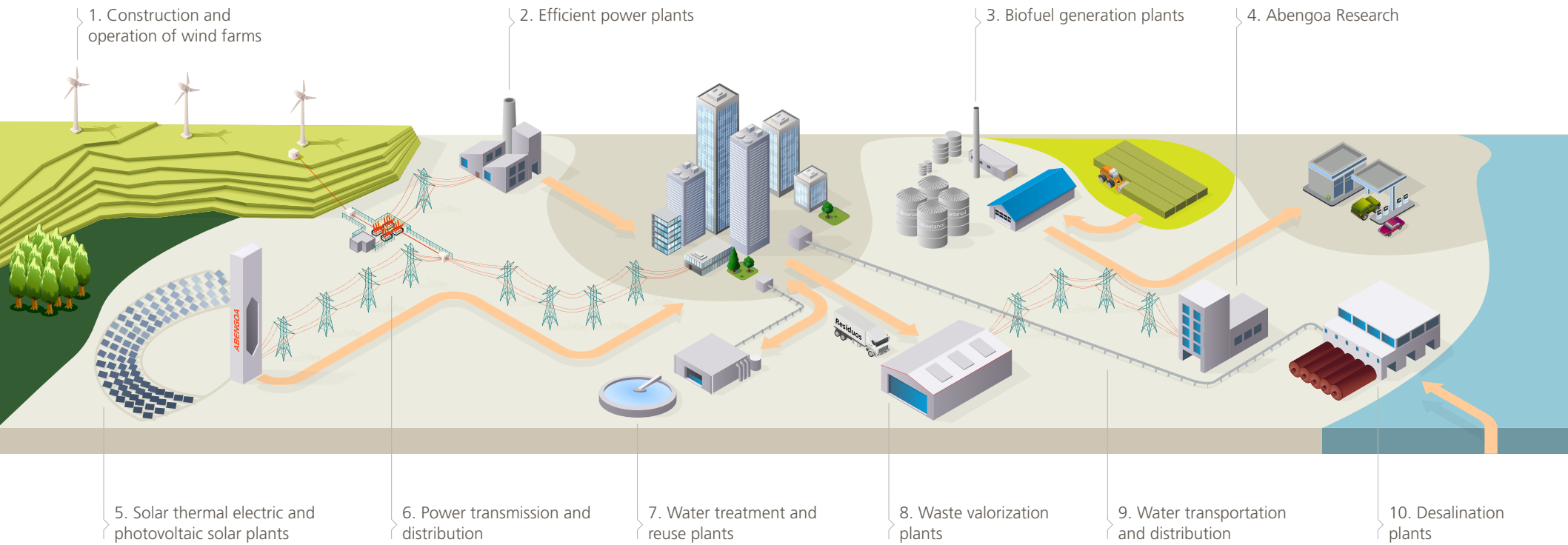
03 Business model

G4-3



Abengoa applies innovative technology solutions for sustainability in the **energy and environment sectors. It meets the basic needs** of towns and cities centers and their inhabitants by generating and transporting energy and drinking water, producing biofuels, treating wastewater and valorizing waste.

Abengoa's business focuses on two main activities strongly associated with technology and innovation: engineering and construction, on the one hand, and Operation and Maintenance (O&M) on the other, both including assets awarded under concession and technology-heavy free market business, such as biofuel production.

1. **Construction and operation of wind farms**: Abengoa designs, builds and operates wind farms, which it uses to generate renewable energy.
The company had 50 MW of wind power under management in 2014. Abengoa also continued construction of a further 50 MW during the year while developing new projects to boost its operating capacity in the coming years.

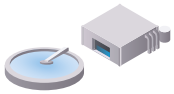
2. **Efficient power plants**: Abengoa designs, builds and operates thermal power stations, embracing both combined cycle plants and cogeneration facilities (heat plus electricity). In 2014, the total installed and in construction capacity from combined cycle and cogeneration plants is 2,363 MW.

3. **Biofuel generation plants**: Abengoa builds and operates plants capable of producing first- and second-generation biofuels.
The company started up 16 new plants in 2014, while a total of 1,700,913 m^3 t of bioethanol and 103,474 m^3 t of biodiesel were produced.

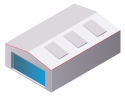
4. **Abengoa Research**: the company's R&D and innovation activity has been consolidated through Abengoa Research, which remains in constant contact with each of the company's business areas. A total of 882 individuals work at the R&D and innovation division, which invested € 597.8 M in R&D and innovation in 2014 and has been granted 312 patents to date.

5. **Solar thermal electric and photovoltaic solar plants**: Abengoa designs, builds and operates plants capable of generating electrical power, solar thermal electric and photovoltaic, from the sun.
It markets components for solar power plants, O&M equipment and other industrial applications. In 2014, the company commissioned a solar thermal power plant with an installed capacity of 280 MW. Abengoa manages and operates 15 plants in 5 different countries, with a total installed capacity of 1,503 MW. These facilities generated a total of 1,959 GWh in 2014.

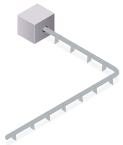
6. **Power transmission and distribution**: Abengoa designs, builds and offers O&M services for power transmission and distribution installations (transmission lines and substations). The company is therefore able to transport the energy generated at renewable and thermal power stations, which tend to be located far away from end consumers. In 2014, a total of 2,375 km of transmission lines were completed and entered into operations.Worldwide, Abengoa has installed up wards of 25,000 km of transmission line.



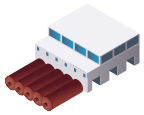
7. **Water treatment and reuse plants**: Abengoa designs, builds and operates water treatment and reutilization plants in order to provide the neccesary basic service involving the treatment of water used and reuse or discharge there of under suitable conditions. To date , this technology has rendered the production of over 2 Mm^3 of drinking water per day, an amount suffcient to meet the supply needs of more then 10 M people.



8. **Waste valorization plants**: Abengoa designs, builds and operates waste valorization plants to recover the value of both municipal solid waste and forestry waste, either to convert them into other useful products or to generate power.



9. **Water transportation and distribution (pipelines, aqueducts, etc.)**: Abengoa designs and builds the installations required to transport water, allowing the valuable commodity to be carried to industrial or urban water treatment, purification or regeneration plants, or to move treated water from desalination plants to towns and cities and industrial facilities. The company brought a further 240 km of water pipeline into service in 2014.

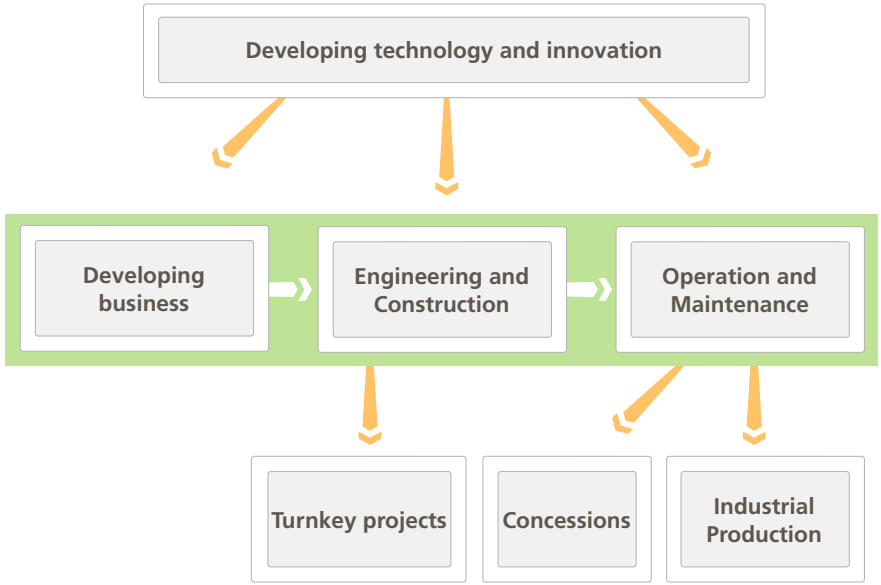


10. **Desalination plants**: Abengoa designs, builds and operates desalination plants to turn seawater and brackish water into water fit for drinking or industrial use. A plant were brought into service in 2014, while the company operated a total of 6. The facilities are capable of desalinating 815 Mm^3 of water a day to supply a population of more than 4 M. Moreover, the company has been selected as the partner of Advanced Water Technology (AWT) to develop the world's first large-scale desalination plant to run on solar energy.

G4-14

There are essentially three categories of project development and plant operation:

1. **Turnkey**: Abengoa designs and constructs the facility while the end client handles the operation (carried out by Engineering and Construction).
2. **Concessions**: Abengoa operates the plant over a given period (carried out by Engineering and Construction and Operation and Maintenance).
3. **Industrial production**: Abengoa develops proprietary technology, seeks out business opportunities and designs and constructs the facilities, which are then managed, operated and ultimately owned by Abengoa. Business here tends to focus on the production and sale of both first- and second-generation bioethanol (carried out by Engineering and Construction and O&M).



Technological distinctiveness is our trademark

All of Abengoa's lines of business are heavily based on **technology and innovation**, which are key to the company's ongoing ability to access new markets (geographically and by business). The **main lines of research** center on **new desalination technologies**, **developing and improving efficiency** at **solar power** plants and **developing catalysts**, **enzymes** and **new biofuel production techniques**.

This **technological slant** is an Abengoa hallmark. It enables the company to integrate vertically throughout all its business areas, spanning the entire life cycle of the projects it undertakes. The company is therefore fully capable of developing its own technology (at its six research centers) and making it operational, whether for facilities under concession, industrial production or turnkey projects. A prime example of this commitment to innovation is the high R&D and innovation investment to EBITDA ratio, which stood at 36.6 % in 2014.

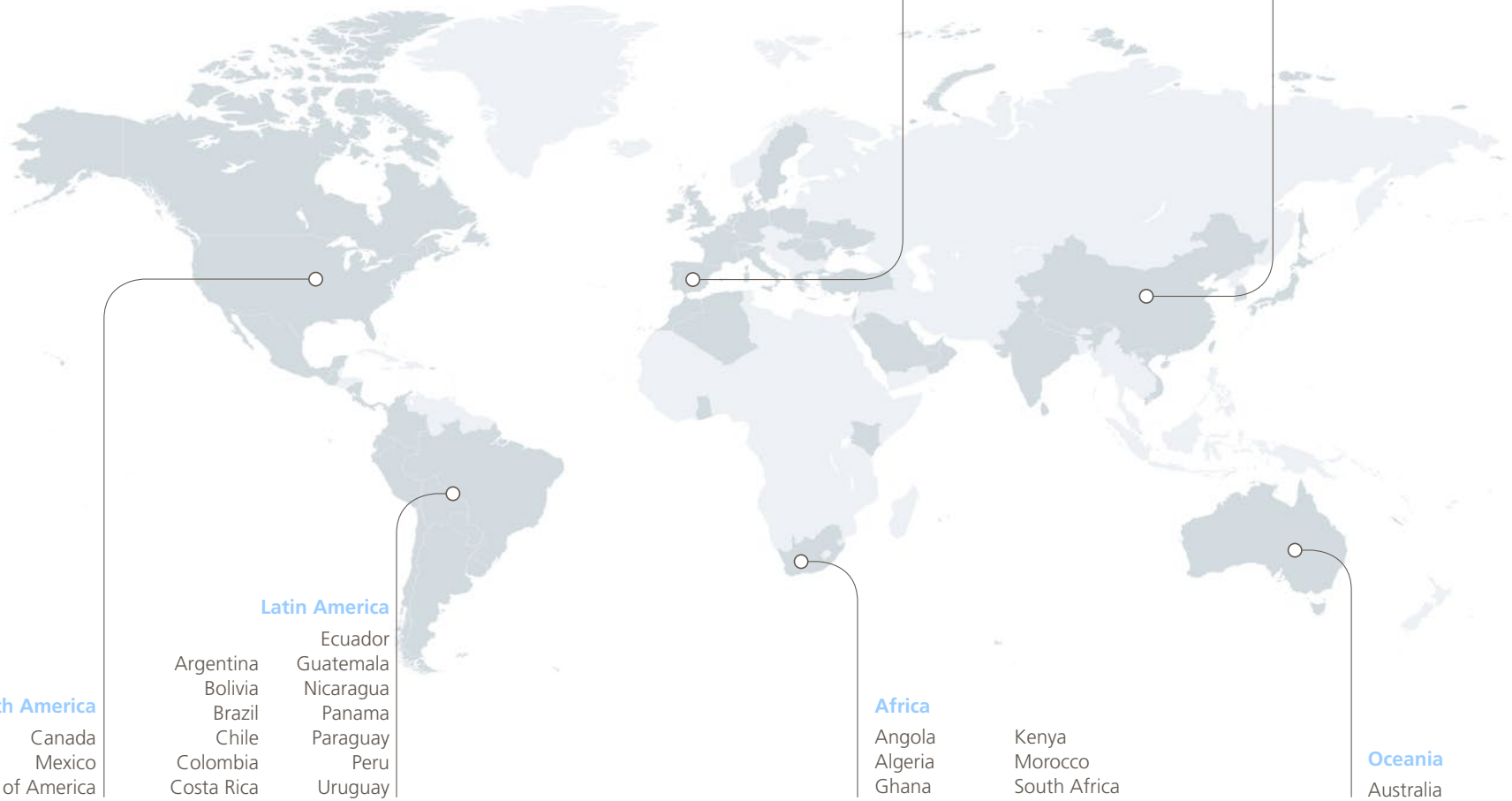
The success of this business model is largely driven by **our human team**, since the company's presence in such a **hugely specialized** sector means only the very best professionals will do. Most projects are headed and coordinated by the company's own personnel, who bring the necessary experience and know-how to meet the objectives that have been set.

Abengoa's **sharp internationalization**, around 84 % of turnover generated outside Spain, means that the company seeks out new business opportunities in many different regions worldwide. Moreover, its tireless efforts at detecting and minimizing risk mean that it remains completely in control of any possible contingencies that could affect its projects. The main risks associated with each project are thoroughly assessed from the bidding phase through to project completion.

G4-5, G4-6, G4-7, G4-8

Abengoa worldwide

Abengoa is based in Seville (Spain) and is present in 57 countries across the globe through its network of roughly 650 companies, subsidiaries, investees, facilities and offices. The company is confident that it will boost its presence in the American and Asian markets in the coming years.



Europe

Belgium
Cyprus
Denmark
France
Germany
Greece
Holland
Hungary
Ireland
Italy
Luxembourg
Poland
Portugal
Romania
Spain
Sweden
Switzerland
Turkey
Ucrania
United Kingdom

Asia

China
Emirates
India
Israel
Japan
Kuwait
Nepal
Oman
Singapure
South Arabia
South Korea
Sri Lanka
Taiwan
Vietnam

North America

Canada
Mexico
United States of America

Latin America

Argentina
Bolivia
Brazil
Chile
Colombia
Costa Rica
Ecuador
Guatemala
Nicaragua
Panama
Paraguay
Peru
Uruguay

Africa

Angola
Algeria
Ghana
Kenya
Morocco
South Africa

Oceania

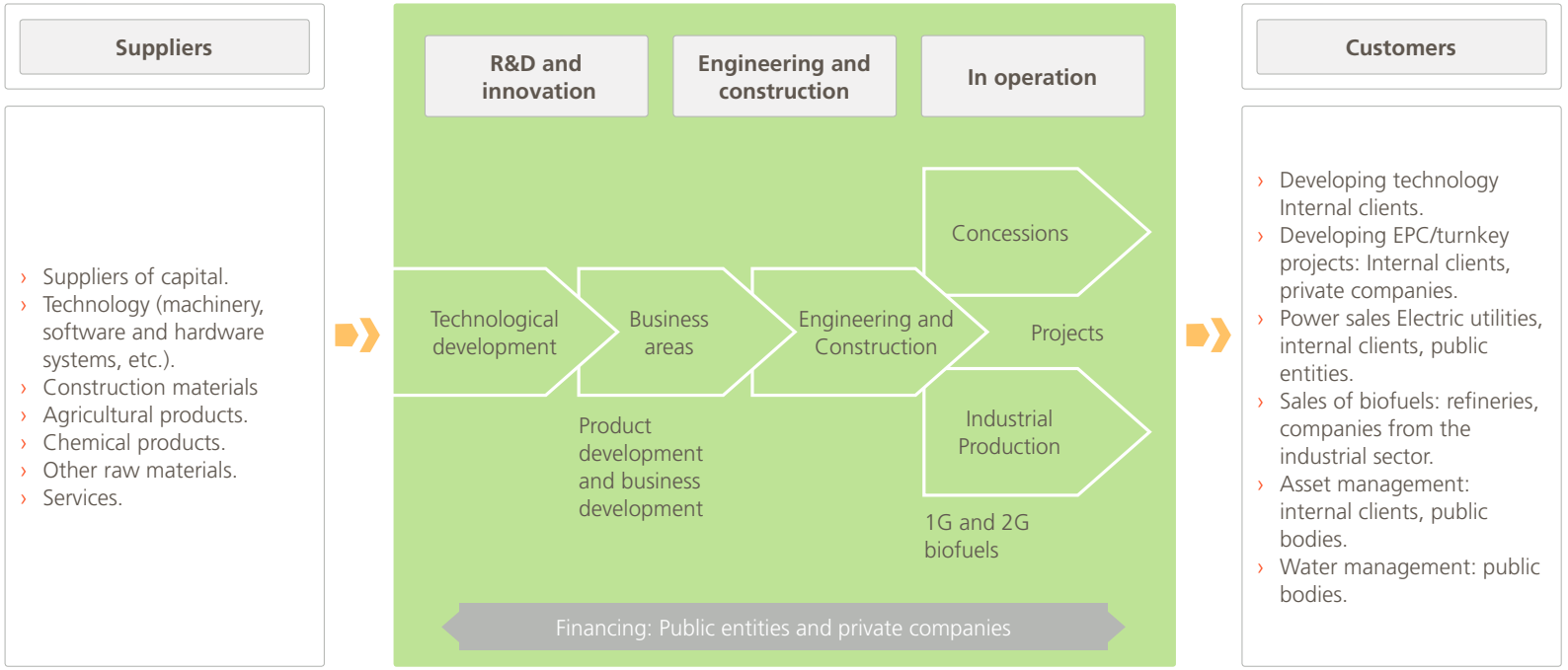
Australia

G4-ID1, G4-ID2, G4-ID3, G4-ID4

Abengoa's value chain

In 2013 and 2014, Abengoa flagged the main elements in its value chain to analyze and better understand the impact and influence that each of these can have on its business while also improving transparency so that the company's stakeholders are fully aware of the interactions taking place between the main players involved in the business.

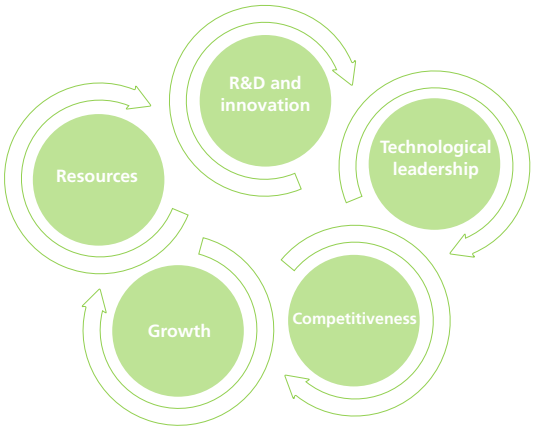
Given Abengoa's complex structure it is very important to map out its value chain. With this in mind, mapping out the chain provides a global picture of Abengoa's activities and how the company works, with the ultimate aim of enhancing competitiveness and offering clients increasingly innovative products.



G4-ID1, G4-ID2, G4-ID3_4

R&D and innovation, key to Abengoa's business model

R&D and innovation is Abengoa's main growth driver. It makes the company a leader in technology and affords it a competitive edge against its peers. Technological differentiation as a product of innovation opens up sustainable growth while providing the necessary resources to fuel R&D and innovation activity.



In 2014, the company invested € 597.8 M in R&D and innovation, representing 8.1 % of revenue. Most of this investment was put towards applied research and technological innovation, in line with the company's strategic objectives. The total number of employees involved in R&D and innovation activity stood at 882[1].

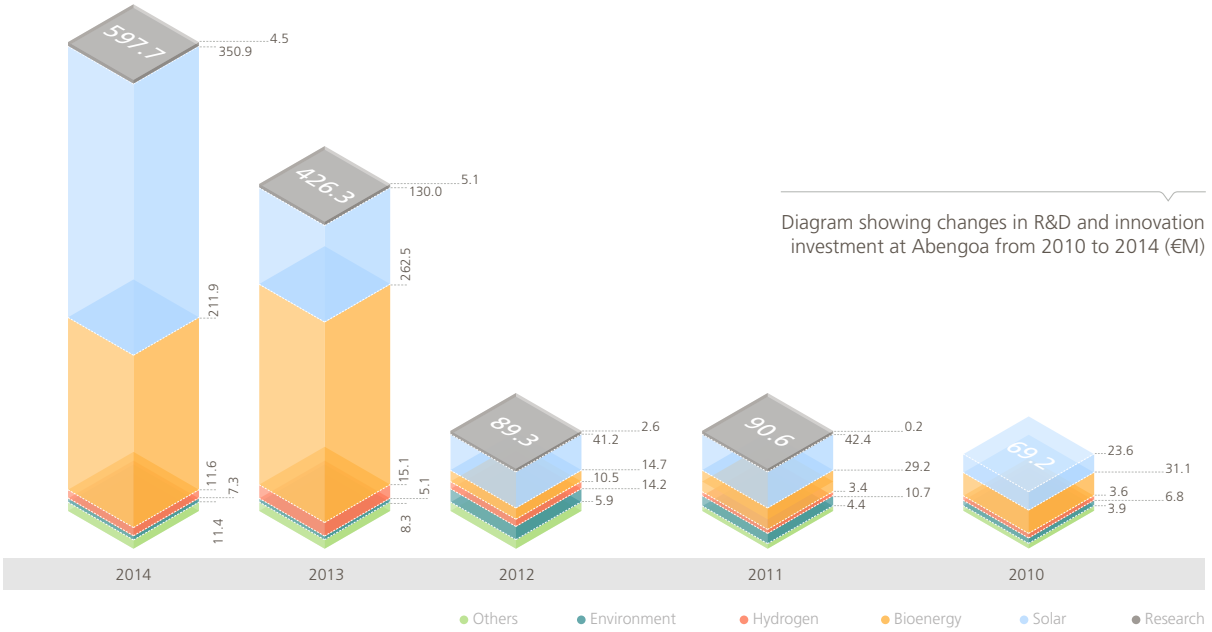


Diagram showing changes in R&D and innovation investment at Abengoa from 2010 to 2014 (€M)

Thanks to innovation at Abengoa, numerous patents are applied for and obtained through the company's Patents and Technology Oversight Office, which manages all activities involving intellectual and industrial property rights. At December 31, the company had 312[2] patents (applied for and granted) since 2008.

Note 1 For more information about the R&D and innovation see Appendix A.

Note 2 Priority patent application.

2020 Objective associate

597.8 M€

R&D and innovation investment

312

patents granted and applied for

882

employees involved in R&D and innovation

Abengoa Research

Abengoa's commitment to an innovation-driven business model branching the entire company prompted the company to centralize its innovation activity in Abengoa Research.

The consolidation in 2014 of Abengoa Research addresses the need to generate science-related synergies between the different research areas and to focus R&D and innovation from a global market-based perspective.

By having a multi-disciplinary R&D and innovation center, the company is able to shift its research focus as needed and base research on areas of knowledge that affect and benefit different areas and divisions of the company to increase the effectiveness and reach of its research activity. Abengoa conducts research in the following fields of technology: thermoelectric and photovoltaic energy, power systems, biotechnology, chemical processes and a simulation group.

This new approach provides not only valuable scientific synergies, but also a much more complete vision of investment in R&D and innovation and the direct return on this investment. It also makes the company more versatile in tackling new challenges and developing future solutions.

R&D and innovation Campus Palmas Altas laboratory, Seville (Spain).

New laboratories at Campus Palmas Altas

With the aim of centralizing all research activity at Abengoa Research, the company constructed and opened a number of multi-disciplinary laboratories in 2014 at Campus Palmas Altas, the company's headquarters in Seville (Spain). The facilities have a combined floor area of 2,150 m^2 and house a team of over 80 individuals, bringing together researchers, doctorate students and highly qualified laboratory technicians, all spread across the following research units:

- **Thermofluids laboratory**: research at this facility centers on the study of new materials to improve the heat storage and transfer capacities of the salts/fluids used at solar thermal power plants.
- **Electrics laboratory**: this center explores the interactions between renewable generation plants and the commercial power grid to which they are connected, the aim being to improve and validate new plant control systems and the impact these renewable power plants have on the grid, while also studying how the plants can provide auxiliary services.
- **Biotechnology laboratory**: engaged in activities related to the development of bioproducts and biofuels, focusing on the improvement of microorganisms that generate compounds valuable for industry and enzymes to generate second-generation (2G) bioethanol or microorganisms for producing high added value bioproducts.
- **Chemical processes laboratory**: work here is largely focused on developing and characterizing new catalysts for bioenergy applications, such as developing new processes to obtain value added products from lignin, reformers and electrolyzers for the production of hydrogen and, lastly, processes for treating water and eliminating contaminants.
- **Materials laboratory**: employs techniques to synthesize and characterize new materials. These include materials designed for applications in photovoltaic, solar thermal and water treatment technologies.

Main projects

In 2014, Abengoa secured a large number of new contracts and completed many other projects across the globe. These projects come in many different shapes and forms, illustrating the different areas of business and sectors in which the company operates. Flagship projects for the year included:

Largest solar thermal facility in South America

Abengoa will build a 110 MW solar thermal electric plant employing tower technology and a 100 MW capacity photovoltaic plant in the Atacama Desert, the region receiving the highest solar radiation in the world. The plant is expected **to prevent the release of 870,000 t of CO_{2eq}** per annum.

Smart water management grid spanning 250 km in Turkey

Abengoa will handle the engineering, design and construction of the project, which has been arranged as a turnkey project. The grid will cover close to 250 km and **will serve** the city of Denizli and its population of roughly **half a million**.

World's largest single-axis photovoltaic plant

With an installed capacity of 206 MW, the facility **will generate enough energy for 72,000 households** while **curbing yearly CO_{2eq} emissions by 356,000 t**.

First second-generation biofuel plant

Abengoa unveiled the first commercial plant capable of producing bioethanol from cellulosic biomass, a huge milestone in terms of innovation since the raw materials or inputs used do not compete with grain otherwise used for food. The facility is expected to generate upwards of **94 ML of bioethanol a year.**

Hugoton plant, Kansas (U.S.).

World's largest biomass plant

Worth in the region of € 315 million, and boasting an installed capacity of 215 MW of electrical power and 100 MW of thermal power, the plant runs solely on biomass. The facility will supply electrical power to **industrial** clients and thermal energy to heat the **city of Ghent** (Belgium).

G4-56

A business model with responsibility at its heart

The world needs solutions that push towards sustainable development.

This approach shapes the company's mission, vision and values and is the hallmark of Abengoa.

Mission, vision and values

The company's mission, vision and values are directly related to the business objectives it has set itself.

All lines of business operate in strict compliance with these three principles.

Mission: Abengoa is a technology company that applies groundbreaking solutions geared towards sustainable development in the energy and environment sectors. Company management champions a culture of enterprise and is heavily focused on social responsibility and transparency and rigor in management, thus providing long-term value to shareholders.

Vision: Abengoa aims to become an international benchmark in the development of groundbreaking technological solutions geared towards sustainable development.

The company's management and business model are rooted in the following **values**:

- **Integrity**: Abengoa strives to operate honestly in everything it does, both within the company itself and with the communities in which its presence is felt.
- **Legal compliance:** each action undertaken by the company must be legally compliant so as to ensure legal security in relation to its work and reduce risks.

G4-15, G4-16 (partial)

- **Professional rigor**: involvement in and full commitment to all Abengoa activities are essential to the company's ongoing success.
- **Reliability**: discretion and prudence govern Abengoa's relationships with stakeholders. This is absolutely essential it hopes to forge close ties and improve dialog and relations between the company and its surrounding community.
- **Quality**: excellence is present in all the products and services the company offers.

Moreover, the company has fully assumed the ten principles **of the Global Compact** .

Global Compact

Since 2002, Abengoa has remained fully committed to the Global Compact of the United Nations, meaning it has undertaken to honor and implement into its business, business model and strategy the ten principles.

Since 2005, Abengoa has been publishing a yearly Communication on Progress (COP) on the Global Compact website to inform its stakeholders of the actions carried out in the last year in relation to implementation of the governing ten principles. The report, which the company is under no obligation to prepare, also identifies the advances and improvements made in comparison to the previous year, making the company more transparent.

In 2014, the Global Compact Network Spain officially recognized Abengoa for the ten-plus years it has spent collaborating with the Global Compact.

03.1 Management Balance Sheet

G4-DMA, G4-9, G4-EC1, G4-EC4, G4-EC8, G4-EC9, G4-LA1, G4-LA6, G4-LA9, G4-HR2, G4-HR10, G4-SO1, G4-SO4, G4-EN3, G4-EN8, G4-EN9, G4-EN10, G4-EN15, G4-EN16, G4-EN17, ID1, ID2, ID3, ID4

The Responsible Management Balance Sheet was devised in 2011 for the purpose of grouping together the CSR-related indicators which, due to their relevance, are critical for the company and for its stakeholders. Given their importance, the company carries out more exhaustive ongoing monitoring of such data in order to ensure higher reliability in information management and reporting. This scorecard is verified by an independent third party, and is published twice a year on the Abengoa website and in this report in order to provide information on the evolution of company performance to stakeholders.

The Responsible Management Balance Sheet comprises a selection of the most relevant CSR indicators

Economic dimension	2014	2013
Total revenue (€M)	7,151	7,356
Purchases from local suppliers	76 %	78 %
Payment to the Public Administration (k€)	237,427.5	168,602.2
Significant financial support received from governments (k€)	43,338.8	25,384.4
R&D and innovation		
Investment in R&D and innovation (M€)	597.8	426
R&D and innovation employees	882	781
Patents accumulated and applied for	312	261
R&D and innovation investment effort (R&D and innovation investment/ revenues)*100% (1)	8.1	5.8

Environmental dimension	2014	2013
Energy		
Energy consumption (GJ) (primary, electrical, thermic)	88,696,317	77,485,620
Energy consuption (GJ) / revenues (1)	12.0	10.5
Emissions		
Direct emissions (tCO_{2eq})	3,802,197	3,390,613
Direct emissions from biomass (tCO_{2eq})	3,445,101	2,999,670
Indirect emissions (tCO_{2eq})	747,378	822,691
Direct emissions (tCO_{2eq}) / revenues (1)	1.5	1.5
Water withdrawal		
Desalinated water produced (m^3)	72,381,117	–
Sea water withdrawal (m^3)	161,825,953	170,975,651
Water withdrawal from other sources (m^3)	39,423,280	26,347,289

Social dimension		2014	2013
Employees			
Job creation (2)		1.4 %	0,6 %
Critical voluntary turnover	Voluntary turnover	6.9 %	4.0 %
	Critical voluntary turnover	0.9 %	0.7 %
Female employees	In management positions	10.9 %	12.8 %
	In middle management positions	21.8 %	23.1 %
Training (hours of training / number of employees)		63.7	47.9
Absenteeism		2.3 %	2.7 %
Work-related accidents	Frecuency rate	14.2	15.4
	Severity rate	0.2	0.3
Suppliers			
Analysis of suppliers with respect to human rights, laboral practices and environmental risks		12,391	14,389
Total of high-risk suppliers with respect to human rights, laboral practices and environmental risks that have been audited		8.4 %	9.6 %
Communities			
Total investment in social action (€M)(3)		9.5	9.1
Countries in which Abengoa operates and has social engagement activities (4)		17	23
Volunteering hours		11,521	10,443
Corruption			
Analysis carried out in accordance with the FCPA (5)		5,806	4,139
Employees trained in company anti-corruption policies		7,467	8,727

(1) In order to calculate these ratios, aggregate revenues of Abengoa and Abengoa Yield (€ 7,356 M for 2013 and € 7,375 M for 2014) were taken into account.
(2) The ratio was calculated using the data on average employee headcount (27,181) in order to eliminate the seasonal component.
(3) Data for investment in social engagement in 2014 were calculated in accordance with LBG (London Benchmarking Group) methodology.
(4) The countries in which Abengoa operates and has social engagement activities were calculated in accordance with LBG methodology.
(5) Foreign Corrupt Practice Act (FCPA): North American law governing corrupt practices abroad. (+ info)