

4.1 BUSINESS-SPECIFIC RISKS

4.1.1 Bouygues Construction

4.1.1.1 Risk management policy

Most of the risks faced by Bouygues Construction in 2018 were of a similar nature to those identified in previous years: operational risks relating to major projects, risks relating to human resources, geopolitical risks, risks relating to cyber-crime, and compliance risk.

4.1.1.2 Risks associated with major projects in the design or execution phase

The types of risk inherent in major projects include:

- **in the design phase:** design flaws, miscalculation and under-budgeting, poor assessment of the local environment, inadequate contractual analysis, etc.;
- **in the execution phase:** technical or financial default by a customer, partner or subcontractor, difficulty in recruiting sufficient staff or adequately qualified staff, and execution defects leading to cost overruns, quality problems or failure to meet deadlines, etc.

To achieve tighter control over these two risks, Bouygues Construction has an organisational structure that reflects the specific requirements of each business, backed up by rigorous selection, approval and control procedures.

Each entity has access to substantial, highly-qualified resources in technical fields such as design, costing, feasibility studies and methods. Clusters of staff with extensive expertise in highly specialised areas (tall buildings, materials engineering, facades and sustainable construction, for example) share knowledge and capitalise on experience across all Bouygues Construction entities.

The support function structure, which operates on similar lines, has been strengthened: separate departments covering legal affairs, human resources, accounting, management control, information systems and procurement are headed up by members of the Bouygues Construction management team. Specialist clusters dedicated to treasury management, financial engineering, tax and insurance provide expertise to all group entities.

Approval and control procedures apply at each key stage in design and execution. For major projects, project selection and key risks and opportunities are subject to systematic monitoring.

Key operational risks are further mitigated by the fact that project execution teams are highly professional and adequately staffed, and are actively supervised by experienced managers.

Particular attention is paid to the pre-execution phase of major projects, especially in design, contract drafting and site preparation.

In the design phase, external consultants are used to back up in-house expertise on technical issues for the highest-risk projects. Regular costing

audits are performed on the reliability of procedures for expenses, subcontractor budgets, and site supervision costs.

Support functions are systematically involved upfront, especially in contract management and procurement.

Particular care is taken in the selection and monitoring of customers and partners. The subcontracting process is closely supervised, with major subcontractors and partners thoroughly assessed before awarding highly-sensitive work packages (such as architectural and technical trades).

Specific additional actions were taken in 2018, and are ongoing:

- internal audits of large-scale projects;
- improvements to the project selection and approval process;
- evaluation of subcontractors.

4.1.1.3 Geopolitical risks and the rise of protectionism

Bouygues Construction can sometimes be exposed to political instability, and to the rise of protectionism that is emerging in a number of countries around the world. Various events (including stricter regulation, taxes, embargoes and trade wars) may trigger transformations in the economic landscape such as closure of markets to foreign companies, curbs on foreign investment, disruption of trade, and restrictions on the movement of foreign workers.

Political instability may generate geographical instability and the emergence of dangerous regions (for example through revolutions, a new Arab spring or social unrest). This might require Bouygues Construction to withdraw rapidly from a country or region, either temporarily or permanently.

The first line of defence against this risk is a diversified business and geographical mix and the fact that the vast majority of Bouygues Construction's business is conducted in Europe, North America and Australia, combined with the process used to select new countries for operations. Generally speaking, vigilance is essential, and Bouygues Construction's geographical reach strategy takes account of this ecosystem, with development prioritised in stable countries such as Germany, Australia, Canada and Switzerland. In other countries, where operations are more transient – with one-off interventions on specific major projects – Bouygues Construction's flexible organisational structure means that in exceptional circumstances, resources can be reconfigured so as to minimise the damaging effects. In addition, Bouygues Construction has stringent contract management procedures, and preventive measures (legal, financial, insurance) are in place where possible.

The depth of the order backlog gives good visibility in the short and medium term. Bouygues Construction analyses forecasts to anticipate adverse trends, so that it can react appropriately and reallocate production resources to less affected markets or activities.

4.1.1.4 Human resources risk, loss of expertise and talent

A major global trend is exposing construction companies to the risk that they will lose expertise and talent. This is largely due to rising demand, which can lead to bidding wars between companies for qualified personnel.

It is essential for Bouygues Construction to retain and increase its human resources so that it has sufficient people with the required level of competence to deliver its projects, especially as it takes a long time for people to acquire that competence.

The risks include an erosion of technical standards and expertise, increased staff turnover and difficulties planning resource availability during the design phase. Such factors may lead to extra costs being incurred on hiring and training replacement staff, **a potential deterioration in quality and lead times to completion, and poorer preparation and management of projects.** Actions are under way to address these issues. They focus on identifying expertise and talent, data analysis, and the appeal of the industry and Bouygues Construction itself. They include:

- developing a resource availability matrix by country, region and market;
- developing new interactive tools to identify expertise and replacement capacity;
- changes to the management model and the remuneration/reward model;
- data analysis, including data from one-on-one interviews and preventive surveys;
- adjustments to the target profile of candidates;
- identifying site-specific needs.

4.1.1.5 Cyber risks

The transformation of Bouygues Construction through the introduction of new technologies and digitalisation makes the company potentially

vulnerable to cyber-attack. Recent attacks in other sectors have shown that they can be on a very large scale, propagate very quickly, and temporarily paralyse operations. For Bouygues Construction, that could translate into a slowdown in order-taking and delays in contract execution, with the potential activation of late delivery penalties (due to inability to contract, place orders, communicate, carry out pre-execution design work, etc).

Existing security measures are constantly being updated, including regular staff awareness campaigns (protection of servers, safeguarding of assets and data, etc) and continuing efforts to strengthen the IT infrastructure.

4.1.1.6 Compliance risk

Bouygues Construction is addressing compliance risk by tightening its ethics policy. The aim is to ensure that the Bouygues group's Compliance programmes are strictly applied, and also to update those programmes in response to recent legislative changes (e.g. the Sapin 2 law in France).

Ethical compliance falls within the remit of the Legal Affairs and Compliance department, working in conjunction with Audit and Internal Control; all three departments are under common management. The Ethics and Compliance team has been reinforced to track regulatory developments, conduct research and surveys as needed, and manage the tools used in this area.

In 2018, two years after the first ethical pledge was signed:

- a new ethical pledge has been rolled out to around 3,000 employees from department head level upwards;
- the policy on gifts and invitations has been redrafted and tightened, and is now supported by "Probity", a new digital tool;
- a practical guide on how to apply the Code of Ethics and Compliance programmes has been distributed to employees; and
- compliance reviews, covering the full range of ethics and compliance issues across the various entities, were carried out on a full scope basis in 2018.

4

4.1.2 Bouygues Immobilier

4.1.2.1 Risk review and quality management system

Bouygues Immobilier carries out an annual review of major risks, and implements strategic action plans to address those risks. In 2018, the principal risks to which Bouygues Immobilier was exposed continued to be risks specific to the property market. Two new risks were identified in 2018: the risk of a sharp rise in the cost of works, and the risk that insufficient inventory will be available to meet demand.

In addition, Bouygues Immobilier obtained ISO 9001 certification for its quality management system, with three key objectives in mind:

- organising the business such that products are permanently up to standard;
- committing to meeting customer expectations at all times;
- embedding constant improvement into the quality management system.

The approach is embodied in a Quality Charter, which is translated to the operational level by strategies specific to each business line. External certification calls for regular staff involvement in quality issues and the enforcement of requirements that go beyond those contained in the Internal Control reference manual or internal audit control points, and subjects a significant number of branch offices to review every year.

4.1.2.2 Property market risks

The activities of Bouygues Immobilier are exposed to economic factors beyond the company's control, and to systemic risks associated with the cyclical nature of property markets. Fluctuations in the property market and in the broader economic situation can have a significant impact on the activities and profitability of Bouygues Immobilier, the consequences of which – whether negative or positive – do not flow through immediately into the company's financial results, due to the time required to complete projects.

4 RISK FACTORS

Business-specific risks

Factors that can affect the property market include:

- international and domestic economic conditions, and trends in purchasing power and the level of consumer confidence, the last two of which exert a strong influence on the residential market;
- the level of long-term interest rates (home loans) and the terms of access to credit (deposits required, and the duration of loans offered) have a strong effect on the solvency of potential buyers and hence on demand for new residential property, with a potentially significant impact on selling prices;
- similarly, demand for new office premises is experiencing high volatility due to the general economic climate, which has a direct effect not only on rents but also on the rate of return expected by investors (who are highly sensitive to potential rises in long-term interest rates). Fluctuations can significantly affect the return on office property developments, at a time when the final investor is very demanding in terms of the quality and term of leases;
- sales may also be significantly impacted by administrative or tax measures that affect segments of the property market (incentives for home-buyers and tax breaks for buy-to-let investors), or more generally by public policies that raise taxes imposed on households (tax rates and mechanisms, reduction or capping of tax breaks, increases in value added tax);

Bouygues Immobilier's organisational structure is designed to optimise responsiveness to market fluctuations, while the risk management policy is based on strict but adaptable prudential rules. The land bank is regularly reassessed to ensure that it gives a good fit with projected commercial operations, and shows a strong bias towards unilateral promises that enable the company to withdraw if necessary. The acquisition of land and start of works are largely contingent on a substantial proportion of the project being pre-sold. Finally, Bouygues Immobilier maintains a balanced spread of products and customer profiles; a diversified product mix and broad geographical footprint help the company respond better to the specific demands of its various markets.

Bouygues Immobilier is also involved, through its subsidiaries, in property development projects outside France. However, the overall level of business outside France is low, representing approximately 5% of sales in 2018. Currently, its activities outside France are primarily located in Poland and Belgium. Consequently, Bouygues Immobilier does not believe that it has significant exposure to country risk.

However, Bouygues Immobilier ensures that its subsidiaries systematically obtain independent legal advice to address the risk of non-compliance with local laws and regulations. Potential exposures to foreign exchange risk are hedged and are generally limited, since the majority of both sales and expenses are denominated in local currency.

4.1.2.3 Operational risks

Risk of a sharp rise in the cost of works

The property market is currently concentrated on certain geographical zones, due to various factors such as tax breaks being limited to certain designated zones where the property market is tight, and the scheduling of major public infrastructure programmes. In such zones, construction works production capacity is stretched to its limits, exposing Bouygues Immobilier to a risk

of scarcity of qualified subcontractors and hence to a significant increase in costs once the marketing phase has begun.

Bouygues Immobilier addresses this risk by regularly reviewing its design methods, and by working in partnership with subcontractors to plan project workloads early.

Disintermediation risk

Bouygues Immobilier runs a website dedicated to new-build projects, on which prospective buyers can go on a virtual tour of their future home. The market is seeing rapid change in selling techniques and a trend towards disintermediation. Bouygues Immobilier may ultimately have to deal with the emergence of ubiquitous operators using innovative direct selling methods on digital platforms, which would affect established operators' ability to retain control over sales channels.

In response, Bouygues Immobilier – through its subsidiary Valorissimo SAS – has opened up its sales intermediation platform to other developers, and intends to add new services to the platform.

Bouygues Immobilier also pays great attention to fostering and enhancing relationships with customers at every stage in their journey, from expression of interest to purchasing and living in their new home. New offers, services, support packages and communication tools are being offered to increase customer satisfaction. Being aware of customer expectations so that they can have a better experience underpins the Bouygues Immobilier promise of "Creator of better living".

Risk that inventory will be unable to meet demand

The property market is dynamic, enabling a number of players to expand or set up new operations. This is leading to tougher competition, and to bidding wars for development land. Bouygues Immobilier is being rather cautious in this inflationary market, and has decided to enhance competitiveness by offering customers better products and services, reflecting new attitudes to neighbourhood living and the rise of digital technologies.

In addition, some major French conurbations are adopting new planning rules that apply across much larger areas than previously, putting on hold decisions on a number of current planning applications. Local authorities also tend to defer or reject planning applications during the run-up to municipal elections. This phenomenon is being amplified by a large number of appeals against decisions to grant building permits. Bouygues Immobilier is responding by enhancing its targeted development strategy, and by tailoring its organisation to reflect local conditions in each geographical area.

Risk of claims and losses

Bouygues Immobilier is exposed to risk due to its reliance on service providers, suppliers and subcontractors to deliver its projects, especially on worksites. Issues such as financial difficulties, poor quality workmanship, general failings or breaches of regulations can lead to late deliveries, health and safety breaches, third-party losses, difficulties in satisfying conditions for delivery, and cost overruns. This may harm the company's reputation, profitability and customers.

This risk lies at the heart of what Bouygues Immobilier does, and of what Bouygues Immobilier promises. This is why large swathes of the organisation

(the operational units, supported by the technical, procurement, customer relations, quality, safety and insurance departments) are involved in ongoing efforts to improve processes, controls, feedback and actions.

Employees are directly incentivised by reference to quality and customer satisfaction objectives.

Finally, Bouygues Immobilier retains third-party experts to conduct rigorous control and monitoring assignments on the quality and safety of its construction and development operations.

Data risk

To keep pace with the changes brought about by the growing importance of digital technology, Bouygues Immobilier is investing in developments to its internal, supply chain and customer-facing processes. As with many companies, there is a risk that data held in digital form (and any information shared or disseminated) may be used fraudulently, altered or lost. Bouygues Immobilier is working with the other Bouygues group companies to strengthen its data protection and governance, and to achieve compliance with the European General Data Protection Regulation.

At the same time, Bouygues Immobilier is supporting the transformation of methods and processes to address the changes brought about by new digital tools.

Acquisition of land and commitment committees

Bouygues Immobilier's business hinges on its ability to secure building land in locations that its customers want and at prices they can afford.

There is however a risk that land may be acquired without it being possible to complete the proposed development.

Consequently, there are strict procedures governing decisions to purchase land. Any legal document that is intended to secure land (or a building) and that binds the company (even with a get-out clause) requires prior approval from a commitment committee. The terms of the transaction, and the decisions taken by the committee, are recorded in minutes that are distributed to all the stakeholders. Until such time as the land purchase is completed by notarised deed, all approvals granted at committee level and all commitments are reviewed on a monthly basis; any substantive change requires a further committee meeting in order to approve the amendment.

4.1.2.4 Technical and environmental risks

Risks relating to pollution, soil quality and existing structures

Bouygues Immobilier operates a risk prevention policy as regards soil quality: as soon as a plot of land (or building) is identified as being of interest, the company carries out a survey of soil and subsoil quality and contamination (or of the existing structure).

Once the broad outlines of a project have been established, the company retains specialist firms as necessary to analyse risks relating to matters such as soil quality, pollution, flooding, safety, the environment, and load-bearing capacity, so as to obtain a detailed estimate of the cost implications.

Bouygues Immobilier also pays close attention to archaeological plans, given that the unforeseen discovery of archaeological remains during site works can have repercussions on the time and costs to project completion.

Where demolition or rehabilitation is required, Bouygues Immobilier oversees compliance with regulations on asbestos removal and decontamination in the buildings concerned.

Safety risks

Bouygues Immobilier pays close attention in ensuring compliance with regulations relating not only to public health (prohibition of the use of toxic materials such as asbestos and lead during construction, and regulations on ventilation systems), but also to workplace safety and the prevention of burn-out. In the latter case, agreements were reached in 2016 on the quality of life at work and on exceptional Sunday working, for the rollout of the "Opéra" software solution. In addition, building works give rise to a risk of site accidents. Bouygues Immobilier generally uses the services of external inspection firms to ensure compliance with safety and building regulations.

In the event of an accident or compliance breach, even though the company does not assume responsibility for design (contracted out to an architect) or execution (handled by construction companies working under an external lead contractor), it may incur civil or even criminal liability in its capacity as project owner. This is why Bouygues Immobilier gives the health and safety co-ordinator all the authority and resources needed.

Bouygues Immobilier has since 2014 been running an extensive internal awareness and training campaign on the responsibility of project owners in terms of safety, prevention of illegal labour, and worksite safety.

Finally, to help protect its own employees, Bouygues Immobilier has for each of its sites designated and trained a safety officer, who regularly updates the risk assessment report for the site as required under French employment law. The company's Quality, Service and Environment (QSE) department also conducts periodic checks of safety procedures.

Environmental regulations

Bouygues Immobilier pays particularly close attention to all regulatory developments and to any other decisions made by the authorities regarding the environment, including those relating to biodiversity, which may result in additional costs not originally budgeted.

The company also attaches great importance to circular economy issues (recycling and re-use of construction materials).

4.1.2.5 Legal risks

Administrative permits

Bouygues Immobilier's business depends on its ability to obtain all the necessary administrative permits for construction of its property developments. Failure to address these issues adequately could have a range of consequences including the loss of building permits, legal disputes and appeals, and the abandonment of projects.

Strict procedures are therefore applied at every stage in a property development project, and processes are regularly strengthened so that these risks remain adequately controlled.

4 RISK FACTORS

Business-specific risks

To address the risk that the administrative permits needed to carry out the company's property development projects (primarily building permits, office development permits, and decisions by local or national commissions for retail developments) may be refused, withdrawn or appealed, Bouygues Immobilier ensures that any commitments to purchase land do not become binding until all possibility of appeal has been extinguished, and meticulously reviews the quality of all applications made for permits.

Compliance of buildings post-delivery

Bouygues Immobilier may face claims from buyers of properties after delivery or completion in the event of non-compliance with the contractual description or with regulatory requirements and standards (such as those dealing with disability, environmental or public health issues).

The company may face claims from customers for defects in properties sold to them. Under the terms of the completion warranty, Bouygues Immobilier arranges for contractors to remedy defects on the snagging list as soon as possible.

Most construction defects are covered by compulsory insurance policies. Bouygues Immobilier ensures that it abides scrupulously by its obligations in terms of public liability and damage to property, and that all parties (lead contractors, subcontractors, consultants, etc.) meet their obligations in respect of the standard ten-year latent defect insurance policy.

Quality and customer relationships are of paramount importance to Bouygues Immobilier, and this is reflected in effective processes for handling customer complaints.

The project owner is under an obligation to ensure that regulations prohibiting illegal employment practices are observed, not just by itself but also by its contractors and subcontractors. Specifically:

- the project owner must perform a half-yearly check to ensure that contractors and subcontractors are complying with their employment law obligations;
- if a competent authority notifies a specific breach attributable to a contractor, the project owner is under an obligation to prevent and notify that breach;
- the project owner is under an obligation to check that every employee working on the site has the requisite building trade identity card.

Recent French legislation (the Savary law of 10 July 2014 and its enabling decree of 30 March 2015, and the Macron law of 6 August 2015) has placed

greater obligations on all those involved in the construction industry as regards undeclared work and the hiring of foreign workers without the necessary permits.

Involvement of the legal and insurance departments

In all the areas described above, Bouygues Immobilier's Legal Department assists operational units in structuring property development programmes, from land purchase through to final delivery. In specific areas, the department has established procedures and uses standard form contracts. Subsidiaries operating outside France invariably consult local law firms when structuring projects and handling claims, in conjunction with the Legal Department.

The Legal Department logs all claims filed against Bouygues Immobilier. These claims are handled by operational units, with assistance from a barrister. A centralised policy for retaining barristers has been implemented in the interests of greater effectiveness. Major or strategic claims are handled directly by the Legal Department.

The Insurance Department, which reports to the Risk Management Department, is responsible for contracting all insurance policies in France. The department also provides support to international subsidiaries when they renew existing policies or contract new ones. By handling these matters centrally, Bouygues Immobilier is able to retain control over the insured risks and ensure that adequate cover is obtained.

Risk of unethical practices

In carrying on its property development activities, and particularly in responses to consultations, land searches and co-promotion projects, Bouygues Immobilier pays scrupulous attention to compliance with competition law, and is especially vigilant as regards active or passive corruption. To this end, Bouygues Immobilier disseminates the Bouygues group Code of Ethics and Compliance programmes. Bouygues Immobilier also applies the anti-corruption measures contained in the Sapin 2 law. The company has developed business-specific procedures, and regularly reminds employees of those procedures via annual internal control campaigns, training programmes for line managers, e-learning modules on ethics, and the corporate intranet. Internal audit systematically incorporates specific controls on the prevention of unethical practices into its work programmes.

4.1.3 Colas

The Colas group has for many years placed the analysis, monitoring and prevention of business-specific risks at the heart of management concerns, with responsibility located at the level best placed to assess risk. The decentralised structure is key to the management of those risks.

Risk evaluation and overall risk policy is managed at head office level and relies on feedback from reporting systems or dissemination of best practice. However, individual subsidiaries and profit centres are responsible for handling, controlling and monitoring their own risks. Major risks are identified, documented and assessed annually by executive operational management

teams. This risk mapping exercise takes the form of a key risk scorecard, focusing on risks liable to impair the attainment of operational, financial or strategic objectives. This scorecard is then used to develop action plans to mitigate identified risks. It is supplemented by a risk prevention policy based on monitoring of loss experience, analysis of causal effects and feedback. Central coordination and leadership, based on reporting tools, serve to improve the risk identification and analysis process, collate feedback that can be passed back to the subsidiaries, and develop risk prevention policies and initiatives.

4.1.3.1 Sector and market risks

The sales and profits of Colas are particularly sensitive to:

- macroeconomic trends in the principal markets where Colas operates (France, Europe, North America), which can have an impact in terms of sales volumes, competitive pressure and price levels;
- trends in public-sector orders, given that some 57% of Colas sales are generated with public-sector customers (especially local and regional authorities in France), and in the ability of public-sector customers to obtain funding. This risk factor is being exacerbated by mounting public debt, the state of the public finances in many countries and the resulting austerity programmes, and (in France) cuts in government grants to local authorities. Administrative and political issues – difficulties achieving consensus on budgets, upcoming elections, proposals to merge local authorities, or the election of a new government (which could put at risk or delay infrastructure projects that have already been approved or are being planned) – may also affect the level of public-sector orders.

However, those risks are mitigated by various factors, including the economically essential role of transport infrastructure maintenance in ensuring the mobility of people and goods, the broad geographical dispersion of the Colas group's operations and its diverse business mix, the large number of projects handled, and the ability to deliver complex contractual solutions.

4.1.3.2 Credit or counterparty risk and country risk

Colas is present in over fifty countries, and is exposed to specific risks in those countries. Since 95% of Colas sales are generated in Europe (including France), North America (United States and Canada) and Australia, exposure to country risk is low. So is the risk of payment default, as the majority of sales are generated from the public sector (national, regional and local governments) with a large number of low value contracts. Operations in high-risk countries with poor ratings from international agencies or credit insurance bodies usually involve contracts funded by multilateral development agencies such as the U.S. Federal Reserve or the World Bank.

The roadbuilding, waterproofing, road safety/signalling and construction materials businesses have an extremely widely dispersed customer base, so counterparty risk is low. In the railway sector, a very high proportion of business is with infrastructure companies or bodies under state control. Private-sector customers are subject to upfront credit analysis, backed up wherever possible with credit insurance, in order to mitigate counterparty risk.

4.1.3.3 Commodities risks

Colas is sensitive to the regularity of supplies of commodities and to fluctuations in their cost. The main commodities involved are petroleum-based products in the roadbuilding business (bitumen, vehicle fuel, heating fuel and gas, oil), and commodities such as steel, copper and aluminium in the road safety/signalling, waterproofing and railway businesses. The biggest risk relates to bitumen and other petroleum-based products.

Supply risk

Delays or stockouts in the supply chain may lead to direct and indirect cost overruns in the roadbuilding and waterproofing businesses. This is not a systemic risk (except in the event of conflict and total breakdown in petroleum supplies), and may affect a country, or more likely a region, over a variable period of time. Over the years, Colas has built up resources to secure bitumen supplies in the main regions where it has operations (such as teams of skilled traders and extra storage capacity).

Price fluctuation risk

Bitumen prices have been subject to significant fluctuations for a number of years. Various factors limit the risk arising from these fluctuations: the number and average value of contracts (which means that prices can often be reflected in the tender bid), and the fact that many contracts (in France and elsewhere) include revision or indexation clauses. Employees involved in contract negotiations are made aware of this issue so that it can be factored into the process. In some regions, it is possible to enter into supply contracts that fix prices at a guaranteed level for a specific period. For large-scale contracts, hedges may be contracted on a case by case basis when the order is accepted. However, in some of the Colas group's activities, such as third-party sales of manufactured goods, rises in prices of bitumen and other petroleum-based products are only passed on to customers to the extent that the state of the competition allows.

Given these factors, it is difficult to quantify the sensitivity of operating profits to commodity price fluctuations: Colas is involved in thousands of contracts subject to varying degrees of legal protection, and the extent of price rises varies from region to region.

There is also an indirect risk that rises in the prices of these products might lead to a reduction in order volumes as customers react to the prospect of higher prices for works or services.

4.1.3.4 Legal risks

Compliance risk

The business activities of Colas involve a very large number of contracts (some 80,000 a year), awarded and executed on a decentralised basis. Apart from the usual laws and regulations that always apply (such as competition law and criminal law), most public sector contracts are also subject to specific regulations at both national and international level. The multiplicity of contracts and decentralised structure can expose Colas to legal compliance risk, particularly in terms of anti-competitive practices and corruption despite substantial preventive measures (information, training, code of practice, etc.), the rollout of compliance programmes to supplement the Code of Ethics, and stringent disciplinary procedures. Colas also applies the anti-corruption measures contained in the Sapin 2 law. For the company, these risks may lead to financial penalties (imposed by competition authorities, for example), criminal or civil liability, loss of contracts (a ban on tendering for certain projects), or reputational damage.

4.1.3.5 Industrial and environmental risks

Risk of fire, explosion and accidental pollution

The risk of fire and explosion varies according to the size and nature of the activities at each site, and is regarded as immaterial at most industrial sites due to their limited size. However, these sites are under regular surveillance to reduce the incidence of such events; for example, fire permit procedures and infrared thermal imaging audits of thermal and electrical installations are used to reinforce preventive maintenance measures. Sites that are particularly important or sensitive because of their size or the nature of their activities are subject to special treatment. Those sites are the Aximum hot dip galvanising facility in Nogent-sur-Oise (France); the paint and speciality binder production facility in Rouen (France); the Axter (Smac) waterproof membrane production facility in Courchelettes (France); the Colas Australia bitumen rectification facility in Brisbane; the Colas Ireland emulsifier production plant in Galway; and the Tipco bitumen production facility in Kemaman (Malaysia).

All sites are covered by appropriate insurance policies.

In addition, some Colas production sites may accidentally generate pollution incidents due to leaks in pipes or storage facilities, even though installations such as storage tanks and sluice gates are designed and maintained to minimise the risk of such incidents. Given the large number of relatively small sites and the risk management policies applied, any such incident is likely to be limited in scope and immaterial at group level.

Environmental risks

CO₂ emissions

The production processes at the Colas group's industrial facilities generate CO₂ emissions. In 2018, fifteen Colas asphalt mixing plants (5 in Belgium, 2 in Denmark and 8 in France) qualified as combustion installations of over 20 megawatts, and as such were covered by the European Union greenhouse gas emissions quota system. These installations are checked annually by accredited audit firms. It may be that eventually no Colas facilities will be subject to the emissions quota system. Compared to other industries covered by the system, asphalt mixing plants are low CO₂ emitters.

Other atmospheric emissions are subject to regular inspections by external authorities and accredited bodies.

Waste

Colas recycles significant volumes of materials. Around two-thirds of the asphalt mixing plants now recycle their planed materials, while the volumes accepted by the recycling platforms are comparable with the output from around twenty quarries. Recycling on this scale calls for appropriate controls over incoming materials, and for increased awareness on the part of those generating the waste (which does not always come from Colas sites). The materials accepted for recycling by Colas are either asphalt-based or inert materials and as such are risk-free; analytical tests are therefore not performed on a systematic basis as this would not be economically viable. Consequently, it cannot be ruled out that around one hundred thousand tonnes of deconstruction waste held at Colas recycling platforms in France

or abroad may prove to be non-compliant, without it being possible to enforce ultimate liability on the project owners (who under the regulations applicable in most countries are normally liable for the chemical content of their waste).

Rehabilitation of operating sites

The Colas group's industrial sites are subject to classified installation regulations in France, and to similar regulations in other countries where Colas has operations. In France, quarry operating licences incorporate site rehabilitation obligations that are agreed upfront with the competent administrative authority. Provisions are recorded in the financial statements to cover rehabilitation obligations for all quarry sites in France, and are periodically reviewed and adjusted. As at 31 December 2018, these provisions amounted to €175 million. If legislation in this area were to be tightened, contingent rehabilitation costs could increase.

Colas has a policy of systematically obtaining environmental certification (e.g. ISO 14001). Documentation and progress measurement are handled via follow-up audits and certification procedures, supported by external bodies and internal resources. The process relies on a globalised checklist system, introduced in 2007, which now covers the majority of materials production activities and forms the basis for consolidated action plans. In 2018, 83% of the Colas group's worldwide materials production sales were covered either by certification or by the internal checklist system. All these arrangements have been incorporated into the internal control system, both in France and in other countries.

As regards the rehabilitation of the Société de la Raffinerie de Dunkerque (SRD) refinery site, which has now been permanently shut down, a provision has been recognised in the Colas financial statements and a team set up to work with the authorities during 2019 on a decontamination programme, while a deconstruction/asbestos removal contract is now 50% complete.

Geological risks

The survey of rock quarries initiated by the French Geological Survey (BRGM) in 2015 continued in 2018 with an analysis of alluvial quarries. In both cases, the BRGM is analysing the presence of actinolite (a naturally-occurring rock which in one of its forms contains asbestiform fibres). Following the publication of two reports by Anses^(a) that highlighted the potentially hazardous nature of elongate mineral particles (crystalline formations resulting from mechanical processing of rock), this risk has been addressed in the regulatory risk assessment reports for the sites operated by Colas and its subsidiaries. In addition, the OPPBTP^(b) has been commissioned by the DGT (the French government body that deals with employment and workplace policies) to carry out a study aimed at developing a protocol to measure the emissivity of materials liable to generate cleavage fragments and elongate mineral particles. Colas will continue to comply with any requests issued by industry bodies and public agencies tasked with investigating these matters.

(a) The French Agency for Food, Environmental and Occupational Health and Safety.

(b) The professional body for the prevention of occupational hazards in the construction and civil works sectors.

Regulatory compliance

One Colas site is classified as Seveso Upper Tier: the Galway emulsifier production plant in Ireland. Other facilities outside Europe subject to hazardous substance risks are the KBC refinery in Malaysia (operated by the Thai subsidiary, Tipco) and a few explosives depots in Africa and the Indian Ocean region. These facilities are managed using the same health & safety rules as in Europe, but are subject to differing administrative frameworks according to the country where they are based. All these sites require the implementation of specific safety management tools and are subject to very strict national and European legislation. These requirements have generally become more stringent over time. If this trend were to continue, the capital and operating expenditure needed to ensure compliance could increase in the future.

4.1.3.6 Operational risks

Workplace accident risks

The Colas group may be exposed to workplace accident risks, arising in particular from the use of heavy plant and industrial equipment, as well as a risk of road accidents either when staff are travelling or when exceptional loads are being transported. For many years, Colas has had an extremely proactive health and safety and training policy, including safety induction programmes for new hires and research into areas resulting in the use of safety "bubbles" around mobile plant. Colas has detailed procedures in place for the haulage of heavy plant and industrial machinery (reminders of the regulations applicable to transporting exceptional loads by road, use of standard load calculation software by all subsidiaries, preparation of a transport action plan by each subsidiary, instructions and procedures for securing heavy plant in transit, procedures for the contractualisation of transport and plant hire). Stringent fire prevention procedures are in place (especially in the waterproofing business) and preventive measures are also applied to worksites located close to sensitive networks (gas, electricity, etc.).

Occupational health risks related to chemicals

Bitumen and ultraviolet radiation

In 2013, the IARC^a published an official monograph on bitumen fumes^b. The IARC was unable to conclude as to whether or not there is a link between cancer and exposure to bitumen fumes in a roadbuilding setting, despite the numerous studies carried out to date. No action has been taken in response to the IARC findings by the national authorities in the various countries where Colas operates, apart from in France where the health authorities carried out a complete update on the subject.

In France, the Anses^c findings were consistent with the risk analyses carried out by the industry. There were no further publications on this subject in 2018.

The only adverse health effect known to be associated with bitumen fume exposure on roadworks contracts is irritation of the upper respiratory tract and eyes. The INRS^d has conducted a large-scale project to monitor the exposure of workers to such irritation, with a view to developing a standard method for measuring the bitumen fumes they inhale. Colas, along with the rest of the industry (Usirf^e), played a major role in this project, which was completed in 2015. A scorecard developed for measuring the effectiveness of preventive measures is now being used as a benchmark by officials from the state health insurance scheme. Workers' exposure will be monitored using the new methods, with the measurements feeding into a database that will be assessed at least every five years.

The risk from exposure to bitumen fumes is assessed as low and sufficiently reduced, except in confined spaces where specific risk analysis is necessary due to the combined effect of vehicle exhaust fumes and ventilation issues. It cannot be ruled out that if further studies establish a link, however uncertain, between the use of bitumen in roadworks and cancer, new regulations may be introduced, although nothing at this stage points to such a development.

The image of the Colas group, as a leading player in the roadbuilding industry, could be adversely affected by any new media campaigns, court rulings or scientific studies in this area. However, there is every indication that Colas is regarded by governmental and scientific bodies in countries where it operates as a company that has made a major contribution to advancing knowledge on this issue while scrupulously respecting the independence of those bodies.

Colas continues to take regular measurements of on-site exposure of its employees to bitumen fumes. The monitoring process is coordinated by the Human Resources department, with support from the Environment department; the company also does its best to facilitate the work done by researchers and occupational doctors. Colas encourages public authorities and project owners to adopt warm asphalt mixes as standard, since by significantly reducing the temperature at which bitumen-based products are applied, the emission of bitumen fumes can be virtually eliminated.

The company is rolling out work planning solutions that might limit the exposure of site workers to bitumen, and maintaining its proactive policy of innovating to ensure the health and safety of its people. For example, it is company policy, wherever possible, to buy road pavers^f with on-site fume extraction systems. In 2016, the INRS concluded that exposure is statistically reduced by 55% when such measures are used. Colas is also taking care to reduce the temperature at which mixes are applied (subject to quality constraints), and to increase its use of warm asphalt mixes.

4

(a) International Agency for Research on Cancer, an agency of the World Health Organisation.

(b) The IARC monograph classifies the carcinogenic effect of exposure to bitumen fumes in group 2B, on a scale from group 1 (carcinogenic) to group 4 (probably not carcinogenic). Group 3 substances are those that are not classifiable due to insufficient data. Group 2 is split into two categories: 2A (probably carcinogenic) and 2B (possibly carcinogenic), i.e. substances for which the number of studies would normally be sufficient to reach a conclusion on carcinogenicity, but those studies do not enable such a conclusion to be drawn.

(c) The French Agency for Food, Environmental and Occupational Health and Safety.

(d) The French National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases.

(e) The French road construction industry association.

(f) Machines that apply asphalt mixes to roads.

4 RISK FACTORS

Business-specific risks

In 2016, the INRS^a concluded that exposure is statistically reduced by 27% when warm mixes are used. For all of its activities involving the use of bitumen worldwide, Colas can use techniques that enable mixes to be applied at temperatures below 200°C. Some of these techniques were invented by Colas, in particular the techniques used for asphalt (which Colas has made available to all industry operators in France, where it produces those materials).

In addition, the nature of the Colas group's activities means that many employees work in the open air and may have repeated exposure to ultraviolet radiation from sunlight, the principal environmental factor in skin cancers. Employees are issued with preventive guidelines and regular reminders to help protect them from ultraviolet radiation; these formed part of Priority Area 1 in the new safety policy rolled out in 2016, and include instructions to wear protective clothing, hard hats and gloves.

Dust and solvents

Exposure to silica dust is being actively addressed by occupational health and industry professionals, both on roadbuilding sites and in quarry and gravel extraction facilities. In France, Usirf^b – an industry body in which Colas plays an active role – has issued two guides prepared jointly with the OPPBTP^c and in conjunction with the DGT (the French government body that deals with employment and workplace policies): "Preventing dust exposure in planing, cutting, chiselling, drilling and milling" and "Preventing dust exposure on recycling platforms". A guide for asphalt plants is currently being finalised. Colas is taking steps both in France and internationally to reduce exposure to dust, whether in its industrial facilities or on work sites. These steps involve specially adapted equipment and processes that use sprinklers or sprays to create a humid work environment, personal protective gear, and the replacement of existing drilling/planing machines with new machines fitted with extractor systems.

The risk associated with the use of solvents is on the decline in workshops, sites and laboratories in France and throughout the world, thanks to a policy of restricting solvent use and installing safety equipment. Colas has ceased using chlorinated and petroleum solvents in over three-quarters of the parts washers used to clean workshop or laboratory equipment. Instead, these workstations now use organic or plant-based solvents, or aqueous cleaning solutions.

Asbestos

Alleging asbestos exposure, some former SRD employees (and/or their heirs and assigns), some of whom were employees of BP prior to the asset-for-share exchange of 31 December 1991, instigated proceedings against BP and/or SRD, and against the public health insurance scheme (CPAM) of their place of residence. At this stage, proceedings to determine whether this is a case of occupational disease linked to asbestos exposure, and the enforceability of the claim against the employer, are still ongoing in 14 cases. When a claim of occupational disease is held to be valid and enforceable against the employer (and hence potentially against SRD), the employer will

be faced with an increase in future contributions, and could also incur the financial consequences of a successful claim for occupational disease due to gross negligence (two gross negligence cases have been brought, one of which has succeeded at first instance).

In France, pending results from the OPPBTP, Colas has introduced individual and collective health and safety guidelines (especially for protection from dust), in line with the procedures described in the regulatory risk assessment reports for the sites operated by Colas. This involved implementing the recommendations in the Ursifa^b "Dust" health and safety guide prepared jointly with the OPPBTP^c and in conjunction with the DGT. Colas is also involved in working parties looking at solutions to these issues.

Conclusion

The implications of chemical risks for occupational health in the Colas group's operating activities are increasingly complex. Such issues have for a long time been one of the key priorities of the company's responsible development policy. The complexity of the issues is not confined to the operations carried on by Colas but rather reflects greater awareness in society generally, as illustrated for example by the European REACH^d regulations. Colas assesses these risks carefully, although the implications appear to be limited. The company is also committed to ongoing dialogue, especially with the scientific community.

4.1.3.7 Contract execution risks

General contract execution risk is relatively limited due to the large number of contracts and their low average value. However, some subsidiaries do work on large-scale projects, for example concession or public private partnership (PPP) type contracts. The complexity of these major projects means that these subsidiaries are exposed to increased risks in terms of design, contingencies (geological, archaeological, acquisition of land for construction), costing, execution, deadlines (e.g. delay in land being made available by the customer), etc.

4.1.3.8 Risks related to weather conditions and natural phenomena

The activities of Colas may be sensitive to weather conditions. Adverse weather such as rain, snow or frost may lead to site shutdowns or business interruption, with the result that fixed costs may not be covered; it may also generate additional costs to complete a contract (increased use of temporary staff, plant hire) within a shortened timescale.

In addition, other natural phenomena such as earthquakes, floods, cyclones, storms and lightning may disrupt operations or lead to the accidental destruction of infrastructure under construction.

(a) The French National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases.

(b) The French road construction industry association.

(c) The professional body for the prevention of occupational hazards in the construction and civil works sectors.

(d) "Registration, Evaluation, Authorisation and restriction of Chemicals" – a regulation of the European Union: Registration of all substances manufactured or imported into the EU in quantities above 1 tonne per year; Evaluation of proposals for testing, registration dossiers, and substances; Authorisation, for substances of very high concern; and restrictions to manage risks associated with other Chemical substances.

Such events may result in reduced sales or additional costs, some of which may be borne by insurers.

Generally speaking, this risk is tending to be exacerbated by the effects of climate change. However, Colas operates mainly in temperate latitudes (which are less exposed to climate change) and in developed countries where good insurance cover is available and construction standards are high. The risk is also mitigated by the large number, small size and wide geographical dispersion of Colas facilities. While this is a major and growing risk for most companies, the company's business model is such that the exposure is growing less fast for Colas.

Colas operates in geographical zones exposed to a potential risk of natural disasters (Asia-Oceania, Indian Ocean, the French West Indies and French Guiana). For that reason, the impact of climate events is built into the Colas group's risk mapping as a factor with the potential to affect business continuity at production facilities located in such zones.

In response, the subsidiaries involved have implemented early warning systems and procedures to safeguard people and assets, as well as adding such risks to their insurance cover.

There are two prongs to Colas' climate change strategy:

- The first is to contribute to limiting the effects of climate change by reducing the company's carbon footprint, and offering solutions to help customers reduce theirs.

- The second is to adapt to climate change by pursuing research into the formation of urban heat islands, both at the level of individual buildings (insulating cladding, and green or reflective roofs) and transport infrastructure. Colas can draw upon a good understanding of the complex equations around climate change, and propose techniques and materials to protect existing infrastructure assets and to design new ones at a time of increasingly erratic climate swings.

For Colas entities, these two aspects represent opportunities for competitive differentiation rather than major risks. For example, the doubts hanging over the future of fossil fuel engines for transport do not undermine the need to provide infrastructure for zero-carbon means of transport.

4.1.3.9 Employee-related risks

The activities of Colas rely on its human capital. This means that in ensuring a smooth transition between generations of employees, Colas is faced with risks relating to the recruitment, training and retention of staff, control over salary levels, and potential industrial action. In addition, the unavailability (for whatever reason) or death of a key executive could delay certain development projects and affect the operational management of the Colas group. Consequently, anticipating future personnel needs and nurturing talent are major priorities of human resources policy for the Colas group.

4.1.4 TF1

4.1.4.1 Operational risks

Risk of loss of key programmes

Description of the risk

The performance of TF1 depends partly on its ability to offer premium programmes in order to maintain its leadership in audience ratings. Consequently, the loss of key programmes represents a risk in terms of reduced audiences, and of reduced capacity to monetise those audiences.

How the risk is managed

Thanks to the talent of its artistic staff and its long-standing special relationships with French and foreign partner producers, TF1 currently offers the best programmes. Future programming streams are locked in via multi-year contracts with the biggest producers, reducing the risk of loss of key programmes in the medium and/or long term.

Risk that programmes will become unsuitable for broadcast

Description of the risk

To secure future supplies of key programmes, TF1 commits to certain programmes (especially series and feature films) at a very early stage relative

to the date of transmission. The time-lag can be substantial, and visibility on new products is often low.

Because TF1 channels are constantly adapting their editorial line in response to changes in public taste, an artistic mismatch may sometimes arise between current editorial needs (aimed at maximising audiences) and past programme acquisitions. If such mismatches occur, they may lead to spikes in impairment losses taken against broadcasting rights inventory.

How the risk is managed

TF1's exposure to this risk is limited to multi-year contracts with the biggest producers. If such a risk were to materialise, there are two ways of mitigating the impact:

- the pooling of rights across the TF1 group's channels offers alternative solutions for using rights to a programme that becomes unsuitable for broadcast on TF1;
- as a last resort, some or all of the risk may be mitigated by selling the rights on to another market player.

Risks associated with the economic environment

Description of the risk

In light of economic conditions, there is a risk of stagnation in the advertising market, which could have an adverse effect on projected trends in TF1 group revenues.

How the risk is managed

To protect against the effects of this stagnation, the TF1 group keeps all of its expenditure under constant review, and continually adapts its business model by identifying and tapping new sources of growth.

4.1.4.2 Industrial and environmental risks

Broadcasting of TF1 programmes – Risk of signal transmission interruption and execution risk

Description of the risk

TF1's programmes are currently broadcast to French homes by:

- radio waves in unencrypted high definition DTT (on the R6 multiplex);
- satellite in high definition digital;
- cable in standard and high definition digital;
- ADSL and fibre optics in standard and high definition digital via all the internet service providers (Orange, Free, SFR and Bouygues Telecom).

TDF is by far the leading national TV signal transmission operator in DTT, with a network and technical resources currently unmatched by any other company.

TF1 is therefore dependent on TDF for signal transmission. The emergence of alternative transmission providers is not yet sufficiently advanced for TF1 to manage without TDF for the hosting of transmission equipment. As a consequence, in the event of an outage of the TDF network, TF1 cannot switch to other terrestrial transmission systems to provide quick and affordable coverage of its entire broadcast area.

The loss that TF1 could incur in the event of transmitter failure is proportional to the number of television viewers served by the transmitter. For this reason, TF1 has negotiated a digital transmission agreement requiring a very rapid response from TDF in the event of a failure, and has requested reinforced backup measures.

As regards operator bundles, TF1 is dependent on the technical resources and supervision/maintenance processes put in place by the operators.

How the risk is managed

The variety of alternative networks to DTT (satellite, cable, ADSL and fibre) and of alternative operators minimises the impact of any failures of the DTT network, since those networks are not connected to each other and rely on their own separate resources.

In addition, to protect against risks arising from operator networks, the contractual terms of the distribution agreements stipulate a guaranteed high level of service.

Cyber-attacks

Description of the risk

The cyber-attacks that affected Sony Pictures and TV5 Monde in recent years led TF1 to reassess external threats that might disrupt transmission, and its operations in general. TF1 is aware that attempts to hack into corporate information systems are now a recurring problem; it has responded by further raising its vigilance threshold and is constantly working to ensure the security of its sites, operations and infrastructures.

How the risk is managed

To guard against the risk of cyber-attack, security audits are conducted by external consultants to identify any weaknesses in access controls. However, no system can be 100% secure, and the techniques used to attack information systems are continually changing. Action plans have been implemented to enhance protection of the TF1 group's transmission infrastructures, alongside incident management procedures such as a rapid response plan for hacking attacks. The objective is to constantly upgrade the TF1 group's sites and information systems, taking care to ensure that all external systems are included in any corrective measures that may be required.

TF1 was unaffected by the recent global virus attacks (WannaCry and Petya). However, those attacks underlined the imperative need for companies to have a high-powered data back-up policy, combined with rapid-response patching capacity to apply security fixes quickly and effective firewall^a protection of datacentres. An analysis showed that while TF1 is fully confident in the effectiveness of its backup policy, there is a need to ensure firstly that security fixes are applied faster and more effectively across all IT assets, and secondly that firewalls are used systematically to protect IT and broadcasting datacentres. Two projects were launched in response: one to investigate the potential installation of a new reliable and fully-automated distributed software solution, and the other to protect all TF1 datacentres with firewalls.

Finally, if such a risk were to materialise, TF1 has contracted insurance cover commensurate with the level of risk, to protect against the consequences of a cyber-attack and better manage the risk.

Risk of intrusion during live public broadcasts

Description of the risk

In the current security and social climate, TF1 has reassessed its exposure to the risk of intrusion affecting major live entertainment shows broadcast in public.

(a) Firewalls protect information systems connected to the internet from hacking attempts.

How the risk is managed

Reinforced security measures have been introduced to protect members of the public. Those measures are the responsibility of TF1 for in-house productions, and of the third-party production company for outsourced programmes. In order to retain absolute control over the output on its channels, TF1 has also introduced a slight delay of a few minutes when broadcasting major entertainment shows live and in public.

Risks related to the growth of digital terrestrial television and to the development of the internet and new media

Description of the risks

The TF1 group operates in a constantly changing competitive environment, but the pace of change has accelerated since 2005:

- the development of DTT, including the launch of six new channels at the end of 2012, has played a significant role in fragmenting the audiences of the incumbent channels;
- changing patterns of consumption include the trend towards delinearised viewing of unencrypted content (reflecting the rise of connected TV and video content on mobiles and tablets); this reached significant levels in 2018, and could erode the amount of time people spend watching television.
- In addition to audience fragmentation, the proliferation of channels could generate inflationary pressure in the rights market, particularly for high-profile, attractive content such as drama series.

With this growth in unencrypted television offerings, TF1's audience share has inevitably been affected, but has nonetheless proved resilient: while the number of unencrypted channels has increased fourfold since 2004, TF1's audience share among individuals aged 4 and over has declined from 31.8% in 2004 to 20.2% in 2018. TF1 achieved 91 of the top 100 audience ratings in 2018. The TF1 group as a whole, including the DTT channels, had an audience share of 27.7% among individuals aged 4 and over.

How the risk is managed

TF1's ongoing exposure to fragmentation risk is being mitigated by taking the DTT channels up-market and increasing their complementarity, and also by the 2016 switchover of LCI to unencrypted, both of which are limiting the impact on the premium channel.

In this context, the TF1 group has consolidated the market leadership of the TF1 core channel by:

- building a coherent global offer through its unencrypted channels, thanks to high-powered programming;
- positioning itself as a major force in DTT through its portfolio of four complementary channels (TMC, TFX, TF1 Séries Films and LCI);
- optimising the acquisition of content for its premium channel and DTT channels by adopting a group-wide organisational structure, providing the best fit between each channel's needs and programme purchases on the one hand, and exploiting and circulating acquired rights (subject to the TF1 group's undertakings) on the other;
- tightening its control over the value chain by using the in-house production subsidiary TF1 Production for part of its programme output;

- adapting its commercial policy to the new competitive landscape, especially through heavy marketing of slots in programmes with big audience-pulling potential;
- establishing MYTF1 as one of the leading French media websites.

The TF1 group is building a position in the connected TV market at reasonable cost, and signing partnership agreements with manufacturers. TF1 is also following its audiences onto social media (including Twitter and Facebook) by offering viewer interactivity on flagship programmes carried on the premium channel (*Danse avec les Stars*, *The Voice*, *Miss France*).

Finally, the ongoing process of adapting TV audience ratings metrics to the new media landscape, which began in 2011, will by the end of 2020 see the inclusion of live and catch-up viewers on computers, tablets and smartphones. These new audience metrics will help mitigate fragmentation risk by capturing a segment of media consumption that is on an uptrend.

General policy on managing industrial and environmental risks

The "Réagir" Committee, created in 2003, continues to work on monitoring and preventing major risks, especially those associated with TF1's key processes. It also updates TF1's risk mapping, and regularly tests business continuity plans that may be triggered when an exceptional event results in interrupted signal transmission or denial of access to the TF1 building.

Those plans rely on a secure external backup site (in place since 2007), which is operational for three processes:

- programme transmission;
- the production of news and weather bulletins (TF1 and LCI); and
- the preparation of advertising spots for the TF1 channel.

The company's vital functions are included in the security plan through an alert and activity resumption process. Besides real-time security, numerous key areas such as accounting, treasury, payroll, e-TF1 and IT are protected to varying degrees by security systems. Procedures are tested periodically so that the system can be adjusted if necessary. Broadcasting and transmission continuity is ensured 24/7, and an operations simulation is performed regularly.

There were no broadcasting incidents in 2018 that required fall-back on an external backup site.

Operational since 2011, "Réagir 1 Vigilance" is a preventive plan activated on an as-needed basis, and in particular at any time of heightened risk (building works, equipment maintenance, mass events, live broadcasts, service launches, software upgrades, IT continuity plan tests, etc.). This plan not only ensures that staff remain vigilant, it also offers improved responsiveness to incidents before they escalate.

As in the case of operational risks, TF1 has insurance policies (including public liability and property) that could be called upon to cover some of the risks mentioned above.

4.1.4.3 Legal risks

Risks related to broadcasting licences and CSA enforcement powers

Description of the risk

TF1 is an audiovisual communications service that requires a licence. Initially, TF1 was awarded a 10-year licence from 4 April 1987 (under the law of 30 September 1986); that licence expired in 1997. The licence was renewed for a further five-year period (via decision no. 96-614 of 17 September 1996) from 16 April 1997, with no requirement to submit to a competitive tendering process.

The TF1 channel's broadcasting licence was renewed automatically for the 2002-2007 period by a decision of the CSA (the French audiovisual industry regulator) of 20 November 2001. Under Article 82 of the law of 30 September 1986 as amended, that licence was automatically extended to 2012, in return for a commitment to provide a DTT simulcast. A further CSA decision of 10 June 2003 amended TF1's licence and contract terms to build in the DTT simulcast stipulation.

The "Future Audiovisual and Television Broadcasting Modernisation Act" of 5 March 2007 introduced two automatic five-year extensions of TF1's licence. The first compensated for the early switch-off of the channel's analogue signal on 30 November 2011 and was subject to TF1 joining the consortium set up to implement the analogue switch-off. The second was in return for the channel's commitment to provide DTT coverage to 95% of the French population.

The CSA awarded TF1 a ten-year HD broadcasting licence on 6 May 2008, and withdrew TF1's standard definition (SD) licence as part of the 5 April 2016 switch-off.

- In a decision dated 27 July 2017, the CSA extended TF1's licence for a further five years.
- TMC, TFX and LCI each hold licences issued by the CSA on 10 June 2003, which expire on 29 February 2020. On 25 July 2018, the CSA announced that it had decided to renew these channels' licences for a further five years, with no requirement to submit to a competitive tendering process. The channels must have agreed new contract terms with the CSA by 29 May 2019.
- TF1 Séries Films holds a licence issued by the CSA on 3 July 2012, which is due to expire on 22 December 2022. On expiry, the channel could be granted a five-year renewal.

If TF1 fails to meet its contractual obligations, the CSA can, after giving formal notice and depending on the severity of the offence, impose one of the penalties set forth in Article 42-1 of the law of 30 September 1986. These include a fine; a temporary ban (of no more than one month) on producing, broadcasting or distributing the service, or a category of programme, or part of a programme, or one or more advertising slots; and reducing the term of the licence to use frequencies by up to one year.

How the risk is managed

TF1's compliance with its obligations is strictly monitored, and the company has a dedicated Programme Compliance department tasked with ensuring that the channel's programmes comply with regulatory requirements. The TF1 General Counsel's department is responsible for compliance with undertakings made in agreements with the CSA, and for dialogue with the CSA.

Risks related to societal pressure on advertising and programmes

Description of the risk

Political attitudes to societal issues such as violence or public health might induce the legislator to tighten legislation relating to advertising or programmes. TF1 takes this situation into account in discussions with its key partners, so that such issues can be addressed over time in the interests of all stakeholders.

In addition, TF1 has a policy of acquiring the best programmes from its production partners in France and internationally, and broadcasts programmes intended for a mass audience.

How the risk is managed

TF1's Programming and "Viewing & Compliance" teams exercise the utmost vigilance in protecting young viewers in order to keep this risk to a minimum.

Advertising intended to be shown on TF1 channels and/or via its on-demand audiovisual media services (MYTF1) is subject to pre-vetting by the ARPP (the French advertising regulator) for compliance with current laws and regulations, and with the rules of conduct established by the advertising industry representatives within the ARPP. No advert is broadcast unless it has been cleared by the ARPP.

In addition, the Programming & Broadcasting Division of TF1 Publicité, the TF1 group's airtime sales house, views all adverts prior to broadcast, sometimes with input from Legal Affairs. Even if the ARPP has cleared an advert, TF1 Publicité may reject it or impose specific broadcast conditions on the advertiser, in cases where it regards an advert as inappropriate for the editorial line of the media on which it is to be shown, particularly as regards the family audience of TF1. In such cases, the advertiser or agency that produced the advert is informed by letter. The parties then seek a solution, adapting the content or time slot of the advert so that it is consistent with the editorial line of the media in question. If no solution can be found, the advert is not shown. This is made clear in the TF1 Publicité general terms and conditions of sale.

Adverts intended to be broadcast on radio stations for which TF1 Publicité handles airtime sales are not subject to the ARPP pre-vetting procedure. However, a dedicated team within the Programming & Broadcasting Division of TF1 Publicité listens to each advert to check that it complies with current regulations, rules of conduct, and the editorial line of the radio station.

Risks related to legislative changes or additional taxes

Description of the risk

The law on the independence of public broadcasting, enacted on 15 November 2013, confirmed that advertising would continue to be carried on France Télévisions public-service channels between 6 a.m. and 8 p.m., even though the legislator had in 2011 adopted the principle that all advertising would be discontinued on France Télévisions on 1 January 2016. In return, the levy paid by other French television channels to fund the loss of revenue for France Télévisions was reduced to 0.5% of those channels' advertising revenue.

This example illustrates the economic risk to which television channels are exposed as a result of new taxes and levies, such as the levy on advertising spending.

In addition, given the repeated requests by France Télévisions, a resumption of advertising on public-service channels after 8 p.m. cannot be ruled out, so this issue calls for particular vigilance.

How the risk is managed

Generally speaking, TF1 maintains close contact with regulators and legislators to try to limit the probability and impact of this risk.

Risk relating to the target country principle contained in the revised Audiovisual Media Services Directive

Description of the risk

Directive (EU) 2018/1808 of 14 November 2018, amending Directive 2010/13/EU (the Audiovisual Media Services or "AMS" Directive), will have to be transposed into French domestic law by 19 September 2020; this will be done as part of a draft Audiovisual Bill being prepared in the first quarter of 2019. Article 13 of the AMS Directive states that a Member State may require media service providers (television or on-demand audiovisual media services) targeting their territory but established in another Member State to contribute financially to the production of European works.

Such obligations may take the form of direct investment in content (buying or co-production, for example) and/or a contribution to national funds (such as the CNC^(a) in France). The financial contribution is based only on the sales generated in the targeted Member State.

At present, the sales generated by TF1 in Belgium is aggregated with its French sales as the basis for calculating the financial contribution to new works in France. Once Article 13 comes into force, TF1 will have to separate out its French and Belgian sales, and if Belgium so decides will have an obligation to make a financial contribution to new works in Belgium. Such obligations will in all likelihood be less onerous than in France, but may raise questions about the return on investment for Belgian co-productions.

In addition, the European Commission is exempting media service providers with low sales or a low audience from Article 13, based on thresholds which are expected to be published in the first quarter of 2019.

(a) The French National Centre for Cinema.

(b) The French agency responsible for content distribution and copyright protection on the internet.

Risks related to piracy of audiovisual content

Description of the risk

In recent years TF1 has been the victim on a massive scale of piracy of content to which it owns the copyright and/or related rights, both on file-sharing sites and social media and on websites dedicated to pirated content. TF1 won damages in piracy cases against DailyMotion and YouTube in 2014 as compensation for losses caused. However, programmes are still being pirated, and the methods used are changing, especially with the use of dedicated set top boxes.

How the risk is managed

To prevent the risk of piracy of its programmes, TF1 has renewed its commitment to rolling out a wide-ranging strategy, involving:

- creating digital fingerprints for its programmes (using Content ID with YouTube, Rights Manager with Facebook and INA Signature with Dailymotion), which will – within the limits of the technology – prevent pirated content from being uploaded to those three platforms;
- a dedicated in-house unit tasked with identifying (as far as possible) pirated TF1 group content on streaming platforms and social networking sites, and ensuring that it is dereferenced manually;
- retaining an external service-provider to dereference pirated TF1 content on cyber-lockers (direct download and streaming sites) and search engines;
- playing an active role in developing European copyright protection law (Directive on Copyright in the Digital Single Market), and establishing close ties with Hadopi^(b) and the French legislator to strengthen anti-piracy measures.

Risks related to cookies and internet trackers

Description of the risk

In January 2017, the European Commission issued a proposal for a new European ePrivacy Regulation, to replace the previous ePrivacy Directive of 2002. The proposed new regulation is complementary to the General Data Protection Regulation (GDPR), in that it deals with electronic communication data. The potential impacts on TF1 include:

- (i) substantially restricting the group's capacity to freely collect user data using cookies and trackers (files saved in users' browsers to track their browsing history); and
- (ii) strengthening the position of the GAFA internet giants (principally Facebook and Google) who do not rely on cookies and trackers to collect data (because they require users to register and log in to their services) and who control web browsers (which under the current ePrivacy proposals will be where user consent and refusal would be centralised).

4 RISK FACTORS

Business-specific risks

The proposed European ePrivacy regulation brings about a triple paradigm shift in the use of cookies:

- switching from opt-out (displaying a notification banner with no break in browsing) to opt-in (users must opt in to allow website editors to install their cookies^(a)).
- Setting up browsers to block all cookies as the default, whereas previously the default setting was to accept cookies.
- Prohibiting the use of "cookie walls", the hitherto tolerated practice of making access to a site conditional on accepting cookies.

How the risk is managed

- Being actively involved in the European legislative process, to put a brake on that process and limit the economic impact on the TF1 group as far as possible.
- Gradually rolling out registration (log-ins) to access MYTF1, first for live viewing and then catch-up.
- Participating in the project led by GESTE (the French association of online content and service providers) to develop a single log-in application along the lines of Facebook Connect.

General policy on managing legal risks

In terms of legal risks, TF1 has a public liability insurance policy that covers the consequences of TF1 and its current and future subsidiaries being held liable for loss incurred by third parties; the amount of cover is commensurate with the risks incurred.

That insurance policy is arranged by the TF1 group Legal Affairs Division with leading insurance companies.

The deductibles under the policy were determined in light of the nature of the risks incurred and the potential reductions in premium, so as to optimise the overall cost of covering the risks to which TF1 is exposed.

Ethical rules and professional standards for advertising

Description of the risk

The principal risk for TF1 is that it will fail to deliver on its public commitments to uphold ethical and professional standards in the content it produces and broadcasts, including adverts.

How the risk is managed: Regulatory compliance

Adverts shown on TF1 channels are subject to general regulation; industry joint regulation, via recommendations from the ARPP (the French advertising regulator); and to rulings by the CSA (the French broadcasting authority). Such regulations, ethical standards and rules of conduct apply to all advertising messages, regardless of the media or format used to broadcast them. Since 1 January 2012, TF1 has applied the ARPP decision aimed at extending the same commitments as were made by TF1 to the CSA back in 1990 to advertising messages carried on all TF1 on-demand audiovisual media services (MYTF1.fr, MYTF1 on IPTV, and the MYTF1 smartphone app). These include submission to the ARPP prior to broadcast and internal viewing of advertising messages.

For television and on-demand audiovisual media services, the outcomes of the ARPP pre-vetting process are always taken into account before an advert is shown.

TF1 Publicité is also represented on the ARPP Board of Directors and on the main trade bodies: the French National TV Advertising Federation, CESP (the French media audience research bureau), and advertising industry forum EDI Pub. In this way, the TF1 group plays a role in shaping the ethical landscape of the advertising industry.

4.1.5 Bouygues Telecom

4.1.5.1 Competitive environment and market risks

Bouygues Telecom sells its offers and services exclusively in the French market. France is a mature market, where in recent years competition has been particularly fierce in the consumer segment, a situation confirmed during 2018. The French market has seen a raft of promotional offers, which have now become a permanent feature. At the same time, growth in the number of customers with Sim Only packages is still rising, albeit more slowly. In conjunction with the proliferation of promotions, this generates a lack of consumer engagement, thereby increasing customer churn.

If price erosion in the mobile and fixed markets persists over time in all the segments where Bouygues Telecom operates, this could slow return on investment (especially the investment in expanding the mobile and fixed broadband networks), adversely affecting the company's results.

4.1.5.2 Risks related to developments in the fixed internet market

Bouygues Telecom offers its services via ADSL, VDSL, very-high-speed cable and FTTH (Fibre-To-The-Home).

The company continues to invest heavily in very-high-speed broadband networks, and has been implementing its own FTTH roll-out programme since the end of 2016. The FTTH programme is supported by a dedicated organisational structure, with qualified staff and specific procedures and management reporting. Nonetheless, given the ambitious goals set for the programme, unforeseen issues – such as potential delays or difficulties in implementation – cannot be ruled out. Consequently, projections for the customer base and sales of the new offer could be revised downward.

In addition, to be able to provide a quality service to its customers across the whole of France, Bouygues Telecom is reliant on fixed network infrastructures owned by other operators. The company has signed service agreements

(a) Cookies are small files downloaded to computer hard drives without the user's knowledge when he or she visits a website which retain data for the user's next visit.

with its partners, and implemented specific procedures designed to secure service quality for the final customer. However, unforeseen issues may arise in the execution of these agreements, which could adversely affect Bouygues Telecom and its financial results.

4.1.5.3 Risks related to convergence of networks and content

In January 2015, Bouygues launched "Miami", the first Android TV box on the market, combining an enhanced digital experience with access to a wide range of content.

Competition in the TV content market is intensifying, with incumbent broadcasters increasingly challenged by technology firms moving into the market as they pursue a strategy of convergence between content and distribution. If premium content were to become available primarily through exclusive access, this could limit the appeal of the fixed-line packages offered by Bouygues Telecom, with an adverse effect on the company's results.

4.1.5.4 Risks related to the emergence of new players

New players are emerging in the mobile and fixed markets, driven by the expansion in broadband usage; these include Google, Apple, Facebook, Amazon and other "Over-the-top" (OTT)^a operators. Competition is also hotting up for control over customer relationships, which to date has been a source of value creation for established operators. If this trend towards disintermediation gathers pace, it could adversely affect Bouygues Telecom's sales and results.

4.1.5.5 Risks related to the roll-out and operation of networks

Implementing Bouygues Telecom's mobile and fixed broadband development strategy requires the company to invest massively in network roll-outs every year. In parallel, the company has struck deals with various partners in order to reinforce its access to fixed-line infrastructure and increase its 4G mobile coverage.

Unforeseen issues with those contracts could impair the success of Bouygues Telecom's strategy, which aims to develop locally-based marketing methods in order to reach all French households.

The company would then be exposed to potential adverse impacts on its financial results, operations and image.

4.1.5.6 Risks related to market positioning

Bouygues Telecom positions itself as a trusted operator, thanks to high-class customer support and the quality of its very-high-speed mobile and fixed broadband networks.

Building on its 4G network, strong value for money and highly-motivated staff, the Bouygues Telecom strategy is focused on:

- **the customer experience:** a simple, seamless customer experience has been a key differentiating feature of Bouygues Telecom from the outset;
- **access to very-high-speed broadband:** Bouygues Telecom has continued to expand its mobile infrastructure, which by the end of 2018 covered 99% of the French population. Meanwhile, roll-out of the FTTH network is ongoing, with the number of premises marketed expected to reach 12 million by the end of 2019.

The success of this strategy will depend on Bouygues Telecom's ability to implement these initiatives effectively. If the company fails to do so, it will be exposed to potential adverse impacts on its financial results, operations and image.

4.1.5.7 Cyber-security

Cyber-attacks on networks and information systems are having an ever-growing impact, either by direct attacks on an operator's proprietary systems or indirectly through attacks on service-providers or suppliers.

If such an incident were to affect Bouygues Telecom it could have a variety of impacts, including:

- disclosure of sensitive data, in particular private data relating to customers; and/or
- interruption of services: network connectivity, in-store sales, customer relations or information systems.

Protective steps taken by Bouygues Telecom include a security policy based on information system access controls, anti-hacking systems, and a monitoring system to detect security incidents. In addition, annual checks are carried out on the security of data hosted by Bouygues Telecom's service-providers and partners. Analyses are systematically performed of major security incidents, leading to the implementation of new security measures and/or reviews of the company's processes.

In addition, Bouygues Telecom provides all its employees, suppliers and partners with regular reminders about security issues.

Since 2016, the company has had a specific cyber-risks insurance policy in place.

If a cyber-attack were to occur, the company would be exposed to potential adverse impacts on financial results, operations and image.

(a) A service consisting of the direct distribution of content via the internet without the participation of operators or their home gateways.

4.1.5.8 Continuity of service and site security

Service interruption can be caused by technical equipment breakdown or by an onsite incident affecting the network or information systems. Bouygues Telecom addresses these risks through:

- security measures at key sites including restricted access, fire prevention, air conditioning, power supplies, etc.;
- a business continuity plan for critical mobile and fixed-line technical systems, maintained in a state of operational readiness;
- a crisis management plan, based on keeping certain employees on call in order to ensure a fast, co-ordinated response to major incidents.

The company also carries out regular crisis simulation exercises, and commissions regular audits of these procedures in conjunction with Anssi^a. Such incidents could have an adverse impact on the company's image and financial results.

4.1.5.9 Regulatory changes

New domestic and European regulations relating to data protection and compliance apply to Bouygues Telecom. Dedicated project teams are working to identify the impacts of these regulations and determine the necessary courses of action. These issues are discussed in regular steering committee meetings.

However, Bouygues Telecom cannot rule out the risks associated with any project, including delays or difficulties in implementation. In addition, tighter regulations on cold selling could require operators to alter their marketing techniques.

4.1.5.10 Supplier risks

In various areas of its operations (handset supplies, customer relations, telesales, IT management, etc.) Bouygues Telecom relies on suppliers in a number of regions outside the European Union including Asia, the United States and North Africa.

Changes in the geopolitical environment in some of those regions could have an adverse impact on Bouygues Telecom's operations, image and financial results.

The control remit of the company's purchasing department includes economic and operational dependency on suppliers. Double sourcing is used for strategic suppliers, and specific measures are built into the business continuity plan.

However, shortages in components used in the manufacture of TV boxes or fibre optic cable, a significant increase in the price of those components, or any other major incident (such as a natural disaster) triggering a production outage at a supplier, could have impacts on Bouygues Telecom's procurement process and lead to temporary stock-outs of products. This could have an adverse effect on Bouygues Telecom's financial results and image.

Suppliers are also subject to an annual CSR risk assessment, documented using a specific risk mapping matrix. Action plans are implemented in response to the criticality of the assessments (see the information provided in the Vigilance Plan, in section 4.5 of this Risk Factors chapter).

4.1.5.11 Effects of electro-magnetic waves

Exposure to electro-magnetic waves is an issue of ongoing concern in France, due to lobbying by various organisations. From the outset, Bouygues Telecom has had a team dedicated to mobile telephony and health, whose remit has now been extended to fixed operations and Wi-Fi waves. This team is responsible for ensuring that the regulations are rigorously applied, and for carrying out a conscientious risk assessment based on collective expertise. Bouygues Telecom funds independent research, and releases all of its scientific publications on this subject. This approach is helping to reassure the French public, since no research has to date established a clear health risk.

An increased perception of health risk on the part of consumers could have various adverse impacts such as reduced usage per customer, shrinkage of the customer base, and higher administrative and site installation costs.

(a) The French Agency for IT Systems Security.

4.2 FINANCIAL RISKS RELATING TO THE EFFECTS OF CLIMATE CHANGE

The Bouygues group has identified actual and potential financial risks relating to the effects of climate change, although it remains difficult to judge accurately the extent of those risks. This assessment is backed up by the findings of large numbers of experts in the scientific community, and by analysis carried out by major players within the financial sector. For example, in 2018 Moody's estimated the potential credit exposure associated with significant emerging environmental risks^a (including climate change) at \$2,200 billion. Such risks will also have an impact on the activities of companies and their ability to pay back their debt. As a result, the factoring in of these extra-financial factors is tending to become critical, especially the challenge of meeting international objectives.

Commercially speaking, the climate change we are experiencing could in some respects be seen as an opportunity: businesses offering solutions that support ecological transition and low carbon emissions will be better placed to meet their customers' needs.

One of the most visible consequences of climate change is the occurrence of extreme weather episodes across the entire planet, leading to impacts on the environment, society (including climate-driven migration), the economy, the insurance industry, and politics. Two risks associated with climate change are of particular relevance:

- **Climatic disturbances associated with global warming** (higher temperatures, drought and floods, coastal erosion, rising sea levels, etc.) will undoubtedly lead to gradual impairment of the resilience of more and more infrastructure. To anticipate this risk, Bouygues intends to offer solutions to adapt infrastructures to climatic disturbances, where customers express a need. Just as seismic risks are taken into account in earthquake zones, low carbon offers can be a source of commercial differentiation wherever project owners take the concept on board. For example, designing and constructing passive or even energy-positive buildings using bio-sourced materials, building and raising dykes, designing green or reflective roofs and developing wetlands to counter the urban heat island effect, all represent business opportunities on every continent. The steady rise in average temperatures is also extending the periods during which it is possible to work in countries with continental or polar climates, such as Canada. Conversely, a greater incidence of heatwaves and extreme weather events (hurricanes, floods, etc.) is disrupting execution on some projects, with impacts on productivity, operating costs and insurance premiums. Similarly, unpredictable weather patterns may reduce demand for advertising of seasonal products on TF1 television channels.
- **The geopolitical consequences of climate change.** Climatic disturbances put economic, social and political systems under pressure and heighten the risk of instability and regional conflict, for example over access to water; this may lead to fewer commercial opportunities in some geographical areas.

The production and construction processes associated with the activities of Group companies, and the use of the assets and infrastructure constructed,

generate greenhouse gases. Against a likely background of profound change in the world economy, particularly regarding the objective of keeping the rise in temperature below 2° between now and 2100, Bouygues is also exposed to transition risks, in other words risks relating to the consequences of transitioning towards a lower-carbon business model. However, dealing with these risks also provides the Group with levers to innovate and to differentiate itself. The three key levers are:

- **Carbon taxation.** The adoption of the principle of a carbon tax in France and Europe, or the extension of the system of quotas in certain countries where the Group operates, could have financial impacts. These include increases in the amount of taxes and in the cost of high grey energy^b materials, the obligation to acquire emissions rights, higher project operating costs, etc. On the plus side, energy transition legislation could place a sufficiently high price on carbon that the Group's customers may pay closer attention to the full carbon cost of the structures they commission. The prospect of increased demand for low-carbon products and services (such as "BBCA" and "E+C-" certification in France) represents a competitive advantage for Bouygues, which positioned itself in this segment several years ago.
- **Supply risks.** The highly carbon-intensive nature of the extractive industries and building materials manufacturing sector means they are having to adapt, and is affecting the cost of access to some primary raw materials such as petroleum products, sand and metals. Delays or interruptions in supply, and fluctuations in the cost of such raw materials, potentially have direct and indirect financial impacts for the construction industry. To counter this risk, the Group is developing circular economy solutions, such as recycling of concrete and road planings or of demolition waste and surplus worksite materials. Such circular economy initiatives are being rolled out on a number of commercial projects or materials extraction sites (Colas); they help reduce dependence on primary raw materials, in particular by encouraging recycling (secondary raw materials) and re-use (second-hand materials). In future years, solutions of this type are likely to gather pace, due to a combination of regulatory incentives (such as the "circular economy" roadmap currently being promulgated in France) and customer pressure.
- **Regulatory requirements intended to replace some existing techniques with solutions that generate fewer greenhouse gas emissions.** These are driving a gradual increase in costs associated with researching, developing and adopting lower-emission materials (such as bio-sourced materials). Given the competitive market for low-carbon solutions, failing to anticipate developments in this area could lead to a drop in demand for certain products and services offered by Bouygues. At the same time, Bouygues is responding to the accelerating pace of climate change by developing and implementing adaptive solutions, along with more resilient technologies and construction models (especially bioclimatic), throughout the world and especially in regions with the greatest exposure.

(a) Covers the building materials, oil exploration/production and steel production sectors.

(b) The quantity of energy consumed during the life cycle of a material or product.

4 RISK FACTORS

Market risks

The Group's business segments are working to factor in and counter all those risks by adopting sustainable construction strategies: low-carbon buildings, active and passive energy efficiency in both renovated and new buildings, creation of eco-neighbourhoods, developing partnerships and commercial solutions to promote soft mobility, etc. Our priorities, and the main initiatives taken as part of our low-carbon strategy, are described in Chapter 3 of this Registration Document.

In order to identify the impacts of climate change on its business environment and to promote the implementation of structural policies at national and international levels, the Group is also a partner and active member of The Shift Project (www.theshiftproject.org), a think tank backed by a multi-disciplinary network of experts and business people with recognised expertise in energy and climate issues.

4.3 MARKET RISKS

In addition to the information provided below, readers should refer to the tables provided in the following notes to the consolidated financial statements in Chapter 7 Financial statements in this document:

Note 4.5 Cash and cash equivalents

Note 8.1 Interest-bearing debt by maturity

Note 8.2 Confirmed credit facilities and drawdowns

Note 8.3 Liquidity at 31 December 2018

Note 8.4 Split of current and non-current debt by interest rate type

Note 8.5 Interest rate risk

Note 8.6 Split of current and non-current debt by currency

Note 17 Financial instruments

4.3.1 Management of interest rate risk and currency risk

Some Bouygues group entities use hedging instruments to limit the impact on the income statement of fluctuations in exchange rates and interest rates.

The Group's policy on the use of financial instruments is described below.

4.3.2 Risks to which the Group is exposed

4.3.2.1 Exposure to the currency risk

In general, the Bouygues group has little exposure to currency risk in routine commercial transactions, given that its international operations (primarily Bouygues Construction and Colas) do not involve exports. Where possible, expenses relating to a contract are incurred in the same currency as that in which the contract is billed. This applies to most projects executed outside France, on which local-currency expenses (sub-contracting and supplies) represent a much higher proportion than euro-denominated expenses. Exposure to currency risk is therefore limited to contract margins, and to design work carried out in France. The Bouygues group also pays particular attention to risks relating to assets denominated in non-convertible currencies, and to country risk generally.

Consolidated financial expenses would be only marginally affected by fluctuations in euro interest rates, or by a divergence in interest rate trends between the euro and other major currencies.

On average over the year, the amount of variable-rate debt in the balance sheet is less than the amount of surplus cash invested at variable rates.

4.3.2.3 Exposure to the commodities risk

Overall, the Bouygues group has very low exposure to the commodities risk. Its main exposure is through its roadbuilding activity (sensitivity to fluctuations in petroleum product prices), followed by the road safety/signalling and railway activities (sensitivity to fluctuations in the prices of certain metals). Hedging instruments are implemented on a temporary basis for certain specific contracts.

4.3.2.2 Exposure to the interest rate risk

The Bouygues group's financial expenses have low sensitivity to interest rate risk. The bulk of debt is at fixed-rate either in the form of fixed-rate bond issues (see Note 8 in Chapter 7 Financial statements), or via a portfolio of hedging instruments that convert variable-rate debt into fixed-rate debt.

4.3.3 Principles applied to all hedging instruments

The only instruments used for hedging purposes are forward currency purchases and sales, currency swaps and purchases of currency options for currency risk hedging purposes; and interest rate swaps, future rate agreements, and purchases of caps and collars for interest rate risk hedging purposes; forward contract purchases and sales, and commodity swaps and options for commodity risk hedging purposes.

These instruments:

- are used solely for hedging purposes;

- are contracted solely with high-quality French and foreign banks;
- carry no liquidity risk in the event of reversal.

Specific reports are prepared for those responsible for the management and supervision of the relevant Group companies describing the use of hedging instruments, the selection of counterparties with whom they are contracted, and more generally the management of exposure to currency risk, interest rate risk and commodity risk.

4.3.4 Hedging rules

4.3.4.1 Currency risk

(see Note 17 to the consolidated financial statements, in Chapter 7 Financial statements)

Bouygues group policy is to hedge systematically all residual currency exposure relating to commercial transactions. If the future cash flow is certain, the currency risk is hedged by buying or selling currency forward, or by means of currency swaps. For some large contracts, options may be taken out for hedging purposes before the contract award has been confirmed; if the hedged item ceases to exist (for example, if the service is not provided or the contract is cancelled), the hedge is closed out immediately.

In the interests of efficiency, the currency positions of some Group entities may be managed centrally, which in some cases may result in the offset of matching positions.

Currency derivatives are used solely for hedging purposes.

4.3.4.2 Interest rate risk

(see Note 17 to the consolidated financial statements, in Chapter 7 Financial statements)

Group policy is for each sub-group to hedge some or all of its financial assets and liabilities, where these are foreseeable and recurring.

The aim is to control future interest expense by fixing the cost of debt using swaps and future rate agreements, or by limiting it through the use of caps, over a period equivalent to that of the financial liabilities to be hedged.

As with currency risk, the interest rate positions of some Group entities may, in the interests of efficiency, be managed centrally and partially offset.

4.3.4.3 Commodity risk

(see Note 17 to the consolidated financial statements, in Chapter 7 Financial statements)

Group policy is for each sub-group to hedge some or all of the exposure of specific contracts to fluctuations in commodity prices, particularly in the roadbuilding activity.

4

4.3.5 Accounting methods

In general, the financial instruments used by the Group qualify for hedge accounting. This means that the hedging relationship is documented in accordance with the requirements of IFRS 9. Two types of accounting treatment are used:

- fair value hedges: changes in the fair value of the hedging instrument and changes in the fair value of the hedged item are recognised symmetrically in the income statement;
- cash flow hedges: changes in the fair value of the hedging instrument are recognised in the income statement for the ineffective portion of the hedging relationship, and in shareholders' equity (until the hedge is closed out) for the effective portion.

4.3.5.1 Market value of hedging instruments

As of 31 December 2018, the market value (net present value) of the hedging instruments portfolio was -€35 million. This amount mainly comprises the net present value of interest rate swaps contracted to hedge the Group's debt (fair value hedges and cash flow hedges), and the net present value of forwards and futures contracted to hedge currency risk arising on commercial transactions.

The split of this market value by type of hedge is as follows:

- fair value hedges of components of net debt: €1 million;
- cash flow hedges: -€36 million;
- net foreign investment hedges: €0 million.

In the event of a 1% movement in the yield curve, the hedging instruments portfolio would have a market value of €9 million; in the event of a -1% movement in the yield curve, the hedging instruments portfolio would have a market value of -€83 million.

In the event of a 1% appreciation (or -1% depreciation) in the euro against each of the other currencies, the hedging instruments portfolio would have a market value of -€36 million (or of -€34 million respectively).

These calculations were prepared by the Bouygues group, or obtained from the banks with whom the instruments were contracted.

4.3.5.2 Exposure to equity risk

In the event of adverse trends in the business of an investee or in the economic environment in which it operates, the Bouygues group could be exposed to the risk of a fall in the price of the shares it holds in that investee.

4.3.5.3 Liquidity risk

At 31 December 2018, available cash stood at €2,676 million (including -€14 million of financial instruments contracted to hedge net debt). The Bouygues group also had €7,344 million of undrawn confirmed medium term credit facilities as at the same date. Consequently, the Group is not exposed to liquidity risk.

The credit facilities contracted by Bouygues contain no financial covenants or trigger event clauses. The same is true for those contracted by the subsidiaries of Bouygues SA, except in the case of the financing of the acquisition of Miller McAsphalt group by Colas in Canada (€410 million), which temporarily includes a leveraged covenant clause based on the debt to EBITDA ratio

The bond issues maturing in 2018, 2019, 2022, 2023, 2026 and 2027 all contain a change of control clause relating to Bouygues SA. Bouygues bond issues are rated long term BBB+ (positive outlook) by Standard & Poor's. The Bouygues bond issues maturing in 2022, 2023 and 2027 are rated long term A3 by Moody's.

For a more detailed discussion of the effects of a change of control, refer to Note 8 to the consolidated financial statements (Chapter 7 of this document, "Non-current and current debt") and to the disclosures in paragraph 6.1.4 Information on the company of Chapter 6 about factors likely to have an impact on any public tender offer price.

4.4 CLAIMS AND LITIGATION

Bouygues group companies are involved in a variety of litigation and claims in the normal course of their business. Risks are assessed on the basis of past experience and analysis by the Group's in-house legal departments and external counsel. To the company's knowledge, there is at present no exceptional event, dispute or claim likely to have a substantial negative impact on the business, assets and liabilities, results or financial position of the Group as a whole. Disputes and claims are subject to regular review,

especially when new facts arise. The provisions recorded in the financial statements appear to be adequate in light of these assessments (see Note 6 to the consolidated financial statements in Chapter 7 Financial statements of this document). The Group uses all legal means to defend its legitimate interests. Details about which claims are or are not covered by provisions have not been disclosed, since such disclosure might affect the outcome of some ongoing claims.

4.4.1 Bouygues Construction

4.4.1.1 France: Flamanville EPR

Bouygues Travaux Publics was found guilty of undeclared work and the illegal loan of manpower by the Caen Court of Appeal on 20 March 2017 and ordered to pay a fine of €29,950.

All the charges against Bouygues Bâtiment Grand Ouest (formerly Quille Construction) for labour law offences were dropped by the Court of Appeal.

Bouygues Travaux Publics lodged an appeal in the *Cour de Cassation* (the French Supreme Court) against the Court of Appeal's judgement. The *Cour de Cassation* applied to the European Court of Justice for a preliminary ruling on 8 January.

4.4.1.2 France: Île-de-France Regional Authority Contracts

Following a Competition Council (now the Competition Authority) ruling of 9 May 2007, the Île-de-France Regional Authority filed a compensation claim in 2008 for losses it claims to have incurred as a result of the anti-competitive practices by construction companies in connection with the awarding of public works contracts for the renovation of secondary school buildings in the region.

The Regional Authority's summary application to the Paris District Court was rejected in a ruling issued on 15 January 2009 on the ground that, *prima facie*, there were serious reasons for objecting in principle to the compensation claim.

After being invited to appeal on the merits, the Regional Authority filed a further claim in the Paris District Court in February 2010, this time claiming damages for a total loss estimated at €358 million based on the joint and several liability of the parties collectively liable for the loss, i.e. the companies and individuals found to have engaged in anti-competitive practices.

In a ruling of 17 December 2013, the Paris District Court ruled the Regional Authority's claim inadmissible. The Regional Authority appealed to the Paris Court of Appeal on 22 January 2014. Nevertheless, after an application by the Prefect of the Île-de-France region, the Conflicts Court decided on 16 November 2015 that this dispute came within the jurisdiction of the Administrative Courts.

The companies in the Bouygues group were informed on 2 May 2017, that the Paris Administrative Court had been seized by the Île-de-France Region

on 28 March 2017 with 85 different applications (one per secondary school) to order all those jointly liable for the loss to jointly and severally pay an indemnity of 16.4% of the price paid for each secondary school.

The case is currently being examined by the court and a hearing date has not been fixed.

4.4.1.3 France: Éole

Following a Competition Council (now Competition Authority) ruling of 21 March 2006, imposing fines on a number of companies for general and specific collusion relating to work packages 34B and 37B of the East-West Express Rail Link (Eole) project, the SNCF, on 21 March 2011, brought an action for damages before the Paris Administrative Court for the losses it claims to have suffered as a result of anti-competitive practices by construction companies in the sector when the above-mentioned work packages for this project were awarded.

The Paris Administrative Court rejected all of the SNCF's claims on 31 May 2016. The SNCF has appealed this judgement. The Administrative Court rejected all of the SNCF's claims on 29 December 2017. On 28 February 2018, SNCF Mobilités lodged an appeal in the *Conseil d'État* (France's Supreme Administrative Court) against the judgement of the Paris Administrative Court of Appeal. Statement of cases were exchanged in this case in 2018.

4.4.1.4 International: Data Centre

After a delay in delivering a data centre in Dublin, the Kuok group terminated the contract concluded with Bouygues E&S Ireland Ltd. Initial proceedings (an award claim) were brought by the Kuok group to obtain lateness penalties. After Kuok group was awarded these penalties, Bouygues E&S Ireland Ltd then disputed the award in an arbitration, which is ongoing.

In November 2018, the Kuok group made a second award claim against Bouygues E&S Ireland Ltd, which was ordered to pay the remainder of the late payment interest.

4.4.1.5 International: Alpiq

In 2018, Bouygues Construction and Colas Rail acquired Alpiq Engineering Services (acquisition of all the shares in Alpiq InTec AG and in Kraftanlagen München GmbH) from Alpiq [Holding AG and Alpiq Deutschland GmbH]. This transaction was closed on 31 July 2018. After the closing of the transaction, a price adjustment mechanism, based on the final accounts of the acquired companies at the time of the closing, was agreed between the parties.

The parties have different opinions on the adjustment of the acquisition price: Bouygues Construction and Colas Rail are demanding payment of CHF205.1 million from Alpiq Holding AG and Alpiq Deutschland GmbH, whereas the latter are demanding payment of CHF12.9 million from Bouygues Construction and Colas.

Since the parties were not able to come to a mutual agreement, a request for arbitration, in accordance with the Swiss Rules of International Arbitration, was filed on 12 February 2019 with the Swiss Chambers' Court of Arbitration and Mediation. Both parties are continuing their respective claims for payment.

4.4.2 Bouygues Immobilier

4.4.2.1 France: the “Grand Sillon” operation in Saint-Malo

This dispute involved environmental remediation works for the “Grand Sillon” operation in Saint-Malo, western France. The discovery of cyanide during the excavations when the construction works started caused a very long delay (twenty-eight months) and the extra costs were borne by a subsidiary of Bouygues Immobilier. Its clients suffered long delays in delivery, notably the purchaser of the hotel built on the site. Two claims as claimant and defendant were initiated to evaluate the extent of the loss caused by the remediation works on the site and the resulting delays. In 2018, the proceedings before the Nanterre District Court and the Versailles Court of Appeal were settled by a settlement agreement.

After the Court expert's appraisal report was filed, Bouygues Immobilier claimed compensation for its loss from the contractors after it was served with proceedings by the hotel's insurer and the architect.

These proceedings are continuing.

4.4.2.3 Ginko (Bordeaux)

After the collapse of a balcony, and bad workmanship was found on the façades, settlement agreements were signed with all the owners, except Société d'Investissement Demare, which requested a court expert's appraisal, which is ongoing. There is no significant risk involved in these proceedings.

4.4.2.4 International: Warsaw

Bouygues Immobilier Polska was served with a Request for Arbitration in the Chamber of Commerce and Industry of Paris by OCP Holding, the purchaser of an office block leased entirely to TPSA Orange in Warsaw, regarding defects which are estimated at (except for additional sums), €18,165,000. These defects allegedly affect the façade, the windows and the electro-magnetic sensors of the doors and windows, which according to the complainant have caused the building to depreciate in value, as well as significant problems for Orange, which has demanded a reduction in rent from OCP.

4.4.2.2 France: Rue Verte development in Rouen

Disturbances were caused to local residents in Rouen (Normandy) by pile driving works at 21 rue Verte, which blocked the flow of underground water (causing cracking to the façade of a hotel, in particular). Two investigations were carried out, one by Bouygues Immobilier to determine the cause of the damage and the costs of the repair works, and another by the hotel to assess the commercial and financial consequences resulting from the interruption to business.

4.4.3 Colas

4.4.3.1 Hungarian competition law cases and associated competition claims in Hungary

Between 2004 and 2012, the Hungarian competition council imposed fines on around ten Hungarian companies, including Colas subsidiaries, for anti-competitive practices in tendering for public contracts. The fines have been paid. Following these decisions, claims for damages against some Hungarian

sub-affiliates of Colas were filed in the Hungarian courts by several companies, in respect of losses allegedly incurred as a result of the anti-competitive practices. There are still two ongoing cases (i) one involving the City of Budapest and (ii) the other now concerning the Hungarian State alone (M3 motorway) before the Budapest Court of Appeal.

4.4.3.2 France: Urssaf reassessment

At the end of 2009, Urssaf issued Colas with a reassessment notice relating to relief from social security charges for the years 2006 to 2008 under the "Tepa" Law and the Fillon plan. Urssaf is demanding repayment in full (in the form of a lump-sum payment) of all the relief from social security charges granted under these schemes, principally on the grounds that the Colas group companies involved did not file the required information electronically. Urssaf claims that electronic filing is required under the French Social Security Code. Colas and its subsidiaries believe there are no grounds for levying the lump-sum tax payment stipulated in Article R. 242-5 of the French Social Security Code, arguing that they supplied the documents and other evidence necessary for the audit in paper form and therefore in a usable format. The amount of this reassessment notice, including late payment interest, was estimated at €60.5 million as of 31 December 2018. This dispute has been referred to the Social Security courts.

4.4.3.3 Tax dispute in Canada relating to technical assistance invoiced by Colas to its subsidiary Colas Canada Inc.

The Canadian Revenue Authorities are disputing the deductibility of the technical assistance costs invoiced by the Colas parent company to its subsidiary Colas Canada Inc. They claim that the amount of these costs is excessive and the supporting documentation is insufficient. The assessment notices for 2004 to 2007, which disputed the whole of the deductibility of the costs, have been referred to the mutual agreement procedure provided for in the Franco-Canadian Tax Convention. The French and Canadian authorities

have agreed on a technical assistance rate that is very close to the rate invoiced. For the years 2008 to 2012, the rate accepted by the Canadian Revenue Authorities was contested by Colas Canada within the scope of the above mutual agreement procedure. The tax audit of Colas Canada for the years 2013 to 2015 is still ongoing. The amounts involved at end-2018 now total around €12 million.

4.4.3.4 Colas Rail files a complaint in relation to an international project

In 2017, an internal audit and an external investigation requested by Colas Rail, a subsidiary of Colas, revealed that suspicious payments in euros and in local currency had been made to local consultants. Colas Rail filed a complaint in France. The contracts of these consultants have been withdrawn and all payments prohibited. In agreement with the customer, Colas Rail transferred the construction contract with no major economic impact on the Colas group. The investigation that followed the complaint filed by Colas Rail is ongoing.

4.4.3.5 Colas Djibouti

On 1 July 2014, Colas SA voluntarily informed the US government that it had discovered that employees of Colas Djibouti, a subsidiary of Colas, had engaged in non-compliant and inappropriate practices during the execution of contracts and sub-contracts with the US government between 2012 and mid-2014. Since then, Colas SA has been cooperating with the government and the Justice department of the United States in the investigation into this affair.

4

4.4.4 TF1

4.4.4.1 Competition law

Alleged abuse of dominant position in the advertising market

Canal+, M6 and NextRadioTV groups have each filed a complaint with the French Competition Authority against the TF1 group alleging an abuse of a dominant position in the French television advertising market. TF1 Publicité was heard at a witness hearing. All these complaints were rejected apart from M6's complaint (brought in 2014), which is still being investigated.

Alleged restraint of trade

On 6 December 2013, the Competition Authority was seized with complaints by the Canal Plus, D8 and D17 groups alleging uncompetitive practices by TF1, M6 and France Télévisions. The complainants consider that the coproduction contracts concluded by TF1, M6 and the France Télévisions group with the producers of EOF films constitute vertical agreements, and that the combined effect of certain provisions (e.g. preference or pre-emption clauses) is to exclude other unencrypted channels. They allege that this "vertical collusion" between each of the unencrypted television groups and the producers excludes or limits the capacity of the other channels to acquire these rights.

The Competition Authority sent a Statement of Objections to TF1. Since then, the rapporteurs moved to dismiss the case and a hearing took place. The case is currently adjourned for judgement.

4.4.4.2 Breach of patent

Orange has brought an action against Free in the Paris District Court alleging breach of European patents. The action alleges that Free fraudulently used two patents held by Orange that prevent videos preselected by an internet user from being downloaded until the user is committed to watching the content, thereby saving bandwidth. This process is allegedly used by Free for the catch-up television services offered to its subscribers.

Orange is claiming €138 million damages from Free for the loss it has suffered. Free has made the companies that broadcast the catch-up TV services of the principal television channels, of which TF1, parties to the action, as it considers that "the conditions in which the catch-up television platforms are operated, are defined and implemented by the television channels" and not by it, as an access provider.

On 8 January 2018, Orange withdrew its proceedings against Free, which accepted this withdrawal. e-TF1 and TF1 Distribution asked the Pre-trial judge to give cognizance of the end of proceedings.

4.4.5 Bouygues Telecom

4.4.5.1 Competition

- After Bouygues Telecom and SFR signed an agreement on 31 January 2014 to share a part of their mobile access networks, Orange filed a complaint with the Competition Authority on 29 April 2014 denouncing the allegedly anti-competitive nature of this agreement. Orange asked the Competition Authority for a certain number of interim measures, against Bouygues Telecom and SFR, notably the suspension of the agreement. The Competition Authority rejected Orange's claim for interim measures in a decision dated 25 September 2014, referring the case for investigation on the substantive issues. The Paris Court of Appeal rejected Orange's claim for annulment and reversal in a judgement dated 5 February 2015. After Orange lodged an appeal, the Paris Court of Appeal's decision was upheld by the *Cour de Cassation* (French Supreme Court) in a judgement dated 4 October 2016. Orange withdrew its claim on the merits on 25 January 2018, and the Authority acknowledged this withdrawal in a decision dated 31 January 2018.
- The Numericable group made commitments concerning the co-investment contract to deploy a FTTH (Fibre-to-the-home) network in very dense areas concluded with Bouygues Telecom on 9 November 2010, in relation to the Competition Authority's decision of 30 October 2014 authorising the Numericable group's takeover of SFR. Bouygues Telecom complained about the failure to comply with these commitments that resulted in a self-referral by the Competition Authority on 5 October 2015. The Competition Authority underlined the seriousness of the breaches in performing the said commitments in a decision dated 8 March 2017 and imposed a fine of €40 million on the Altice/SFR group, and several orders which are subject to daily fines for delayed performance. The Authority's decision and fine was upheld by a decision of the *Conseil d'État* (Supreme Administrative Court) on 28 September 2017. Bouygues Telecom started arbitration proceedings against SFR in October 2017 concerning the co-investment contract to deploy the above-mentioned FTTH^a network. Bouygues Telecom withdrew its claims to the Arbitral Tribunal within the scope of a Memorandum of Agreement signed in December 2018 between Bouygues Telecom and the Altice/SFR group ending a number of disputes.
- In November 2014, Bouygues Telecom brought proceedings against Free Mobile in the Paris Commercial Court for unfair competition for the bandwidth throttling on some of the mobile internet services that Free Mobile provides via its roaming agreement with Orange. The use of the internet with this level of bandwidth is so degraded that access to the internet is compromised. Bouygues Telecom accused Free Mobile of breaching European regulations on net neutrality^b, and claimed damages estimated at €719 million. Counsels' speeches were heard during the second quarter of 2018. On 1 March 2019, the Paris Commercial Court dismissed all the claims brought by Bouygues Telecom and ordered it to pay the legal expenses of Free Mobile, which total €350,000.

- Bouygues Telecom served proceedings on NC Numericable and Completel before the Paris Commercial Court in July 2015, challenging a certain number of practices by these companies regarding access to Numericable's cable network. Bouygues Telecom was claiming the cancellation of the disputed contractual terms and invoicing, as well as the damages for its loss. Numericable counter-claimed for the payment of various amounts against Bouygues Telecom. A settlement agreement was signed to end the proceedings. Bouygues Telecom, NC Numericable and Completel withdrew their reciprocal claims before the Commercial Court in a Memorandum of Agreement signed in December 2018 by Bouygues Telecom and the Altice/SFR group to end a number of disputes.
- In November 2015, Free brought proceedings against Bouygues Telecom in the Paris Commercial Court for unfair competition concerning the communication by Bouygues Telecom in relation to its ADSL offer and is claiming damages for its prejudice estimated at €275 million.

4.4.5.2 Regulatory matters

- Bouygues Telecom lodged a claim on 23 May 2013 with the *Conseil d'État* for ultra vires in respect of Decree 2013-238 of 22 March 2013 (amending decree n° 2007-1532 of 24 October 2007) setting the fee payable for the 1800 MHz frequencies. Bouygues Telecom sought the annulment of this decree, which sharply increased the fixed portion of the usage fee for 1800 MHz frequencies. The *Conseil d'État* annulled this decree in a decision dated 29 December 2014. Since this annulment, the fee for the 1800 MHz frequencies has been the subject of a new decree (decree n° 2018-825 of 28 September 2018) which kept the fixed part of the fee at the previous level.
- Bouygues Telecom made a preliminary claim to the Prime Minister, following a letter dated 4 December 2015, to obtain an indemnity for its loss due to the failure to supervise Free Mobile's roaming. Bouygues Telecom's prejudice is assessed at €2.285 billion. As it did not receive a reply, Bouygues Telecom filed a claim for damages in April 2016 before the Paris Administrative Court. In a judgement dated 24 January 2018, the court decided that no new grounds could be raised after 30 April 2018. These proceedings are ongoing.
- In a decision dated 19 October 2016, Arcep began sanction proceedings for failing to respect the roll-out schedule of a shared 2G/3G network in blind spots. The proceedings are still ongoing.
- In a decision dated 21 February 2018, Arcep began an investigation on the basis of articles L. 36-11 and D. 594 of the French Post and Electronic Communications Code concerning the implementation of the European Regulation n° 2015/2120 on an open Internet. These proceedings are continuing.

(a) Fibre-To-The-Home.

(b) Regulation (EU) 2015/2120 of the European Parliament and Council, article 3, §3, and guidelines of the Berec (Body of European Regulators for Electronic Communications) for implementation by national regulators of European rules on net neutrality, p. 21, §77.

4.4.5.2 Contracts

- Tel and Com, a specialised distributor whose contract was not renewed when it expired on 31 December 2013, filed a claim against Bouygues Telecom in the Paris Commercial Court on 10 November 2015 alleging the sudden break off of an established business relationship. Tel and Com was disputing the starting point for the notice period, alleging that Bouygues Telecom failed to give a sufficient period of notice. Tel and Com was claiming the sum of €125.7 million to indemnify its prejudice, as well as €8.7 million which it considers it is owed under the contract. The Commercial Court handed down its judgement on 16 October 2017 concluding that the 9-month notice period was insufficient. The Court therefore ordered Bouygues Telecom to pay €7.7 million as damages. However, the Court also found that Tel and Com owed around €9.1 million to Bouygues Telecom for contractual breaches, and ordered Tel and Com to pay Bouygues Telecom a sum of around €1.4 million. The Court also ordered the immediate execution of the judgement. Tel and Com lodged an appeal against this judgement and the proceedings are before the Paris Court of Appeal.

- Bouygues Telecom is a party in proceedings brought by the French Economy Minister against Apple in the Paris Commercial Court based on article L.442-6 paragraph 2 of the French Commercial Code, against some clauses in the contract to supply handsets between Apple and Bouygues Telecom. The case is continuing.
- A US company that manages a patent portfolio filed claims against Bouygues Telecom in October 2017, and then in January 2018 in the Paris District Court alleging infringement of three patents it claims to own and which are allegedly used in the equipment in its DSL and 4G networks. The plaintiff company is at the moment asking for further information and is claiming financial compensation from Bouygues Telecom. Bouygues Telecom and its equipment suppliers involved in the law suit are contesting the plaintiff company's claims, and in particular the validity of the patents, and is requesting a stay in ruling for two of them pending the outcome of other law suits involving them abroad. The three actions are ongoing.

4.5 VIGILANCE PLAN

4.5.1 Introduction

France's new corporate duty of vigilance law no. 2017-399 passed on 27 March 2017 requires certain companies (including Bouygues SA) to draw up and implement an effective vigilance plan setting out the reasonable vigilance measures taken to identify risks and prevent serious violations of human rights and fundamental freedoms, of health and safety of people and of the environment, resulting from the operations of the company and its subsidiaries or the operations of subcontractors or suppliers with which they have an established business relationship.

These issues are matter of great concern within the Bouygues group. Respect for people and the environment is a fundamental value for the Group and is embodied in specific provisions of its Code of Ethics. The Code of Ethics was updated in 2017, among other things to include this duty of vigilance. It is available on both the Bouygues website and intranet site.

Furthermore, Bouygues' Human Resources Charter also seeks to protect the health and safety of its employees.

A Group-wide CSR Charter for Suppliers and Subcontractors, which was updated in 2015, sets out the key commitments required of suppliers and subcontractors wishing to work with the Group. It is a key driver of the Group's CSR policy. More broadly speaking, the issues covered by the duty of vigilance law are being taken into consideration in the Group's business operations (see Statement on Extra-Financial Performance in Chapter 3 of this registration document) under the dual supervision of Bouygues SA's

Ethics, CSR and Patronage Committee (a Bouygues SA board committee) and the Sustainable Development Committee chaired by one of the three Deputy Chief Executive Officers.

In addition to these arrangements, each business segment has a CSR policy adapted to its own issues, mainly in the form of CSR roadmaps and Quality, Safety and Environment approaches to take into account the specific features of its activities and impacts.

This Bouygues SA vigilance plan covers Group companies and therefore the operations of its five subsidiaries (Bouygues Construction, Bouygues Immobilier, Colas, TF1 and Bouygues Telecom). The plan also covers the operations of suppliers and subcontractors with which the Bouygues group has an established business relationship, where those operations arise from that relationship.

The methodology used to prepare the plan was defined by Bouygues SA using the 2018 plan as a guide. Its content is based on contributions from representatives of the CSR, Legal, Purchasing and Risk Management departments in the Group's business segments. The 2018 plan was submitted for opinion to a committee of some ten representatives of Bouygues' stakeholders (NGO, supplier, trade union, social audit and responsible purchasing experts, etc.) in April 2018. Feedback from the committee's report was used to prepare this second edition of the plan.

4.5.2 Risk mapping/Prevention and mitigation actions/Assessment of suppliers and subcontractors/Report on implementation

Each business segment has mapped its own risks to identify, analyse and rank the key risks that could arise in the three main areas addressed by the law of 27 March 2017. The business segments focused on the risk of serious violations that could arise from their operations or the operations of suppliers and subcontractors with which they have an established business relationship. They therefore addressed the significant risks identified in these areas.

The risk mapping for each business segment is summarised below. It describes the main risk factors, the key prevention or mitigation measures

already in place and any additional measures to be taken, which together constitute the appropriate actions required by the law to mitigate the risks or prevent serious violations.

Many factors that may form part of Bouygues SA's vigilance plan are already discussed in some detail in Chapter 3 of this registration document (Statement on Extra-Financial Performance). Readers should therefore refer to that chapter for further details on certain issues. Furthermore, this text is merely a summary and some existing measures may not be described below.

4.5.3 Bouygues Construction

Human rights and fundamental freedoms

Bouygues Construction is exposed to the risk of human rights violations, mainly by its suppliers and subcontractors, particularly outside France (use of illegal labour, child labour, forced labour, etc.).

Bouygues Construction addresses this risk through its Top Site labelling scheme, which encompasses a set of stringent requirements and legal controls (see chapter 3). Top Site has been deployed at its major construction sites since 2018. The Group's CSR Charter for Suppliers and Subcontractors is also appended to all Bouygues Construction contracts. The charter imposes certain requirements and failure to comply can lead to sanctions that may go as far as contract termination.

External audits are performed under a framework agreement with SGS to ensure that its partners comply with these CSR obligations.

Bouygues Construction's internal regulations do not allow identity papers to be kept on file and require site workers to be provided with a safe place where they can store and access these documents.

Bouygues Construction also uses "Attestation Légale"^a, a platform for collecting administrative documents (some of which concern the prevention of illegal labour), to make sure that its subcontractors comply with their French legal obligations.

Lastly, to combat illegal labour, Bouygues Construction carries out identity checks at its construction sites, including the identity of its subcontractors.

Specific practices and procedures are in place to protect the personal data of both Bouygues Construction Group employees and third parties. A compliance programme is also underway to bring these practices and procedures into line with the provisions of the new European Data Protection Regulation (GDPR) which came into effect in May 2018.

A formal application has been made to the CNIL (the French Data Protection Authority) for BCR^b (Binding Corporate Rules) certification.

A dedicated structure is in place to ensure the security of employees working on construction projects in France and abroad. The security policy is based on supervision, analysis, training and monitoring of employees and partners in sensitive geographic areas.

Health and safety

Bouygues Construction operates in a complex environment where the key risks involve workplace accidents and occupational illnesses, both in Bouygues Construction's own operations and those of its subcontractors. These risks are managed through Bouygues Construction's health and safety policy, which is rolled down to all operating entities through an Afnor-certified health and safety management system based on either Ohsas 18001 or ISO 45001 standards. Bouygues Construction has also drawn up twelve health and safety fundamentals, which are adapted to and applied by all entities. For example, a policy on the wearing of personal protective equipment (PPE) is applicable throughout the Bouygues Construction group. Training initiatives for the relevant operating entities and support functions are managed at Bouygues Construction group level. Health and Safety clauses are included in framework agreements with temporary employment agencies in France. R&D and Innovation activities contribute to this policy through, for example, trials with devices such as "zeroG exoskeletal arms" or the development of a prototype for a new generation of form panel (B18)^c.

Bouygues Construction's health and safety policy is completed by an accident and incident reporting procedure.

Minimum standards apply to housing or accommodation provided to Bouygues Construction site workers and subcontractors, which comply with the recommendations of the International Labour Organisation (ILO).

(a) <https://www2.attestationlegale.fr/>.

(b) Intra-group data protection policy regarding the transfer of personal data outside of the European Union.

(c) Metal or wooden formwork used in the construction of concrete or rammed-earth walls.

Regular inspections are carried out and compliance with these standards are a mandatory criterion for obtaining the Top Site label.

Health and safety standards are imposed on subcontractors and suppliers through the CSR Charter and, where necessary, specific contractual provisions. Supplier assessments are performed through external audits (International Purchasing portals and SGS framework agreement).

Environment

The main risk involves environmental pollution of sites (waste, water, etc.) and surrounding areas (sound, air quality, water discharge, etc.).

This risk is addressed through two internal processes:

- ISO 14001 certification, which is a non-financial performance metric measured as part of the annual non-financial reporting process. The information is audited centrally on-site by an independent auditor (EY);

- the Top Site label, which has been deployed since 2018 at Bouygues Construction's major sites (that generate more than €3 million or last more than six months), which requires these sites to have a documented environmental analysis and an associated prevention plan. It is an important driver and means of preventing environmental risk.

Supplier and subcontractor assessments are performed using Afnor's Acesia approach.

As part of a policy to source responsible materials for its operations, Bouygues Construction has forged a partnership with WWF France for its timber sourcing. WWF France is supporting Bouygues Construction in setting up a system to reduce the negative impacts of its timber sourcing on the world's forests, the people who depend on them and the biodiversity they shelter. This partnership will lead to a formal timber strategy and various actions to drive the strategy forward over time, including training modules and purchasing guides for buyers.

4.5.4 Bouygues Immobilier

Human rights

Bouygues Immobilier may be exposed to the risk of human rights violations (child or forced labour) by listed suppliers with which it enters into framework agreements. To address these risks, Bouygues Immobilier performs CSR assessments of its suppliers using the EcoVadis platform. It also includes specific clauses in its contracts requiring suppliers to respect fundamental rights and to comply with the terms of the Group's CSR Charter for Suppliers and Subcontractors.

Bouygues Immobilier's contractors may also be exposed to the risk of undeclared work. To address these risks, Bouygues Immobilier has set up a system encompassing various types of measures, including:

- Training Bouygues Immobilier employees present on construction sites;
- Information campaigns aimed at the relevant employees (via the Intranet);
- Standard contractual clauses;
- Requirement to carry an official construction worker ID card on worksites;
- Accreditation system for subcontractors;
- Subscription to the "Attestation Légale" platform.
- In Poland and Belgium, Bouygues Immobilier has strengthened its arrangements to combat undeclared work. Likewise, these contractors may be exposed to the risk of violations of fundamental workers' rights, mainly due to their use of posted workers. Other than the measures described above, Bouygues Immobilier obtains lists of all posted workers employed on each site and displays information about workers' rights in their living quarters in the language spoken on site.
- For service providers (non-contractors), the risk of undeclared work is addressed through the standard clauses contained in service provision agreements.

Bouygues Immobilier protects the personal data of its customers and prospective customers and has implemented specific arrangements as

regards compliance with the GDPR. A Data Protection Officer (DPO) has been appointed and is responsible for compliance with the GDPR.

Several measures have been taken to prevent the risk of violations of the fundamental rights of its employees, including company agreements, internal procedures and training.

Health and safety

The risks related to health and safety of people are those inherent in any building site. These risks may be aggravated by the use of posted workers. To address these risks, Bouygues Immobilier has implemented a set of measures similar to those described above in the section on human rights. The focus is on safety training actions. In France, the legal requirement to have an on-site Safety and Health Protection Officer is a crucial element in preventing such risks. This is also the case in Morocco. In Poland, a health & safety plan is drawn up and signed by the main contractor before the worksite begins. In Belgium, the employer also appoints a safety officer in accordance with regulations.

Suppliers considered to be at risk are also assessed on these issues through EcoVadis CSR assessments.

Environment

Environmental risks, mainly related to ground pollution, are among the issues taken into account by Bouygues Immobilier when it purchases land. Bouygues Immobilier has implemented environmental risk procedures, including geotechnical and environmental studies prior to purchasing land, and training to raise employee awareness about these risks. Specific contractual clauses are included in land purchase contracts. In the event of land pollution, management and remediation plans are implemented.

4.5.5 Colas

Colas has two core business activities: roads (construction and maintenance of road infrastructure, production and sale of construction materials) and specialised activities, of which railways (see Chapter 2 Business activities of this document).

Human rights

Colas has very extensive international operations in over fifty countries and is therefore exposed to the risk of human rights violations (rights of foreign employees, local populations, etc.) in some countries considered to be at risk in this area. Based on the Human Rights Risk Index, Colas has mapped its risks by country to identify which of those countries where it has a major operation (based on revenue and headcount) should be considered as "at risk". The risk mapping shows that those countries considered as "at risk" account for 4% of its sales and 10% of its headcount. Risks may arise from Colas' own operations or those of its subcontractors or suppliers, especially as Colas works with local partners.

In 2018, Colas began to implement various measures targeting the most exposed countries, in co-ordination with the responsible development manager. These measures include external audits to identify risks and implement appropriate action plans, creation of a dedicated internal social network, *ad hoc* vigilance measures proposed by the site manager (for sites of over €100 million), *ad hoc* vigilance measures for all contract bids over €50 million. These initiatives will be stepped up in 2019. Compliance with these vigilance measures will be audited internally by the Internal Audit department or externally by a specialist firm. Specific arrangements are implemented for those suppliers and subcontractors identified in the risk mapping as most at risk.

Lastly, in 2018, Colas introduced its "One Colas, One Security" approach, which aims notably to protect employees against malicious acts. The approach includes the deployment of a general security plan for international sites.

Health and safety

Colas' business activities involve safety and occupational health issues. As regards safety, the most significant risks involve workplace accidents, such as traffic accidents, crush injuries, machinery-related injuries and falls from height. As regards health, the most significant risks involve occupational illnesses, mainly musculoskeletal disorders (MSD). These risks may affect Colas employees or those of its subcontractors.

Colas has identified these risks and ranked them in order of importance through its risk mapping process. Several prevention actions have been taken in these areas, including health & safety training, a safety checklist,

information and prevention campaigns (e.g. Safety Week, the 2018 edition of which addressed addictions), a group health & safety policy (internal procedures adapted at operating entity level), and CSR clauses in standard terms and conditions of purchase.

The effectiveness of these measures is assessed through monthly reports, internal audits (e.g. inter-subsidary cross-audits) and external audits (e.g. CSR audits performed by EY). Other measures contribute to the Safety policy, such as the "Goal Zero" campaign in North America and ISCI at Spac, a Colas subsidiary.

As regards subcontractors and suppliers, some measures are taken at local level. They include health and safety commitments required of the subcontractor during the tendering process, and regular reference to the Group's CSR Charter for Suppliers and Subcontractors in framework agreements negotiated with suppliers. Colas will step up the roll-out of this system in 2019 and strengthen it further based on the risk mapping, in order to assess the key suppliers with which it has an established business relationship. Colas already imposes safety requirements on its listed temporary employment agencies.

Environment

Colas is exposed to environmental risks related mainly to potentially polluting or hazardous emissions. These risks mainly involve Seveso classified sites (or international equivalents), various production facilities, premises and work sites, particularly those storing hazardous chemicals, manufacturing processes exceeding a temperature of 250°, and the transportation of hazardous goods or waste.

These risks are addressed through traditional management tools (feedback from indicators and action plans), ISO 14001 audits and internal procedures (Environment checklist), the inclusion of CSR clauses in standard terms and conditions of purchase, and reference to the Group's CSR Charter for Suppliers and Subcontractors in framework contracts negotiated with suppliers.

In 2019, Colas will continue to implement more robust vigilance measures at its main, potentially most dangerous sites, using a methodology based on a multi-criteria matrix (source of danger, vulnerability of environments and populations, etc.). New measures will be introduced in 2019 at several levels, including site, head entity and head office level. They will include measures proposed by the site managers and approved by the Environment department, systematic ISO 14001 certification (or equivalent), internal and external audits, improvements to the Environment checklist, and a more structured CSR approach in the Purchasing process and towards subcontractors.

4.5.6 TF1

Foreword

TF1 operates in a highly regulated sector and is supervised by the French broadcasting authority (CSA) as well as by the French advertising regulator (ARPP). In addition, journalists are subject to strict ethical obligations^a.

Human rights

Due to the nature of its operations (production of news or other programmes, purchase of programmes, advertising, etc.), TF1 may be exposed to the risk of fundamental rights violations (protection of children, respect for privacy, presumption of innocence). These issues are strictly controlled through:

- oversight by the General Counsel's department, or the News or Broadcasting department, as regards compliance with the commitments made by TF1 (specifications and agreements signed with the CSA, journalists' code of conduct, etc.), and as regards programme ethics and the protection of young viewers;
- introduction of a committee responsible for the integrity, independence and pluralism of information and programmes, as required by the law of 14 November 2016;
- preventive viewing of various programmes (by a psychologist for children and an *ad hoc* committee), and ensuring that programmes are appropriately rated;
- submission of advertising material, where necessary, to the ARPP and the CSA (advertising) for a prior opinion;
- a system of control over TF1 websites and community sites (moderation system, safe web browsing).

The risk of human rights violations (child labour, compensation, etc.) in purchasing or the production of products sold by the Entertainment division (games, collections, DVDs, etc.), in the home shopping business, or in relations with service providers, is addressed through (i) mandatory contractual commitments made by suppliers and service providers (standard "Ethics and Compliance" clauses in the terms and conditions of purchase), (ii) CSR questionnaires accompanied where appropriate by (iii) EcoVadis assessments or sometimes on-site supplier and service provider audits.

For teleshopping, TF1 has completed these measures with:

- the inclusion of general and specific obligations in the standard terms and conditions of purchase.
- governance of imports from Asia through "Quality and Conformity", "Quality Testing", "Inspection and Audit" (including international labour law) and "Ethics and Compliance" clauses.
- quality controls performed by local approved agents (AKA, Outspring, Innomega and DAG Import) with inspections of factories and testing laboratories by approved firms (TUV SUD and SGS). In addition to these controls, the Téléshopping (home shopping) team also makes on-site inspections several times a year.

For US and European suppliers, the standard contracts also contain "Compliance with Labour Regulations" and "Ethics and Compliance" clauses.

In 2018, TF1's responsible purchasing approach was rewarded with the renewal of its "Responsible Supplier Relations & Purchasing" label.

The issue of personal data protection (own operations, operations of subcontractors and suppliers) is also subject to specific procedures and practices, which have been strengthened to bring the TF1 group into line with the new regulations set out in the GDPR. Specific procedures limiting the exchange of personal data are in place to protect children.

Health and safety

- Health and safety, both physical and psychological, are important issues for TF1. As regards the safety of its journalists (particularly in conflict zones), their technical support staff, employees in general as well as candidates taking part in some programmes, TF1 strives to anticipate and as far as possible mitigate these risks through appropriate measures. Various procedures have been implemented, particularly in (i) safety and security of sensitive TV productions, (ii) prevention of risks for news reporting teams, and (iii) control and access to buildings or sensitive sites. Employees exposed to certain types of risk are given appropriate training and special equipment may be made available to them. Lastly, insurance policies are regularly reviewed by the Legal and Human Resources Departments. The activity of suppliers or subcontractors can also be assessed by including specific clauses in their contracts or through on-site inspections.
- The specific risks of intrusion and attack, which are potentially high at the Boulogne-Billancourt premises (Tour and Atrium buildings), have prompted TF1's security department to set up a three-pronged action plan: (i) security improvement work was done in 2018, such as reinforcing access points, anti-ram vehicle barriers and burglar deterrents; (ii) strengthening its dedicated, fully trained staff, particularly the fire and security teams, with an additional level of expertise (training of all security guards in self-defence with regular on-site drills, equipment review, damage control training for all safety, fire and first aid staff); and (iii) strengthening technological resources over a three-year period from 2019 (total overhaul of the CCTV and facial recognition systems, total overhaul of the fire detection system, etc.).

The risk of harm to consumer health is also an area of concern in TF1's retail activities (home shopping, games, publishing, etc.). These risks are addressed through compliance tests (French and European standards) performed by external service providers (inspection firms, consultancy firms).

(a) Autorité de régulation professionnelle de la publicité

Environment

Environmental risks (mainly waste management) may arise from the operations of suppliers or subcontractors involved in the production of various programmes or in the transportation of products used. These risks are addressed through the responsible purchasing policy, (responsible

supplier relations charter/responsible purchasing policy), supplier assessment questionnaires, the inclusion of appropriate clauses in standard terms and conditions of purchase and EcoVadis assessments with remedial action plans. Buyers are also given appropriate training (all buyers in the purchasing department, other than TV rights, have received training in responsible purchasing and CSR since June 2015).

4.5.7 Bouygues Telecom

Human rights

Human rights risks (minimum employment age, working time, rest time, pay, disciplinary practices, etc.) may arise from the operations of foreign suppliers or subcontractors of Bouygues Telecom branded products (router, SIM card, goodies), and from the operations of foreign handset suppliers and call centre providers in some countries.

These risks are addressed through the responsible purchasing policy and, more specifically, through the Bouygues group's CSR Charter for Suppliers and Subcontractors.

In practical terms, the protection measures taken consist of:

- desk audits performed by EcoVadis for suppliers (contracts over €100,000);
- including specific contractual CSR clauses imposing certain obligations on suppliers and appending the Group's CSR Charter for Suppliers and Subcontractors to all contracts;
- on-site audits of social performance by a specialist firm (SGS) for all suppliers of Bouygues Telecom branded products and for a sample of handset suppliers and call centre providers.

There is also a specific risk of human rights violations (minimum age, working hours, etc.) related to the sourcing of conflict minerals used to manufacture electrical and electronic equipment (routers, handsets, etc.). This risk, which involves suppliers, is addressed by including CSR clauses in contracts and by EcoVadis audits;

Given its business activities, Bouygues Telecom is exposed to personal data protection risks (own and foreign suppliers' operations). These risks may involve data collection methods, respect for personal rights or data storage terms. Bouygues Telecom has always paid due care and attention to these issues and monitors them through a "dedicated entity" responsible for compliance with legal requirements and relations with the CNIL (French Data Protection Agency). There is a genuine governance framework in this respect covering documentation of data processing, data classification, approval

committees, regular awareness sessions for employees or subcontractors, audits of subcontractors, and procedures to be applied in times of crisis. Bouygues Telecom has also implemented the provisions of the GDPR.

Health and safety

As is the case for human rights, health and safety risks may arise from the operations of some of Bouygues Telecom's suppliers and partners. These risks may involve working conditions at the premises of suppliers or subcontractors: factories manufacturing Bouygues Telecom branded products or handsets, call centre providers, companies working on fitting out or dismantling Bouygues Telecom telecoms sites or stores.

These risks are addressed through the same measures described above for "human rights". Specific safety arrangements are in place for workers called out to network sites. They are also given safety training.

Risks related to exposure to radio frequencies (electromagnetic waves) are monitored and taken into account at the outset. The benchmark exposure level is that applicable to the general public. The control system includes various types of measures (scientific intelligence, internal procedures to be applied on site, training for relevant employees, health & safety rules imposed on subcontractors, etc.). In addition, a series of additional measures will be deployed in 2019 to better take this type of risk into account, including a review of site demarcation, change in output power, new types of mobile tower, etc.

Environment

Environmental risks may arise during the transportation of waste (site dismantling and equipment resale). The measures in place include assessing suppliers and subcontractors (EcoVadis assessment procedure with monitoring and analysis of assessment outcomes). An audit of the main service provider is scheduled for early 2019.

4.5.8 Whistleblowing mechanism

A whistleblowing system was introduced in 2006 for Bouygues SA and the Group's five business segments and is included in the Code of Ethics.

The system was supplemented and updated to take into account legislative changes introduced in the law of 9 December 2016 (the Sapin 2 law) and the law of 27 March 2017 requiring the preparation and implementation of a vigilance plan. It now forms part of the Bouygues group's Code of Ethics and an appendix to the Code of Ethics, which is available on the intranet sites of Bouygues SA and the business segments, and on the corporate website bouygues.com. The appendix describes the procedure for raising and processing whistleblower alerts.

This procedure applies to all Bouygues group entities. It is a single mechanism encompassing all situations that might give rise to an alert as provided for by French law. The procedure was drawn up after consultation with

Bouygues SA's trade unions. The employee representative bodies in the Bouygues group's legal entities were also consulted.

Although the whistleblowing system is a single system at Bouygues group level, alerts are dealt with at business segment level as the business segment Ethics Officer is the designated officer for dealing with alerts (unless the whistleblower considers that the situation goes beyond the scope of the business segment, in which case the alert may be reported to the Group Ethics Officer instead). In early 2018 the Group set up an internal platform to make it easier for whistleblowers to use the system and to centralise alerts.

The platform is available at the following address:

<https://alertegroupe.bouygues.com>

4.5.9 Monitoring the vigilance plan

Bouygues SA's vigilance plan forms part of a continuous improvement approach. Various metrics for each business segment and each of the three themes (Human Rights, Health & Safety, Environment) are used to monitor progress in the measures implemented under the plan.

More generally, the Bouygues group has set up an internal control and risk management system, the main components of which are described in section 4.6.2 of this registration document. These principles apply to all the Group's business segments and may be supplemented at business segment level to take into account any specific requirements of each business activity.

This system will therefore include self-assessments at business segment level enabling the operating entities to assess how well the measures in the vigilance plan have been applied. Action plans will then be implemented

where necessary. As indicated in Chapter 3 of this document, the monitoring system also includes annual reporting on key information in the three areas addressed by the law of 27 March 2017.

As regards suppliers and subcontractors, the monitoring system covers both the results of self-assessment questionnaires and the assessments carried out by EcoVadis or any other external service provider. They are supplemented as required by the results of audits and controls performed by the business segment in accordance with the provisions of the Bouygues group's CSR Charter for Suppliers and Subcontractors.

Based on the conclusions of the monitoring measures taken, each business segment will assess the effectiveness of its risk prevention or mitigation measures and will complete or adapt the system as required.

4

4.5.10 Conclusion

The first vigilance plan was presented to a panel of stakeholders in 2018. The business segments are gradually defining and implementing additional measures and action plans to strengthen vigilance and take into account the recommendations made by stakeholders. A new inter-business segment working group will be set up in 2019 to:

- better determine the priorities;
- better define the principles to be implemented and general rules to be observed;
- share best practices;

- continue to obtain opinions and suggestions from stakeholders;
- co-ordinate group-wide initiatives between business segments and promote common action.

The working group will monitor the plan and develop it as required in order to ensure continuous improvement in the prevention and management of risks in the areas of human rights, health and safety of people, and the environment.

4.6 INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES RELATING TO THE PREPARATION AND PROCESSING OF ACCOUNTING AND FINANCIAL INFORMATION

4.6.1 Introduction

Bouygues and its subsidiaries are acutely aware of the importance of internal control and risk management. These processes help give reasonable assurance as to the achievement of the Group's principal objectives.

Risk management has always been an essential part of the Group's corporate culture. It is a key concern of the Group's managers and is based on internal control systems inspired by principles that have been applied across the Group's business segments for many years.

This is especially the case as regards the preparation and processing of accounting and financial information, given that the quality and reliability of the Group's accounting documents and the financial information communicated to investors may be of great importance.

The scope of this report covers the Bouygues group (parent company, Bouygues Construction, Bouygues Immobilier, Colas, TF1, and Bouygues Telecom).

4.6.2 Bouygues group internal control and risk management

The Internal Control and Risk Management Reference Manual of the Bouygues group is based on the reference framework published by the AMF in 2007.

The Manual was first updated in 2010 after the AMF reference framework was revised to accommodate changes in laws and regulations on risk management as well as the AMF Recommendation on audit committees.

It is regularly amended and improved to take account of changes and to reflect feedback from the business segments.

The Reference Manual covers the general principles of internal control and risk management, and internal control principles relating to accounting and finance. The main objectives are to:

- define the Group's key internal control principles;
- better identify common best practices across its business segments;
- develop a consistent approach to major issues affecting the entire Group.

Each business segment has further developed this Group-wide approach by analysing the specific aspects of its own internal control system and supplementing the Manual with principles specifically related to its own activities, especially on accounting and financial matters.

The Reference Manual includes a section on "Risk management principles and methods" that encompasses the key stages of risk management:

identification, classification, assessment, prioritisation, processing, reporting and communication.

The business segments use this approach to check, on a regular basis, the degree to which they are applying internal control principles relating to accounting and financial matters.

The accounting and financial internal control self-assessment campaigns conducted within each business segment focus on the risks and challenges identified at both Group and business segment level.

Three accounting and financial issues were addressed across all business segments in 2018:

- Treasury: financing and financial instruments;
- Procurement and trade payables;
- Controls and verifications.

Each business segment completed the self-assessment by adding issues of their choice to reflect their own perceptions of risk. Examples of accounting and financial issues addressed by one or other of the business segments include application and control of accounting risks; provisions and commitments; revenue and trade receivables; subcontracting; and treasury, financing and financial instruments.

4.6.3 Preparation and processing of financial information

One of the key objectives of internal control is the reliability of accounting and financial information. Within the Bouygues group, this is addressed through comprehensive systems and a set of stringent procedures.

Quarter-end close

Each business segment has its own accounting close procedures, which must dovetail with the Group's consolidation process. Interim financial statements are produced quarterly, and consolidated at Group level.

Accounting consolidation process

At parent company level, a major role of the Group Consolidation and Accounting department is to establish and implement consistent rules and methods for consolidation across the Group as a whole. It also provides support to the business segments in managing their activities on a consolidated basis, and prepares the parent company financial statements. Consolidation is carried out quarterly, using intermediate consolidations. Each business segment prepares a consolidation at its own level using identical methods defined by the Group Consolidation and Accounting department, which then carries out the overall consolidation of the Group's financial statements.

The consolidation is processed at each level using a specific software programme widely used by listed companies; all of the business segments use it to prepare their intermediate consolidation. Using consolidation software makes it possible to exercise rigorous control and apply standardised procedures during the preparation of the financial statements.

In addition to the computerised accounting system, the Group Consolidation and Accounting department has produced a Group consolidation handbook containing the rules and procedures applicable to consolidation throughout the Group. The handbook is an important reference tool for preparing consolidated financial statements, and is accessible to all accounting staff Group-wide on a dedicated intranet site that also describes the accounting policies and elective treatments applied within the Group.

The Group Consolidation and Accounting department also has an educative and co-ordinating role, organising seminars and distributing circulars to make sure the business segments are kept up to date on accounting rules and methods. Special emphasis is placed on the interpretation of, and developments in, international financial reporting standards. This in turn helps to lock in consistency in the way financial statements are prepared.

4.6.4 Management control/Reporting

The management control system is organised such that no Group company falls outside the management control process. Any company not subject to control at business segment level is controlled by the parent company.

The principles governing operational relations between the parent company and the business segments are summarised in a regularly-updated document, issued by the Group Strategy, Development and Financial Control department, to which all the business segments refer.

The parent company exercises systematic control over the financial management of its subsidiaries via the annual plan (including updates to the plan), combined with monthly performance indicators sent directly to Group senior management and centralised by the Group Strategy, Development and Financial Control department.

The management cycle and control/reporting procedures provide a regular flow of information and dialogue between the parent company and the business segments. Plans can be adjusted and the parent company is always in a position to exercise control over how the subsidiaries are being managed and intervene at an early stage in strategic decision-making.

4.6.5 Financial communication

At Bouygues SA level, the Group Investor Relations department handles relations with investors and financial analysts (in conjunction with senior management), providing the markets with the information they need and offering feedback to shareholders and analysts.

Great care is taken in preparing press releases, the half-year report and the Registration Document, which (along with presentations for financial analysts and investors) the Group regards as major vectors of its corporate image. The Group published its first Integrated Report in 2018.

Various departments are involved in the process of preparing these documents, including Finance, Consolidation, Corporate Communications and Legal Affairs. They are approved by senior management, and audited by the statutory auditors. The quarterly press releases are approved by the Accounts Committee and the Board of Directors.

Procedures are in place to ensure that employees are aware of insider dealing regulations.

The other listed companies in the Group (Colas, TF1) handle their own investor relations.

4.6.6 Key players in control

In addition to the essential role played by the departments mentioned in sections 4.6.3, 4.6.4 and 4.6.5 above, many other players are involved in the internal control and risk management process as regards accounting and financial matters.

Senior management

Senior management teams are responsible for overseeing the internal control system as a whole, defining strategic priorities, and ensuring that internal control and risk management procedures are designed and implemented in a manner appropriate to each company's development. Bouygues SA senior management in particular plays an important role in financial communication.

Accounts Committees

The Bouygues SA Accounts Committee and its remit are described in the "Corporate governance" section of this report (see section 5.3.4.1). Each business segment's Board of Directors has an Accounts Committee with similar responsibilities to those of the Bouygues SA Accounts Committee.

In addition to their role relating to elective accounting treatments and examining the financial statements, their remit also includes monitoring the effectiveness of internal control and risk management systems. Accounts Committees at business segment level review internal audit programmes and findings as well as risk mapping exercises, making them a key component in the internal control and risk management system.

Internal Control and Audit departments

The parent company has a Group Risks, Internal Control and Audit department, which plays a major role in developing the Group's internal control policy and has specific responsibility for:

- directing the Group's internal control and audit functions;
- coordinating the business segments' internal control, risk management and audit activities.

The Group Internal Audit Charter states that the main role of internal audit is to provide senior management with reasonable assurance that organisational principles and internal control and risk management systems are reliable and effective. In fulfilling that role, Internal Audit evaluates the integrity, reliability, completeness, traceability and protection of accounting, financial and management information.

The business segments also have dedicated internal control functions. Accounting self-assessment campaigns are conducted under the direct responsibility of each accounting department.

Each business segment (with the exception of Bouygues Telecom, where internal audit is handled by the Bouygues SA Audit department) has its own Audit department.

Group Treasury and Finance Department

The Group Treasury and Finance Department at parent company level has a lead role in coordinating policy in this area; it establishes management principles at Group level, and ensures that they are applied.

These rules cover the cash pooling vehicles Bouygues Relais and Uniservice, which are managed at parent company level, and cash pools operated by the business segments. They also apply to financing arrangements for the subsidiaries.

Key management rules relate to issues such as internal security (counter-signature for payments, etc.); external security (secure cheques, payment by promissory note, etc.); liquidity (confirmed credit facilities, investment of surplus cash, etc.); counterparty quality; legal documentation for credit agreements; and assessments of any hedging of interest rate risk and foreign exchange risk.

Statutory auditors

In connection with their statutory audit engagement, the auditors perform four reviews a year (two of which, for the first-quarter and third-quarter financial statements, are limited reviews). They present a summary of their work to the Audit Committees (of the parent company, and of the lead company of each of the business segments).

4.6.7 Oversight

Internal control systems must themselves be subject to control by means of periodic assessments, and should also be subject to a constant process of improvement.

Audit departments at parent company and business segment level have always assessed the effectiveness of internal control as part of their core mission, and are actively involved in this improvement process.

The key concern is always to develop and implement action plans whose primary objective is to help the Group exercise better control over its operations, and to provide ever more reliable accounting and financial information.

4.7 INSURANCE – RISK COVERAGE

4.7.1 Organisation and policy

The insurance policy is handled by separate insurance departments in each of the five business segments with a significant degree of autonomy. A central Risks and Insurance department provides leadership and coordination on a Group-wide basis.

Policies are usually contracted by the insurance departments at business segment level, reflecting the great diversity of risks to which each business is exposed. Some insurance programmes that are less sensitive to the specific needs of individual businesses are centralised in the interest of cost-effectiveness.

The Group and its subsidiaries operate a loss prevention policy, developing new measures to further reduce the probability and impact of accidents and claims. This policy also reduces the overall cost of risk, improving the Group's position when negotiating premiums and cover with its insurers.

A high proportion of the Group's policies are compulsory, for example third-party motor insurance and (for buildings in France) cover such as ten-year latent defect insurance, reflecting the importance of construction activities in the business mix. These policies can account for up to 75% of the insurance budget of the business segment most exposed to those risks.

Looking beyond compulsory insurance, Group policy is to transfer significant risks to the insurance market by establishing stable relationships with leading insurers, and to negotiate policies on the best possible terms as regards cover and cost.

Insurers are selected using key criteria such as financial security, technical expertise and administrative efficiency. The main programmes are placed via specialist insurance brokers with leading insurers such as Allianz, AxaXL, Chubb, Covéa, Generali, MSIG, SMABTP and Zurich.

Worst-case scenarios are used in determining the level of cover required, subject to restrictions imposed by insurance market capacity and the cost of cover.

Deductibles on these policies are set at entity level to ensure an optimum trade-off between the likelihood of claims and the premium reductions that can be obtained from insurers by increasing the deductible. On this basis, some risks are insured with no deductible, while others are subject to a higher deductible of up to €2 million for some property insurance claims.

Total premiums paid to property and casualty insurance companies vary depending on the insurance contracts bought for specific large-scale projects. However, this amount represents less than 1% of the Group's total sales.

The Bouygues group owns a captive reinsurance company, Challenger Réassurance, which may be involved in some of the risks to which the Group is exposed. This company is governed by Luxembourg law and is supervised by the Luxembourg insurance regulator.

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4.7.2 Core insurance programmes

To prevent certain information being used to the detriment of the Group and its shareholders, especially in legal disputes, the amount of premiums and terms of cover are kept strictly confidential, especially in the case of liability insurance.

- **Property insurance:** Cover is generally set on the basis of property value; where this is impossible, cover is set at a level corresponding to the worst-case scenario subject to market constraints.

Generally, when damage to insured assets could lead to a business interruption, insurance is taken out to cover the financial consequences, such as operating losses and/or additional costs. The amount of cover reflects the expected downtime at the damaged site based on the worst-case scenario and on the recovery plans in place.

- **Contractor's insurance:** Cover is generally equal to contract value. Exceptionally, cover for some geographically dispersed projects may be limited to the cost of repairing damage incurred in a worst-case scenario. The scenario used depends on the type of project (e.g. motorway, viaduct

or tunnel) and its geographical location, so as to build in the risk of damage from natural disasters such as seismic activity and hurricanes. In some cases, the amount of cover may be limited by the total capacity available in the world insurance market, for example in the case of damage caused by tunnelling activity or by natural events abroad.

- **Liability insurance:** These policies provide cover against loss or injury to third parties for which Group companies may be liable. Because Group companies vary greatly in size and in the nature of their activities, cover is tailored to the risk exposure

The Group considers that its current policies are suitably matched to its risk exposure profile, taking account of what is available on insurance markets in terms of capacity, cover and terms. The insurance policies described are subject to market constraints, and hence may contain exclusions and/or limitations; they may be subject to change in response to market conditions or to changes in the risks to which the Group is exposed.