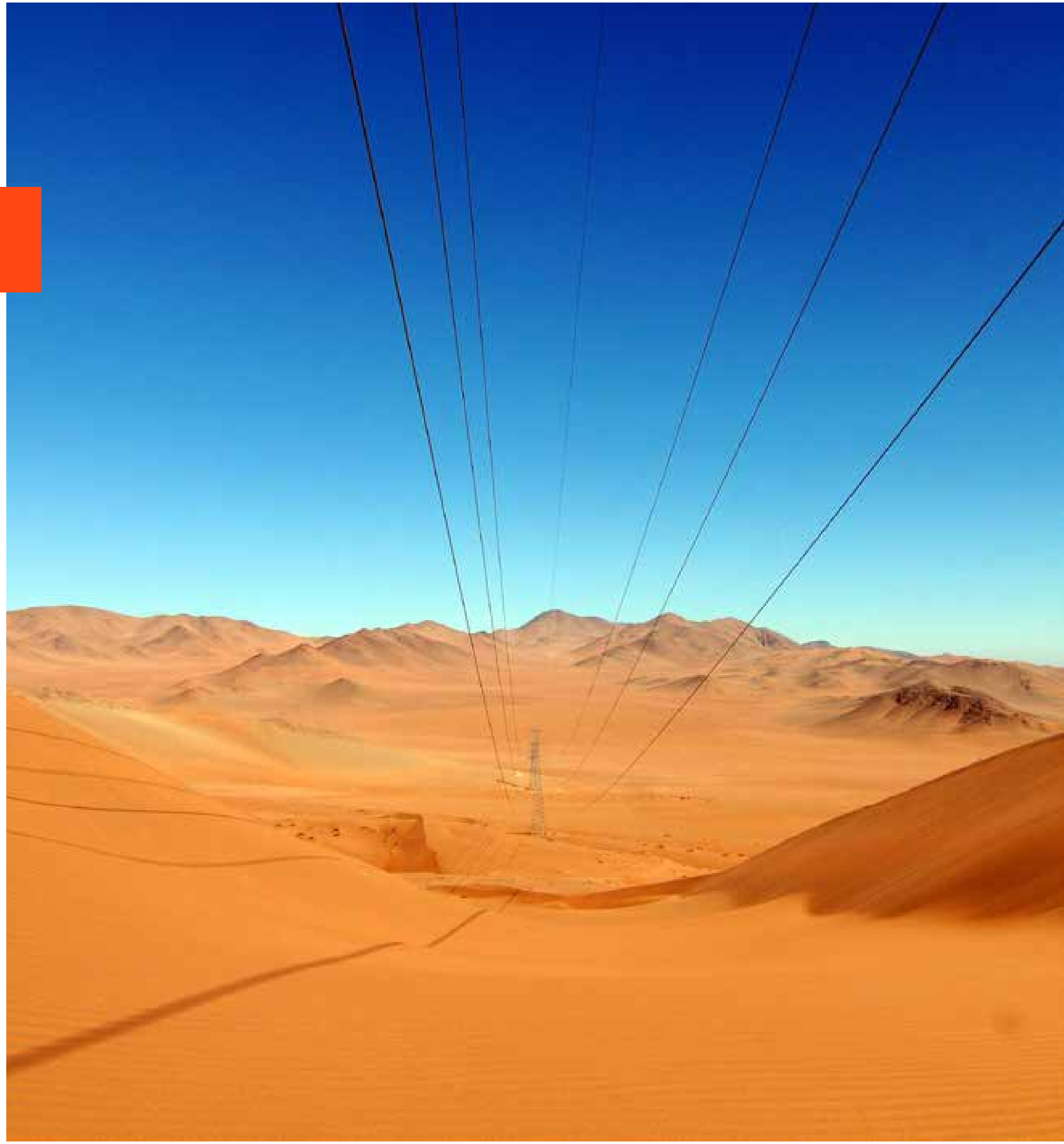
3.4 Risk management



36
risks analyzed in the universal risks map

70
action plans aimed at mitigating risks

105
management indicators

28
recommendations to the Board in project approvals

Goals set forth in the **2019-2023 SCSRP**

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Conduct the annual CSR risk analysis at the company's facilities, so these can be included in Abengoa's risk map.	0 % Planned for 2020
Use the Risk Management System to identify the potential changes in the environment, as required to prepare and adapt the company to achieve the global business goals.	100 %
Strengthen Abengoa's risk management systems in relation to identifying and controlling CSR aspects (social, environmental, ethical and reputational order).	50 %
Create value through Abengoa's Risk Management System as a competitive advantage and tool that guarantees excellence in the decision-making process.	100 %

Abengoa defines risk as any potential event that may prevent the achievement of business objectives arising from lost opportunities and strengths, or due to the materialisation of threats or potential weaknesses. Therefore, the company's attitude towards risks is **awareness, involvement and anticipation**.

The organisation **has a flexible, global and dynamic methodological approach** whose scope extends to all strategic and operational aspects and which allows satisfactory risk management of the entire company in the following areas:

- Execution of the strategy.
- Achievement of business objectives.
- Correct performance of operations.

To ensure compliance with the objectives established in the company's Strategic and Feasibility Plan, Abengoa has designed a **Risk Management System** fully integrated into the business covering all areas of the company. It is based on three fundamental pillars: **Common Management Systems, internal control procedures** (SOX) and the **Enterprise Risk Management** (ERM) methodology, which is used by Abengoa to identify, understand and assess the risks affecting the company. *102-11*

The objective of this system is to obtain a comprehensive vision of risks which allows the appropriate responses to be developed based on a common culture of awareness of all employees that risks should be duly managed at all levels, so that, in Abengoa, managing businesses is equivalent to managing risks.

Business risks

Common Management Systems
Mitigation and control of business risks through an internal system of communications and authorisations.

Risks associated with the reliability of financial information

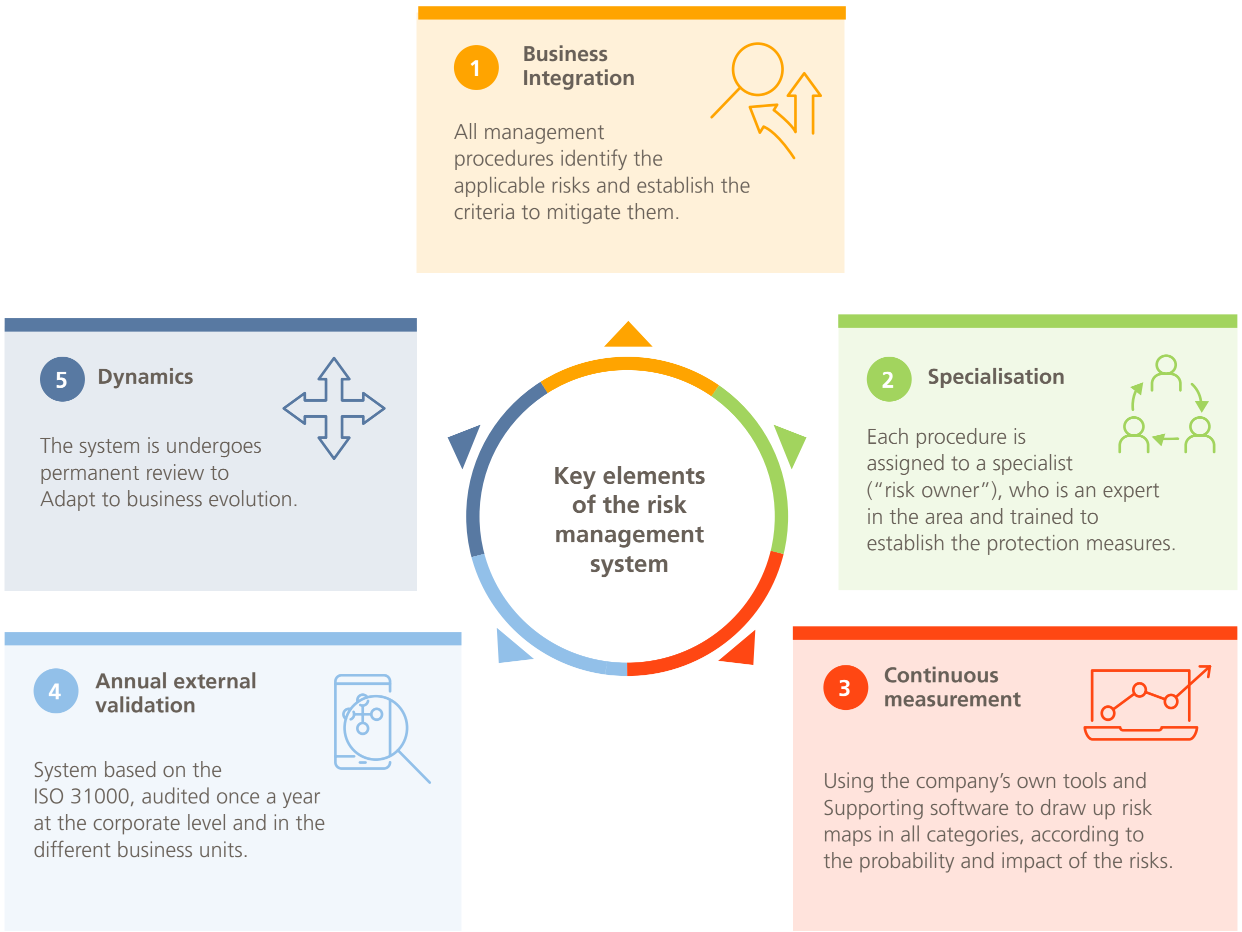
SOX
Mitigation of risks related to the reliability of financial information through control procedures and activities in key areas.

Continuous Risk Assessment

Risk Map
Internal "Enterprise Risk Management" (ERM) methodology which allows measuring and evaluating the company's main risks. The tool is used to create the risk maps in real time, allowing the design of efficient responses that are in line with the business goals.

Adequate internal control system

Key elements of the risk management system

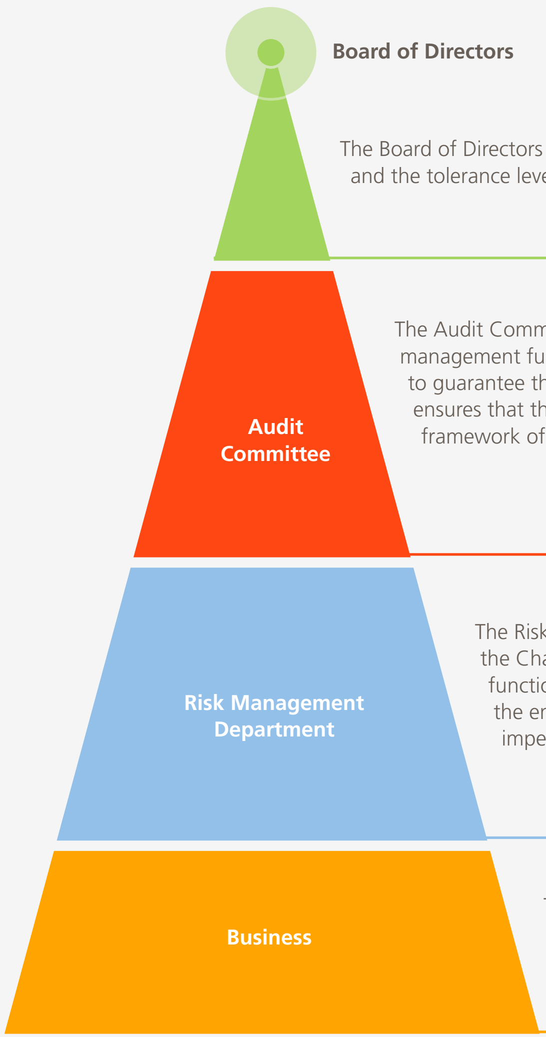


Risk policy

Abengoa's risk policy, approved by the Board of Directors, **establishes the following principles and guidelines** to design Abengoa's Risk Management System.

- **Risk management at all levels of the company**, without exceptions.
- Decisions always **carryshared and agreed responsibility**.
- Abengoa's risk management system is fully **integrated** in:
  - The organisation's **strategic planning process.**
  - The **definition of the business objectives**.
  - The **daily operations** to achieve the above mentioned objectives.
- Risk management includes **identification, evaluation, response, monitoring or follow-up and reporting** of risks according to the procedures intended for this purpose.
- The **responses** to risks should be consistent and widely **appropriate to business conditions and the economic environment**.
- Management shall regularly **evaluate the risk assessment** and the responses that have been designed.
- On a regular basis, **monitoring** activities will be carried out and compliance of the identification, evaluation, response, monitoring and information activities included in Abengoa's Risk Management System will be reported.

Organisational layout of Abengoa's Risk Management System



Board of Directors

The Board of Directors approves Abengoa's Risk Management Policy and the tolerance levels in relation to the company's risks.

Audit Committee

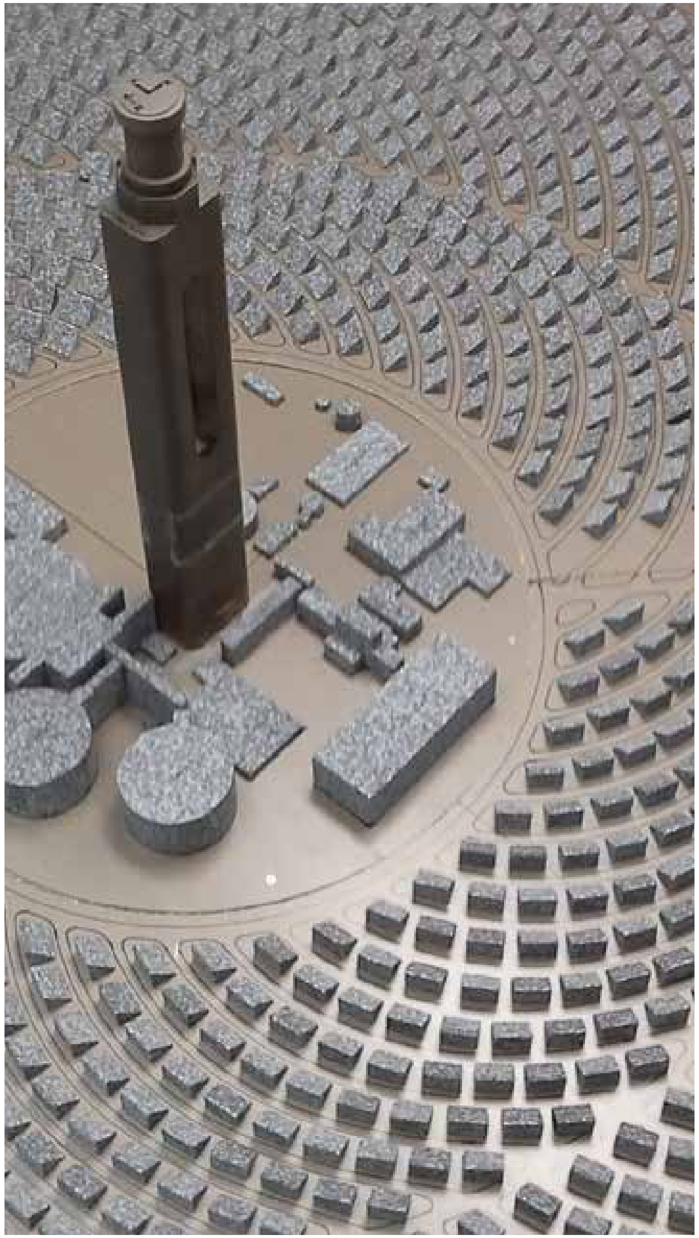
The Audit Committee supervises the internal risk control and management functions exercised by the Risk Management department to guarantee that the Risk Management System is effective and ensures that this system identifies and mitigates the risks within the framework of the policies established by the Board of Directors.

Risk Management Department

The Risk Management department, which reports directly to the Chairman of the Board of Directors, constitutes the internal function of the organisation adapting it to potential changes in the environment and prepares it so that such changes do not impede business objectives.

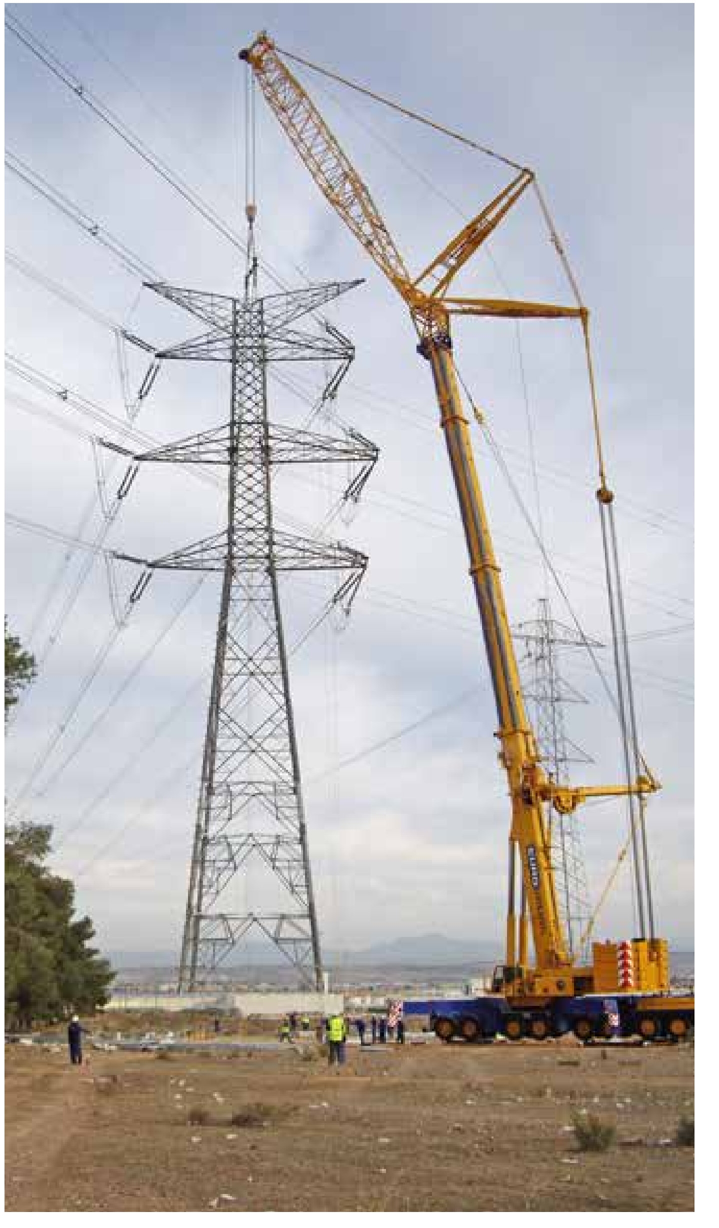
Business

The risk plans are implemented and developed by the verticals and geographies, in perfect coordination with the Risk Management department.



The scope of Abengoa's **Risk Management Department functions** covers three specific areas: business risk management, insurance management and special risk management.

Areas	Roles
Business risk management	■ Supporting the Chairman and the Board of Directors in the **definition and development of the strategic approach of the system** and in the decision-making process. ■ **Defining**, preparing and updating the **methodology**, procedures and analytical support tools to manage risks. ■ Guaranteeing the correct dissemination of the risk management policy across the organisation and thus develop a culture of business risk mitigation. ■ Identifying, analysing, quantifying and drawing up a **risk treatment plan** to which the company is exposed at a global and operational level, both during the bid preparation stage and during the execution, operation and maintenance and warranty stages. ■ Preparing an **internal classification to identify the risks in the countries** in which the company has activities, defining the necessary measures to be able to develop them. ■ Identifying **specific risks of M&A** (Mergers and Acquisitions) operations. ■ **Preparing Abengoa's risk maps** of Abengoa and defining the action plan to mitigate these risks. ■ **Negotiating contracts with clients** before signing the contract to guarantee that the contractual risk profile can be assumed by Abengoa.
Insurance management	■ Identifying **the risk transfer strategy for the company's insurance market**, identifying the most suitable insurance plans, both at the corporate level and in each business unit, project and operation, as well as the adequate coverage, limit and sub-limit details. ■ Taking out and renewing the company's **insurance policies,** including the negotiation with insurance companies and insurance brokerage firms. ■ **Managing incidents**, defining the applicable strategy, as well as leading the relationship with insurance companies and appraisers, to maximise the value when recovering the damage caused in the incident.
Special risk management	■ **Managing crisis scenarios**, preparing the correct procedure framework and leading the management process with the crisis management committee. Potential crisis management events include strikes, taking staff as hostages, or situations that recommend the evacuation of the staff from a country in which we operate. ■ Preparing **the safety and evacuation plans** in companies and international projects being executed, as well as the on-going monitoring of the environmental risk levels in the regions in which the company is present. ■ Applying **business intelligence methodologies**.



Applicable methodology of the Risk Management System for the business

Abengoa manages its risks in an **on-going cycle**, based on five key phases:

Two-directional, fluid and regular communication is essential in each phase, as well as permanent feedback to incorporate the improvements required.

This process is carried out for all projects in their different stages, from the identification of the business opportunity, going through the bid preparation and presentation, contract, execution and warranty period, and to the operation and maintenance stage with a **preventive and predictive approach** that allows anticipating the most adequate mitigating measures for each type of risk and in each phase. *102-11*

Offer phase

- Preparation of Risk Assessment in all significant projects, before making any firm commitment.
- Sources of risks are identified and mitigation plans are established.

Approval phase

Decisions and approvals based on risk mitigation criteria.

Approval Level	Approval Limits
Internal System of Authorisations (Approved by two members of the COEJ)	Project Amount <20 €M Guarantees <4 €M
Executive Committee	Project Amount 20 €M < 40 €M Guarantees 4 €M < 8 €M
Board of Directors	Project Amount >40 €M Guarantees >8 €M Contribution of Equity

Execution/ guarantee phase

- Fortnightly monitoring of project risks in the Business and Risk Executive Committee.
- Monthly risk committee per risk monitoring project/budget and cash flow of the project.

For each project in execution, a project risk management plan is established, the process of which has several phases, as established as follows:

Project launch meeting

- Transfer to the execution team.
- Definition of project team.
- Definition of the management plan and project risk mitigation.
- Definition of the risk matrix.

Transfer of risk to the market

- Taking out insurances.
- Hedging for exchange rate, raw materials, credit risk, etc.
- Transfer of risks in contract closure with suppliers, subcontractors and partners.

Risk monitoring

- Budget control and project deadline according to the earned value method.
- Monthly update of the project risk plan, reviewing the evolution of:
  - Margin
  - Budget
  - Risks
  - Cash Flow
  - Term deviations and guaranteed benefits
  - Contingencies
  - Technological risk

Risk reporting

- Fortnightly risk committees with the Chairman and the CEO.
- Fortnightly review in the business and risk executive committee.
- Monthly committee of the Chief Operation Officer with the risk management and the group control management.

Implementation and reception

- Settlement of contracts with suppliers and subcontractors.
- Contract closure negotiation with the client.
- Release of bank guarantees.
- Monitoring activities to be carried out during the guarantee period.

Lessons learnt

- Final meeting with the project team to gather the lessons learnt.

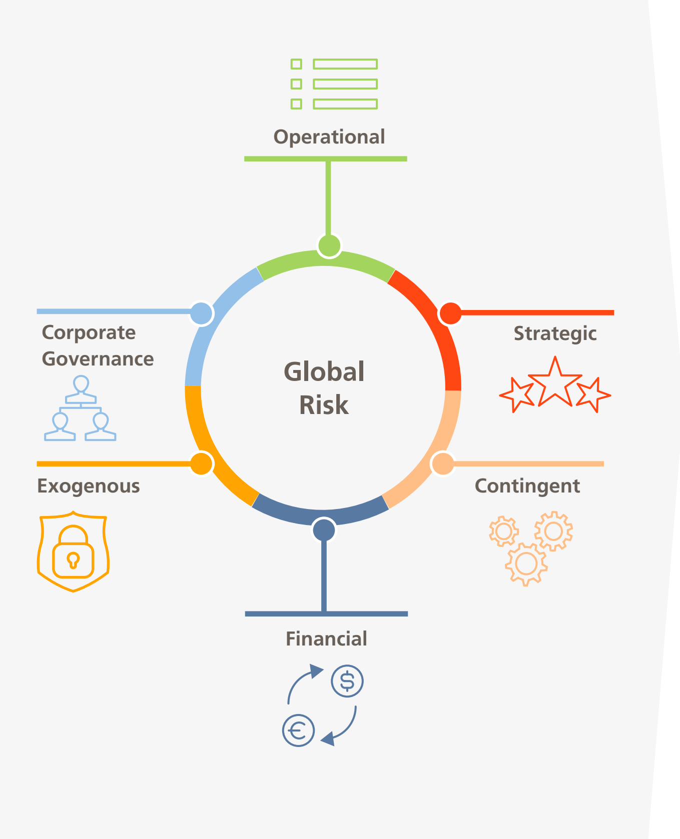
ERM Methodology

Abengoa has developed an **internal Enterprise Risk Management (ERM) methodology** which allows **measuring**, based on a series of impact and probability indicators, the level of importance of the **main risks** affecting the company.

Likewise, ERM provides **real-time risk maps**, in order to design efficient responses aligned with business objectives.

During 2019, Abengoa carried out a review of the risk classification and the review of the probability and impact indicators, in order to allow a more complete identification of the risks and an analysis adapted to the new strategic approach of the company.

Each of these risks is divided into different subcategories, with specific risk maps prepared for each of the areas, analysing the following risks.



Operational

- Contracting
- Preparation of offers
- Profitability in projects
- Overhead
- EBITDA vs. Target
- ROS
- Sales vs. Budget
- Margin drop potential
- Technological component
- Health and Safety
- Personnel turnover
- Portfolio destruction

Strategic

- Commercial unit
- Commercial unit in offers
- Inadequate strategic diversification
- Monitoring of the strategic plan

Contingent

- Execution of guarantees
- Matured debt
- Potential claims
- Pending lawsuits

Financial

- Credit
- Liquidity
- Exchange rate
- nterest rate
- Availability of guarantee line
- Overindebtedness
- Capital structure
- Taxation

Exogenous

- Cyber risk
- Regulatory changes
- Political violence
- Natural risks
- Changes in demand
- Global pandemic risk

Corporate governance

- Composition of the Board
- Segregation of duties
- Lack of internal control

Relevant news in the fiscal year 2019

During 2019 the following actions have been carried out to meet the objectives of the strategic plan:

- Criteria **to monitor the risk of commercial concentration** of some of the subsidiaries with certain clients have been defined, establishing collection assurance and independence measures of the projects, to avoid affecting projects.
- A **specific cyber-risk insurance policy has been taken out** to cover the economic impact of an attack on the company's information systems and allow its operational recovery in the shortest possible time.
- Risk management plans **for all projects have been updated**, in order to identify in a more preventive manner possible any events which may jeopardise the outcome of the projects in relation to compliance with deadlines, costs and guaranteed benefits.
- **The risks were analysed in all relevant projects and operations**, and its decisions were taken by the Executive Committee and/or Board of Directors.
- The **risks associated with the company's asset divestment processes** were analysed.
- **The emergency and evacuation plans and all safety level**, terrorism and specific alert monitoring processes have been updated, in relation to those that could have an impact on the assets, operations and staff working in the countries in which we are present, especially in Mexico, the Middle East, South Africa, and North Africa.

The evolution of **Abengoa's risk profile** in the last years is shown below:

Evolution of Abengoa's risk profile

From developer to EPC contractor

Focus on anchor and known geographies

Reduction of the project size

- Lower cash requirement.
- Diversification.
- Activities focused on our know-how with higher margin.
- Less exposure to risks of a certain project.

Evolution of the company's risks during 2019

The main risks to which Abengoa has been exposed in its activity during 2019 have been:

Operational risks

- Risks derived from **intrinsic delays and overheads** of the engineering and construction activity, **due to the technical difficulties** of projects and throughout their execution.
- A significant volume of Abengoa's contracts has been in "turnkey" construction, which are contracts by which a facility is built for a client in exchange for a fixed price and are usually subject to very long construction deadlines in which **unexpected events may occur which make costs higher than expected** resulting in the reduction of profitability.
- Risk of a potential **delay to comply with the agreed upon dates** as a consequence of lower performance than estimated, or due to the occurrence of **unforeseen conditions** which may cause stoppages in construction, such as torrential rain or other adverse weather phenomena, delays in the supply chain, etc. Failure to meet delivery deadlines may result in the payment of penalties set forth in the agreements.
- Risks derived from **the failure to meet the contractual obligations** agreed with clients in terms of guaranteed performance and deadlines. The consequences of these obligations might derive in penalties and claims for damages from the client, as well in the enforcement of performance guarantees requested by clients.
- Risks associated with the **backlog**, as some of the above mentioned projects could be subject to some contingency, such as delays in the start of projects due to delays caused by clients in their financial closing processes or in obtaining the permits required for the execution of projects or as possible unexpected cancellations. Material delays, cancellations and failure to pay could significantly affect Abengoa's business, financial situation and results of operations.

- Risks associated with **managing the supply chain**, derived from the failure to observe the obligations assumed by suppliers, as well as events of force majeure in suppliers' facilities, preventing supply deadlines from being met; integrated management of different suppliers and subcontractors is necessary to mitigate such risks, as well as maintaining the adequate risk transfer level.

- Risks derived from the **association with third parties for the execution** of specific projects. Given the complexity of Abengoa's projects (usually designed ad hoc), or with the purpose of increasing the competitiveness and value created for the client, it is necessary to ensure the participation of third parties specialising in the processes required to perform certain activities associated with these projects, so there is a risk of potential claims between parties and of the incorrect choice of partner in terms of its technical capacity and viability.

- Risks derived **from the rotation in senior management and key employees**, as well as in relation to not hiring the most suitable highly-qualified employees. Most of Abengoa's know-how is in the company's human capital, so Abengoa's capacity to retain and motivate senior executives and key employees and of attracting highly-qualified employees will have a big impact on Abengoa's capacity to conduct business successfully.

- It is possible that **government support** for the development of renewable energy, a key market for Abengoa, may be **reduced**, and a **gradual but significant reduction** of **premiums and incentives for renewable energy** cannot be ruled out. If this reduction occurs, market participants, including Abengoa, should reduce prices to continue being competitive against other alternatives. If cost reductions and product innovation do not occur or occur more slowly than necessary to achieve price reductions, it may have a significant negative effect on Abengoa's business, financial condition and operational results.

Internationalization risk and geopolitical risks

- Abengoa has projects on the five continents, some of them in emerging countries, including diverse locations such as Africa, Latin America, the Middle East, India, Australia, China and North America, and it anticipates expanding operations to new locations in the future. Any **variation in the economic, political, security environment or social conditions** in the different countries in which it operates may affect both economic results and the security of personnel and assets located abroad.

The central focus is on the situation in the Middle East, taking into account that it is the main region in which Abengoa operates, and how the economies in Middle Eastern countries rely on crude oil price variations, meaning that reduced price scenarios and tax restrictions in the country could lead to a high increase in taxes, delays or cancellation of projects and an increase in client default risks.

Additionally, during 2019, geopolitical tensions between Iran and the United States have created an environment of uncertainty both for the security of personnel in the area and in certain restrictions on the supply chain.

Abengoa's risk policy has a **methodology to mitigate geopolitical risks**, consisting of classifying the countries in which it operates based on the level of risk and **to establish certain specific requirements to work in these countries according to the risk**. For example, the obligation to cover country risk through insurance policies which cover scenarios such as political violence, expropriation, nationalisation, confiscation, regulatory risk, lack of transfer of investment-related amounts, dividends, amortisation of credits, contractual breaches by the authorities of the receiving country regarding the insured investment and revolution or war.

Other requirements could be to transfer risk to financial entities through the corresponding financing contracts or other mechanisms; establishing a maximum amount of guarantees on projects and minimum margin requirements; to avoid accumulating cash surpluses of the activity in those countries and establishes hard currencies, such as USD or EUR, as contract currency, etc. Nonetheless, it is not possible to ensure that these mechanisms ensure full coverage of possible contingencies or full recovery of damages in all cases.

Market risks

- **Market risks** arise when Abengoa's activities are mainly exposed to the financial risks derived from variations in the exchange rates and interest rates, as well as its volatility.
- Some risks are derived from the **exposure of the revenues from the electric power plants** to electricity market prices. Despite the company's divestment plan associated with its power plants, some of the revenues from Abengoa's operation and maintenance activities partially depend on electricity market prices and part of the costs are affected by different factors, such as the price of raw materials.
- There are risks arising from the **changes in prices of raw materials**, which may result in higher operational costs. Engineering and construction activities are mainly exposed to changes in materials such as steel, aluminium, copper or zinc, which influence the price of much of the equipment that Abengoa buys from its suppliers, as well as the cost of the price of natural gas or electricity, which are usually consumed during the construction of projects or when operating plants and assets by the company.
- Nonetheless, a price lowering environment for raw materials such as the one experienced in 2019 has caused some investments from mining clients in countries such as Chile and Peru to be delayed.

Risks associated with Abengoa's financial restructuring process

Regarding the second financial restructuring carried out by Abengoa in 2019, a series of specific risks have been identified, which could be summarised as follows:

- Risks associated with **delays in the implementation of some of the measures established in the viability plan**, in particular, when closing specific divestment processes, which could have an impact on the estimated operational and investment cash-flow established in the feasibility plan.
- In addition, from the **reputational** point of view, such a long financial restructuring process generates **uncertainty in different stakeholders**, who can request higher guarantees than those established as the market standards. These problems are being solved by creating partnerships with powerful groups with a solid technical and financial structure and by meeting the contractual requirements agreed with clients, which has allowed us to renew the agreements signed with our recurring clients.

Integration of risk management into the organisation's strategy

Abengoa focuses on its risk management policy which involves the complete **integration of risk management objectives with the strategy** of the company.

The company has determined the activity and target markets according to the risks that can be assumed by the organisation as the criteria used to prepare the Strategic and Feasibility Plan, establishing the priority in known markets, recurring clients, countries with lower risk levels and an activity based on medium-sized third-party projects, which do not require an investment in Capex and with a lower level of risk assumed and less exposure to regulatory risks, leveraged based on Abengoa's own know-how and that of potential partners whose scope extends to countries and activities in which Abengoa has less experience.

In turn, Abengoa's internal approval system implies that the strategic decisions made by senior management and the Board of Directors are supported by the conclusions of the various assessments of the risks to which the company is exposed.

Due diligence of the highest governance body on risk management

The **senior management** is fully **committed and involved** in risk management.

The Risk Management department reports directly to the executive chairman of Abengoa's Board of Directors, allowing him to monitor the efficacy of the risk management processes through a series of regular fortnightly committee meetings.
102-30

Moreover, the director of the Risk Management Department holds a series of fortnightly risk committee meetings with the company's Managing Director.

A committee of each of the business units is held on a monthly basis with the Executive Committee, with the participation of the Risk Management Department. The purpose of these meetings is to identify and analyse the evolution of the main risks affecting each one of these units, the assessment of whether the expected financial, environmental, social and health and safety results are being achieved or not, as well as the potential impacts on this unit and on Abengoa as a whole.
102-30, 102-31