

Business model and sustainable development



The global energy context: the key role played by Snam in decarbonisation

The year just ended was characterised by the increasing awareness of companies and institutions worldwide of climate change and the effects caused by the rise in temperature.

A great many studies and reports have been published during the year, which analyse the actions needed in order to reduce the emissions originating from human activities and therefore slow the rise in the average temperature with respect to the pre-industrial period.

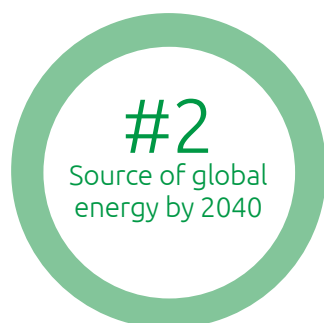
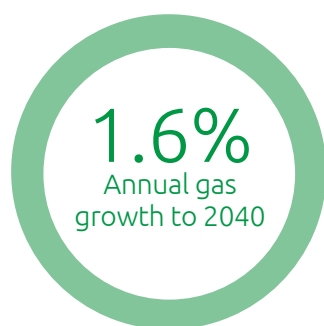
Of these, Snam helped analyse the future energy scenarios, examining the crucial role that natural gas may play in the global energy mix in the 2018 edition of the “**Global Gas Report**”. The study, which **Snam, International Gas Union (IGU)** and **The Boston Consulting Group (BCG)** unveiled at the June World Gas Conference of Washington DC (USA), analyses the scenarios for the use of natural gas, a flexible, programmable energy source that will give increasing support over the next few years to economic growth and the fight against climate change, in a process of world decarbonisation and rapid changes to global energy balances.

According to the main energy scenarios developed by the **International Energy Agency (IEA)** and analysed in the study, natural gas consumption is set to grow significantly: the “Global Gas Report” highlights a strong rise in the global demand for gas in 2017 and the main forecasts suggest that by 2035, gas may exceed coal as the world’s second most important source of energy, after oil, increasing its share in the total energy mix from the current 22% to more than 24%.

In this historic period of changes to global energy balances, Snam intends to play a guiding role in the country’s transition towards a decarbonised economic model.

The activities of the company, which already leads the national natural gas transmission, storage and regasification market, put Snam in a key position to achieve the national and European commitments to mitigate the effects of climate change. This is why, in accordance with the **targets set in the Strategic Plan** for the next few years, Snam will be supporting the use of its infrastructures to promote innovative businesses in the energy efficiency, biomethane and sustainable mobility sectors.

Gas is projected to be the fastest growing fossil fuel



Source: The future of gas to 2040 del “Global Gas Report 2018”.

Enabled by key market developments



Economic
development/
growth



Increasing
global gas
supply



Supportive
government
policies

The 2019-2022 Strategic Plan

In an energy sector that is undergoing major changes, gas infrastructures will therefore continue to play a key role in decarbonisation.

Late November 2018, Snam launched the new **2019-2022 Strategic Plan**, which maps out the route that will allow the Group to rise to the challenges connected with climate change and help reduce emissions, minimising the rise in global temperature and limiting the costs of natural gas to end users.

In the new Plan, Snam expects to increase its investments up to **5.7 billion euro**, approximately 10% more than the 5.2 billion envisaged by the previous Plan. The growth can be traced to the development of new businesses in the energy transition sector, to the continuous attention to reducing emissions and the increase in investments in maintenance and replacement works for the existing network. In particular, **4.8 billion** of investments will regard the transmission network, **0.7 billion** storage and regasification and **0.2 billion** the new businesses linked to the energy transition. A quarter of investments in the **transmission** segment will be dedicated to development initiatives like the TAP interconnection, the north-west connections, methanisation and development projects of cross-border flows.

Investments in **storage and LNG** will instead mainly go towards strengthening the Fiume Treste storage plant. In addition to this, 200 million will instead be used to **develop new businesses for decarbonisation**: the biomethane segment, energy efficiency and sustainable mobility.

The continuous improvement of the results of the regulated core business, the new initiatives, the solid performance of international activities, the focus on technological innovation and the creation of value through the financial structure allow Snam to envisage sustainable growth in the main indicators throughout the Plan period. As compared with 2017, EBITDA is expected to rise by an average of 3.5% per year during the Plan time frame, net profit by more than 4% per year and net earnings per share (EPS) by an annual average of more than 5%.

In order to diversify the sources of finance and bring the financial strategy as closely into line as possible with the Group's general objective of making its business more sustainable in the medium/long-term, Snam has decided to look to **sustainable finance** initiatives.

These operations will allow the company to invest in specific projects in environmental sustainability and the development of technological infrastructures, thereby making an active contribution towards the fight against climate change. In this regard, in 2018, Snam finalised the transformation of the 3.2 billion euro in syndicate credit facilities, into a **sustainable loan**, the third largest sustainable loan to ever have been stipulated worldwide and the largest by a gas utility company. This loan envisages bonus/malus mechanisms according to the achievement of certain ESG (Environment, Social, Governance) KPIs. In addition, in November 2018, Snam published the **Climate Action Bond Framework**, which defines the criteria for the future issue of debenture loans aimed at financing investments in environmental sustainability.

The new Strategic Plan in fact integrates the **ESG values**, making them an integral part of Snam's growth strategy. As regards environmental protection, the new Plan sets more challenging targets in respect of the reduction of methane emissions, envisaging a 25% reduction in methane emissions by 2025 (with an interim target of -15% in 2022), as compared with the previous target of 10% by 2021.

Of the investments envisaged, 850 million will go to the **Snam - TEC (Tomorrow's Energy Company) project** for the integration of new technology to monitor the network and control and reduce natural gas emissions and consumption, as well as for initiatives regarding biomethane, renewables, energy efficiency and sustainable mobility. Additionally, in 2018, Snam adhered to the **Task Force on Climate-Related Financial Disclosures** (TCFD), undertaking to provide clear, structured reports on its activities in connection with climate change. The result of this commitment is the document "**Snam in Change – Financial Disclosure on Climate Change**", which shows Snam's activities using the climate change lens.

Snam's **attention to safety** is confirmed by the launch of the new Snam4Safety programme, created to increase the safety at work culture of employees and suppliers. ESG values are also integrated into Snam's **corporate governance**, with it today being the only Italian company, and one of just four worldwide, to have arranged for a global partnership with Transparency International for the fight against corruption.

Creating sustainable value: the Snam business model

Financial capital



The financial capital available to the Group is the essential input for making all the investments necessary to the correct function of the natural gas infrastructures. Snam's financial capacity comprises its own resources and debt capital obtained either on the financial markets or through its own operating income.

Infrastructural capital



The transmission network and storage and regasification plants for natural gas represent the essential infrastructural capital that allow Snam to provide operators and users with its services.

Gas pipelines, storage plants and regasification plants are the regulatory asset based (RAB) needed to obtain recognition of the reference revenues for the regulated business, as calculated on the basis of the rules defined by the Autorità di regolazione per energia reti e ambiente (ARERA).

In addition to this, in the coming years Snam's infrastructure will be enriched with plants for the production and introduction of biomethane and natural gas distribution plants for motor vehicles

Intellectual capital



The intellectual capital is Snam's distinctive heritage that comprises the computer systems and internal processes and procedures for the efficient management of its business activities. These practices have been developed and consolidated over time, based on company know-how and aimed at guaranteeing the safety of the networks and infrastructures for employees, suppliers and users.

Human capital



Snam's human capital are the people making up the Group – the employees and the capillary network of Italian and international suppliers – with their wealth of knowledge and experience.

Snam supports the promotion of a business culture hinged on certain distinctive values: the optimisation and development of people, the culture of safety, the maintenance and growth of the know-how necessary for the continuous technological update and modernisation of the Group's assets.

Relational capital



The Group's relational capital is the "licence-to-operate" that stakeholders recognise to Snam.

The trust afforded by stakeholders in the Group's capacity to create value is the direct consequence of more than 75 years of history that link Snam's activities with its stakeholders and the companies in the territories hosting the infrastructures. Also in consideration of the expansion of Snam's business into the non-regulated market, over the next few years, the contribution made towards the enhancement of the Group's relational capital will become increasingly important, through participation in national and international working parties and ratified agreements and understandings aiming to develop collaborations and partnerships with companies operating on the international and non-European energy markets.

Natural capital



The territory in which the infrastructures stand, the air and biodiversity are Snam's natural capital, just like the energy resources (the natural gas) necessary to allow Snam to provide operators and users with its services.

INPUT

Financial capital

- Funding comprising own resources and debt capital
- Constant investments in upgrading and the function of company assets

Infrastructural capital

- Network of gas pipelines for the transmission of natural gas in Italy
- Storage plants and regasification plants
- Plants for the production and injection into the network of biomethane
- Distribution network of gas for vehicles

Intellectual capital

- Information systems, company processes and procedures aimed at assuring safety in infrastructures and efficient business management
- Know-how and technological innovation

Human capital

- Optimisation and development of people
- Safety culture

Relational capital

- Partnerships and long-term relations with the main stakeholders (clients, suppliers, shareholders and lenders, regulatory authority, local associations)
- Collaboration with institutions, regulatory entities, local and territorial administrations
- Commercial agreements with companies operating on the national and foreign energy markets
- National and supranational working parties

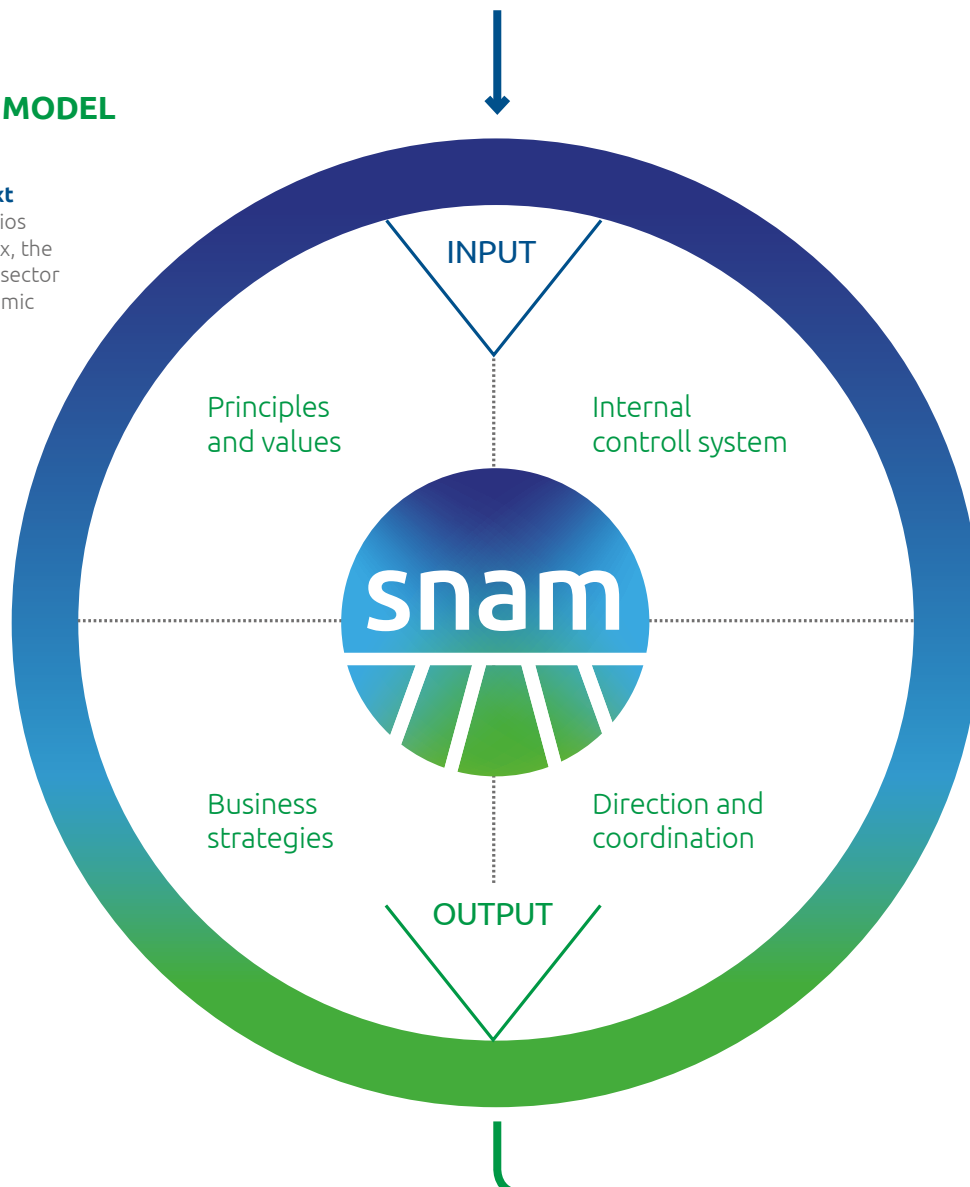
Natural capital

- Energy resource (natural gas)
- Natural areas involved by the passage of gas pipelines and on which the plants stand

BUSINESS MODEL

External context

Evolution scenarios of the energy mix, the evolution of the sector and social-economic dynamics



OUTPUT

Financial capital

- 2,532 million euro in economic value generated
- 1,634 million euro in economic value distributed

Infrastructural capital

- 32,625 km of gas pipelines
- Target: to develop 250 refuelling stations for methane gas-powered cars
- 14 biomethane connection contracts

Intellectual capital

- Management and certification systems obtained by Snam and subsidiaries - extended certifications ISO 9001, ISO 14001 and OHSAS 18001 to include Snam4Mobility and Cubogas

Human capital

- 107,771 hours of training provided
- 7 injuries involving employees and contract workers - "Zero injuries" prize, 1550 employees rewarded

Relational capital

- Partnerships with SEAT, ENI, API, State Grid International Development and Beijing Gas
- Relations with ARERA - 12 responses to consultation documents
- Acquisition of IES biogas, Enersi Sicilia, TEP and CuboGas

Natural capital

- 7.9 % reduction in natural gas emissions on 2016
- 227 km environmental restoration performed
- 445 km environmental monitoring
- 1,651 km of network inspected with smart pigs

OUTCOME

- Distribution of economic value to Group stakeholders
- Financing dedicated to environmental sustainability projects

- Increased value of company assets
- Diversification and innovation in the Group infrastructures
- Diversification of the source of natural gas consumed within national borders
- Diversification of the national energy mix
- Secure procurement

- Quality of service supplied in compliance with the standards
- Greater efficiency of processes and control throughout the entire value creation chain

- People motivation and increase in their competences
- Consolidation of the safety culture for all employees and in all operative contexts

- Maintenance of a good company reputation, in line with the company vision, values and mission
- Consolidation of relations with the main Group stakeholders and regulatory entities in the natural gas sector

- Mitigation of negative environmental impacts
- Sustainability of the business activities and attention paid to the community and territory

The objectives of Snam's 2019-2022 Strategic Plan include the creation of value in all intangible capital characterising the company.

The investment programme outlined in the Strategic Plan, which envisages a total of 5.7 billion euro for the development and modernisation of the existing network and the development of new businesses connected with biomethane production and, in general, the energy transition, will have a positive impact on Snam's financial capital.

The objectives included in the Strategic Plan shall also affect the infrastructural capital: with the aim of guaranteeing the quality and continuity of service, over the next few years, development will continue of the infrastructural and network of gas pipelines, new connections to the north-west will be completed, methanisation projects, the TAP interconnection and potential storage plants.

The energy resource is the pillar on which the Snam Group's activity is based, acknowledging the importance of safeguarding the natural environment. As confirmation of the attention paid by the company to protecting climate, the Strategic Plan envisages a new target reduction of methane emissions.

The activities included in the TEC project will also allow Snam to enrich its natural capital, implementing actions to monitor the network and measure the territorial structure in real time, along with gas consumption and the energy efficiency of the infrastructures, thereby achieving the twofold objective of optimising operating costs and minimising the impact of its activities.



2019-2022 Strategic Plan

Impact on capitals

Investments in the development of the Italian gas system and new business activities connected with decarbonisation

- 4.8 billion euro in investments envisaged for the transmission network (TAP, north-west connections, Sardinia), 0.7 billion euro for storage investment (Fiume Trieste) and regasification
- 100 million euro in investments envisaged for the development of biomethane production infrastructures, 50 million euro in investments to extend the network of methane refuelling stations, 50 million euro in investment to develop small liquefaction plants



TEC project

- Greater operative effectiveness and smart gas project
- Reduction of methane emissions
- Continuous interest in innovation and the regular update and upgrade of distinctive competences



ESG values

- Environment: target methane emissions reduction
- Social: Snam4Safety, Snam Institute, Snam Foundation
- Corporate governance: partnership with Transparency International



Sustainable finance

- 3.2 million euro in syndicated credit facilities
- Framework setting the rules for the future issue of debenture loans aimed at financing investments in environmental sustainability



FINANCIAL CAPITAL



INFRASTRUCTURAL CAPITAL



INTELLECTUAL CAPITAL



HUMAN CAPITAL



RELATIONAL CAPITAL



NATURAL CAPITAL

Impacts of Snam's activities on the gas system and on the energy scenario

IMPACTS ON THE GAS SYSTEM

Market facilitation

With the new "Network Balancing Code" regime, which has been in effect since October 2016, the balancing service is conducted in accordance with common and harmonised European rules, which are aimed at promoting trading and market liquidity. In a new system, Users are the primary parties responsible for system equilibrium and they can balance their own trading positions (injections and withdrawals from the system) through an hourly reprogramming of their own requirements, and/or by executing gas transactions on both the organised and over-the-counter markets.

Snam also performs the role of Default Transportation Supplier, namely supplies gas to Sales Companies and Final Customers for which the Balancing User responsible for the related withdrawals is not identifiable. The same service is also carried out for the Sales Companies and Final Customers at third-party transporters who explicitly requested it.

Impact of the Default Shipping Service

The service in the 2017-2018 thermal year involved 192 parties amongst Final Customers and Sales Companies, for a total volume of approximately 263,300 MWh.

New transmission capacity products

In 2017, Snam introduced greater flexibility in offering transmission capacity at the re-delivery points that power the thermoelectric plants and the withdrawal areas through the provision of short-term capacity products (daily and monthly). In 2018, new flexibility services were also introduced, like infra-day storage auctions.

Gas access and cost

The cost of transmission, distribution and metering (meter reading) services, which allow the delivery of gas to end users, is one of the three main items of the gas bill.

Incidence of the transmission service on the cost of gas

The cost of the transmission service in 2018 is estimated as accounting for approximately 5% of the total costs of a typical domestic client (family with individual heating and annual consumption of 1,400 scm) as compared with 18% of the total cost of infrastructural services.

New connections

In 2018, 88 connection contracts were signed for the construction of new delivery/re-delivery points (of which 14 were for biomethane inputs and 43 for CNG) or the upgrading of existing points, up approximately 13% over 2017.

Creation of a european gas market

Snam is one of the founders of PRISMA, the international project established to promote the harmonisation of rules for accessing and providing services in implementation of the European Codes, by offering services through a single shared digital platform. Approximately 40 European operators active in the transmission and storage of gas from 17 countries participate in the development of PRISMA.

The numbers of the PRISMA platform

In 2018, the PRISMA platform further increased the number of auctions for the sale of capacity products, which in fact went from 4.5 million in 2017 to 6.5 million in 2018. The number of shippers and users registered respectively come to approximately 650 and 2,500.

Impacts of Snam's activities on the gas system and on the energy scenario

IMPACTS ON THE ENERGY SCENARIO

Security of supplies

The constant, structural reduction in national production leaves Italy very much dependent on foreign gas, the import of which has recorded a 2.4% increase in the 3rd quarter of 2018 as compared with the same period of the previous year, accentuating the role played by Russia as the top supplier of Italian gas, with a share that has virtually reached 50% of the total. (Source: ENEA)

Diversification of sources

Thanks to the interconnection of Snam's network, Italy is the current European country that can rely on the greatest number of supply sources. Besides domestic production, the Italian system can receive gas through four methane import pipelines (Algeria, Libya, Russia and Norway) and 3 regasification terminals. It is also planned in the future to add the importation of gas from the Caspian Sea by constructing the TAP methane pipeline. The development of bidirectional capacity in the north of our country along the North-South corridor (reverse flow) may also make Italian supply sources accessible to other European countries.

In the instance of Italy, if any of the supply sources should fail, the remaining sources of supply are capable of satisfying more than 120% of the area's total gas demand, calculated during a day of particularly high gas demand.

Use of storage capacity

In 2018, Snam took action to promote the replenishment of national storage facilities for the purpose of being able to manage seasonal peaks in demand. The replenishment level at the end of the injection campaign was 98% as opposed to a European average of 88%.

Contribution to decarbonisation

Gas in its various forms guarantees lower carbon dioxide emissions, by 25% to 40% compared to other fossil fuels, as well as reduced nitrogen oxides and fine particle levels.

Gas in the national energy mix

The quarterly analysis of the Italian energy system performed by ENEA highlights how, considering all the first nine months of 2018, natural gas consumption has reduced by around one percentage point on the same period of the previous year. In particular, a major reduction has been seen in consumption in the 2nd quarter (-7% in trend terms, due to the lesser thermal production linked to the resumed hydroelectric generation) and a slight increase in consumption in the 3rd quarter 2018 (+1.2% on the same quarter of 2017). Renewable energy sources (excluding biomass for thermal uses) are slightly up on the levels recorded in the 3rd quarter 2017, by approximately half a percentage point.



NFS Governance and organisation

Snam operates within the framework of the Universal Declaration of Human Rights, the fundamental conventions of the ILO and the OECD Guidelines for Multinational Enterprises, and in compliance with its own Code of Ethics, which is also a key element of the Organisational Model of Legislative Decree 231/2001.

Snam's governance plays a crucial role in value creation dynamics. It helps to determine the conditions for the **Company to interact properly and adequately with its reference environment**, in particular by putting into practice the principles of **integrity, transparency and compliance with** internal and external **rules**, with the ultimate aim of reconciling the interests of our various stakeholders.

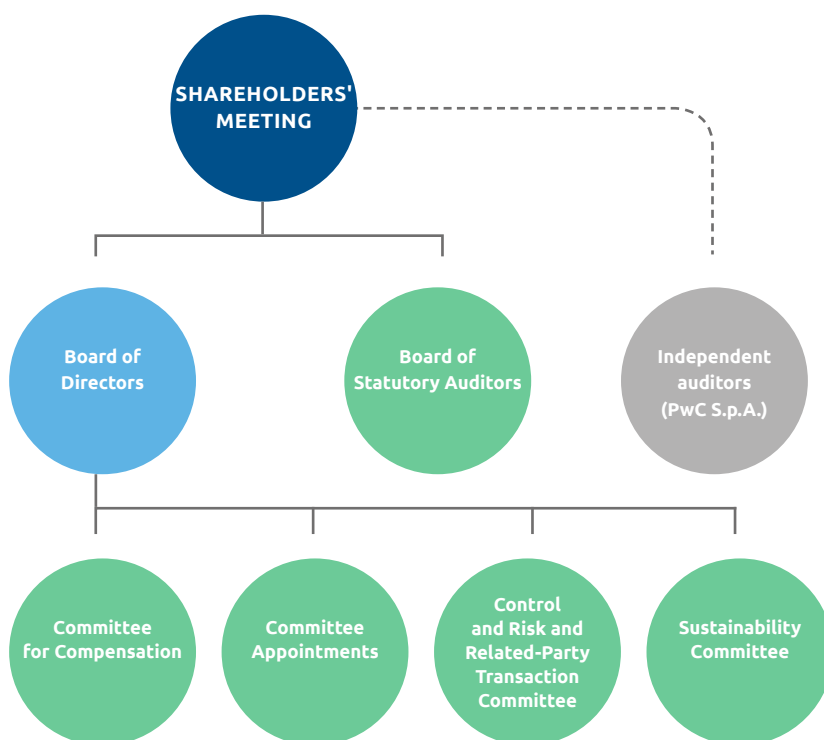
The **governance system** reflects the 'traditional' model and is developed in accordance with the applicable industry regulations (laws governing unbundling and listed companies), while also taking into account **national and international best practice**.

Snam's Board of Directors

56% of the BoD is made up of independent directors

All the BoD committees are chaired by **independent** directors

44% of the BoD is made up of women



More detailed information on governance can be found in the document "2018 Report on corporate governance and ownership structure", which was published online at www.snam.it at the same time as the Annual Report.

More detailed information on remuneration can be found in the document "2019 Remuneration Report", which was published online at www.snam.it at the same time as the Annual Report.



Snam's new challenge is to support national and international development through the **optimisation** of internal processes, the redefinition of the organisational structures and the **simplification** of the regulations.

The context that evolves and the consequent adjustment and evolution of the businesses provide the drive for change. In order to cope with these external stimuli and stay one step ahead, in accordance with the strategic plan, the last two years have seen the Snam group develop a long series of change programmes with the aim of making the organisation of the internal structures and processes more streamlined and efficient:

- optimisation and redesign of the processes with a view to assuring greater efficiency and continuous improvement;
- simplification and streamlining of the company regulations in order to streamline the actions in response to an ever more dynamic business;
- organisational structures that are more in line with purely organisational logics, with simpler, more flexible decision-making processes.

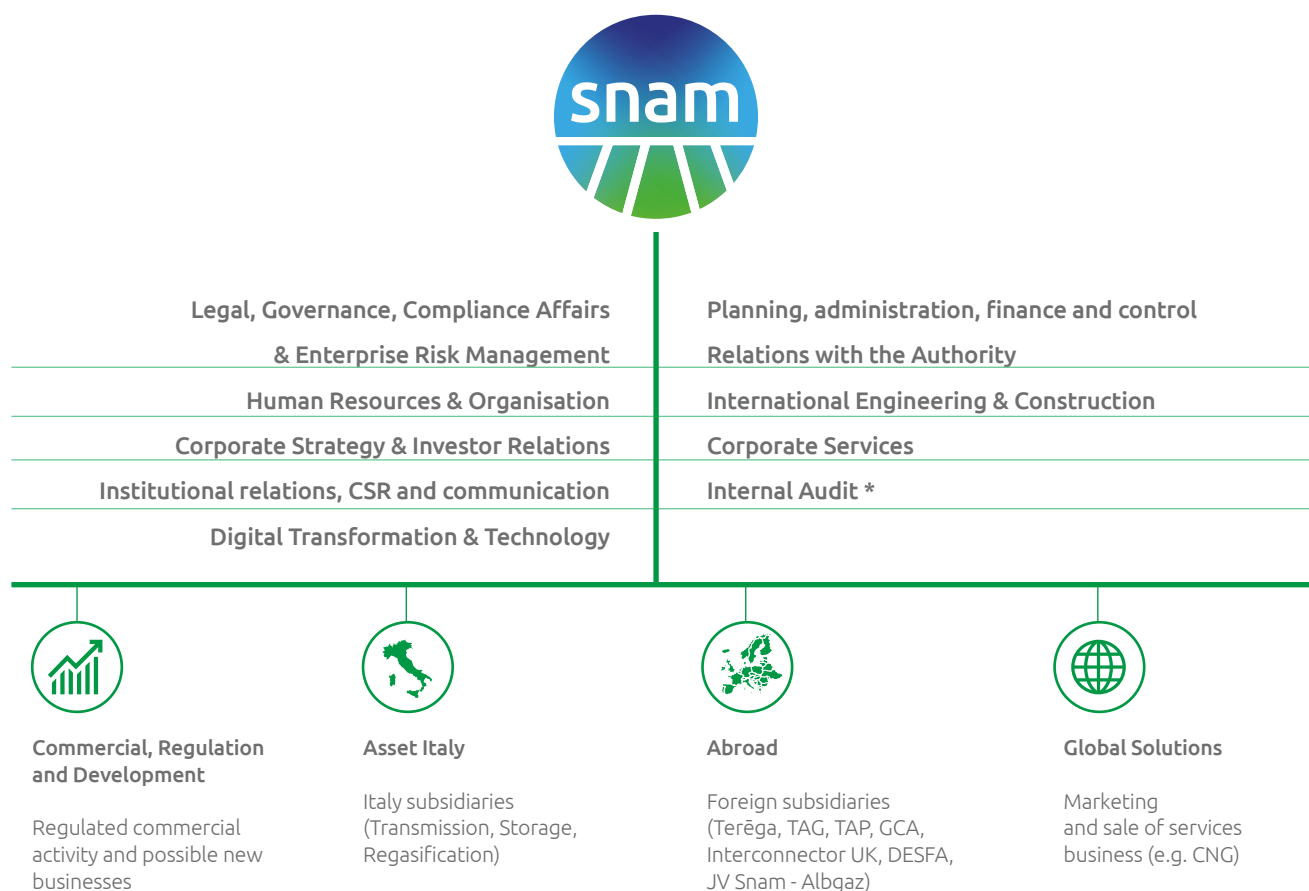
With reference to this latter point, in 2018 the TURN project was promoted on all Snam Corporate Staff departments and on the operating companies' office departments. The TURN project worked to create a simpler organisation and quicker decision-making processes, thereby rationalising the number of units, eliminating 1 organisational level and 150 units.

Snam's top priorities include supporting international development and new businesses. The company's constant commitment to these matters has given rise to the integration of the following contexts:

- Infrastrutture Trasporto Gas - ITG, an investment that allows Snam to strengthen its infrastructures in Italy and put additional synergies to good use in the integrated management of the whole gas system;
- CuboGas and IES Biogas, respectively operators in vehicle methane gas refuelling and in the design, development and operation of biogas and biomethane production plants;
- TEP Energy Solution, an energy efficiency company whose mission is to foster decarbonisation and ensure the better use of energy.

It also increases the group's international presence through the acquisition of DESFA, the Greek national gas transmission operator and the joint venture with Albgaz for the development of the gas market in Albania.

The Snam Organisational Model



* Dependent on the Chief Executive Officer, he carries out the audits entirely independently, according to the indications of the Board of Directors.

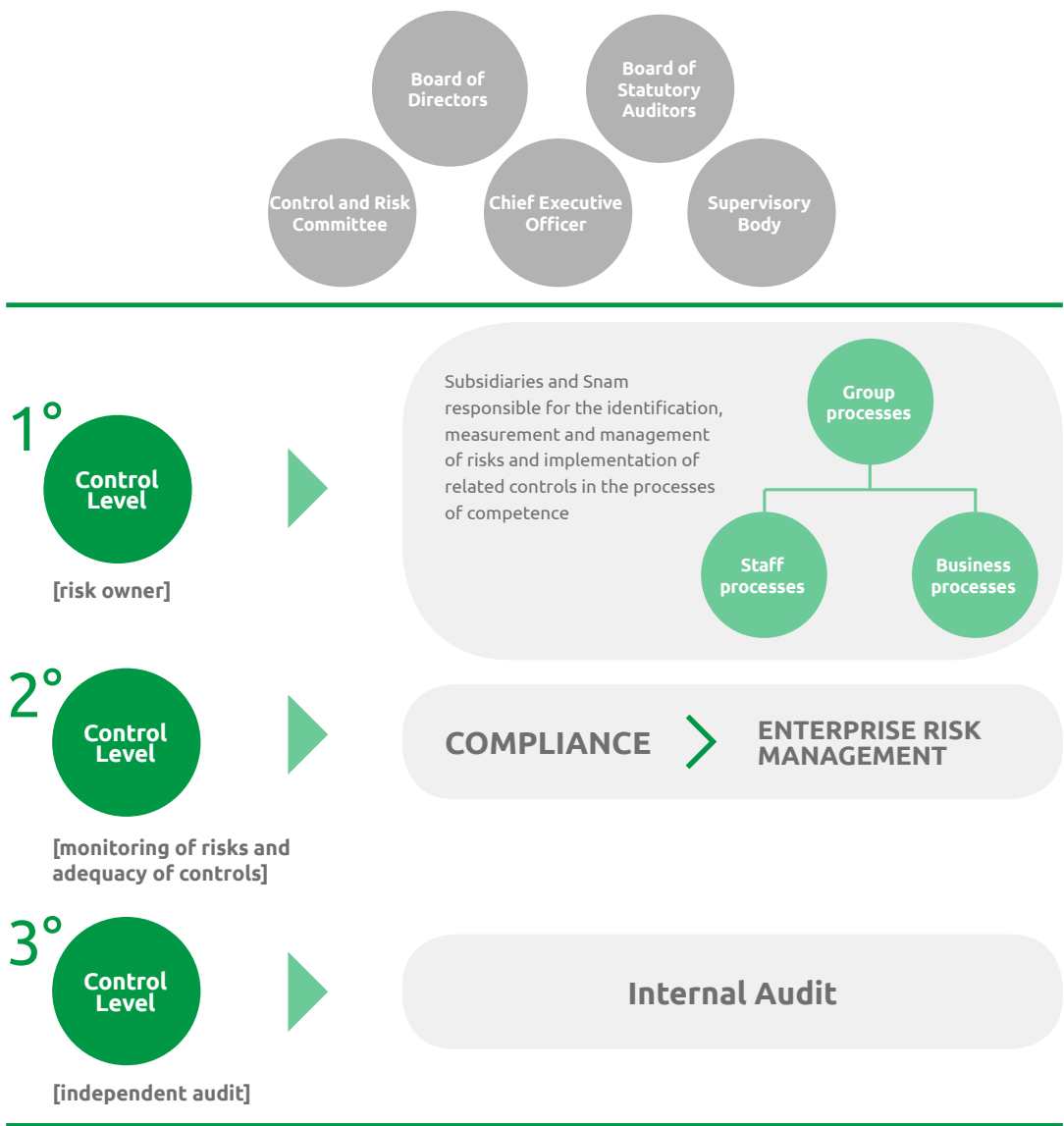
Management of risks and the control system

Although it has a limited economic and financial risk profile because most of its operations are in regulated business segments, Snam adopts a structured and systemic approach to governing all risks that could affect value creation.

The system we use across the Group to identify, assess, manage and control risk has three levels, each with different objectives and associated responsibilities. The Board of Directors charges the CEO with giving structure to and maintaining the entire system. We use an integrated, dynamic and group-wide method of assessing risk that evaluates the existing management systems in the

individual corporate processes, starting with those relating to the **prevention of fraud and corruption and health, safety, environment and quality.**

These same controls form an integral part of the managerial processes. Management must therefore foster an environment that encourages controls, and must specifically manage “line controls”, consisting of all the control activities that individual operating units or companies perform over their own processes. Independent controls are performed by the Internal Audit department, which is responsible for checking that the system is functioning and adequate.



In 2018, audit activities were performed by a dedicated team of an average of 10 auditors.

Activities performed by Internal Audit

(no.)	2016	2017	2018
Total number of audits performed (*)	42	42	22
- of which relative to planned and/or spot audit activities	8	8	14
- of which relative to independent monitoring activities (Law - 262/05) (**)	34	34	8
Reports received	5	5	4
- of which related to the internal control system	1	-	-
- of which concerning accountancy, audit, fraud, etc..	-	-	-
- of which concerning administrative liability pursuant to Legislative Decree 231/2001	1	-	-
- of which concerning breaches of anticorruption law	1	1	-
- of which concerning other matters (Code of Ethics, mobbing, theft, security, etc.)	-	4	4
Reports archived due to absence of elements or found to be untrue	2	1	2
Reports resulting in disciplinary or managerial interventions, and/or submitted to judicial authorities	-	3	2
Reports pending	3	3	-

(*) The figure relating to 2017 has been amended to take into account the audits carried out in the reference calendar year.

(**) The number of audits relating to independent monitoring activities has reduced on 2017 for the following reasons: (i) part of the control activities was carried out by the Independent Auditing Firm and (ii) reports on control activities of the 2018 Independent Monitoring Programme will be produced in calendar year 2019.

In 2018, the Internal Audit activities were carried out by ensuring that the conditions of complete independence and autonomy are preserved, as well as the due professional diligence, objectivity, and competence, as provided for by the Mission of the Internal Audit and by the Mandatory Guidance of the Institute of Internal Auditors and by the principles contained in the Code of Ethics.

Internal Audit regularly carried out the programmed activities, which regarded: (i) the execution of the Audit Plan, approved by the Snam Board of Directors on 13 March 2018, after obtaining the favourable opinion of the Control, Risk and Related Party Transactions Committee and spot audits not envisaged on the plan; (ii) the carrying out of the independent monitoring programme defined with the Chief Financial Officer as part of the Snam Control System on the Corporate Disclose; (iii) named or anonymous reports of problems relating to the internal control and risk management system, to the Company's administrative liability, irregularities or fraudulent acts (whistleblowing); (iv) the activities involving relations with the Independent Auditing Firm and those relating to the monitoring of the activities for the conferral of additional appointments on such.

Please also note the main activities carried out in methodology:

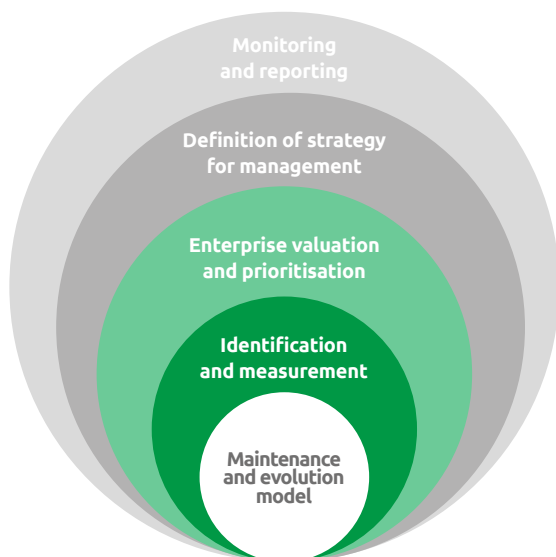
- the implementation of an Internal Audit Manual, which, with a view to ensuring continuous improvement, aimed to update the methodologies and identify standard formats so as to increase the efficiency and simplify the internal audit process;
- the development of a new tool to manage audit activities from the planning of interventions through to the follow-up of corrective action following the implementation of the Integrated Risk Assurance and Compliance Project;
- the update of the Key Risk Indicators, as well as the implementation of new ones, as part of the continuous monitoring of the expenditure cycle with the desire to structure, in 2019, dedicated reports for the functions of the first and second level control;
- the Internal Quality Review with the aim of monitoring the effectiveness and efficiency of the activities, the conformity, in going about operations, with the regulatory and operative tools of the Department and with respect to best practices and reference international standards for the profession.

NFS THE ENTERPRISE RISK MANAGEMENT (ERM) PROCESS

The Snam group, in line with the indications of the Code of Corporate Governance and international best practices, has instituted, under the direct supervision of the General Counsel, the Enterprise Risk Management (ERM) unit, which operates within the wider Internal Control and Risk Management System, in order to manage the integrated management process of corporate risks for all Group companies.

The main objectives of ERM are to define a risk assessment model that allows risks to be identified, using standardised, group-wide policies, and then prioritised, to provide consolidated measures to manage these risks and to draw up a reporting system.

The risk is defined as a result of the uncertainty over the objectives, and may be negative or positive (opportunity).



1. Identification and measurement:

of risk events relating to corporate processes and external risk factors that could influence the achievement of corporate goals, either through direct impacts on results and corporate finances (lower revenue or higher costs) or through intangible negative effects on other types of capital, especially the licence to operate.

2. Enterprise and prioritisation assessment:

each event is assigned an 'enterprise measurement', which summarises, for each risk, the different measurements carried out by the risk owner and by centralised units with specialist expertise. The prioritisation of risks is defined by combining the measurements of impact and probability.

3. Definition of the management strategy:

for all risks, management measures are identified, together with any specific interventions and the relevant implementation time frames, associated with a type of risk management from among those that have been codified. Management plans for the main risks are presented to the Control and Risk Committee.

4. Monitoring and reporting:

the risk mapping is periodically updated according to the enterprise measurement, and at least once a year, including for low-priority risks. The periodic reporting activity ensures, at the various corporate levels, the availability and representation of the information on the activities concerning the management and monitoring of the relevant risks.

Cross-organisational nature

One of the best features of Snam's ERM model is the wide-ranging nature of its impact measurement.

Any risk event may have eight different types of impact, some determined by the risk owners (operational impacts) and others by specialist departments (e.g. legal and financial impacts). This means risk measurement from different perspectives and team risk prioritisation.

The most common operational impact is industrial impact, consistent with the fact that risk identification begins with process analysis. The most prevalent specialist impacts include reputational and legal impacts, confirming the existence of an increasingly globalised external context subject to ever more complex regulations.

During 2018, the risk assessment cycles were completed and the first mapping of corporate opportunities performed, according to the model described above and the "Enterprise Risk Management" guidelines approved in March by the Board of Directors, which involved the whole of the Snam Group. As at the end of 2018 approximately 138 enterprise risks appeared to be mapped, distributed across all corporate processes. Moreover, the 2018 mapping of risks and opportunities considered the new activities under the scope of new unregulated businesses, as a result of acquisitions made during the year.

Opportunities (approximately 25) were identified using a similar method to that employed for the risks. In this case too, suitable metrics were used to measure the operative impacts (industrial/business and economic) by each owner and to have the specialised departments measure the other impacts (market, reputational, environment, financial).

In 2018, the Integrated Risk Assurance and Compliance project was trialled, with the aim of defining and implementing an integrated risk assessment model that, through a single IT tool and a single database, rationalises and integrates information flows of second-level controls with a synergistic approach aimed at maximum overall efficiency.

The main enterprise risks identified and monitored were classified as financial and non-financial (strategic risks, legal and non-compliance risk and operational risks).

The table below shows the mitigation and monitoring measures implemented for each type of risk.



- OPERATIONAL IMPACT
- SPECIALIST IMPACT



 More information on the main risk and uncertainty factors is given in the chapter entitled “Elements of risk and uncertainty” in this Report.

Classification	Description	Management actions	Impact on capitals
STRATEGIC RISKS	Macroeconomic and geo-political risk		
	Risks associated with political, social and economic instability in natural gas supplier countries	■ Continuous monitoring of the political, social and macroeconomic framework	
		■ Maintenance of constant relations with Authorities and Institutions responsible for managing possible crises in high-risk scenarios	
	Regulatory and legislative risk		
	Definition and updating of a regulatory framework in Italy and in the countries of interest that presents penalising parameters, in particular with regard to criteria for determining tariffs	■ Maintenance of ongoing constructive dialogue with the regulator that can contribute to the definition of a clear, transparent and stable framework in order to incentivise the sustainable development of the gas system	
	Significant change in regulations and/or case law	■ Ongoing regulatory oversight through the monitoring of changes in laws and rulings, analysis of changes, and the dissemination of information and further details to business and commercial departments	
	Risks related to climate change		
	■ Reinforcement of the regulatory framework for greenhouse gas emissions ■ Change of scenarios with impact on the demand for natural gas and transported volumes	■ Ongoing regulatory supervision with monitoring of the development of the greenhouse gas emissions authorisation system	
		■ Target of -10% natural gas emissions from 2016 to 2021, with same scope	
		■ Target of -15% natural gas emissions from 2016 to 2022, with same scope	
		■ Target of -25% natural gas emissions from 2016 to 2025, with same scope	
		■ Recovery of 33% of potential emissions deriving from maintenance activities, each year from 2017 to 2022	
	Increase in the severity of extreme atmospheric phenomena, with impacts on continuity and quality of service	■ Development of new business related to alternative uses of gas and implementation of the use of gas to support the energy transition (biomethane and other renewable gases, small scale LNG, CNG, gas heat-pumps and micro-cogeneration)	
		■ Adaptation of the recovery plan and business continuity management system to international best practices	
		■ Technologically advanced tools for monitoring/controlling the status of infrastructure/plants and the areas affected	
		■ Elaboration of corporate energy scenarios consistent with the national and European decarbonisation objectives developed for the containment of temperatures increase envisaged by the Paris agreements	
		■ Ongoing, systematic maintenance and monitoring measures	

Classification	Description	Management actions	Impact on capitals
STRATEGIC RISKS	 Growth in the sensitivity of public opinion on matters related to climate change	■ Adhesion to national and international initiatives aimed at strengthening the commitment to reduce methane emissions	 
		■ Adhesion to the TCFD "Task Force on Climate Related Financial Disclosure"	 
		■ Disclosure of multi-year targets defined to fight climate change	 
LEGAL AND NON-COMPLIANCE RISK	 Possible violation of rules and regulations, with particular reference to Legislative Decree 231/2001 which provides for the company's liability for malfeasances committed by management or by third parties in relation to certain cases (corruption, fraud, health and safety of workers, environment)	■ Updating and monitoring protocols of Model 231	   
		■ Awareness-raising initiatives and training on the prevention of corruption	
		■ Analysis and evaluation of reports received through the channels provided for by the reporting procedure	
		■ Adoption and maintenance of Health, Safety and Environment management systems certified according to ISO14001 and OSHAS18001 standards	
		■ Awareness-raising and training initiatives on accident prevention for employees and contractors	
	 Maintaining an adequate reputational profile for suppliers and subcontractors	■ Introduction of additional measures to prevent corruption and criminal infiltration	
		■ Obligation of suppliers and contractors to subscribe the Ethical and integrity Agreement	
		■ Reputational checks on suppliers and subcontractors	
	Non-alignment of corporate governance and/or the internal control and risk system with regulations and/or best practices	■ Periodic revision of employer model	
		■ Updating of Model 231 and the Code of Ethics	
		■ Analysis of updates to the latest version (July 2015) of the Borsa Italiana Code of Corporate Governance and to corporate governance best practices	

Classification	Description	Management actions	Impact on capitals
OPERATING RISKS	Retaining gas storage concessions	Development of storage carried out in line with the most up-to-date technical and economic criteria and best practices in science and technology so as not to damage the deposit, not to cause harm to third parties or the environment and to guarantee the optimisation of capacity in compliance with the security of the national gas system	 
	 Delays in the progress of infrastructure implementation programmes	Application of the strictest national and international environmental and safety standards during planning, with particular attention to safeguarding the natural value of the area and biodiversity	 
		Communication policy on the planned work, with a view to sharing projects with the local community and stakeholders from the outset	
		Use of innovative construction technologies with low environmental impacts (e.g. trenchless technologies, use of turbo gas with low atmospheric emissions)	
		Strict, structured system for selecting contractors and monitoring their performance	
	 Breakages or damages to pipelines/ installations also upon exogenous events, which can cause malfunction and unexpected service interruption	Application of management systems and procedures that take into account the specific nature of Snam's activities	
		Recovery plan system and business continuity management in line with international best practices	
		Communication initiatives aimed at providing information about the presence of infrastructure and behaviours to avoid/implement by third parties so as not to damage it	
		Technologically advanced tools for monitoring/controlling the status of infrastructure/plants and the areas affected	
		Continuous verification of insurance coverage in relation to the type of business and related risks	
		Ongoing, systematic maintenance and monitoring measures	
	 Computer threats (Cybersecurity)	Adaptation of IT security and business continuity systems to the ISO/IEC 27001 and ISO22013 standards respectively, with provision for related certification	
		Definition of a model of <i>security incident management team</i> to respond promptly to events that may damage the integrity of the information and IT systems used	

(cont'd)

Classification	Description	Management actions	Impact on capitals
FINANCIAL RISKS	Medium- and long-term debt rating down grade	■ Constant monitoring of rating indicators and availability of long-term credit lines	
	Changes in the interest rate	■ Monitoring cash-flow-at-risk using an asset and liability management (ALM) model	
	Exchange rate changes	■ Minimisation of transaction risk, through measures such as the use of derivatives	
	Inability to raise new funds (funding liquidity risk) or to liquidate assets on the market	■ Minimisation of opportunity cost and maintaining a balance in terms of debt duration and composition	
	Default	■ Monitoring of the contractual protection clauses in loan agreements	
	Receivables	■ Periodic monitoring of the situation of receivables and systematic management at set deadlines of reminders and any action necessary to collect on overdue debt	
		■ Evaluation of the authenticity and validity of guarantees	
		■ Reporting of any issues with the regulatory system that may lead to opportunistic/fraudulent behaviour by operators	

 FINANCIAL CAPITAL

 INFRASTRUCTURAL CAPITAL

 INTELLECTUAL CAPITAL

 HUMAN CAPITAL

 RELATIONAL CAPITAL

 NATURAL CAPITAL