long pants and sleeves and helmets. With the use of personal protective equipment made compulsory, the 2016 Safety Week was an opportunity to reiterate this requirement. This topic is always covered at safety orientation meetings for new employees.

1.2.4.4.3.4. Bitumen fumes

IARC⁽²¹⁾ published an official monograph on bitumen fumes in 2013. The IARC stated that, despite the substantial number of studies carried out, it was unable to judge whether there is a link between cancer and exposure to bitumen and bitumen fumes in road work. Given the IARC’s findings, no new positions have been adopted by national authorities in the various countries where Colas has operations, with the exception of France, whose health authorities have produced an extensive update on the issue. The conclusions and official report of ANSES⁽²²⁾ reflected the risk analyses carried out by the road construction industry, stating that there are no grounds to consider a carcinogenic risk in the production or use of non-oxidized bitumen, but that it does present risks of eye and upper respiratory tract irritation.

(20) UN Sustainable Development Goal 3 (SDG 3): Ensure healthy lives and promote wellbeing for all at all ages.

(21) International Agency for Research on Cancer (an offshoot of the World Health Organization).

(22) French national agency for food, environmental and occupational health and safety.

There were no further publications in 2019. In order to monitor the risk of employee exposure to this irritant, a major study was launched by INRS (the French national research institute for occupational safety and health) and Routes de France (formerly USIRF, the French road industry association) to develop a standard method for the metering of bitumen fumes inhaled by workers. Completed in 2015, this research involved broad participation by industry players, including Colas. An assessment template to evaluate the effectiveness of prevention methods has been developed and is now used by health insurance agents. Employee exposure data monitored using this new assessment tool enables a database to be built up and analyzed at least every five years.

For several years now, Colas has worked on reducing exposure to bitumen fumes and has pursued its strategy around the world with two main objectives:

- **reducing bitumen application temperatures**, since every 12°C reduction in temperature reduces fume emissions by around 50%. In addition, the rollout program for warm mixes is being supplemented by communications campaigns aimed at convincing clients to adopt warm mixes in place of traditional hot mixes; in 2016, the INRS⁽²³⁾ determined that the use of warm mix results in a statistical reduction in exposure of 25% (see indicator below);
- **upgrading the fleet of pavers** (machines that lay asphalt mix) to equip them with fume extraction systems. In 2016, the INRS determined that using these systems results in a statistical reduction in exposure of 55% (see indicators below).

Work on these two areas continued in 2019, and a joint publication by Routes de France (a trade body), the INRS and the DGT (General Labor Directorate) is due to be published next year.

Measures are also being taken to eliminate residual use of oxidized asphalt (as defined in the IARC's monograph), following its classification as a probable carcinogen, both in road and waterproofing applications. Currently, Colas' only use of oxidized asphalt is related to its presence in roof shingles recycled into asphalt mixes at certain facilities in North America.

Name of indicator	Scope	Coverage	2018	2019
Percentage of warm mix and low-temperature mastic asphalt (as % of quantity)	World	Mixing and mastic asphalt plants	22	20
Percentage of pavers equipped with a bitumen fume extraction system (as % of quantity)	World	All fleets of equipment	58	64

The collection and consolidation of data for these indicators follow the rules described for environmental and social indicators (see note on methodology).

The percentage of warm mix declined slightly in 2019 due to the integration of Miller, which on its own accounts for 6% of total hot mix production and does not produce any warm mix (cf. Section 6.3.2.1, "Asphalt plants").

The proportion of pavers equipped with fumes extraction systems increased by 6 points, showing that efforts in this area continue to make progress everywhere as and when equipment is replaced.

1.2.4.4.3.5. Dust

Workplace health bodies and industry players have rallied around the issue of exposure to dust at worksites, quarries and gravel pits.

In France, Routes de France, a trade body in which Colas plays a very active part, published guides on two issues: Preventing dust risk in milling, sawing, chipping, scaling and coring activities; and preventing dust risk on recycling platforms, together with the UNPG (French national union of aggregates producers). Colas also takes part in a number of industry-wide measures relating to crystalline dust emissions as part of the campaign launched by the FNTP⁽²⁴⁾ and OPPBTP⁽²⁵⁾.

These guides were prepared with input from the DGT as well as OPPBTP.

Colas is taking action in France and around the world to reduce exposure to dust at manufacturing facilities and construction sites alike by using equipment and processes that create a humid environment through spraying or misting, having workers wear personal protective equipment, and upgrading milling and planing equipment with machines fitted with dust extraction systems. Dust risk was one of the priorities in the 2018 action plan under Colas' health policy, and was brought forward again in 2019.

Name of indicator	Scope	Coverage	2018	2019
Percentage of milling machines equipped with a dust extraction system (as % of quantity)	World	All fleets of equipment	50	56

The collection and consolidation of data for these indicators follow the rules described for environmental and social indicators (see note on methodology).

(23) French national institute for research and safety.

(24) Fédération Nationale des Travaux Publics - [French] National Federation for Public Works

(25) French construction and public works prevention organization.

The proportion of milling machines equipped with dust extraction systems increased by 6 points, showing that efforts in this area continue to make progress everywhere as and when equipment is replaced.

In France, Colas has taken part in the debate on the presence of amphibole elongate mineral particles (asbestos belong to this family of natural minerals) in existing roads, recycled materials and newly extracted aggregates. Colas is a member of several working groups that bring together public-sector experts as well as building, construction, demolition and public works industry associations to better gauge this risk and develop suitable prevention measures.

The health effects of potentially asbestos-bearing actinolite and of amphibole elongate mineral particles (EMPs) are an issue that has attracted attention for a number of years in several countries (including the United States, Germany and Hungary) from a regulatory and scientific standpoint. At present, France is the only country in which a number of public decision-makers have decided to equate this risk to that of commercial asbestos. Requirements in this area vary from one country to another. Colas ensures that it complies accordingly, and at the same time, intends to promote a genuine scientific and regulatory dialogue internationally, including in the United States, where most of the research in this area has been carried out, but where it has not been regarded as sufficiently conclusive.

In France, Colas complies with requirements from the French authorities.

1.2.4.4.3.6. Solvents

Solvents are the latest front in the fight against employee exposure to toxic chemicals, a category that includes chlorinated solvents used in laboratories, fluidifying agents or anti-adhesive petroleum-based products used at worksites, and petroleum-based or chlorinated solvents used in workshops. Solvents are hazardous to human health when absorbed through the skin (and via the respiratory tract, especially when heated). In addition to maintaining high standards for individual and collective protection equipment and the strict supervision of all products used, Colas has begun a program focused on finding safer alternatives for all solvents in use. Progress in this area is difficult to achieve because possible alternatives may encounter resistance from staff for technical reasons. They may also be more costly, not available in all countries, or require adaptations in working methods due to their lower effectiveness (see indicator below).

Name of indicator	Scope	Coverage	2018	2019
Percentage of chlorinated solvents used in closed-loop systems (as % of quantity)	World	Laboratories	80	74

The collection and consolidation of data for these indicators follow the rules described for environmental and social indicators (see note on methodology).

The percentage of chlorinated solvents used in closed-loop systems fell by 6 points. While the quantity of chlorinated solvents purchased or used from inventory storage increased by 27%, the quantity used in closed-loop systems increased by only 17%; this deterioration was due to the integration of Miller, which accounts for 10% of the total quantity of solvents used by Colas, and none of whose solvents are used in closed-loop systems. It should be noted that purchases of these laboratory solvents by US affiliates have been reduced to extremely low levels. More generally, the risk related to chlorinated and petroleum solvent use has been reduced in workshops, on worksites and in laboratories, both in France and internationally. More than 70% of Colas' parts washers no longer use these types of solvents to clean workshop and laboratory equipment, being replaced with biological solutions, plant-based solvents or aqueous detergent solutions. The goal of completely eliminating these uses in an open environment still has to overcome several highly specific applications, the laboratory standards in certain countries and the availability of equipment and alternative products in certain locations. Colas continues to invest in refining control methods, but it seems likely that progress will now become slower and harder to achieve.

1.2.4.4.3.7. Health policies in developing countries

Furthermore, in developing countries where it has operated for many years (in Madagascar, West Africa and central Africa, in particular), Colas is involved in health initiatives (to fight AIDS, intestinal infections, and malaria in particular) that cover employees, their families, and local village populations. One of the programs has been led jointly with the International Labor Organization for several years.

1.2.4.4.4. Workplace accidents, particularly their frequency and severity, and occupational illnesses

Name of indicator ⁽¹⁾	Scope	2018	2019
Frequency rate⁽²⁾ of employee workplace accidents	World	6.67	6.19
Severity rate⁽³⁾ for workplace accidents	World	0.46	0.38
Number of fatal accidents⁽⁴⁾	World	6	3
Number of employees recognized as suffering from an occupational illness during the year	France	122	120
Percentage of companies outside France providing employee benefits	International	100	100

(1) These figures include data for the Miller McAsphalt group; 2019 figures do not include Smac.

(2) Number of lost-time accidents x 1,000,000 / Number of hours worked. These are accidents declared and recognized by the competent authorities, e.g. the CPAM in France.

(3) Number of working days lost x 1,000 / Number of hours worked, in line with the regulatory definition of "Severity rate": "Working days lost in the current year are taken into account even if the accident occurred in the previous calendar year."

(4) The number of fatal accidents relates to the registered workforce and consists of accidents linked to occupational activities resulting in death, including road traffic accidents. (Commuting accidents are excluded, as are cardiac events).

In 2019, the frequency rate was lower than in 2018. It fell from 6.67 to 6.19. This is the best performance ever achieved by Colas. The severity rate also improved significantly, dropping from 0.46 to 0.38. Unfortunately, there were three fatal accidents, following which new instructions were issued at "Safety Pauses".

2019 also saw the launch of the Safety Culture initiative with Dupont in Mainland France. This initiative is aimed at eliminating fatal accidents and halving the number of accidents at road construction affiliates in Mainland France and at Colas Rail France. Its rollout is scheduled to be completed in 2021.

1.2.4.4.5. Absenteeism

The absence rate is a useful but hard-to-interpret indicator: an increase in the rate could equally well point to a deterioration in labor relations within the company or a deterioration in the health of the workforce.

Name of indicator	Scope	2018	2019 ⁽¹⁾
Number of working days lost due to workplace accidents (excluding commuting accidents)	World	50,780	42,086
Absenteeism rate⁽²⁾	France (Mainland + Overseas)	5.0	4.85

(1) These figures include data for the Miller McAsphalt group; 2019 figures do not include Smac.

(2) Permanent contracts; this indicator measures the number of working days lost due to workplace accidents, commuting accidents, illness or occupational illness, in proportion to the number of calendar days.

After decreasing by 1.5% in 2018, the worldwide number of working days lost due to workplace accidents once again declined in 2019, falling sharply by around 17%, notably following the sale of Smac.

In France, the absenteeism rate also declined for the second year running, coming in at 4.85 (down 0.15 percentage points relative to 2018). This is marginally lower than the national private sector rate of 5.10 in 2018 (according to the Ayming survey).

France's overall rate of 4.85 breaks down as follows: 6.4 for workers; 3.9 for office staff, technicians and supervisors; and 1.76 for managers.

1.2.5. Ethics and human rights

1.2.5.1. COMPLIANCE POLICY

Acts of corruption or complicity in corruption (falsifying prices, money laundering, paying bribes or offering gifts to obtain contracts, fraud, etc.) are major economic and financial risks (loss of contracts, fines, insolvency) and a risk to a company's reputation. Colas identifies all risks of corruption or conflicts of interest, particularly in sensitive countries, draws up and displays rules of ethical conduct (code of ethics and gifts policy) and implements prevention measures (monitoring training), warning systems (whistleblowing procedure and protection of whistleblowers) and penalties in case of fault (provisional dismissal, redundancy, etc.).

Compliance focuses on ensuring that employees' decisions and behaviors, both within the company and in their dealings with third parties, comply with internal or external standards applicable to their areas of activity. At its core are five programs ("Anti-corruption", "Competition", "Conflicts of interest", "Financial disclosures and stock market transactions" and "Embargoes") drawn up to supplement the Code of Ethics, which has been in place for many years. These programs summarize applicable legislation and, in particular, the "Sapin II" Act of December 9, 2016, and define specific practical behaviors prohibited by Colas

as well as best practice to be adopted. Compliance is based on measures intended to create a culture focused on knowledge of and adherence to rules (information, training and awareness) as well as whistleblowing, advice, audit and empowerment mechanisms, all of which are critical to fostering desired behaviors within a company or group (by preventing, detecting and responding to potential breaches).

The Colas French affiliates must submit their compliance policies and procedures to employee representative bodies for review. In 2019, they adopted a new version of their internal rules and regulations including a section on ethical requirements within Colas and the Bouygues Group. These requirements also provide for the application of disciplinary sanctions when these rules are breached.

For affiliates not directly subject to French law, an analysis of applicable requirements must be conducted before a disciplinary regime can be put in place. This analysis is due to be completed in the first quarter of 2020.

At the organizational level, after appointing its Group General Counsel and Chief Compliance Officer in September 2018, in 2019 Colas set up a three-person Compliance unit within the corporate Legal Department. Furthermore, compliance forms an integral part of the responsibilities of chief legal officers within their territories.

A compendium of Colas compliance procedures was issued in 2019, bringing together in a single document all internal processes rolled out pursuant to the Code of Ethics, compliance programs and the General Principles of internal control; the procedures in this compendium apply to all companies of which Colas directly or indirectly owns at least 50%. One section of the document covers procedures and rules for reporting and responding to ethics alerts.

Work has begun to digitize all compliance-related processes (covering corporate philanthropy, sponsorship, gifts, ostensible commitments, etc.) to make them operate more smoothly and increase traceability at the global level.

Monitoring of compliance procedures set out in the compendium now forms part of the inspection checklist drawn up in conjunction with the Audit Department.

In 2019, Colas began to use the dedicated “Colas Map” software to map its corruption risks. This software makes it possible to centralize all country-specific risk mappings and facilitates employee cooperation and top management involvement.

The risk mapping exercise consists in a number of phases:

- preparatory work: 20 risk scenarios are adopted and controls are adapted for each of them in accordance with country-specific characteristics;
- preliminary assessment of individual risk scenarios;
- collective assessment of risk scenarios: assessors meet to review all individual assessments and agree on each scenario's location within the matrices;
- the mapping is signed off in Colas Map by the Country Manager and presented to top management.

At the end of November 2019, 90% of business line and country risk mappings had been completed. The focus in the first half of 2020 will be on drawing up and implementing action plans.

1.2.5.2. ACTIONS TAKEN TO PREVENT CORRUPTION AND ENCOURAGE FAIR BUSINESS PRACTICES

A number of actions had been implemented over previous years to combat active and passive corruption, unfair competition and conflicts of interest, some of which were strengthened in 2019.

- in September 2019, a **communications campaign** was kicked off aimed at all Colas employees. The campaign consists of displaying eight visuals on employees' screen savers and the Colas intranet covering ethics alerts, the compendium of procedures, gifts and invitations, sponsorship and corporate philanthropy, and conflicts of interest. Prior to the campaign, a message was broadcast from the Colas CEO reiterating his personal commitment in this area;
- a **whistleblowing system** open to all Colas employees was introduced in early 2017;
- as in previous years, Colas' **Ethics and Corporate Sponsorship Committee**, which is comprised of three board members (two of them independent), met twice, in February and September 2019. Philanthropy and sponsorship initiatives in amounts exceeding 20,000 euros were presented to the committee, as was progress made on the rollout of compliance programs for the past fiscal year and the actions scheduled for 2019. The cases reviewed by the Business Ethics Commission were also presented to it;
- since 2017, **executive commitment** has been reflected in the requirement for each executive to sign an ostensible commitment. A campaign to renew these commitments was undertaken in 2019 covering all managers (from head of department upwards), company officers and all Purchasing staff;
- under the terms of the Colas Compendium of Compliance Procedures, the requirement to verify the **identity and integrity of stakeholders** translates into the need to gather information and assess the risk of corruption to which a third-party relationship exposes a given Colas entity. The appropriate level of investigation to be undertaken depends on the characteristics of the planned relationship or transaction (from Level 1, undertaken by operational departments on an “open source” basis, to Level 4, undertaken by an outside organization under the supervision of corporate Legal and Compliance Department). Colas uses specific research software (Compliance Catalyst) to carry out Level 3 investigations. At the end of November 2019, a total of 1,565 investigations had been carried out, mainly in France.

In 2019, the **training campaigns** continued and were stepped up:

- the “**Applied ethics and compliance**” module, aimed at familiarizing all employees taking the module with the core principles of compliance documentation and providing an overview of all procedures contained in the Compendium, was rolled out in 2019 both in France and internationally, except in the United States (which has its own specific procedures and training modules). In April 2019, Chief Legal Officers responsible for overseeing this training at the local level were provided with common training materials applicable to all Colas affiliates. A total of 4,034 employees were trained between November 1, 2018 and October 31, 2019. In the United States, 5,520 employees were trained (out of a total of 5,631 employees). This training is incorporated into all “UNI” sessions (central training programs);
- rollout of the **Fair Play** serious game continued in 2019: this e-learning module, aimed at all employees with a business e-mail address, is designed to help employees explore issues relating to ethical best practice. An initial campaign was kicked off in 2018: out of a target audience of 3,608 employees, 3,221 actually completed the module (giving a participation rate of 89.2%). Of those employees who did not complete the module, 160 did not do so because they were due to leave the company in the near future. A second campaign covering 3,278 employees across all locations (outside North America) was kicked off in the second quarter of 2019 (with 973 participants, giving a participation rate of 29.7%). Due to technical issues that have now been resolved, rollout in Australia and the Middle East did not begin until September 9, 2019: 174 employees are involved. As at September 15, 2019, 4,402 employees had been trained (3,221 through the first campaign in 2017/2018 and 973 through the second campaign, plus 208 who took the module of their own initiative), giving a participation rate of 63.92%. Lastly, the module is in the process of being translated into Czech, Croatian, Flemish, Polish, German, Romanian and Spanish;
- the **Ethics and Accountability** training program delivered for the first time in 2016 by an independent consulting firm to promote discussions about business ethics and the individual and collective accountability of Colas affiliate leaders, also continued throughout 2019 in France and around the world. 70 managers were trained;
- all participants in the **Colas University** 1, 2, 3 and 4 courses receive training in the fundamentals of compliance. 400 personnels were trained in 2019 as part of the University 1 course. A two-hour slide show presentation was produced to be used by chief legal officers to train affiliate staff;
- the affiliates in **North America** continued their rollout of a specific communication and training program on ethics:
 - In the **United States**, classroom training sessions for employees and managers have been organized on topics such as anti-competitive practices, workplace conduct, conflicts of interest, gifts and third-party invitations. Two ethics training modules have been offered at Colas University in the United States. In parallel, all of the US affiliates regularly hold training sessions on ethics-related topics, some of which have been amply documented in their in-house magazines. The online ethics training program also continued in 2019. As part of this program, all affiliates’ personnel in the United States with an email address are allocated various online modules relating to information security and workplace behavior. All personnel have been invited to online viewing of the Bouygues code of ethics and the Colas code of conduct specific to the United States and to confirm that they have read them carefully. Furthermore, all employees of Colas affiliates in the United States are required to confirm each year in writing that they have received the code of conduct and comply with it. All offices and hiring centers advertise the dedicated hotline for ethics alerts that can be accessed anonymously by anyone. Fold-out cards listing the phone numbers and the website for ethics issues were also distributed,
 - In **Canada**, Ethics and Compliance Program training had been delivered to 969 employees by the end of 2019. As a reminder, a new whistleblowing system for employees was introduced across Canada in June 2017. A major communication campaign informed all the employees of the Canadian affiliates about this bilingual service run by an independent third party. In addition, the overhaul of the Colas Canada intranet provided an opportunity to reiterate the obligations with regard to commercial middle men, corporate philanthropy and sponsorship, gifts and hospitality. Internal training on compliance programs and instructions for their application began in 2019 for the Miller McAsphalt group.

These actions will be continued and expanded in 2020.

1.2.5.3. HUMAN RIGHTS

In Article 2 of its Code of Ethics, the Bouygues Group, Colas’ parent company, commits to complying with the United Nations’ Universal Declaration of Human Rights and the ILO’s fundamental conventions. In 2019, the policy on human rights was reworked and an outside consulting firm was appointed to help deepen the risk mapping to separate out risks covered by the vigilance plan required by the French law on the Duty of Vigilance from those relating to Colas’ day-to-day activities. Not only was this a new and complex exercise, it also ran the risk of being somewhat theoretical given the lack of known incidents at Colas, though this does not, of course, mean there may not be genuine risks in this area.

This work resulted in the following four-way mapping of risks:

- **a distinction based on countries identified as high-risk:** the main countries in question are those classed as “amber” on the Verisk Maplecroft Q4 2018 map (high-risk in relation to human rights) where total Colas revenue equates to less than 4% of Colas’ total revenue (Algeria, Benin, Ivory Coast, Egypt, Gabon, Indonesia, Kenya, Madagascar, Malaysia, Morocco, Oman, Peru, Senegal, Thailand, Vietnam and Zambia); Colas does not operate in any of the countries on the “red” list (extreme risk in relation to human rights);
- **a distinction based on population type:**
 - Colas employees: depending on circumstances, risks may relate to discrimination, working hours, religious neutrality, physical, moral or sexual violence, migrant workers’ rights, racketeering and undeclared work, housing, and the protection of personal data. These issues are mainly monitored by the Human Resources Department (refer to 1.2.4. “Human capital”),
 - employees of subcontractors, suppliers and partners: all issues are relevant, including forced labor and child labor. This issue is mainly managed by the Purchasing Department (cf. 1.2.3.6. “Responsible purchasing),
 - civilian populations: land grabbing and accidents. This issue is mainly managed by the Security Department;
- **a distinction based on risk situations:**
 - large base-camps for employees without their families and the unstructured populations that can form around them involving trafficking and sexual abuse,
 - crises requiring various categories of personnel to be evacuated or affecting local populations (e.g. industrial accidents);
- **a distinction based on the most exposed Colas business lines:**
 - Colas Projects,
 - Colas Rail.

Work has now begun based on fact-finding missions in the field (the first of which took place in Morocco in 2019) to refine monitoring measures, define vigilance thresholds and provide Colas’ Audit Department with a set of baselines against which to carry out controls and checks.

1.2.5.4. PERSONAL DATA PROTECTION

The European Union’s General Data Protection Regulation (GDPR) entered into force on May 25, 2018. Colas was already mindful of the need to protect personal data taking into account the evident expectations of numerous stakeholders. A Chief Privacy Officer (CPO), supported by a corporate team, was appointed in 2018 to oversee the compliance process and ensure that it is embedded for the long term.

The main actions undertaken by the CPO and the CPO’s network of 37 correspondents in 2019 were as follows:

- With Colas also operating outside the European Union:
 - Binding Corporate Rules (BCRs) were drawn up and filed with CNIL⁽²⁶⁾, the supervisory authority (France),
 - all key reference documents relating to GDPR are written in French and English and translated by the relevant entities depending on local context;
- 60 “record of processing activities” information sheets have been produced in 12 key areas including legal, sales, accounting, human resources, equipment, safety and security.
- 16 workshops have been run for Colas departments to promote understanding of GDPR and ensure it is rigorously applied on an ongoing basis.
- 260 employees tasked with championing the GDPR approach within their business areas (France and International) have been trained in conjunction with correspondents.
- A dozen digital tools designed to help embed the “personal data protection instinct” and ensure ongoing compliance with GDPR have been developed with the help of Colas’ specialized entity (Colas Digital Solutions).
- A dedicated GDPR newsletter ensures that *ad hoc* information is communicated quickly and that best practice is shared across the worldwide community of GDPR correspondents.
- Lastly, a governance committee has been formed at Executive Management Committee level to monitor the activities of the CPO and the CPO’s network and ensure their complete transparency.

From 2020 onwards, GDPR is managed by the Legal and Compliance Department in conjunction with the Human Resources Department.

(26) *Commission nationale de l’informatique et des libertés, the French data protection agency, acting under delegated authority of the European Union.*

1.2.6. Environment and carbon

Combining general environmental issues and issues specific to Colas' activities as set out in its business model, Colas has structured its response to these issues around five themes:

1. Risk prevention
2. Energy and carbon
3. Circular economy
4. Biodiversity and ecosystems
5. Water management

The topics of R&D and innovation in these areas are covered in Section 3, "Value chain and innovation".

1.2.6.1. GENERAL ORGANIZATION

In light of the large environmental footprint of Colas' activities, a specific organizational structure has long been in place under the responsibility of the Environment Department; with effect from January 1, 2020, this department has been incorporated into the new Responsible Development and Innovation Department (DDRI). This department draws on a network of about 40 environmental representatives in the Colas affiliates in France and around the world, in turn supported in the field by several hundred coordinators and internal environment auditors, who often have responsibilities in other areas such as safety.

To deepen the professionalism and expertise of this network, the Environment Department has developed various collaborative and participative tools:

- conventions on environmental themes are held every other year (most recently in Montreal in June 2018, with the next one to be held in Rabat, Morocco in 2020);
- EOCE, an individual and collective development program for environmental officers aimed at putting officers to work together in groups of four, with each correspondent focusing on three high-priority themes for his/her affiliate, drawing on the network's resources, the three other members of the group, two coaches who have already completed the program and a member of the Environment Department team. At the end of the program, each participant visited seven Colas affiliates around the world to help develop appropriate solutions inspired by existing best practice, received help in situ from six Colas experts to make progress on his/her own themes, strengthened the relationship with his/her affiliate CEO and other functional and operational managers within his/her affiliate, and built relationships with the worldwide network of environment officers and the Environment Department's corporate team. To date, 32 officers have completed or are currently completing the program, 20 of them from international affiliates. Since the program kicked off, the Environment Department has trained 12 coaches who have taken on board the methodology and each coached two participants for more than half a year;
- a dedicated Yammer social network for environment officers, set up at the initiative of the EOCE program and coordinated by the Environment Department;
- working groups: entirely at their own initiative, participants in the EOCE program felt the need to share tools across their affiliates in the form of informative and prescriptive themed information sheets; the Environment Department took responsibility for organizing the resulting working groups and publishing the final versions of these information sheets on Colas Share, the Colas multi-language sharing platform;
- industrial Risk Committee: a cross-departmental committee formed in 2017 to look into industrial risk with the Materials, Health and Safety in the Workplace, Audit, Technical - R&D and Risk & Insurance departments, as well as with the three operational Divisions (France & Rail, North America, International). Its role is to specify a Colas policy for various risks with appropriate tools for the different types of facilities (FMECA⁽²⁷⁾, causal tree, etc.). This approach aims to take account of technical and human factors as well as organizational factors, while also including a review of industrial equipment suppliers. The Industrial Risk Committee appoints and oversees various working groups and signs off their deliverables in the form of prescriptive documents. The relevant corporate departments and Colas' Audit Department subsequently check that the instructions in these documents have been implemented. To date, documents have already been finalized covering "dual drum" asphalt mixing plants and storage tanks for chemicals, bitumen and hydrocarbons.

As regards environmental training, an e-learning module is currently being finalized in French and English. The module, expected to go live in March 2020, will be available to all employees with an e-mail address. Instructional notices for on-site use are also planned, together with PowerPoint® materials for use in face-to-face training (e.g. Colas Campus training sessions). The topic of the environment is also covered in the CSR sessions of two training programs: University 1 for newly hired managers and University 3 for managers.

Furthermore, environmental certification standards (particularly ISO 14001) require that the environmental performance of employees be assessed, that environmental training be provided for employees when necessary, particularly for new recruits, and that contractors be provided with relevant information (pursuant to Section 4.4.2 of ISO 14001).

(27) FMECA: failure Mode, Effects and Criticality Analysis.

1.2.6.2. RISK PREVENTION

1.2.6.2.1. Risk prevention policy

The entry into force of the regulation on the Duty of Vigilance provided an opportunity to step up efforts to safeguard against environmental risks, resulting in the identification of a core set of major risks defined and limited by volume thresholds for chemicals, types of industrial processes, size of construction site, etc. A total of 50 sites and five very large construction projects are thus subject to stricter monitoring by the Environment Department based on risk mapping, vigilance plans for each of the relevant sites and projects, while arrangements for specific audits are currently being initiated.

Outside of this scope, which is managed very much on a top-down basis with the business units involved, responsibility for safeguarding against risks is delegated to business units and affiliates around the world, within the framework of a policy managed by the Environment Department. The key issue for Colas mainly relates to permanent facilities: equipment maintenance workshops, laboratories, materials production sites (asphalt mixes, modified binders and bitumen emulsion, paints, quarries and gravel pits, ready-mix concrete, etc.), depots where such materials are stored, and so on. Construction projects are less affected given their small average size (170,000 euros) and the fact that the vast majority (accounting for around 90% of revenue) take place in areas that are already artificialized. However, the largest projects are subject to specific procedures such as Environmental Protection Plans, as is the case, for example, of the major Route du Littoral (Coastal Highway) project on Reunion Island. Furthermore, the Colas Projects QSE team is tasked with leveraging feedback and improving performance.

Operating permits for environmentally sensitive facilities subject to special administrative processes (“ICPE” or “ISDI” facilities in France) generally require strict compliance with environmental requirements, irrespective of the country in question. Compliance with these administrative requirements is the number one concern for environment officers at business unit and affiliate level, and is subject to regular audits and self-assessments of various types. On this subject, it is worth mentioning the system of annual inter-affiliate cross-audits carried out across Belgium, Mainland France and Switzerland by specially trained internal auditors: on average, 100 ISO 14001 certified sites – equating to around 14% of all sites in the region – are audited each year. Extending this type of system to countries with different languages, where Colas has fewer locations, is more difficult, but the lessons learned from these cross-audits are shared with other Colas teams and some geographical areas (e.g. the Indian Ocean region and the United States) have experimented with similar exchanges, often initiated after the completion of an EOCE program.

Safeguarding against environmental risk within business units and affiliates mainly relies on two tools:

- formal environmental management systems as ISO 14001 or equivalent standard, based on internal and external audits or certification. This implies the existence at each relevant site of an environmental analysis, dashboards and preventive action plans (particularly for managing emissions) and archival arrangements ensuring a good level of traceability;
- self-assessments using Colas checklists: this very pragmatic own-to-earth system uses a set of over 100 questions by type of facility. They are used to determine progress plan priorities. A standard checklist has been prepared for practically every type of stationary facility: laboratories, construction branches’ yards, workshops, hot- and cold-mix plants, emulsion and binder plants, bitumen terminals, quarries & gravel pits, recycling platforms, ready-mix concrete plants, prefabrication plants, and construction waste disposal sites. This covers more than 3,000 production units all over the world. These checklists are incorporated into Colas’ internal control system and were developed into a new full web multimedia computer application christened CHLOE. This application is designed to improve affiliates’ users’ friendliness, facilitate checklists’ updates and allow for the development of new functions in terms of dashboards, indicators and action plans. The system is due to be rolled out worldwide in 2020. Use of checklists is monitored as part of Colas’ internal control system. These collaboratively developed checklists also serve as a training vehicle and audit benchmark, as well as helping with the design of new facilities; they bring together the contributions of over a hundred Colas employees worldwide over the past 15 years or so.

These programs generates three indicators shown in the table below:

Name of indicator	Scope	Coverage	2018	2019
Percentage of manufacturing activities under environmental certification (as % of CAE ⁽¹⁾)	World	100% of CAE ⁽¹⁾ of manufacturing activities	61	65
Percentage of manufacturing activities that carry out environmental self-assessments using Colas checklists (as % of CAE ⁽¹⁾)	World	100% of CAE ⁽¹⁾ of manufacturing activities for which checklist is applicable	83	79
Percentage of manufacturing activities that use a tool to manage environmental impact (environmental certification and/or Colas checklists) (as % of CAE ⁽¹⁾)	World	100% of CAE ⁽¹⁾ of manufacturing activities	84	89

(1) CAE: revenue + intra-Colas transactions. This amount takes into account Colas’ upstream activity (essentially construction materials), whereas accounting for Colas’ vertical integration results in the elimination of more than 50% of materials production activity from revenue.

The “percentage of manufacturing activities under environmental certification” indicator rose by 4 points and remains at a satisfactory level, given the range of contexts around the world in which Colas operates and the minority interests held by Colas in many of these businesses. However, in some regions, managers have begun to question the usefulness of this approach, or would like to replace it with more practical and less systemic guidelines. At this stage, the debate remains open, even though there is a strong tendency at affiliates to define their certified scope with greater precision. The consolidated 2019 target for affiliates of 75% was therefore not met, in spite of good progress in the year thanks to the environmental certification of McAsphalt (98%), which accounts for 9% of total CAE of the Colas manufacturing activities.

The checklist-based environmental self-assessment indicator declined (a drop of 4 points), but remains at a high level. The decline in this indicator reflects the inclusion in the 2019 reporting scope of Miller and McAsphalt. Although these large Canadian affiliates have many sites eligible for the indicator, the system only began to be implemented there in 2019. Self-assessment using checklists continues to be the cornerstone of Colas’ policy for addressing environmental risks.

The final indicator, which combines the two approaches, remains at a high level and rose further in 2019. The target remains 100%, though this objective is very ambitious considering other shareholders sometimes have large and even majority stakes in some Colas entities, which prevents Colas from ensuring complete oversight. (See the Appendix for a presentation of the method used to consolidate non-financial indicators).

1.2.6.2.2. Prevention expenditure and accruals amounts

Colas does not use consolidated indicators for planned spending on the prevention of environmental hazards or pollution. This spending is included in normal operating expenditures and it is difficult to allocate purchases or major maintenance costs: for example, replacing a bag filter at an asphalt mix plant constitutes a routine investment for Colas, even though it is of an environmental nature since it serves to prevent particulate emissions.

As regards contaminated land, in line with its management guidelines, Colas makes accruals for clean-up expenses when the amounts are based on an assessment by an independent firm and when a date for site rehabilitation is set (by the competent authority, for example) or is otherwise known (upon lease termination, for example). Colas also has a particular advantage in managing this type of liability thanks to its affiliate Colas Environnement, which specializes in groundwater and soil remediation. This affiliate, recognized for its cutting-edge expertise, operates for both internal clients (28% in 2019) and outside industrial clients. Following conclusive trials outside Mainland France in Reunion Island and Spain, it continues to grow (with revenue up 44% in 2019) and provides its expertise to Colas, whether to evaluate budget allocations or to manage tricky decontamination exercises such as the current exercise at the SRD site in Dunkirk.

A large number of quarries and other sites worldwide are subject to specific regulatory requirements when they are no longer operated and require taking accruals during operations in order to cover environmental risks. This entails a wide variety of guarantees and practices (such as performance bonds, insurance, escrow accounts and accruals) that depend on national laws. Colas’ accruals on site remediation commitments totaled 184 million euros as of December 31, 2019.

As of this date, there is nothing that indicates that any of these measures were insufficient, either during internal or external audits or during the investigation of insurance claims.

1.2.6.3. ENERGY AND CARBON

As set out in Colas’ business model, the issue of the Colas carbon footprint is paramount and is even covered by its parent company’s vigilance policy, given its specific importance relative to other Bouygues Group business lines: Colas’ activities are structurally carbon-intensive, as demonstrated by its calculated carbon footprint. There is thus a need for a proactive policy and a good understanding of the levers available to significantly reduce this carbon footprint, in step with commitments by the majority of countries where Colas operates. Given the climate upheaval associated with greenhouse gas emissions, Colas’ contractual and non-contractual, internal and external stakeholders have expressed their sensitivity very clearly, though with significant variation, notably by country and by client.

1.2.6.3.1. Colas’ carbon footprint

Colas’ carbon footprint is calculated across Scope 3a, “from cradle to gate”: it thus includes the entire carbon cost of the upstream value chain as well as direct greenhouse gas emissions by Colas but excludes the downstream carbon cost. This choice is based on simple considerations: since Colas does not know how the materials it sells to external clients (aggregates, bitumen, etc.) are used, it cannot estimate the carbon cost resulting from such use; at the same time, since Colas has no control over the maintenance of or traffic transiting through the transport infrastructure on which it works, it cannot calculate the downstream carbon cost.

Following detailed methodological work to calculate its carbon footprint for the first time in 2010 using emissions factors recalculated by major geographical region, Colas updates this calculation every year. Caution is required when interpreting this information: a carbon footprint (which should more properly be called a “consolidated assessment of greenhouse gas emissions, expressed as CO₂ equivalent”) is calculated with around 30% uncertainty, notably due to the impossibility of calculating the upstream carbon cost sufficiently accurately; in Colas’ case, this upstream carbon cost depends on data held by hundreds of thousands of direct and indirect suppliers of all types.

This type of calculation does, however, provide an order-of-magnitude estimate of the carbon footprint and its various components:

Name of indicator	Scope	Coverage	2018	2019
Greenhouse gas emissions (in millions of metric tons of CO ₂ equivalent)	World	All Activities	12	13
Carbon intensity (in kilograms of CO ₂ equivalent per euro of revenue)	World	All Activities	1	1

The increase in the total is due to the inclusion of Miller and McAsphalt in 2019 reporting. The breakdown by scope⁽²⁸⁾ of Colas' carbon footprint may be estimated as follows:

- Scope 1: 1.8 million metric tons of CO₂ equivalent
- Scope 2: 0.1 million metric tons of CO₂ equivalent
- Scope 3a: 11.2 million metric tons of CO₂ equivalent

Four figures are worth highlighting, expressed as percentages of the total carbon footprint:

- 21%: upstream contribution of cement (Scope 3)
- 16%: contribution of Colas' direct energy expenditure (Scopes 1, 2 and 3)
- 13%: upstream contribution of bitumen (Scope 3)
- 8%: upstream contribution of freight (Scope 3 only)

These four items alone thus account for well over half of Colas' carbon footprint.

With a carbon footprint of around 13 million metric tons of CO₂ equivalent, Colas has a duty to work to reduce its greenhouse gas emissions; the options available for reducing direct emissions obviously differ from those available for reducing the upstream carbon cost.

1.2.6.3.2. Energy policy

In spite of the relatively modest proportion (14%) of greenhouse gas emissions generated directly by Colas, the idea of pursuing a policy of reducing the upstream carbon footprint without having committed to a policy of reducing the Colas own carbon emissions is clearly out of the question.

In value terms, Colas' internal energy consumption equates to almost 3.5% of consolidated revenue, while its average consolidated net profit has not exceeded 2.5% of consolidated revenue over the past three years. This gives rise to an initial observation: Colas does not have the resources to switch to more expensive greener energy and must instead always make use of the cheapest available energy in each of the territories where it operates; that being the case, only regulatory constraints or tax incentives can affect its energy mix by sending to the market price signals applicable to Colas and its competitors; for example, this is the case in Switzerland, with its dynamic energy taxation policy and the possibility of exemption for businesses that put in place a strictly controlled strategy to lower their carbon cost; in fact, Colas was one of the very first Swiss firms to commit to this virtuous program. Another example is that of global regulations governing sea and river traffic, which require the use of fuels with lower sulfur content or require ships to have scrubbers in effect as of 2020.

Pending such price signals in other countries and fields, Colas focuses its efforts on energy efficiency, and thus on lowering its consumption for any given task and level of production; the aim is to establish an effective culture of energy sobriety to avoid waste and excess consumption.

However, some of the resulting savings may be proactively reinvested in the use of lower- or zero-carbon forms of energy, notably in anticipation of future price signals: such initiatives might be termed "learning investments", aimed at assessing the real energy efficiency of alternative energies for the kinds of uses to which Colas would put them, as well as the various associated costs for retrofitting, employee training, safety management, etc.

(28) The calculation changed in 2019, with the ISO reference standards shifting the upstream carbon cost of hydrocarbons from Scope 2 to Scope 3a, with no impact on either Scope 1 or the total. However, this change in the standards means Scope 2 is now completely negligible at Colas, where it now covers only the carbon cost of electricity consumed.

Energy expenditure is monitored using the following three indicators:

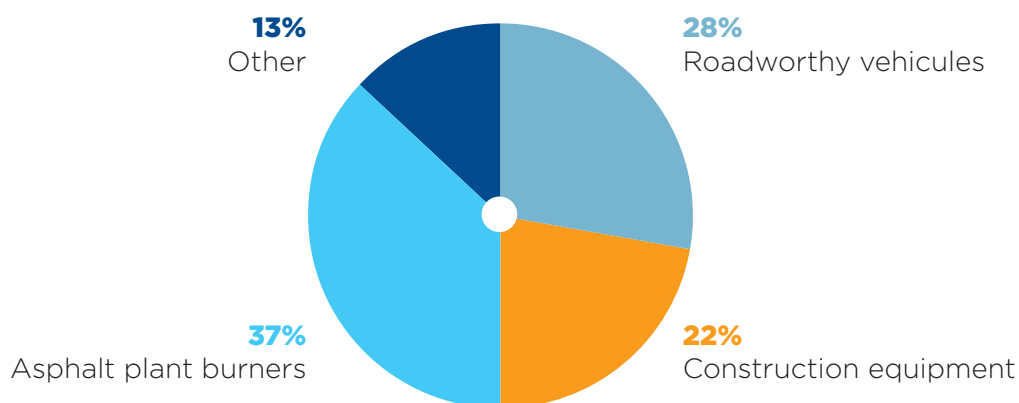
Name of indicator	Scope	Coverage	2018	2019
Total energy costs (in millions of euros)	World	All Activities	427	450
Total energy consumption (in millions of MWh)	World	All Activities	7.6	7.9
Ratio of total energy costs to IAV⁽¹⁾ (as %)	World	All Activities	3	3

(1) IAV (Internal Activity Volume): the purpose of this performance indicator is to establish an accounting scope reflecting direct energy consumption by Colas, in order to calculate a ratio of direct energy intensity. It is equivalent to CAE (revenue before eliminations) less operating profit margin and subcontracted work.

The observed increases of 5% in euros and 4% in kWh reflect the inclusion of Miller and McAsphalt. Excluding Miller and McAsphalt, the energy bill would have been 3% lower and total consumption 7% lower.

To implement an energy intensity indicator, Colas looked at establishing a relationship between these energy costs and a relevant denominator, such as revenue or added value. This work helped to reveal the complexities involved in this matter. Selecting revenue, for example, would encourage energy-intensive business activities to be outsourced via subcontracting: revenue would remain unchanged, while direct energy consumption would go down, without actual progress in this area. For this reason, Colas defined IAV to express the volume (in euros) of business activity that truly constitutes the basis of energy costs. IAV is equivalent to CAE (revenue before eliminations) less operating profit margin and subcontracted work. No change in this indicator was recorded between 2018 and 2019.

Colas' energy expenditure is broken down as follows:



Colas' energy efficiency policy is expressed via the simple priorities set out below. However, due to the disillusionment observed at numerous Colas business units after adopting various ISO systems (see 1.2.3.1. "Quality and client satisfaction", and 1.2.6.2. "Risk prevention policy"), Colas has yet to make any substantial commitment to the ISO 50001 system, continuing instead to observe the effects of this management standard on those affiliates that have adopted it. Conversely, given the extremely scattered nature of its energy consumption, Colas is aware of the need to mobilize large numbers of personnel throughout.

1.2.6.3.2.1. Asphalt plants

Opportunities to drive improvement have long been known (managing the moisture content of aggregates; limiting starting and stopping of equipment; adhering to recommended temperature settings; trimming burners; adopting the widespread use of warm mixes; limiting the number of different mix designs in use; etc.). Reliable data on the consumption of each burner at Colas' 476 active asphalt mixing plants has been reported annually for many years, while 29% of plants have computerized real-time or daily monitoring systems running applications developed by Colas (My-mix, Hamp Report, Mix link®, etc.). To promote the implementation of resulting best practice, Colas has adopted the following policy:

- target: reduce burner energy consumption per metric ton of asphalt produced by 1 kWh for each of the next five years, thus lowering the total from 79 to 74 kWh per metric ton by the end of 2024;
- target: increase warm mixes as a proportion of Colas' global production of asphalt to 25% by 2024;
- as part of the strategic One Colas Plants program, incorporate energy best practice into the program and systematically audit all plants with annual production of over 75,000 metric tons where consumption exceeds 90 kWh per metric ton.

The situation deteriorated in 2019, notably due to the inclusion of Miller in Canada, a country where this ratio is hampered by the climate:

Name of indicator	Scope	Coverage	2018	2019
Energy consumed per metric ton of mix produced (kWh per metric ton)	World	Asphalt mixing plants	78	79
Greenhouse gas emissions per metric ton of mix produced (in kilograms of CO ₂ equivalent per metric ton)	World	Asphalt mixing plants	18	19

Warm mixes require about 15% less energy to produce than hot mixes. The percentage declined slightly in 2019 due to the inclusion of Miller, which on its own accounts for 6% of total hot mix production and does not produce any warm mix. All employees remain committed to expanding the use of these products across all regions, adapting production tools and conducting ongoing research to develop new technical solutions that enable lower product temperatures, with the knowledge that the health-related benefits are essential (see explanatory comment on the indicator in Section 1.2.4.4.3, "Health policy"). In 2019 as in 2018, US affiliates achieved the highest levels; for example, warm mix accounted for 100% of Branscome's production.

Name of indicator	Scope	Coverage	2018	2019
Percentage of warm mix and low-temperature mastic asphalt (as % of quantity)	World	Mixing and mastic asphalt plants	22	20

1.2.6.3.2.2. Machines and vehicles

While opportunities to drive improvement have also long been known (adopting calm driving habits, lowering engine power, optimizing loading on outward and return legs, switching off engines when idling, etc.), performance indicators are much more complex to implement and the target personnel is almost 100 times more numerous than of asphalt plants operators. It is thus essential that employees be made more energy-aware, and Colas is continuing with its information campaign to encourage truck drivers and equipment operators to reduce their fuel consumption by 20% by adopting calmer driving habits and switching off engines when equipment is idling. This program highlights the three advantages of environmentally friendly driving: it reduces costs, increases safety and helps preserve the environment. In this context, the improvement policy is expressed as follows:

- target: equip 50% of the Colas vehicles and equipment with onboard telematics⁽²⁹⁾ by the end of 2024;
- target: ensure that vehicles and equipment with onboard telematics have their engines switched off when idling in at least 80% of cases by the end of 2024;
- energy efficiency is already taken into account when choosing which equipment to buy, while the target of a 2% gain in average utilization rate means the least efficient equipment is automatically removed from the fleet.

The goal is to derive maximum benefit from the investment already made in equipment:

Name of indicator	Scope	Coverage	2018	2019
Percentage of vehicles with on-board telematics	World	All Activities	25	23
Percentage of machinery with on-board telematics	World	All Activities	25	28

The number of site machines and vehicles equipped with energy consumption monitoring systems rose by 3 points for site machines and declined by 2 points for vehicles in 2019: the decline in the number of vehicles equipped with onboard telematics is mainly due to the sale of Smac, almost 80% of whose vehicles were fitted with this type of system.

1.2.6.3.2.3. Energy purchases

While the current system for monitoring energy bills is mature in France, it is not yet able to detect abnormal consumption or billing errors at the international level. The system will be reinforced worldwide and verified under the strategic One Colas Quarries and One Colas Plants programs as well as through customary affiliates' audits by Colas' Audit Department.

(29) Systems that provide real-time primary data on the operation of vehicles or equipment: consumption, engine speed, speed, distance traveled, etc. Such systems may be built-in into recent equipment or retrofitted on older equipment. They must also be capable of sending feed-back instructions to the driver.

1.2.6.3.2.4. Alternative energy

As stated earlier in this section, although Colas does not have the resources to opt for more expensive, greener forms of energy, it does have the capacity to invest some of its energy efficiency savings in continued trials of less carbon-intensive forms of energy. To this end, two performance indicators are being introduced in 2020:

- Number of alternative energy projects (gravity recovery and hydraulic power in quarries; installation of solar and wind farms at Colas sites; testing of hybrid and electric equipment; biosourced fuels at asphalt mixing plants; thermal solar power; etc.) in the production phase, with a target of 100 such projects by 2024;
- Annual production from such projects (kWh).

Energy savings certificates

In light of incentive schemes put in place by the French Government, Colas is actively seeking to register various energy reduction initiatives in the form of official energy savings certificates. For 2018 and 2019, initiatives undertaken in the areas of non-road transport, engine types and insulation currently generate total energy

savings of 1.17 terrawatt-hours (tWh). Converting this figure (excluding non-road transport for the client's benefit) on the basis of the average carbon cost of Colas' total energy bill translates into an annual saving of over 6,400 metric tons of CO₂.

1.2.6.3.2.5. CO₂ quotas

As combustion facilities with a rated thermal input exceeding 20 MW, some Colas asphalt plants are under the European Union's emissions trading system. This applies to five mobile asphalt mixing plants in Europe as well as five stationary asphalt plants in Belgium, two in Denmark and three in France. Compared with other manufacturing facilities under by this system, asphalt plants are minor CO₂ emitters. For example, the three French plants totaled around 10 thousand metric tons of CO₂ in 2018 (reported in April 2019) for a production of about one million metric tons of asphalt mix. Following the closure of Société de la Raffinerie de Dunkerque, Colas picked up surplus quotas, allowing it to transfer in 2019 27,597 CO₂ quotas to needing affiliates for their 2018 reporting without calling on the CO₂ market. Thanks to these transfers, each affiliate had a quota balance following the April 2019 report corresponding to the free quotas allotted in February 2019, which will have to be used in the April 2020 report. For Colas, this scheme has proved administratively cumbersome and ineffective at lowering emissions.

1.2.6.3.3. Reducing the upstream carbon footprint

Opportunities to reduce the upstream carbon footprint (which accounts for 84% of Colas' total carbon footprint) are also severely limited by financial constraints. However, there are still some initiatives worth implementing or reinforcing:

1.2.6.3.3.1. Transportation

With transportation accounting for a significant proportion of Colas' upstream carbon footprint, Colas continues its efforts to transfer upstream and downstream freight to waterways and railways. These efforts are helped by Colas Rail and the sea and river freight expertise of the Colas businesses specializing in transporting bitumen by sea, river and rail. A reliable indicator monitoring tonne-kilometers of freight for each non-road mode of transport has been in place for several years:

Name of indicator	Scope	Coverage	2018	2019
Number of metric tons of materials transported by rail or waterway (in millions of metric tons)	World	All Activities	8.5	10.5

The tonnage of materials transported by rail or waterway increased by 25% and the average distance traveled by 47%, up from 233 km in 2018 to 343 km in 2019. The quantity of materials transported by rail or waterway equates to nearly 3,900 freight trains (with each train containing 44 freight cars), which avoids deploying more than 351,000 trucks, each with a haulage capacity of 30 metric tons. The strongest growth (in metric ton/kilometer) has arisen from the integration of McAsphalt, which is extremely active in transporting bitumen by rail and waterways.

1.2.6.3.3.2. Recycling asphalt mix and aggregates

Recycling of asphalt mixes and aggregates has been one of the biggest sources of energy savings for Colas since the Colas carbon footprint was first calculated in 2010 (cf. 1.2.6.3.5. “Summary of prospective reductions at Colas”). Longstanding and reliable annual reporting indicators mean clear targets can be set:

- Target for asphalt mixes: increase the amount of recycled asphalt mix as a percentage of each metric ton of asphalt mix produced by 0.5 points a year for the next five years to reach 18% by 2024. This target has now been incorporated into the strategic One Colas Plants program. Recycling bitumen recovered from demolition or the milling of road surfaces is currently the main means of reducing CO₂ emissions (113,000 metric tons of CO₂ equivalent in 2019);
- Target for aggregates: increase the ratio of recycled materials produced to virgin aggregates produced from 10% to 15% by 2024. This target will also be incorporated under the Materials business unit’s strategic program.

For more information about these two indicators, refer to 1.2.6.4. “Circular economy”.

1.2.6.3.3.3. Research and innovation

The two materials with the biggest negative impact on Colas’ carbon footprint are bitumen and cement⁽³⁰⁾, the former due to the volumes involved and the second due to its greenhouse gas intensity. While Colas cannot unilaterally stop using either of these materials, it can continue with research and innovation efforts to reduce their contribution to its carbon footprint – an approach that can be extended to encompass other materials that have less of an impact on Colas’ carbon footprint. The goal is obviously to offer the market less harmful alternatives and translate the corresponding research effort into a specific competitive advantage:

- Bitumen: first of all, it is important to remember that bitumen used for road paving is not converted into CO₂, since it is neither burned nor consumed; **fossil bitumen thus remains a stable carbon sink for road use**. However, bitumen is a distillate of crude oil, and as such is vulnerable to policies limiting the extraction and transformation of the fossil fuels with which it is *de facto* associated. For this reason, Colas has been interested in researching alternative organic binders for many years⁽³¹⁾, whether involving plastic waste or biomass. As regards biomass, the required volumes are challenging: replacing the amount of bitumen used worldwide with a vegetable oil derivative would require dedicating the equivalent of one-third of the European Union’s total cultivated lands⁽³²⁾. That being the case, Colas is refocusing its research on the recovery of agricultural waste, and in particular lignin.
- Cement: through its affiliate Argeco, which produces flash metakaolin (17,000 metric tons in 2019), Colas has for several years been working to reduce the carbon footprint of concretes. Colas is now involved in the global effort to develop low-emission cements while continuing its work on alternative binders based on inorganic geopolymers.
- Green chemicals: efforts to upgrade the Colas use of chemicals (bitumen emulsions, road marking paint, surfactants, etc.) in accordance with the principles of green chemistry have led Colas to work towards switching to biosourced materials for some of its niche products (Vegecol® plant-based binder, patented in 2004; Vegeflux® fluxing agent, patented in 2006; Vegemark® road marking paint, certified in 2010; Ostrea®, a hot road marking product certified in 2006; Ekoflux®, a plant-based bio-fluxing agent which entered the development phase in 2014), which has the effect of moving from petroleum-based fossil carbon to a biosourced carbon sink, and even lowering production and application temperatures or reducing overall materials requirements in some cases.

1.2.6.3.4. Helping to reduce the downstream carbon footprint

Colas is also committed to extending its client offering to include solutions for lowering the carbon cost associated with designing and operating projects.

1.2.6.3.4.1. Low-carbon alternatives

Colas has for many years⁽³³⁾ sought to offer its (public sector) clients environmentally friendly alternative bids to reduce the use of carbon and materials. It does this by changing the selection and quantity of materials specified, though without diverging from specified performance requirements. Such alternative bids often rely on the use of materials sourced more locally and greater use of recycling. Moreover, it is important to emphasize that such alternative proposals usually result in a lower cost to the client. In France, such alternative bids rely on the Seve® software, approved by public authorities. Regrettably, these efforts have had little success, with public works contracts still heavily reliant on base solutions due to technically and regulatory conservative cultures. Such low-carbon alternatives are currently retained in fewer than 0.1% of projects won by Colas worldwide. However, the number did increase slightly in 2019, up 2%, while the amount of CO₂ emissions avoided rose 17%

(30) Cement and bitumen account for 21% and 13% of Colas’ carbon footprint respectively.

(31) For example, Vegecol® was developed as a bitumen alternative based on vegetable oils and resins as long ago as 2003.

(32) This calculation is based on an oilseed yield of 2 metric tons of oil per hectare – higher than the world average – and annual global bitumen consumption of around 100 million metric tons.

(33) Ecologiciel® was the first software developed by Colas (in 2006) to offer Colas’ (public sector) clients low-carbon alternatives. This system was subsequently replaced by Seve®, developed by the French road industry, which is currently in the process of being expanded across the European Union with the support of the European Commission.

to 3,105 metric tons. The SustainEuroRoad project (see box in 1.2.6.4.4. “Environmentally friendly alternatives”), subsidized by the European Union and spearheaded by Routes de France (formerly USIRF, the French road industry association), in which Colas is heavily involved, could speed up this revival to overcome market indifference and thus validate Colas’ efforts in this area over the past 15 or more years.

1.2.6.3.4.2. Driving and parking assistance

Many studies have shown that vehicle congestion and time spent looking for parking spaces represent an exorbitant cost in terms not only of lost productivity and social frustration but also of pollution and greenhouse gas emissions. Against this backdrop, a significant portion of Colas’ innovation policy is focused on techniques and applications dedicated to these issues under the Mobility by Colas initiative (refer to 1.2.3.4. “Innovative and sustainable solutions for a better living environment”).

1.2.6.3.4.3. Just-in-time maintenance

The issue of how and when to maintain road and rail infrastructures remains unresolved in most countries. If maintenance is carried out too late, it involves more work, which costs more and entails a higher carbon cost. Independently of efforts to promote virtuous contractual approaches in this area, such as the use of PPP and concessions, Colas has for decades been developing increasingly effective tools for populating predictive maintenance programs, whether for infrastructure itself or the associated urban equipment. Progress has been made by using the Internet of Things to make infrastructure “smart” and using inspection and testing systems powered by the latest technology combined with expert data analysis software. Among the most recent fruit of innovation in this area is the ANAIS system (refer to 1.2.3.4. “Innovative and sustainable solutions for a better living environment”).

1.2.6.3.4.4. Energy self-sufficiency solutions

With its WattWay photovoltaic technology platform, Colas offers carbon-free energy self-sufficiency solutions for a range of applications in roads, streets and their immediate environment (see 1.2.3.4. “Innovative and sustainable solutions for a better living environment”).

1.2.6.3.5. Summary of prospective reductions at Colas

The following table, which has been monitored for the past several years, shows the current status of reliably metered actions:

Name of indicator	Scope	Coverage	2018	2019
Greenhouse gas emissions avoided by Colas’ actions (metric tons of CO ₂ equivalent/year)	World	All Activities	340,000	483,000

This indicator was completely recalculated in 2019 to take into account actions that are now fully factored in; the 2018 figure has been recalculated on a pro forma basis. The sharp increase in the indicator is due to progress on alternative freight and recycling, resulting in particular from the integration of Miller and McAsphalt.

Taking into account all numerical targets under the carbon policy set out in this document, the amount of CO₂ avoided could reach an estimated 650,000 metric tons by 2024, equating to around 5% of the Colas carbon footprint. This is obviously a disappointing figure relative to the amount of effort expended to achieve these ambitious targets.

This highlights the need for a low-carbon external environment more generally: if, in addition to Colas’ aforementioned efforts, cement were to become carbon-neutral, the calculation of the carbon cost of bitumen were to take into account its true status as a stable carbon sink and the transportation industry were to become carbon-free, Colas could more than halve its carbon footprint, given its efforts to prepare for such an eventuality.

1.2.6.4. CIRCULAR ECONOMY

Colas’ approach to reducing the consumption of raw materials (essentially aggregates and bitumen) is based on the following action plan:

- optimizing and maximizing recycling of all types of excavation material, demolition debris and inert waste produced by construction and public works projects. Colas has developed indicators to track the amounts of materials effectively recycled at its industrial facilities in order to compare these amounts to the volume of new materials produced, rather than simply record the amount of waste generated by its worksites or the amount of recycled materials Colas reuses. This decision serves two purposes: it improves data reliability and encourages the affiliates to invest in materials recycling equipment. The aim of this approach is therefore not to track total consumption, the interpretation of which has proven too complex to allow proactive action plans to be developed. For example, some totals may increase with revenue while others decrease due to changing market conditions (such as bitumen consumption, the increasing proportion of service and maintenance activities, and the development of new activities);
- developing new products at Colas’ R&D laboratories based on a sustainable design approach that seeks to minimize the use of raw materials, particularly non-renewable resources (see 1.2.3. “Value chain and innovation”);
- developing and offering environment friendly alternative bids: for many years now, Colas has led the way in offering its clients environment friendly alternative bids and in developing “eco-comparison” tools for assessing these alternative bids.

Colas is one of the world's five biggest recyclers across all sectors and materials. A leading producer and user of construction materials, Colas recovers and recycles its waste and site demolition materials in its road construction, and more generally also waste and materials from other construction and public works professionals and even other industries (mirror glass waste, broken porcelain, shoe soles, etc.). In total, this represents over 16 million metric tons each year; some of this progress can be attributed to the inclusion of existing recycling activities at Miller. This positioning continues to improve and is particularly robust in that it is based on a very fine network of recycling sites across practically all regions where Colas operates (numerical targets are available in 1.2.6.3.3.2. "Recycling asphalt mix and aggregates").

Since most of the materials that Colas uses are relatively heavy, recycling must be optimized at a very local level to minimize transportation. The key environmental aspects are determined from life-cycle analyses and carbon footprint calculations. This local dimension understandably favors an industrial ecology approach and there are many examples of how Colas has successfully brought together quarries, recycling centers, asphalt plants, and other facilities with this approach. By using short supply chains wherever possible to maximize the use of local resources and favoring sites that adopt an integrated industrial ecology approach, Colas helps each local area develop using its own materials while minimizing waste: road construction activities are able to achieve virtually zero waste insofar as recycled materials are accepted by clients and recycling sites permitted so as to combat the use of landfills.

1.2.6.4.1. Aggregates

Aggregates are the resources most used by human beings, after water. Public works account for the bulk of this consumption, with road construction alone making up more than half of it. Aware of the responsibility that results from this, Colas has been developing recycling techniques for over 40 years and has disseminated them across all the regions where it works. Today, around 320 Colas sites transform used materials to turn them into public works materials. This saves the operation of almost 50 quarries worldwide and an even larger number of landfills.

Name of indicator	Scope	Coverage	2018	2019
Quantity of recycled materials produced (in millions of metric tons)	World	All construction and manufacturing activities	9	9.2
Ratio of materials recycled to total aggregates produced (as % of quantity)	World	All construction and manufacturing activities	10	10

In 2019, Colas recycled and recovered 9.2 million metric tons of materials. This represents almost 10% of its total aggregate production and worldwide savings equivalent to the average production of 47 Colas quarries. The ratio of materials recycled was stable between 2018 and 2019, in spite of a 9% increase in the production of aggregates, due to a slight increase in the tonnage of materials recycled. The biggest increases were outside France excluding North America (up 7%) and in Mainland France (up 4%), bearing in mind that Mainland France accounts for 59% of total Colas production of recycled materials.

Colas Île-de-France Normandie: an affiliate retooled around circular economy

For more than 30 years, Colas Île-de-France Normandie - a regular road construction Colas affiliate - has taken account of fundamental issues about responsible management of waste and materials from sites of all kinds, as well as their recycling and reuse. The affiliate now has a network of around 40 facilities (recycling platforms, sorting platforms for commercial users, clean waste storage facilities) across the region.

Its specialized affiliate Premys, which operates throughout Mainland France, is a major player in the demolition sector. It has long been recycling concrete from demolition and is making progress on secondary works waste from emptying an selective removal in buildings targeted for demolition (ferrous and non-ferrous metals, computer room flooring, wooden flooring, wooden beams, false ceilings, furniture, etc.) so that they become a source of raw materials or equipment. Moreover, Premys is currently testing solutions for selling products arising from recovered demolition

waste (doors, windows, false ceilings, insulation, etc.) to private individuals and tradespeople.

Through all its activities, including those of its demolition affiliate Premys, Colas Île-de-France Normandie was able to recycle 1.6 million metric tons of materials in 2019 (up nearly 10% from 2018), including 290,000 metric tons (up 5% from 2018) of reclaimed asphalt pavement from the demolition of former road surfaces.

This end-to-end integration based around the cycle of materials production, construction, demolition and recovery has made Colas Île-de-France Normandie one of the first circular economy companies in its region for the construction and public works sector. Thanks to its updated business model and the resulting industrial firepower, the company was able to complete in 2019 the massive project to fully rebuild runway number 3 at Paris Orly airport in only 14 weeks using 300,000 metric tons of recycled materials, with 200,000 metric tons reused in the new runway itself.

1.2.6.4.2. Bitumen

Reclaiming asphalt pavement makes it possible to reduce consumption of bitumen (a non-renewable petroleum resource) by reusing that contained in the aggregates recovered when repairing or demolishing roads. Asphalt mix, the surfacing used for most road systems throughout the world, consists of a mixture of about 5% bitumen with aggregates. Reclaimed asphalt pavement (RAP) comprises the materials recovered from the milling or demolition of roadways before new asphalt mix is applied. Recycling asphalt mix when repaving a road offers three advantages:

- Saves energy and reduces greenhouse gas emissions (see 1.2.6.3.3.2. “Recycling asphalt mix and aggregates”),
- Enables the reuse of bitumen, a non-renewable natural resource, and aggregates,
- reduces road construction costs for the client (often public sector) at identical levels of quality and performance.

Name of indicator	Scope	Coverage	2018	2019
Reused quantity of reclaimed asphalt pavement (in millions of metric tons)	World	Mixing and mastic asphalt plants	6	6.2
Percentage of reclaimed asphalt pavement reused for bitumen recovery (as % of quantity)	World	Mixing and mastic asphalt plants	15	16

The percentage of reclaimed asphalt pavement recycled rose by one point in 2019: the quantity of reclaimed asphalt pavement recycled increased by more than 2%, while asphalt production fell by 3% (particularly in the Middle East, western and northwest France and Quebec). However, the consolidated target for Colas’ affiliates in 2019 was 17% for this indicator. The percentage varies from one geographical area to another depending on urban density, client habits and the techniques used at asphalt mixing plants. Some affiliates perform particularly well: Roadworks Ontario (33%), Branscome (30%) and Reeves (28%) in the United States, Colas Belgium (25%), Colas Switzerland (23%) and Colas Rhône-Alpes Auvergne (20%), whereas such progress is more difficult to achieve in less proactive countries. More than half of the 6.2 million metric tons of recycled asphalt mix comes from six affiliates (Barrett, Reeves, Colas Centre-Ouest, Colas Rhône-Alpes Auvergne, Colas Nord-Est and Miller). The total savings thus made are equivalent to the annual bitumen production of a medium-sized refinery.

1.2.6.4.3. In-place road recycling

In-place road recycling – which involves removing the asphalt mix from a road, adding a binder to it at the worksite and repaving the road with the resulting mix – saves a great deal of energy by considerably reducing the need to transport materials. Substantial amounts of aggregates are also saved since the material removed from the road is recycled in place.

Name of indicator	Scope	Coverage	2018	2019
Surface area of road recycled in place (in millions of m ²)	World	Sites	3.3	7.4

The surface area of road recycled in place more than doubled year on year in 2019. This significant increase is linked to the incorporation into the Colas reporting in 2019 of Miller in Canada, which uses this technique on many of its projects and accounts for 60% of total 2019 performance.

1.2.6.4.4. Environmentally friendly alternative bids

Environmentally friendly alternative bids are often a prime opportunity to move the circular economy forward by favoring local materials supply chains, shortening transportation distances, making savings on materials at the design phase, recycling locally available materials, generating savings on transportation and energy, and so on. Colas invests significant effort in promoting its expertise as an innovative, regionally based group, reflecting one of the most fundamental aspects of its business model. It must, however, be recognized that these efforts have met with only modest success (cf. 1.2.6.3.4. “Low-carbon alternatives”):

Name of indicator	Scope	Coverage	2018	2019
Number of environment friendly alternative bids submitted	World	Sites	116	121

The slight improvement seen in 2019 notwithstanding, the number of environmentally friendly alternative bids submitted reflects the current state of the market and the difficulty of offering such alternative bids. The proportion of greenhouse gas emissions avoided by Colas increased by 17% in 2019, while the number of environmentally friendly alternative bids submitted was 4% higher and the number of such proposals retained increased by 23%. Within the road construction industry, Colas is playing an active role in efforts to give new impetus to environmentally friendly alternative bids, especially now that the French SEVE® eco-comparator is attracting genuine interest in Europe (see inset below).

SustainEuroRoad: the future environmental comparator for Europe's roads?

Working together, the industry and the European Union have undertaken to promote France's SEVE[®] internationally, with Colas playing an active role.

In 2017, the SustainEuroRoad project, 50% grant funded under the EU's LIFE program, was audited by the European Commission. It has been noted that there are no other projects of this type in road construction and that it would help contribute unbiased selection of best bidders under carbon and material savings criteria. The European Commission's Directorate-General for Environment has referred to the possibility of reducing greenhouse gas emissions and energy consumption by more than 30% and consumption of natural resources by 70%.

In 2018, "SustainEuroRoad" generated a new pan-European database and demonstrators at worksites

and production sites across Europe (Spain, Hungary, Germany and France). Its aim is to support GPP (Green Public Procurement), an European Community organization, in its efforts to introduce environmental criteria into public procurement.

In 2019, experts working on the project pulled together technical specifications from each road construction project where there was potential to reduce the environmental impact and created different scenarios modeling positive performance. SustainEuroRoad has finished developing the software - a comprehensive decision tool harmonized at the European level that can calculate and then lower the environmental impact of building and maintaining road infrastructure over its entire life cycle. The software is changing continually paying attention to users' comments in order to be as much in touch as possible with the reality of worksites.

1.2.6.4.5. Waste prevention and management

As part of its effort to measure its waste management performance, Colas has developed a specific indicator to monitor the management and disposal of waste oils generated by all its affiliates and business lines. In most countries, waste oil is subject to special hazardous waste regulations and is the main hazardous waste generated by Colas' business activities. The indicator is based on the ratio of used hydraulic and motor lubrication oil that is either disposed of by a certified channel or responsibly recovered, relative to total oil purchased.

Name of indicator	Scope	Coverage	2018	2019
Waste oil recovery ratio (as % of quantity)	World	All Activities	65	70

Regarding waste oil, the optimum oil-recycling ratio is considered to be 80% considering part of the oil consumed and burned by vehicles and machinery. Colas' recycling ratio rose by 5 points in 2019.

The management of all types of waste is monitored and evaluated pursuant to ISO 14001 certification requirements and during the annual checklists self-assessments (see 1.2.6.2.1. "Risk prevention policy" for environmental certification and self-assessment).

1.2.6.5. BIODIVERSITY AND ECOSYSTEMS

Climate upheaval and the collapse of biodiversity are both key environmental challenges. As regards biodiversity, the first report produced by IPBES for the UN in 2019 did a lot to raise public and government awareness in most of the countries where Colas operates, and particularly in France, where an international plenary session was held to finalize the report. The report highlighted five factors responsible for this collapse, in descending order of importance: (1) changes in land and sea use; (2) direct exploitation of organisms; (3) climate change; (4) pollution; and (5) invasive alien species.

Colas, which is affected by factors 1, 3, 4 and 5 (climate disruption is covered in 1.2.6.3. "Energy and carbon", and pollution is covered in 1.2.6.2. "Risk prevention policy", and 1.2.6.6. "Water management"), has already done a lot of work on some of these issues: its first attempt at a formal biodiversity policy dates back to 2011 and was accompanied by performance indicators and a methodological guide. In keeping with its emphasis on practical solutions, Colas has not sought to adopt systemic approaches such as calculating the ecological footprint (the scientific basis of which remains to be validated), monetizing ecosystemic services (which are often overly reductive relative to ecosystems' intrinsic value) or subscribing to the French National Biodiversity Strategy (whose principles Colas considers both too general and administratively cumbersome). Colas has instead sought to incorporate its pro-biodiversity initiatives into simple programs and existing tools (ISO 14001, Colas checklists, etc.) while pursuing in-depth dialogue with the scientific community through the French Foundation for Biodiversity Research (FRB) to improve its understanding of the complexity of ecosystemic phenomena.

1.2.6.5.1. Changes in land and sea use

The principle here is the three-pronged “avoid, reduce, offset” approach adopted in French regulations. In keeping with these regulations, Colas is particularly committed to the first two prongs of this approach.

90% by value of all projects delivered by Colas are conducted on sites that are already artificialized: Colas’ work leads it to maintain, rebuild or develop areas that have already lost most of their environmental value. Meanwhile, for the remaining 10% of new infrastructure developments, Colas often has no control over how land is used, since the land for its projects (including concessions and public-private partnerships, or PPPs) is made available by its clients. Given the nature of its worksites, Colas therefore rarely has a direct impact on land use, as the land footprint of its activities is determined by the projects’ owners. Meanwhile, Colas does not authorize the construction of its own industrial facilities on high-quality natural sites. Even though Colas has relatively little interaction with ecosystems, the need to prevent the collapse of biodiversity is so pressing that Colas has nevertheless identified four priorities:

1.2.6.5.1.1. Education

As highlighted by Professor Claude Villeneuve⁽³⁴⁾ at the Colas Environmental Convention in Montreal in 2018, biodiversity is first and foremost a cultural issue: irrespective of the country, conservation initiatives have little impact if neighboring populations fail to see their benefit or take ownership of them. Colas is thus able to magnify the impact of its initiatives in the field through educational action at the local level, and can even sometimes incorporate such action into participatory science⁽³⁵⁾ approaches and listen to local knowledge about how to respect and manage nature. Indeed, genuine solutions to the challenges posed by biodiversity will be found only if people take ownership of them on a local and global scale. Against this backdrop, Colas always considers how it might include an educational component in its biodiversity initiatives. Feedback in this area has been very enlightening: Colas employees tasked with explaining their actions to those around them find that, in so doing, they strengthen arguments in support of those actions and thus gain their colleagues’ buy-in.

Ten years of partnership with Lemurs’ Park, Madagascar

In Madagascar, since December 2008, Colas has offered an educational and awareness-raising program on protecting biodiversity, providing its support to a botanical garden and private lemur reserve. Thanks to this program, over the last 10 years, 32,166 schoolchildren and 1,129 teachers have learned about the importance of their country’s natural heritage, particularly the protection of lemurs through habitat conservation. On-site explanations and a Malagasy-language comic

strip help children understand the challenges of living in harmony with ecosystems. The children have expressed their understanding through thousands of drawings and, for the older ones, quizzes. The project’s abundant documentation, which also includes words of thanks from teachers, is quite touching.

Colas also provides transportation using verified coaches and drivers; thanks to the extreme care taken in this area, the program has experienced no road accidents to date.

1.2.6.5.1.2. Quarries and gravel pits

All quarry and gravel pit sites are restored when they are depleted and many are progressively restored while still being operated. In addition, the amount of materials recycled is equivalent to sparing the production of about 50 quarries or gravel pits and many more landfills around the world (see 1.2.6.4. “Circular economy”).

Colas has also on occasion identified that its sites had become refuges for remarkable pioneer species (whether animal or plant) that were colonizing the new ecological niche created by the site. In such cases, a systematized program was adopted to ensure that each site implements and monitors actions aimed at fostering and facilitating the presence of such species, with the support of skilled biologists and the provision of educational information for local residents. The program has made steady progress, with key successes including a recovery in the raven population in Brittany, the continued presence of nesting pairs of peregrine falcons in a region of Quebec, and educational initiatives to combat poaching of the giant pangolin in Gabon. The program is tracked using a reliable indicator in place for several years:

(34) *Claude Villeneuve is a biologist, former Director of the Institut Européen pour le Conseil en Environnement (European Institute for Environmental Consulting) in Strasbourg, and professor in the Department of Basic Sciences and holder of the Environmental Consulting Chair at Université du Québec à Chicoutimi. He is particularly known for his work taking into account cultural factors, which he successfully introduced into UN environmental standards, and his work on the cultural knowledge of First Nations people gained from living in harmony with their ecological niches.*

(35) *Participatory science: an approach that consists in involving citizens in the scientific process, with educational benefits in return for those who contribute. For example, volunteer members of the Audubon Society have been carrying out a survey of birds across the whole of the USA every Christmas for over a century, resulting in a database that could only arise from a citizen science approach of this kind.*

Name of indicator	Scope	Coverage	2018	2019
Percentage of CAE from aggregates production activities that take action to promote biodiversity (as % of CAE)	World	100% of CAE of permanent aggregate production activities	51	52

Around 70 protected species currently live at Colas' extraction sites, in addition to some 50 sites that are home to beehives. The biodiversity indicator was up one point in 2019 reflecting the real progress that has been made since this policy was rolled out on the occasion of the 2012 Colas' Environment Convention. This effort remains patchy, varying from one cultural context to another: while modest in the United States and Canada (16%), it enjoys strong support in France and other countries where Colas operates (with a ratio ranging from 50% to 90%), with local residents always showing support and interest. The EOCE program has played a major role in securing affiliates' collaborative commitment to advancing this policy. The consolidated target for Colas affiliates in 2019 was 57%; the slower than expected progress in the year was notably due to the integration of Miller.

Alpes-de-Haute-Provence bee conservatory

In 2016, Colas created a conservatory for black bees at Colas Midi-Méditerranée's Cozzi quarry in Norante (France) in partnership with specialist laboratory Apilab. This scientific heritage project relies on regular analysis of genetic and biometric data to ensure that all resident bees are of native origin. For the past four years, the 20-hive conservatory has been managed by a specially trained local team. It is the only conservatory of its kind in France created by the private sector. This social and collaborative project is conducted in partnership with local beekeepers and neighboring municipal authorities. Beekeepers thus have the opportunity to occasionally recover queens and swarms from the conservatory.

Lastly, the conservatory is involved in a genetic propagation program to enable French beekeepers to recover these invaluable native hardy bees, with their natural resilience to harsh climates. In 2019, thousands of eggs freshly laid by one of the conservatory's queen bees were sent to beekeepers in Auvergne so they could in turn produce several dozen black queen bees, some of which could be inseminated. With the genetic heritage thus protected, the exercise is to be repeated in 2020.

An initiative to protect stingless wild bees is also underway at a quarry run by Ribal (a Colas affiliate in French Guiana), also in partnership with Apilab.

1.2.6.5.1.3. Road construction and railway projects, etc.

As stated earlier, Colas has relatively little leverage and relatively little impact on ecosystems. For new infrastructure projects, Environmental Protection Plans are usually put in place by clients (whether public or private sector) and added to by Colas staff, an example being the large Route du Littoral (Coastal Highway) project on Reunion Island, where Colas staff received an award in recognition of their efforts to protect marine mammals at the project site.

To curb growth in the amount of space dedicated to transport infrastructure and decouple it from growth in the human population, Colas offers innovative solutions for optimizing traffic and making more effective use of existing infrastructure (see 1.2.3.4. "Innovative and sustainable solutions to improve living conditions"), in keeping with its business model focused on developing infrastructure that promotes responsible mobility.

1.2.6.5.1.4. Ecological engineering

Colas has for decades carried out one-off projects to restore or protect ecosystems: for example, back in the 1970s, its Colétanche waterproofing membrane was used to restore and protect watercourses, and Colas has also long been involved in work to restore ecosystems at its quarries and gravel pits.

Today, such preservation, restoration and offsetting projects are increasingly common, and the proportion of standard projects that incorporate an ecological engineering component is rising steadily in some countries, and particularly in France. On the strength of feedback from its affiliates in the field, Colas decided to develop its activities in this area by capitalizing on its teams' existing skills, putting in place regional champions, pooling expertise and identifying opportunities to innovate, whether in natural or urban ecosystems. In France, Colas is already recognized as an ecological engineering contractor thanks to its highly motivated and skilled staff, in keeping with the expectations of many stakeholders. This networking approach fosters relationship-building with scientists in the fields of plant-based and ecological engineering as well as with design firms specializing in ecological studies.

Rehabilitation of the Vistre (2016)

Colas rehabilitated the Vistre (in the south of France), a small river that had been converted into a functional channeled watercourse in the 1950s. The watercourse had gradually deteriorated over time, resulting in mediocre water quality, a poor fish population and

sparse riverine biodiversity. As a result of these hydromorphological changes, the Vistre was prone to flooding. Re-meandering work helped restore its functionality as far as possible, returning its morphology closer to its original state.

Restoring the confluence of the Doubs and Loue rivers (2018-2019)

Major development has been carried out along the Doubs and Loue rivers (in eastern France) over the past two centuries. This has had a major impact on river dynamics at both the ecological and the social level. It therefore became necessary to restore the river dynamics by re-establishing the morphological balance. The project included earthworks, rock clearance and stabilization

of the riverbanks, reinjection of sedimentary alluvium, leveling of dykes, dismantling of traps and breakwaters, and the extension of a reed marsh to eliminate lateral constraints along the watercourse, reactivate morphosedimentary processes and restore the site's ecosystemic dynamics.

1.2.6.5.2. Invasive alien species

Colas is an unintentional local propagator of invasive exotic plant species in its day to day cut and fill activities: excavating a few cubic meters of earth in one place and depositing it at another site a few miles away can inadvertently transfer seeds or rhizomes. The deliberate or accidental human introduction of invasive alien species threatens ecosystems, habitats and native species, with adverse ecological, economic and health consequences: examples of such species include ambrosia and the Asian hornet.

Colas was one of the first companies to own up to this problem, made all the trickier by the shortage of available eradication and prevention solutions, most of which would increase the cost price per cubic meter excavated by a factor of 100 or 1,000 – as in the case, for example, of contamination by Japanese knotweed propagules. Colas is thus committed to dialogue with the scientific community, and in particular the FRB (French foundation for biodiversity research); it is one of the few companies to have been part of the FRB's strategic steering committee since 2011. In this context, it encourages research (in November 2018, it awarded a prize to a young researcher in the category "Biodiversity and the fight against invasive species.") and is mobilizing a growing number of affiliates to discuss and experiment with pragmatic solutions as part of its work on ecological engineering.

1.2.6.6. WATER MANAGEMENT

Water consumption is more important in some parts of the world than in others. In general, Colas affiliates must take local water requirements into account, especially considering that water consumption by Colas' business lines is fairly low. Water management is one of the criteria in the ISO 14001 standard (see 1.2.6.2.1. "Risk prevention policy"). Colas has nevertheless put in place two targeted programs.

1.2.6.6.1. Protecting water resources from pollution

The main environmental risk for Colas' manufacturing facilities is generally considered to be the risk of gradual pollution resulting from accidental spillage into the aquatic environment (via rivers, sewage drains, aquifers, etc.): Colas has thus put in place a surface water and groundwater protection policy to guard against the impact of accidental or everyday pollution at its stationary production and maintenance sites. This policy follows strict guidelines, backed up by Colas checklists, to ensure that these sites are or can be completely isolated from the surrounding environment. A specific indicator has been extracted from the Colas checklists to monitor progress on managing this risk: to put it simply, if a site meets this list of ten or so criteria, it is more or less physically impossible for that site to pollute water resources:

Name of indicator	Scope	Coverage	2018	2019
Percentage of manufacturing activities with procedures in place to manage water discharges (as % of CAE)	World	100% of CAE of manufacturing activities	27	22

22% of CAE from Colas' global manufacturing activity meets all these requirements, down 5 points from 2018. This decline should be seen in light of the 15% increase in CAE from manufacturing activities for which the checklist is applicable, notably due to Miller and McAsphalt being included in this year reporting. It should be noted that the criteria involved are very difficult to meet completely at a given site, especially at older or very large facilities. But it is still an excellent indicator of the vulnerability of Colas' sites and illustrates the need for its environmental risk management systems. The goal remains to return to a rate of 25% within the next two years.

1.2.6.6.2. Colas business units located in areas facing extremely high water stress

In 2015, Colas introduced new indicators to measure and limit the pressure exerted on water resources by its operations in regions where water is extremely scarce. In such regions, any additional use of local water resources can cause problems; the number of such regions around the world is steadily growing, though Colas' water footprint is not a material global priority, with Colas deriving only 5% of its revenue from such regions. In order to limit the pressure exerted by Colas business units on water resources in these regions, action plans aim to increase water self sufficiency, encourage recycling and reduce waste.

The methodology used to assess the Colas operating regions involved is based on the interactive "Overall Water Risk - Baseline Water Stress" map published on the website of the World Resources Institute. The water consumption of Colas' stationary facilities in these areas in 2019 is estimated to be under one million cubic meters.

These indicators continued to become more reliable in 2019, both in terms of the business units in question taking ownership of what the indicators are telling them and in terms of water management at these locations. The concept of extremely high water stress is not based solely on climate considerations but also on overexploitation or poor management of water by populations. That being the case, affected Colas business units are found in areas of the world as diverse as California, Missouri and Virginia in the United States; South Africa, Guadeloupe, Martinique, Ireland, Belgium, Poland, India, Morocco, the Middle East and Chile; and the Normandy, Hauts-de-France and Alsace-Lorraine regions of Mainland France.

Name of indicator	Scope	Coverage	2018	2019
Percentage of stationary activities (in terms of CAE) located in areas facing extremely high water stress (as % of CAE)	World	100% of CAE generated by stationary activities in areas facing extremely high water stress	6	5
Water self-sufficiency rate of areas facing extremely high water stress (as % of m ³)	World	100% of CAE generated by stationary activities in areas facing extremely high water stress	73	77
Percentage of CAE generated in areas facing extremely high water stress for which an action plan are in place (as % of CAE)	World	100% of CAE generated by stationary activities in areas facing extremely high water stress	76	60
Percentage of water consumption in areas facing extremely high water stress for which an action plan is in place (as % of m ³ consumed)	World	100% of CAE generated by stationary activities in areas facing extremely high water stress	82	78

In 2019, the number of sites in areas experiencing extremely high water stress decreased due to a change in the baseline map. While the bulk of such sites consist in quarries and gravel pits, they also include workshops, terminals, binder plants, asphalt mixing plants, ready-mix concrete plants and recycling platforms.

In addition to reducing water consumption in these localities, a key Colas objective is to increase water self-sufficiency so as to minimize disruption of the water cycle and downstream water use. The water self-sufficiency indicator for 2019 reached 77%, up 4 points over the previous year, which means that most of the water consumed was obtained internally and not from the local water system. This preserves access to water resources for other local users. By tracking its action plan progress indicators, as part of a continuous improvement process, Colas is able to monitor and reduce pressure on water resources in areas facing extremely high water stress.

Implementation of action plans declined between 2018 and 2019 for both CAE and water consumption, mainly as a result of changes in scope arising from changes in the baseline map.

1.2.7. Local presence and adapting to local needs

Colas' policy has always been to pursue long-term integration in the areas where it operates: this is at the heart of the Colas business model, which revolves around a sustainable, lasting presence in local areas through local human scale operations. This results in genuine solidarity between Colas staff and the areas where they work. This is a more or less completely intangible component of Colas' worldwide culture: both in France and internationally, local populations are highly sensitive to this binding relationship, which is spontaneously recognized as associated with the Colas brand.

Therein lies a dilemma, however: it is simply not possible to integrate without adapting. In fact, various forms of rejection can arise when a large multinational corporation indiscriminately and inflexibly imposes its rules and procedures wherever it operates. Rather than denying this inevitable need to adapt, the associated discomfort should be acknowledged and appropriate governance mechanisms put in place to manage it.

1.2.7.1. ADAPTING RULES

The issue of adapting general policies to the reality of local conditions has been the subject of lively debate among Colas' stakeholders, as stated in 1.2.2. "Governance of responsible development". The obvious conclusion is that this kind of adaptation,

while inevitable, must be managed in such a way as to avoid harmful excesses that could detract from the global consistency of the Colas Group. The Colas approach to managing this issue is based on a principle of exemption and a governance structure:

1. Principle: no local adaptation must produce an inferior result to what other companies have successfully achieved in the same local area.
2. Governance: moreover, such exemptions must be controlled and authorized by the relevant corporate departments, and may even be subject to prior approval by the Executive Management Committee of Colas.

In some extreme cases, this may lead to an operation being shut down when it is no longer possible to adapt to local constraints without compromising certain principles: in the past, Colas has already had to resort to temporarily or permanently shutting down sites due to security or corruption issues. Such decisions are never easy, since they always leave local staff facing the difficulties that prompted Colas to pull out of their country.

Conversely, some adaptations make sense: Colas has had some success in withdrawing from use some products that are hazardous to health, safety or the environment, except in certain countries where their use is required by the public authorities; rather than pulling out and forfeiting any further opportunity to improve these markets, especially when pulling out would have no impact on the market itself, Colas has authorized its affiliates to use the products in question subject to three conditions:

- they commit to constantly lobbying the authorities in that country to convince them to withdraw the products, reporting annually on this commitment;
- their use of such products is controlled through specific risk assessments and that very restrictive measures are in place to protect people and/or the environment, as applicable;
- they obtain sign-off for such exemptions from the relevant corporate Colas department, report on them annually and submit themselves to enhanced audits.

For example, this approach is being introduced to authorize the use of cutback bitumen in those few countries where local authorities still require this technique – now prohibited throughout the rest of the world – to be used on most projects.

This approach as a whole aims to meet the aspirations of Colas' internal and external stakeholders: to adapt locally while strengthening the overall consistency of the Colas brand as expressed in the One Colas corporate plan, and to make this trade-off more transparent. This debate, which is central to the success of the Colas business model, has been going on at Colas for over half a century.

1.2.7.2. SOCIAL ACCEPTANCE AND LOCAL DIALOGUE

The notion of social acceptance allows is about economic development that takes account of the positive and negative impacts of Colas' activities overall in a given region. This means taking into consideration Colas' relations with its stakeholders and being able to listen to their expectations. In keeping with Colas' culture, management of stakeholder relations is decentralized, while a global approach is favored for issues faced by Colas as a whole.

Colas manages a large number of production sites for construction materials (aggregates, ready-mix concrete, asphalt mixes, bitumen, emulsions, and others). The acceptance of these sites, particularly by local residents, is an increasingly sensitive topic throughout the world. Concerns raised include those relating to nuisances (odors, dust, traffic, noise) and risks of environmental or health impacts. Colas has identified community acceptance as one of its key priorities for Responsible Development and has initiated action plans focused on two areas:

- exemplary production sites: each site must implement progress measures that go beyond mere compliance with administrative or regulatory requirements. The preferred approach is to obtain environmental certification and use Colas checklists (see 1.2.6.2.1. "Risk prevention policy");
- dialogue initiatives with neighboring communities, local governments and the relevant authorities: maintaining an open dialogue with local communities makes it possible to better understand their expectations, explain the reality and constraints of production sites, and promote mutual understanding to prevent crisis situations.

Name of indicator	Scope	Coverage	2018	2019
Percentage of CAE from manufacturing activities with a local dialogue system (as % of CAE)	World	100% of CAE of manufacturing activities	47	44

A local dialogue indicator was introduced in 2006 to measure the extent of this dialogue with local communities, local elected officials, and the competent government agencies: Colas is considered a true pioneer through its use of this indicator. In 2019, this indicator declined by 3 percentage points; the consolidated target for the Colas affiliates in 2018 was 50%. This relative decline is a result of the 7% increase in manufacturing activities' CAE with local dialogue systems, while the CAE from all manufacturing activities increased by 15%, due in particular to the inclusion of Miller and McAsphalt in 2019 reporting, which resulted in a 20-point decline in the indicator for Canada. Furthermore, a working group is set up to implement the tools that will allow for progress in this area, with the aim of passing the 50% mark within the next two years.

As regards its work sites and new manufacturing sites, Colas aims to identify and anticipate the risks of blockages relating to social and societal contexts (population displacement etc.), cultural contexts (sacred ground etc.) and environmental contexts (protected species, water stress etc.), as well as disturbances (noise, vibration, dust, smells, visual pollution, light pollution, etc.). It is developing a structured and proactive system for listening, consulting and dialoguing with stakeholders so as to take into account their expectations (open house days; meetings; raising awareness about recycling; “Colas and me” smartphone apps to help local residents stay informed and be in touch with superintendents to ask questions or make comments; etc.).

Initiatives in this area include very successful trials by the Colas communication center at the Boulevard de la Marina site in Cotonou (Benin) and ongoing daily dialogue with residents in connection with the Portsmouth PPP project (United Kingdom). This constitutes a genuine commitment by Colas site staff, who are expressing a simple reality: the maintenance and construction of transportation infrastructures aims to foster connections between people, cultural exchange and economic development within regions; streets, roads and railways thus de facto form the first social network within and between regions.

1.2.7.3. SOCIOECONOMIC IMPACT AND PARTICIPATION IN LOCAL LIFE

Due to the nature of its activities, whether in terms of long-term operations or major projects, Colas has a socioeconomic impact on the regions where it operates through both job creation and local purchasing. In addition to this role, it supports general interest initiatives in the education and humanitarian, cultural and heritage, scientific research, etc. fields

1.2.7.3.1. Local employment

Colas operates in more than 50 countries across five continents. As regards employment, Colas prefers to train and internally promote locally recruited staff wherever possible, as demonstrated by the extremely small number of expatriate personnel around the world: approximately 300 from around 20 countries, out of a total of around 26,000 personnel outside France.

Colas Canada and the First Nations

Since 2012, affiliates of Colas Canada have been taking steps to integrate members of the First Nations into its work crews working on projects located on their ancestral land. A nationwide approach is currently being drawn up to introduce a wider-ranging program. For example,

this may include setting up partnerships of common interest, establishing training programs (literacy, efforts to combat addiction, etc.) and prioritizing the hiring of indigenous populations.

1.2.7.3.2. Local purchasing

As regards purchases, Colas’ activities are decentralized and in this respect a significant proportion of purchasing (see 1.2.3.6. “Responsible purchasing”) is done locally via the network of suppliers in each country and each region in which Colas operates. Colas helps preserve local economies in the areas where it operates, also working to improve economic vitality, by adopting several principles:

- framework agreements signed at Colas Group level are with companies that are predominantly represented locally;
- preference is given to local suppliers and subcontractors in the case of similar offers from several bidders, unless there is a strategic reason to prefer a non-local product or service.

1.2.7.3.3. Corporate citizenship

Participating in local life also involves responsible corporate philanthropy and sponsorship activities governed by guidelines set out in Colas’ compliance policy (Section 5, “Ethics and human rights”).

Name of indicator	Scope	Coverage	2018	2019
Philanthropy: Cash donations (in millions of euros)	World	100% of CAE of all activities	2.5	2.9
Philanthropy: In-kind donations (value in millions of euros)	World	100% of CAE of all activities	0.10	0.22
Sponsorship: Cash expenditures (in millions of euros)	World	100% of CAE of all activities	3	3.7
Sponsorship: In-kind expenditures (value in millions of euros)	World	100% of CAE of all activities	0.0052	0.011

The total amount of philanthropy donations (in cash and in kind) increased by 20% between 2018 and 2019, while sponsorship expenditure increased by 23% over the same period. Cash and in-kind donations mainly related to solidarity-based and humanitarian initiatives, while sponsorship expenditure was mostly focused on sports sponsorship.

As a reminder, the Colas parent company's philanthropy policy focuses on three main areas:

- cultural philanthropy: the Colas Foundation (commissioning paintings from artists on road-related themes), Colas on Stage (support for dance performances, young virtuosos and music festivals);
- solidarity philanthropy: Colas Life (support for educational assistance initiatives);
- scientific philanthropy: French Foundation for Biodiversity Research (FRB), Institut France Ville Durable.

Specific information regarding the Non-Financial Performance Statement

NOTE ON METHODOLOGY

With Ministerial Order No. 2017-1180 of July 19, 2017, and Decree No. 2017-1265 of August 9, 2017, France has implemented the EU directive of October 22, 2014, relating to the disclosure of non-financial information, and amended Articles L. 225-102-1 and R. 225-104 to R. 225-105-2 of the French Commercial Code accordingly.

Specifically, the "Article 225" system under the Grenelle II Act has been replaced, for fiscal years beginning on or after September 1, 2017, by the obligation to prepare a "non-financial performance statement".

Colas' 2019 Non-Financial Performance Statement reflects the principles set out in the new legislation. As part of Colas continuous improvement process, changes to this document are planned every year. It includes sections covering:

- I. Colas business model;
- II. Responsible development policy
 1. Revise policy
 2. Governance of responsible development
 3. Value chain and innovation
 4. Human capital
 5. Ethics and human rights
 6. Environment and carbon
 7. Local presence and adapting to local needs

In light of its activities, Colas does not consider that it has a significant impact on the following societal issues:

- Combating food waste
- combating food insecurity
- Promoting animal welfare
- responsible, fair and sustainable food

Indicators monitored by the Human Resources Department

Indicators monitored by the Human Resources Department are calculated on the basis of a calendar year from January 1 to December 31. The scope of affiliates considered in the calculation is a subgroup of the scope of financial consolidation.

For 2019, the calculation rules for HR indicators were the following:

1. Fully consolidated affiliates are 100% consolidated
2. Proportionately consolidated affiliates are 100% consolidated if the percentage owned is above 50%, while the remainder are excluded from the scope
3. Equity-accounted associates are excluded

Colas makes the scope of its HR reporting as wide as possible in order to reflect the activities of its companies in France and around the world. HR reporting at Colas is common to all entities worldwide. The software that produces these indicators interfaces with the payroll management system in France (rollout of a global payroll management system began in 2019) and with the World Activity Report consolidation process. Indicators are consolidated according to the definitions found in the Bouygues Group's HR reporting protocol.

Section 1.2.4. Human capital

In 2019, 54% of the indicators were consolidated on a worldwide basis:

- External hires by status and number of leavers
- Workforce by geographic location
- Workforce by age bracket
- Workforce by gender
- Representation of women in Colas
- Number of hours worked

- Existence of a formalized training plan;
- Number of employees trained;
- Number of days of training;
- Total number of employees trained in first aid;
- Frequency rate of employee workplace accidents;
- Severity rate of employee workplace accidents;
- Number of fatal employee accidents;
- Number of consecutive lost-time days following workplace accidents.

38% of the indicators correspond to definitions that come from the French Labor Code and are therefore consolidated under the “France (Mainland and Overseas)” scope:

- Number of departures (permanent contract staff);
- Number of employees with disabilities;
- Number of employees with disabilities recruited;
- Revenue with companies that employ people with disabilities;
- Employee working time arrangements;
- Number of collective bargaining agreements negotiated, including mandatory yearly negotiations;
- Average annual wages by status;
- Number of people under apprenticeship contracts taken on during the year;
- Number of people under vocational training contracts taken on during the year;
- Number of employees recognized as suffering from an occupational illness in 2019;
- Absence rate.

8% of the indicators apply to companies incorporated under French law and those with more than 300 employees outside France:

- Turnout for latest works council elections; existence of an employee representative body;
- Percentage of companies outside France providing employee benefits.

Indicators monitored by the Responsible Development team

The indicators listed below are strictly defined. They are collected across the world using Xfi – a BFC (BusinessObjects Financial Consolidation) application – and calculated over a non-calendar year from October 1 of year Y-1 to September 30 of year Y (to allow sufficient time for precise data collection, verification, processing and analysis). Following the structural changes made in 2013 and new features added in 2014, the Xfi application has undergone extensive maintenance work since fiscal year 2015.

In 2019, there were two changes in the scope of consolidation for Colas’ environmental and social indicators relative to 2018: Miller and McAsphalt, both acquired in 2018, were included in reporting; and Smac and its affiliates were divested.

For environmental and social reporting, the following rules apply to companies that are acquired, merged, created, closed or sold in the course of the fiscal year:

- the company is taken into account for reporting for the same period only in Magnitude, the Colas financial consolidation reporting system;
- companies that are too small to be taken into account in financial consolidation (revenue of less than €2m) may or may not be included in non-financial reporting for the first fiscal year depending on the specific requirements of the Colas company to which they belong;
- as Colas produces indicators in the form of ratios and percentages, there is no pro forma adjustment of non-financial figures for the previous year to compare them with the current year if the scope is amended.

If for technical reasons an exception is made to one of the three rules listed above, Colas shall provide the reasons for this in a report to this effect in its Non-Financial Performance Statement.

For several years, the indicators used for manufacturing activities have also applied to companies jointly held with external partners, and for which Colas does not always have control over environmental aspects (as is the case for example with sites in which Colas has a minority interest). The broad scope of Colas’ responsibility and risk exposure may have a negative impact on indicator results.

In addition, this scope includes small manufacturing affiliates, even when their consolidated revenue is lower than the threshold for financial consolidation (€2m). The total volume of materials produced by these companies can be significant, even though their revenue is often subject to a high rate of eliminations, due to Colas’ vertical integration.

The rules of consolidation, which were changed in 2013 to more closely resemble those of the financial consolidation, are presented in the table below and have not changed since then.

	Financial consolidation	Xfi consolidation	≠
Exclusive control = full consolidation	100% (between 50% and 100% control)	100% (between 50% and 100% control)	=
Joint control = proportionate consolidation <i>(for GIE consortiums in France, partnerships or joint ventures)</i>	Application of percentage of control	Application of percentage of control	=
Significant influence or joint ventures = equity method <i>(for partnerships or joint ventures)</i>	Application of percentage ownership (application of percentage ownership to income rather than revenue)	Application of percentage ownership (application of percentage ownership to all data)	≠

Section 1.2.4. Human capital

- Percentage of warm mix
- Percentage of finishers equipped with a fume extraction system
- Percentage of asphalt planers equipped with a dust extraction system
- Percentage of chlorinated solvents used in closed-loop systems

Section 1.2.6. Environment and carbon

- Percentage of materials production activities that have environmental certification
- Percentage of materials production activities that carry out environmental self-assessments using Colas checklists
- Percentage of materials production activities that use a tool to manage environmental impact
- Greenhouse gas emissions
- Carbon intensity
- Total energy costs
- Total energy consumption
- Ratio of total energy costs to IAV
- Energy consumed per metric ton of mix produced
- Greenhouse gas emissions per metric ton of mix produced
- Percentage of warm mix produced at hot-mix plants and other asphalt plants
- Percentage of vehicles with on-board telematics
- Percentage of machinery with on-board telematics
- Number of metric tons of materials transported by rail or waterway
- Greenhouse gas emissions avoided by Colas actions
- Quantity of materials recycled
- Ratio of materials recycled to total aggregates produced
- Quantity of reclaimed asphalt pavement
- Percentage of reclaimed asphalt pavement with bitumen recovery
- Surface area of road recycled in place
- Number of low-carbon alternatives offered to clients
- Waste oil recovery rate
- Percentage of CAE from aggregate production activities that take action to promote biodiversity
- Percentage of materials activities with procedures in place to manage wastewater discharges
- Percentage of stationary activities (in terms of CAE) located in highly water-stressed areas
- Water self-sufficiency rate of highly water-stressed areas
- Percentage of CAE generated in areas facing extremely high water stress for which an action plan has been implemented
- Percentage of water consumption in areas facing extremely high water stress for which an action plan has been implemented

Section 1.2.7. Local presence and adapting to local needs

- Percentage of CAE from materials production activities with an organization for local dialogue
- Corporate patronage: cash donations; in-kind donations
- Sponsorship: cash expenditures, in-kind expenditures