

SIEMENS

Ingenuity for life



In Morocco. For Morocco.

Business to Society Report

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Foreword by the CEO of Siemens Morocco

“Thanks to its 170 years of existence, Siemens knows that truly successful companies are those which address the needs of the society in which they live and work. This of course means that we must assume our responsibilities in the economic, environmental and societal fields.

But that alone is not enough. We must also bring added value to the countries and communities in which we are present.

For the success of a company is more than just the profits it creates”, explains Dirk De Bilde, CEO Siemens Morocco.

At Siemens Morocco, we put into practice the values we defend.

Over the past 60 years, during which we have been active at the local level, we have detected the enormous potential of this magnificent country. This is a region that is moving towards a multi-cultural, dynamic community with the goal of becoming a major hub for the African continent.

Given that innovation and local partnerships are absolutely essential for Siemens in Africa, I am particularly proud of our wonderful achievements so far: the investments we devote to innovation, the local skills we are helping to develop, the interesting relations we enjoy with universities and the strong ties we are creating with our local partners. Without them, we could never have been able to achieve the success we enjoy today.

Our global “Business to Society” project consists precisely in highlighting the extent to which Siemens makes a contribution to supporting the progress of a country. In this report, we do not simply measure our economic contribution to Morocco. We also assess our impact on society and on areas such as the environment and energy. The prospects presented in this report illustrate how we are helping to build a stronger Morocco that will be better able to face the challenges ahead.

Best regards,
Dirk De Bilde,
CEO Siemens Morocco



“ A stronger Morocco ”

*“ Siemens contributes to supporting
the progress of the country ”*

Dirk De Bilde, CEO of Siemens Morocco.

Business to Society in Morocco

Morocco's top priorities analysed from the viewpoint of the 6 pillars.



What are the main challenges the country faces?

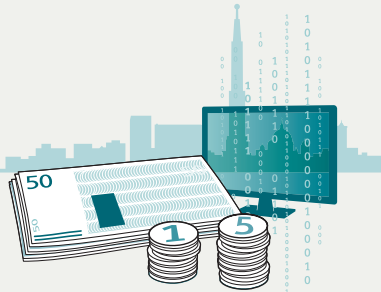
For many years now, Morocco has been making the most of its closeness to Europe. Building on this advantage, the country is focusing on creating a diversified, open, market-oriented economy. Its ambition? To become the regional economic and technological hub for the entire African region.

Morocco is currently undergoing a key transitional phase. In addition to benefiting from considerable experience in agriculture and having an economy that is primarily based on the service sector, Morocco is enjoying significant industrial growth. The Government considered that the foundations of the existing industrial structure needed to be consolidated in order to make optimum use of the country's industrial potential.

Morocco is ideally situated at the crossroads between Europe, Africa, the Middle East and America.

When compared with the other countries in which Siemens operates, Morocco has specific and unique internal strengths which help stimulate its economic and social growth.

In order to measure the contribution and positive impact of Siemens in Morocco, we have defined a frame of reference built on six fundamental pillars or six topics: the economy, jobs & skills, the environment, quality of life (health & integrity), productivity & innovation and optimisation of infrastructures.



Driving the economy

Morocco is an upper-middle income country with a medium-sized economy. The country is well respected by the international risk management institutions, in recognition of its political and social stability.

However, the economy is still heavily agriculture based, which is an obstacle to future growth. Through its 2014-2020 Industrial Acceleration Plan, the Government aims to strengthen and diversify its industries and increase the added value in the overall value chains in order to benefit from free trade agreements and stimulate its economy.

This "Business to Society" project enables us to measure our contribution to the Moroccan economy in three ways: the direct influence of Siemens, its indirect influence and finally the buying power generated by the salaries of our employees and all those working in the supply chain.



Developing jobs & skills

The active population of the country is currently estimated at 11.1 million¹ (persons in work or seeking employment), with an unemployment rate of 9.2%² (mainly among the young). Over the next 10 years, the workforce should increase at an annual rate of 1.8% and Morocco should create about 3.85 million jobs.

At present, jobs are mainly concentrated in mining, agriculture and tourism. The move towards a higher level of skills is a major challenge for the country.

This "Business to Society" analysis enables us to identify the number of jobs supported by Siemens in Morocco, including direct jobs, and jobs in the supply chain. It is also able to quantify spending in the Moroccan economy by the employees.

We have calculated the number of training days and the amount invested in improving the skills of employees, in order to gain a clearer understanding of the positive economic benefits of training, both for the individual (higher wages) and for the public coffers (increased taxes).



Sustaining the environment

Morocco is the largest energy importer in North Africa. Since 2009, the country has adopted a proactive and ambitious policy: to produce 52%³ of its electricity from renewable energies by 2030 (with particular focus on wind, solar and hydraulic energy).

Morocco also aims to produce energy to meet its growing needs and become an important exporter for the region.

Emissions and discharges (on land, in the air and in water) have a negative impact on health and the environment.

Rather than simply measuring the quantities of emissions, this "Business to Society" analysis enables us to understand how the Siemens solutions and local expertise are helping Morocco achieve its energy transition.

¹: Countrymeters.info

²: Worldbank 2014

³: cop22-morocco.com



Quality of life, health and integrity

Sustainable development of the Moroccan health sector is one of the main focal points for the Government. Increased investment and training of health professionals are the strategic pillars for supporting the future areas of growth in this sector.

In addition to its investments in health care, the Moroccan Government has also allocated a budget of nearly 1.951 million MAD (180 million euros)⁴ for implementation of its national anti-corruption strategy, which will run for a period of 10 years. This strategy, based on 239 projects, comprises 10 programmes coordinated by several Ministers.

Health and integrity are two important topics for Siemens. This “Business to Society” project is a means of demonstrating our added value in these fields and spotlighting the work we do to improve the economic and social conditions of the companies in which we work.



Productivity & innovation

To keep pace with other African countries and play a leading role in the region, Morocco is promoting research and development. The Government has allocated an additional budget of almost 640 million MAD (58 million euros)⁵ to support innovation and promote partnerships between companies and universities. The country has also built new science and technology hubs in Fes, Marrakech, Rabat and Casablanca to create an environment that is favourable to innovation.

Digitisation is strategic for Siemens and for our customers. Smart processing, analysis and effective use of the masses of data generated by our systems and solutions are creating enormous business opportunities.

This “Business to Society” report is creating greater transparency on the impact of Siemens on productivity and on the economy of the country – on the one hand thanks to innovation and on the other thanks to Siemens’ overall offering in the field of digitisation. This enables the customers to achieve higher levels of productivity, greater flexibility and resilience in the production and operation of their resources.



Optimising infrastructure

In recent years, the Government has defined a policy to improve the business climate and encourage private investment, in order to support its economic transformation. These efforts earned Morocco 71st place in the rating of 189 countries given in the World Bank’s “Doing Business 2015” report.

In order to encourage Morocco’s transition to a new industrial economy, the Government introduced a new approach based on the creation of industrial ecosystems.

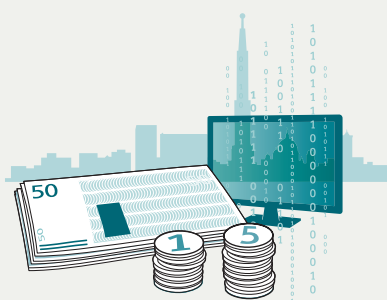
By 2030, the construction of five new ports will help support the development of key sectors: energy, industry, agriculture and tourism. Traffic through Moroccan ports is growing, creating more commercial opportunities. Siemens has extensive expertise in the control and automation applications used by cranes in shipyards, airport terminals, steel mills and electricity generating power plants.

The impact of the development of infrastructures on the environment, society and communities is considerable. The solutions proposed by Siemens enable Morocco’s largest ports to optimise their costs and achieve significant savings. The “Business to Society” analysis enables us to model both the positive and negative impacts of these developments and balance societal needs and benefits.

⁴: Siemens Morocco

⁵: Worldbank statistics

Our contribution to Morocco's economy



Driving the economy

Siemens' global operations are linked to a GDP contribution in Morocco of around MAD 1.7 billion (157 million euro) in FY15. This equals about 0.2% of Morocco's GDP in 2015.

As well as adding value of around MAD 0.1 billion (9.2 million euro) generated by Siemens' Moroccan operations and derived from wages & salaries paid to Morocco-based employees.

Indirect contribution of around MAD 0.2 billion (18.5 million euro) triggered through Siemens' global demand for intermediate products and services that are partly manufactured or provided by Moroccan companies (indirect effects supply chain).

Wages paid to Siemens employees in Morocco and companies within the Siemens supply chain finance private consumption - value created in Morocco equals a GDP contribution of MAD 0.4 billion (37 million euro); induced effects operation and supply chain.

* Pwc report



Developing jobs & skills

More than 12,000 jobs in Morocco are linked to Siemens' global business operations. This equals about 0.1% of the total number of persons engaged in economic activities in Morocco in 2015.*

220 direct employees in 2015; 19 new hires in 2015.

3300 indirect employees in 2015.

Each employee of Siemens in Morocco facilitates more than 12 jobs in Morocco through Siemens' procurement and through private spending of wages paid.*

Based on Siemens' share of intermediate products purchased by its direct customer industries in Morocco, roughly 2,700 jobs in customer industries can be attributed to Siemens' operations in Morocco (indirect effects).*

A further 7,000 jobs can be attributed to multiplier effects based on private spending of wages paid to the employees of Siemens customers.*



Sustaining the environment

1,400 MW of wind power capacity installed by Siemens (by 2020).

18 electricity substations implemented by Siemens Morocco.

More than MAD 1,083 million (100.2 million euros) invested by Siemens in the Tanger blade factory.

New blade factory to produce more than 600 blades a year; investment in blade factory to create over 1,000 direct and indirect jobs.



Quality of life, health and integrity

In 2015, Siemens allocated more than 10.5 billion MAD (one billion euros) for research and development (R&D) in the medical sector globally.

More than 1,474 invention disclosures were registered, of which more than 700 were patent applications (2015).

1,000 billion MAD (92 million euros): the budget made available for the Siemens Integrity Initiative.

MAD 5.4 million (498,955 euros) : Siemens sponsorship of Al Akhawayn University (April 2015) to create a Center for Business.

Active engagement of Siemens Corp. in the global G20/B20 process on anti-corruption.



Productivity & innovation

MAD 1,083 million (100 million euros) invested by Siemens in the Tangier factory.

Between 600 and 700 new direct jobs and 500 indirect jobs (Tangier factory).

21,000 cars manufactured per month using Siemens technology (2015).

For the Tahaddart power plant project, Siemens is currently at a service factor of 100% and has achieved 99.9% reliability (2015).

With 17,500 software engineers, Siemens is globally one of the biggest software companies.



Optimising infrastructure

Siemens is active in Morocco with SCADA Energy Grid Control in six towns (Tangier, Marrakech, Fès, Rabat, Tétouan and Kenitra).

Siemens contributed additional capacity of 20 million tons in four new mines at Khouribga – Benguerir.

Installation of six conveyors over a total length of 14 km: Siemens contribution to the Slurry Pipeline (linking conveyor to transport phosphate mined along 14 km).

From 18 million tons p.a to 38 million tons p.a.: increased production and transport capacities in the Slurry Pipeline.

Driving the economy

1,083 million

MAD for Tangiers plant



In 2015, more than

31.5 billion

MAD Foreign investment (2015).

In 2015, more than

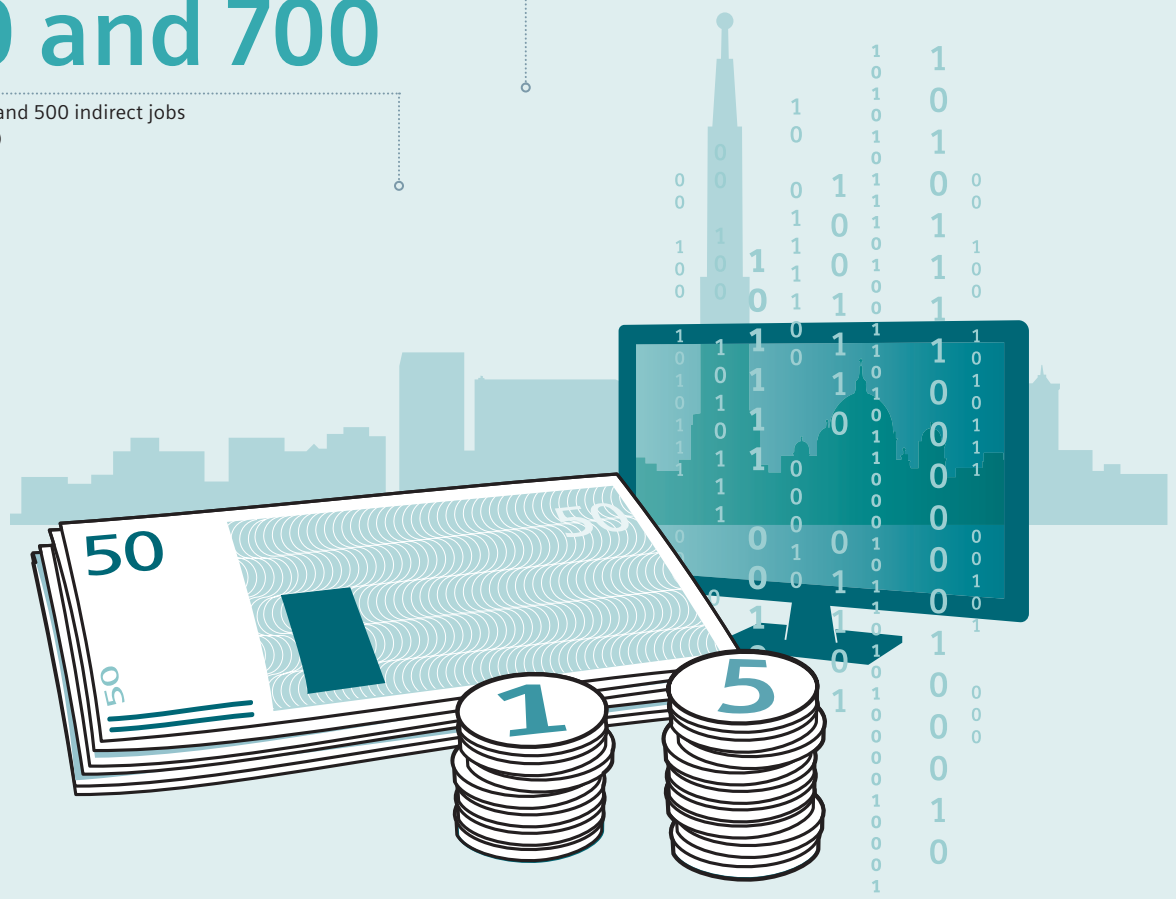
21,000

cars built on assembly lines with Siemens technology.

Between

600 and 700

new direct jobs and 500 indirect jobs (Tangier factory)



Morocco is a dynamic country attracting increasing amounts of foreign investments (more than 31.5 billion MAD - 2.9 billion euros - in 2015⁶) and is aiming to acquire the means to fulfil its ambitions. Diversifying its economy by moving into sectors with more added value, developing renewable energies – wind power in particular – or creating a regional commercial hub for Africa, are just some of the goals the country has set itself for the coming years.

Through its 2014-2020 Industrial Acceleration Plan, the Government is aiming to strengthen and diversify its industries and increase its added value in the global value chains in order to benefit from free-trade agreements to stimulate its economy.

Siemens supports the Moroccan Industrial Acceleration plan by partnering with local SMEs to implement innovative solutions.

Stimulating Moroccan industry through a policy of local investment

Siemens is actively pursuing its investment policy in Morocco in order to support it with its future projects. Siemens investments focus mainly on three fields: energy, industry and infrastructures. Siemens offers the appropriate technology and supports the country's ambitious energy goals (mainly based on renewables), while considerably bringing down the cost of electricity production.

Siemens investments focus mainly on three fields: energy, industry and infrastructures.



⁶: UNCTAD 'World Investment Report 2016'

Investing to develop sustainable energy potential, together

Siemens has chosen the Tangiers site to install a new, ultra-modern plant specialising in the production of the latest generation of turbine blades for on-shore windfarms. This Siemens investment of more than 1,083 million MAD (100 million euros) will have an immediate and direct impact on job creation in the region (between 600 and 700 direct jobs and about 500 indirect jobs) and on the transfer of skills.

What is Siemens' aim? To supply the on-shore wind power market –

currently enjoying rapid growth – shipping from the Tangiers plant to Africa, the Middle East and Europe.

The automobile industry, an economic lever for export

The Moroccan Government considers that the automobile industry represents a key sector for its economic growth and for export.

An increasingly demanding globalised market

The Moroccan automobile industry is strengthening its position on the global automobile value chain, as witnessed by the remarkable

performance achieved in recent years – automobile production exceeded 227,570 vehicles in 2014 as compared with 18,546 in 2003⁷.

Siemens offers automobile manufacturers innovative solutions for optimising their products and the complete production lifecycle: from design to production, including maintenance of the plant itself. Thanks to the technology developed by Siemens, it is possible to provide smart automation with command and control of assembly lines, paint shops and bodywork shops.



The automobile sector in a highly competitive context

The Governmental Development Plan for Automobile Production aims to achieve 1,083 million MAD (100 million euros)⁸ in net sales per year.

The automobile and equipment manufacturers are at present faced with a series of challenges linked to the demands of the market: shorter time-to-market, ever-wider range of car models and versions, higher productivity, greater availability of the plant and faultless production quality. All of this takes place within the context of a global market.

To guarantee and maintain the competitiveness of the automobile industry in Morocco, Siemens is working in close collaboration with its customers looking to boost their production capacity.

For example, every month, one of our customers exports nearly 21,000 cars built on lines using Siemens technology.

For Siemens in Africa, local partnerships are absolutely key.

Over the years, Siemens Morocco has developed partnerships with high level companies to cover the African market, thus contributing to national trade. We are also ensuring transfer of competence to our partners, in the fields of Electrification, Automation and Digitalization.

Siemens Partnership program is based on a 'certified by a Solution Partner' approach, this to meet the

high standards needed for our projects. Our programs include: annual 1-2 Certification Workshops, the SILPP Siemens Industry Learning Program for Partners and our e-training programs.

Today more than 20 Partners have been granted access to this program and many Moroccan SMEs are certified as Siemens Solution Partners in the fields of Automation and Drives. They perform the local integration of innovative solutions and support customers in their industrialization projects.

Our partners

Our technology partners are highly specialized in the vertical markets and domains that matter to Siemens.

We have a Technology Partner for LV Switchboards (certified with ISO 14001) and 4 Building Technologies Solution Partners, trained to enrich their system expertise and create tailored offerings suited to customer requirements.

Within our partnership program, our aim is always to work with energy-efficient, economically balanced, and future-proof solutions from knowledgeable professionals.



The automobile and equipment manufacturers are at present faced with a series of challenges linked to the demands of the market.

⁷: [Finances.gov.ma/automobile](https://finances.gov.ma/automobile)

⁸: [Atlasinfo.fr/L-industrie-automobile](https://atlasinfo.fr/L-industrie-automobile)

Developing jobs & skills



220

direct jobs, 3,300 indirect jobs and 9700 induced jobs (2015).

1.35
million MAD

invested in staff training.

+ 300

persons trained in Industry and Public Services (2016)



In the context of the new economy, globalisation and digitalisation, the need for highly qualified staff is no longer a luxury but an absolute necessity.

The creation of high value added jobs in Morocco is both vital to ensuring the success of its innovation programme and beneficial to regional economic prosperity.

Training qualified manpower for the future

This is one of the Government's main priorities. The Moroccan National Employment Strategy (SNE) 2015-2025⁹ is a new approach to employment policy. Its main aim is to create optimum conditions for offering highly qualified jobs. This arrangement is a means of addressing the expectations of the younger generation, remedying gender inequality and eliminating regional employment disparities.

With the adoption of this new strategy, employment becomes a cross-cutting responsibility now involving the Government as a whole (and no longer simply the Ministry for Employment), ministerial sectors, elected bodies across the country, the trades unions, the private sector and civil society.

Siemens Morocco – a benchmark employer

In Morocco, Siemens represents 220 direct jobs, 3300 indirect jobs and 9700 induced jobs (2015)¹⁰. Siemens fully intends to continue its policy of engagement to employ several thousand people and attract the most talented candidates. Siemens' goal is clear: to become the "benchmark employer" in Morocco.

More than ever, Siemens is also engaged in a proactive approach to training: a key factor in motivation and success from the human and technological viewpoints. Siemens is committed to the vocational training of its staff and the development of their skills and abilities. In doing so, the company aims to support them throughout their career.

A dedicated training centre

In 2016, Siemens took the decision to invest in a plant producing wind turbine blades in Tangiers, northern Morocco, and to set up a training centre for new employees.

We thus created partnerships with public training agencies in order to hire "the right person for the job" and accurately address local needs.

More than ever, Siemens is also engaged in a proactive approach to training.

Driven by this same philosophy, our aim is to develop our partnership policy with universities and schools, but also to bring more training partners on board in order to expand our network.



⁹: Morocco National Strategy

¹⁰: PwC Analysis

Sustaining the environment

**1.3
million**

people will benefit from
energy production NOOR
Solar park.



1,400MW

wind power capacity installed
by Siemens.

**800,000
tonnes**

CO₂ reduction with NOOR.



Morocco is engaged in a proactive, ambitious environmental policy: reducing energy dependency, meeting growing demand for electricity and becoming an important energy exporter for the entire region.

Siemens has developed specific functionalities to support this policy and has the means to considerably bring down electricity production costs.

Siemens is also focusing its efforts internally, by giving priority to energy efficiency solutions and environmental technologies on its own sites in Morocco.

A country blessed by nature

Wind and sunshine are powerful sources of energy and in this field Morocco enjoys a significant advantage: 300 days of sunshine per year and winds blowing at an average speed of 32 km/h in the coastal regions.

To achieve the ambitious objectives set by the Government – producing 52% of its electricity from renewables by 2030¹¹, Morocco has already completed several major steps, for example the building of the solar complex at Noor, or the development of a number of windfarms, including the one in Tarfaya.

The country also has significant access to water resources. The planned construction of new dams will also increase the number of major infrastructures from 139 (in 2015) to 170 (in 2030)¹².

In the field of renewable energies, Morocco aims to be a true pioneer and is setting strict criteria for optimising the viability of projects and risk reduction (in terms of performance, flexibility, proximity and short decision-making cycles).

Tarfaya, the largest windfarm on the African continent

Siemens has already implemented several strategic projects such as the Tarfaya windfarm. With a capacity of more than 300 MW, Tarfaya is currently the largest windfarm in the whole of Africa. By 2020, Siemens will have installed more than 1.400 MW of wind power in Morocco.

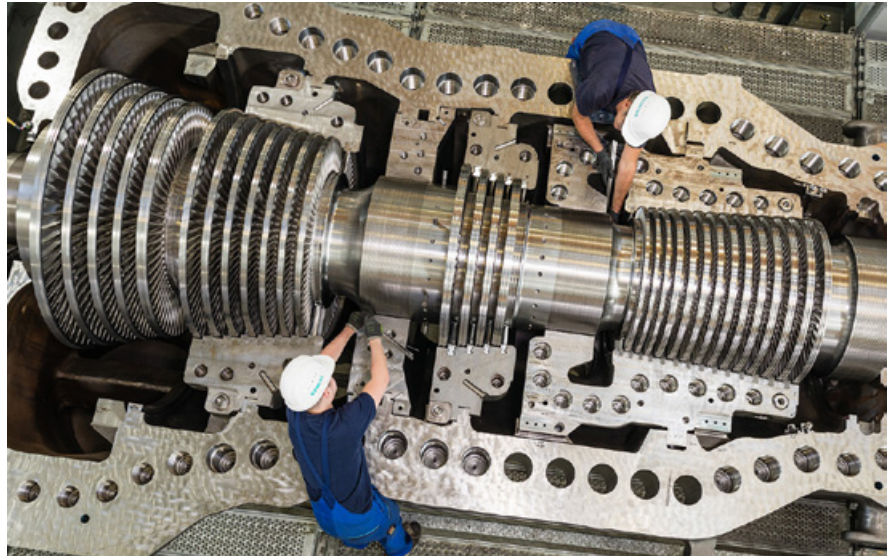
To achieve the ambitious objectives set by the Government, Morocco has already completed several major steps

For the Tarfaya farm, Siemens proposed a solution based on cutting-edge technology. The turbines have been equipped with functions appropriate to the extreme conditions of the desert and the Atlantic marine environment: sandstorm detection, heat resistance, protection against corrosion. Moreover, a power amplification mechanism has been installed on the turbines, thus boosting their efficiency by up to 5%.



¹¹: cop22.ma

¹²: Connaissances des energies.org



Noor, the most ambitious solar complex on the planet

It is located in Ouarzazate and comprises three phases (Noor I, II and III). Siemens has delivered the Noor I turbines and is involved in manufacturing the turbines for Noor II and III. Three twin-shaft steam turbines from the Görlitz site (Germany) will be used in the Noor solar power plant project.

Following the implementation of the three phases, the energy produced on the site will supply 1.3 million people. This will represent a reduction of 800,000 tonnes of CO₂ emissions per year, by comparison with conventional electricity production.

Once all the Noor solar power plants are in service, it will be the world's largest complex, with a surface of 3,000 hectares and an output of 580 MW.

Collaboration with ONEE: solutions for extending the electricity grid

By 2030, Morocco foresees a tripling of its primary energy requirements and a quadrupling of its electricity needs by comparison with 2008.¹³

The challenge is a significant one. In order to meet it, the ONEE (national office for electricity and drinking water, the largest electricity sector operator in Morocco) has in recent years focused on extending the national electricity grid. The aim is to acquire sufficient capacity

to be able to ensure the transmission and distribution of the energy produced.

Siemens is actively participating in this project, by providing appropriate solutions and making its local expertise available.

Over the period 2004-2016, 18 electricity substations were commissioned by Siemens Morocco in a market of diversified segments and customers. Siemens is also contributing to the on-site maintenance of the electrical installations and is thus helping Morocco optimise its investment. Maintenance can prolong the lifetime of the installations by nearly 20 years.

¹³: Connaissances des energies.org

Improving the process of production with respect to the environment

Siemens' solutions dramatically reduce CO₂ emissions. For client OCP (Office Chérifien des Phosphates), a major exporter of phosphate and one of the largest enterprises in Morocco, Siemens has implemented Energy Efficiency (EE) solutions. Apart from its EE-offering, Siemens also develops a sustainable approach for its clients and partners.

Training and sharing know-how

Through the implementation of projects and the organisation of technical workshops, Siemens is helping develop local skills by sharing technical know-how (more than 300 persons in the "Industry" and "Public services" segments were trained in 2016).

Over the period 2004-2016, 18 electricity substations were commissioned by Siemens Morocco.

Through a variety of partnerships, Siemens is currently in discussions for the creation of a large Training Centre. Nearly 1,000 people from the sub-Saharan region would benefit from this initiative.

Energy diversification projects

To support its economic growth, Morocco is envisaging a number of energy diversification projects. To achieve this, the Government needs financial support.

The participation of Siemens Financial Services (SFS) in the funding of the 850 MW Integrated Plan is making a significant contribution to bringing down the overall cost of electricity production by the wind-farms. In concrete terms, this reduction in production costs means more affordable energy prices for the end-users.



Quality of life, health and integrity

**1,000
million MAD**

(92 million euros) - Siemens Integrity Initiative



**10.5
billion MAD**

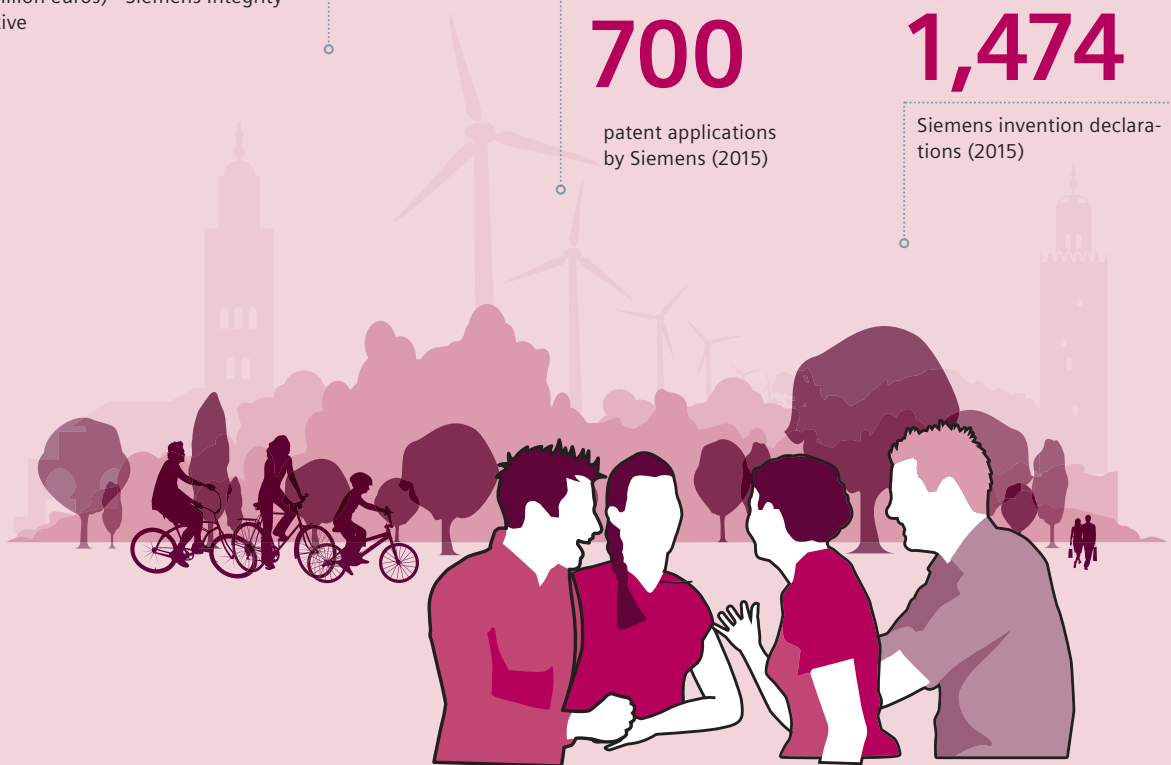
(a billion euros) Siemens investment in medical R&D worldwide (2015).

700

patent applications by Siemens (2015)

1,474

Siemens invention declarations (2015)



Access to health care and personnel development in this field is a major concern for the Moroccan Ministry of Health. Three strategic pillars have been defined to support future areas for growth in this sector: an increase in the number of health care professionals and improvements in training programmes and in working conditions.

In addition to investments in health care, the Moroccan Government has also implemented a national anti-corruption strategy. The two aspects of health and integrity are strategic topics for creating confidence and wellbeing in Morocco.

Cancer detection techniques

In Morocco, cancer is the second cause of death – 30,000 new cases are diagnosed every year. In 2013, the main causes of death were circulatory diseases (20%) and tumours (13.6%). Owing to difficulties with access to health care, the patients are usually diagnosed once the disease has reached an advanced stage.

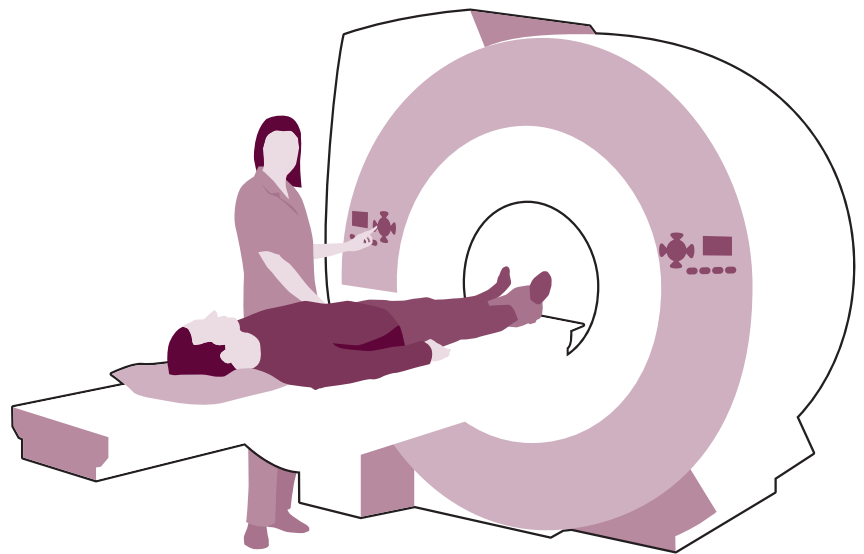
Using technology which allows early diagnosis and appropriate treatment, more than half the patients could be treated and healed. Medical imaging is thus growing in importance, as a result of continuous progress in the techniques used to detect the diseases earlier and more accurately.

Siemens Healthineers – innovation working for health care

Contributing to the development of high-quality health care for all is at the heart of Siemens' preoccupations.

In 2015, Siemens devoted 10.5 billion MAD (more than a billion euros) to medical research and development worldwide. This investment covered all the fields of our extensive range of products and solutions.

During the course of this same year, more than 1,474 invention declarations were registered, including more than 700 patent applications¹⁴.



Contributing to the development of high-quality health care for all is at the heart of Siemens' preoccupations.

¹⁴: Siemens Press Release

The aim of Siemens is to support Morocco in its strategy and promote access to health care.



Siemens is a global expert in the development of MRI technology (magnetic resonance imaging) and more than 1.08 billion inhabitants of emerging nations have access to Siemens imaging systems.

The aim of Siemens is to support Morocco in its strategy and promote access to health care, in both public and private institutions. Of all the major known brands active in this field, Siemens Healthineers is the only one to operate directly in Morocco in the imaging segment. Siemens proposes product ranges that include all diagnostic devices.

Creating confidence – a true anti-corruption culture

To develop its national anti-corruption strategy for the long term, the Moroccan Government has allocated nearly 1,951 million MAD (180 million euros) over a 10-year period. This strategy is based on 16 main principles and 239 projects.

By reducing the risks for companies coming to Morocco and offering a stable and sustainable investment climate, the country is attracting more foreign investment and encouraging more companies to establish themselves on the Moroccan market. Stimulating cooperation and partnerships between

public and private sectors (as well as with other stakeholders such as NGOs) is a key factor in achieving this anti-corruption objective. Collective action proves to be far more effective.

With the implementation of conformity programmes, it is possible to act at various levels: raise the level of ethical standards (for example, Codes of Conduct adopted by companies), approve ethical and responsible commercial practices and reward those who abide by the rules.



Integrity, a fundamental topic for Siemens

The Siemens Integrity Initiative was launched in 2009 and represents a budget that will reach 1,000 million MAD (more than 92 million euro)¹⁵. This sum can be broken down into several funding pillars designed to support a certain number of (selected) anti-corruption projects worldwide.

To boost integrity in the business world, Siemens sponsored the Al Akhawayn University in April 2015 (sum of 5.4 million MAD¹⁵ (498,955 euros) with the goal to create a Business Centre. In June 2015, 9.97 million MAD (644,000 euros)¹⁶ were granted to the Organisation for Economic Cooperation and Development (OECD) for implementation of an alliance between the private sector and the Government, with emphasis on public contracts.

Siemens is also closely involved in the G20/B20 global anti-corruption process.

Data protection, a major pre-condition for establishing confidence

Morocco has set up a legal and regulatory framework for personal data and has reinforced the legislation on data protection. Consequently, protecting the transfer of these data is now an integral part of the development of new technologies and the digital economy in Morocco.

Since 2012, Siemens has been a participant in this process. We have obtained all the necessary authorisations for collecting, processing and transferring personal data.

Siemens is closely involved in the G20/B20 global anti-corruption process.



¹⁵: Siemens Press Release
¹⁶: Siemens.com-sustainability-integrity initiative

Productivity & innovation

14.601
million MAD

(1.345 million euros) invested in R&D by the Government (2015)



4.371
million MAD

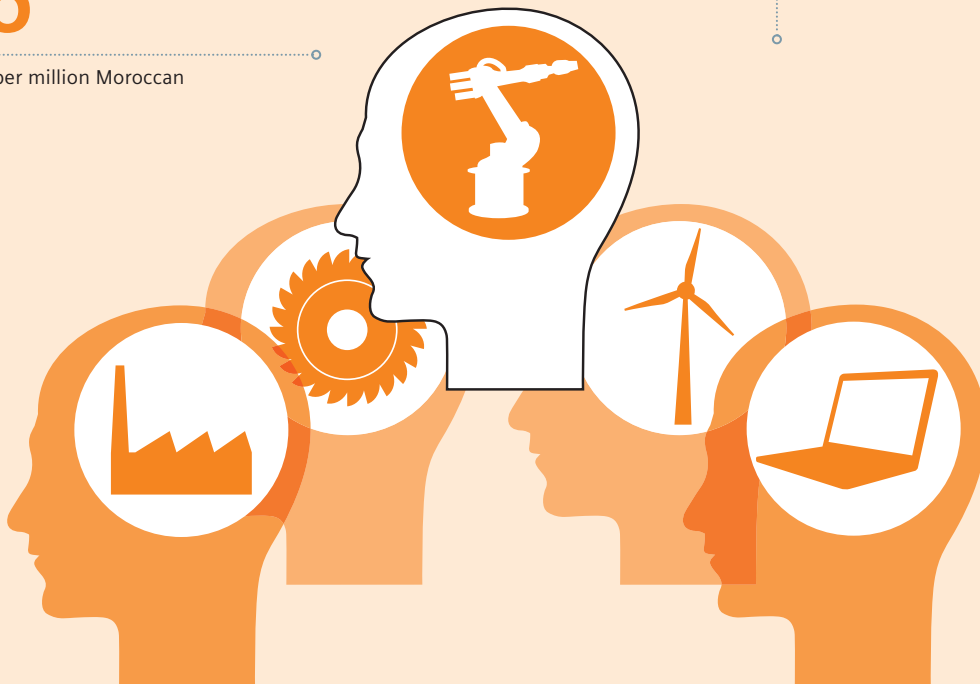
(403 million euros) investment in R&D by Companies (2015)

100%

service factor and 99.9% reliability achieved in Tahaddad

856

researchers per million Moroccan inhabitants.



Supporting innovation is crucial for the future

In order to develop its activities and play a leading role in the region, Morocco encourages research and development. The country has also built new science and technology “hubs” in Fes, Marrakech, Rabat and Casablanca.

At the same time, the Moroccan Government has allocated an additional budget of nearly 640 million MAD (58 million euros) to support innovation and promote partnerships between companies and universities.

Massive investments

In Morocco, total spending on research and development reached 14.601 million MAD (1.34 million euros) in 2015. This sum comes from various sectors: 6.863 million MAD (634 million euros) from universities, 4.371 million MAD (403 million euros) from companies and 3.367 million MAD (311 million euros) from the Government. Morocco counts some 856 researchers per million inhabitants, which is the highest ratio on the African continent¹⁷.

Cities dedicated to innovation

In the Moroccan cities dedicated to innovation, research centres and incubators are helping start-ups to develop. They provide them with the necessary technological and legal support for innovative projects. They also help to obtain financing for these young companies taking their first steps.

The future competitiveness of Morocco will be based on a strong innovative capacity and on its technological leadership.

The strategic importance of digitalisation

By investing in Research & Development or by creating partnerships with universities or research organisations in Morocco, Siemens is engaged in continuously stimulating innovation and competitiveness.

Digitalization is highly strategic for Siemens customers. The overall digitalization offering (processing, analysis and smart use of the mass of data generated by our solutions and our products) enables the customers to increase their productivity significantly. By combining data and engineering technology along the entire value chain, they reach high levels of flexibility and resilience in production and operations.



Digitalization is highly strategic for Siemens customers.

¹⁷: afrique.le360.ma



The case of OCP – a competitive advantage

The OCP (Office Chérifien des Phosphates), one of the largest industrial enterprises in Morocco, is also the world's leading exporter of phosphate. The OCP is banking on digitalization and it has high expectations for the fertiliser value chain "from the mine to the farm".

Siemens technologies in fields such as automation, digitalization or "big data", offer unique possibilities for creating a significant competitive advantage.

The example of the Tahaddart combined cycle power plant

In the energy field, Siemens can also offer the latest generation of solutions. Tahaddart, situated 30 km south of Tangiers on the Atlantic coast, is the first combined cycle power plant in Morocco. It was inaugurated in 2005 and belongs to EET (Énergie Électrique de Tahaddart), with a capacity of 384 MW.

Siemens delivered the power plant and is also responsible for its operation and maintenance. Since it started up in 2005, Tahaddart has relied on Siemens remote-diagnostic services to optimise the plant's reliability and availability. This plant is crucial for the country as it meets 10% of electricity demand in Morocco. Unforeseen failures must be avoided at all costs.

Reliability, flexibility and rapid response are essential and Siemens currently has a service factor of 100%. It has achieved reliability of 99.9% over the past year of operation.

To understand what goes on inside a turbine, one must take a close look at the figures. Siemens analyses the data, observes how the values evolve over time, analyses the logs and the operating files from similar plants and decides whether or not changes are essential. Complete attention to the slightest detail is crucial.

“Our aim is to be proactive rather than reactive. We aim to intervene before an apparently insignificant fault becomes a far more serious problem”.

Optimising infrastructure



5

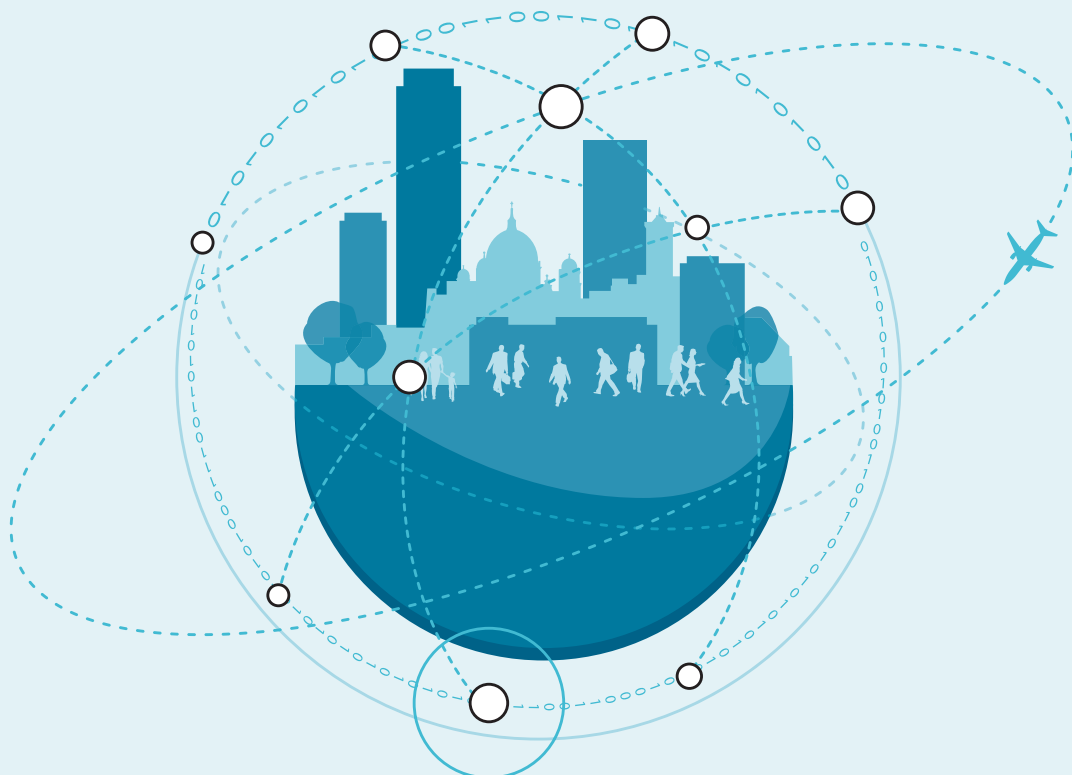
new ports by 2030

6

towns using Siemens SCADA system

20 million

tonnes : additional capacity in Khrouribga and Benguerir mines





An increasingly demanding globalised market

Infrastructure is the heart of a city and an economy. In Morocco, Siemens contributes to the transformation of the infrastructure, needed for the new industrial era, by investing in smart mobility and clean energy solutions.

Ports, a sector for the future

Port facilities are also considered to be a key industrial sector for Morocco. Year after year, traffic in Moroccan ports continues to grow. By 2030, five new ports will be built to support development of key Moroccan sectors such as Energy, Industry, Agriculture, Tourism, and more.

However companies active in container shipping are faced with a highly competitive market. Customer service must be optimised at all costs, in terms of efficiency and delivery times.

Siemens offers crane technology and solutions, in particular an extensive range of modular solutions intended for industrial and dock cranes. As cost-effectiveness is vital, Siemens has developed solutions capable of achieving significant savings.

Siemens, a key partner for the industrial sector

Availability, productivity and safety are three decisive factors for applications specifically intended for cranes. Our expertise and cutting-edge know-how of crane control and automation applications represent a key advantage. Whether for shipyards, airport terminals, steel mills or power plants, the solutions proposed by Siemens guarantee reliable and energy-efficient crane operations, worldwide.

Siemens contributes to the transformation of the infrastructure by investing in smart mobility and clean energy solutions.

Monitoring the quality of networks, a major challenge for a prosperous city

RADEEMA (Marrakech independent water and electricity distribution utility) called on Siemens Smart Grid for the installation of the new Energy Grid Control SCADA (Supervisory Control and Data Acquisition System), for monitoring networks inside and around the periphery of the city.

The Marrakech SCADA system will collect data from the electricity distribution grid, the water distribution network and the water treatment system. RADEEMA will have a clearer overview of all these data and will thus be able to avoid failures and losses on the network, respond more rapidly to a problem and manage the teams in the field more efficiently.

Given the considerable economic, social and cultural growth of Marrakech and the rapid expansion of activities in the city, it is crucial for the utility to be able to analyse and satisfactorily anticipate network developments.

Siemens is already active in Morocco with SCADA in cities such as Tangiers, Fes, Rabat, Tétouan, Marrakech and Kenitra.

Towns like Marrakech, Tanger, Fes, Rabat, Tétouan et Kenitra use the Siemens' SCADA system.





