EU2020
GE’s Vision for Growth
GE’s 20/20 Vision
Shared Ambitions for Europe

The sovereign debt crisis in Europe and the continuing turbulence in global financial markets are reshaping the world’s economic and political order. Powers in Asia and beyond have emerged from the 2007-2009 crisis stronger than before, claiming a greater share of the world’s wealth and a more assertive voice in international institutions. Newly prosperous population centres such as Brazil, India and China are placing greater demands on our planet’s finite resources, raising issues of scarcity and security of supply. There is a renewed clamour of voices warning that Europe risks being left behind in this new world order.

We believe that Europe can and will remain a global player but it needs to rethink its system of economic governance in the face of these seismic shifts. The continuing Eurozone crisis underlines that it needs stronger institutions and stricter macro-economic oversight to generate greater stability and hence improved business and consumer confidence. Europe is also still undergoing major demographic changes: we are living longer and our healthcare and welfare needs are changing dramatically.

At GE, we believe renewed growth and restored confidence will come but this will require greater European integration and a commitment to action - from businesses, governments and civil society working more actively and closely together. Europe can only remain competitive and a global standard-setter by working as a more cohesive union, offering increasingly European solutions for problems affecting its 500 million citizens. Multiple barriers which hamper the completion of its single market and block its real economic potential must be removed.

We believe environmental or “eco” innovation can be a catalyst for Europe’s economic renewal. The EU is a global leader in environmental and green technologies. To remain so it must become a hub of resource efficiency and a cutting-edge innovator; this in turn requires a collaborative framework that promotes, incentivises and rewards innovation and investment in education and R&D as well as infrastructure. Europe must continue to lead the way in creating and sustaining a low carbon economy.

Europe is still undergoing major demographic shifts and these pose new challenges: we are living longer and our healthcare and welfare needs are changing dramatically, requiring innovative solutions. The EU must also ensure the benefits of growth are spread equitably: no EU citizen should go without access to affordable healthcare, all regions should participate in growth, wealth-creation and, above all, jobs.

The earlier Lisbon strategy failed. Europe 2020 now outlines ambitious targets for a smart, sustainable and inclusive economy, marked by high levels of employment, productivity and social cohesion. GE believes that Europe needs real political decisiveness and more effective policy instruments to achieve these targets. A closer partnership with industry is essential and we are anxious to play our part. In the pages that follow, we set out some elements we think will play a critical role in achieving these 2020 targets. They cannot be allowed to fail: 2020 is already upon us.

Hendrik Bourgeois
Vice President, European Affairs,
General Electric Company
Fast facts: GE in Europe

- Operating here for over 100 years
- 84,000+ employees
- Annual revenues of €23.9B in 2010 (21.2% of GE’s global revenue - more than any other market outside the US)
- European assets of €149.8B (at end-2010)
- Over €4B invested annually in R&D globally
Supporting smart, sustainable, inclusive growth across Europe

Port of Rotterdam sails to sustainability

GE and the Port of Rotterdam have joined forces to reduce the port’s carbon footprint. The emissions generated by Rotterdam and the neighbouring German Ruhr region are the highest in Europe. The Rotterdam Climate Initiative sets a target of halving CO₂ emissions by 2025 on 1990 levels. GE and the Port will jointly draw up a pilot project for a smart grid within the port to promote localised renewable energy production.

Promoting efficiency in the French MoD

GE Capital, GE’s financial services arm, partnered with the French Ministry of Defence now expects that over €6 million contracts and invoices. The Ministry of Defence to reorganise and manage its vehicle fleet. Together, they rejuvenated the fleet and optimised its use, cutting greenhouse gas emissions by 15%. GE offers on-going management training and centralised invoice management, reducing the time and cost of processing and reducing the time and cost of processing and centralised invoice management, reducing the time and cost of processing contracts and invoices. The Ministry of Defence now expects that over €6 million will be saved over the course of the project.

Headquarters

Austria
- GE Power & Water’s Gas Engines headquarters, Jenbach
- GE Power & Water’s European Water & Process Technologies headquarters, Heverlee
- GE Global Growth and Operations’ European Headquarters, Brussels

Belgium
- GE Transportation’s Intelligent Control Systems global headquarters, Paris
- GE Energy’s headquarters for Western Europe, Belfort
- GE Capital Real Estate’s European headquarters, Paris

Czech Republic
- GE Energy’s headquarters for Eastern Europe, Prague

France
- GE Capital’s European Mortgage and Restructuring Group headquarters, Chalfont St. Giles
- GE Capital’s EMEA headquarters, London

Italy
- GE Energy’s headquarters, Florence
- GE Energy’s EMEA headquarters, Milan

United Kingdom
- GE Capital’s EMEA headquarters, London
- Other GE sites

Funding an intelligent biogas plant

In the Czech Republic, GE Money Bank has set up a specialised loans programme for biogas plants. The bank agreed to fund 100% of the investment by gas company Bioplyn Trebon in building a new eco-energy biogas plant. This includes a GE Jenbacher cogeneration unit, which transforms biogas into electricity and heat; its annual output is 8000 MWh of electricity and 25,000 GJ of heat, using local agricultural waste and helping to replace almost 500,000 m³ of natural gas. The project reduces CO₂ emissions, helps to support local agriculture and generates jobs.
Hungarian homecare

In Hungary, some 600,000 people over the age of 60 live alone. GE spearheaded the creation of a consortium, which, alongside the government, invested €4 million in an Assisted Living Programme to help the elderly live healthy and independent lives in their own homes. GE helped to implement effective solutions for managing chronic diseases and aging conditions in a home environment. Monitoring systems such as GE’s QuietCare® use wireless sensors that facilitate the delivery of remote personalised care, transforming patients’ lives and lowering costs.

Read more
GE cases studies:

1. Prague, Czech Republic
   GE Aviation drives high-tech job growth, p. 6
2. Munich, Germany
   At the cutting edge of global research, p. 7
3. Motril, Spain
   Creating energy efficient solutions, p. 8
4. Brussels, Belgium
   GE helps Justus Lipsius go green, p. 9
5. Warsaw, Poland
   Supporting female entrepreneurs through Banking on Women™, p. 10

Reducing emissions in flight

An airline’s flight management system (FMS) can make as dramatic a difference to performance as its choice of engines. In Sweden, GE launched a pilot programme testing its latest FMS technology in flight descents; the outcome was lower fuel costs, reduced emissions and less noise pollution. GE Aviation, SAS and partners will now participate in a transatlantic initiative designed to reduce flight distances, provide fuel savings of around 100 kg and reduce CO₂ emissions by more than 300 kg per flight.

Lighting the way in Bulgaria

In 2009, the town of Smolyan in Bulgaria began a retrofit of its public lighting. To meet European lighting standards and help develop a competitive national energy sector, GE provided highly efficient lamps and a smart energy control system. So far, the retrofit has reduced operational costs by 31%, saved 23,500 kg of CO₂ each year and brought significant cuts in energy consumption.

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Investing in smart growth

Europe’s 2020 Strategy sets ambitious but attainable targets for smart growth through investment in education and skills, in research and innovation and in the digital society. Achieving these goals is essential if Europe is to stay ahead of the game and compete with the new economic powerhouses as well as the US. Smart growth, says José Manuel Barroso, EC president, can create 3 million jobs by the end of the decade. Business as usual, he says, is off the agenda; it would consign Europe to a gradual decline, to the second rank of the new global order.

For GE, Europe is an important centre of innovation and product development. We have over 36,000 employees spread across the region working in R&D, engineering and manufacturing; our Global Research Centre in Munich, Germany, develops technologies for European and worldwide application. Globally, GE has spent over €34B in technology and content development since 2000. GE invests over €4B a year in R&D, approximately 6% of our industrial revenues - and double the EU target of 3% of GDP.

• Promoting high-tech job growth
  Our commitment to innovation sustains and develops our high-tech manufacturing in Europe. In 2008, GE Aviation bought selected assets of Walter Engines a.s. in the Czech Republic, a company producing at most 15 aero-engines a year. GE Aviation Czech now plans to manufacture hundreds of new engines annually and to invest in new models.

  In 2009 the Czech government gave GE Aviation its first research grants for the development of the new H80 engine, the first in the company’s history that has been designed, manufactured and certified outside the US. This and other contracts will double engine manufacturing and significantly increase employment in the Czech Republic.

• Investing in innovation
  GE also recognises the importance of SMEs, individuals and start-ups as the backbone of an innovation ecosystem. We partner with venture capitalists to provide funding and support for innovators tackling some of society’s most critical issues through GE’s ecomagination challenge, a €150 million multi-phase experiment involving businesses, entrepreneurs, innovators and students sharing their best ideas on how to build the next-generation power grid.

  GE and its partners have already invested €41.4 million to develop and commercialise breakthroughs in cleaner and more efficient energy technology developed by challenge winners. Among the companies selected for investment are EnOcean, from Oberhaching, Germany, which is developing wireless sensors to improve energy efficiency, and Manchester, United Kingdom-based VPhase, a maker of patented voltage optimisation systems.
How can the EU drive smart growth?

We need to create an environment that promotes, incentivises and rewards innovation in its broadest sense in public and private sectors alike. To create jobs, innovative products and services must reach their target market. So policies should not only encourage research and development but also increase the prospects for resulting innovations to find a strong and broad customer base. Measures that could improve the level, quality, and impact of innovation include:

• **Public procurement**
  Equal to almost 17% of the EU’s GDP, public procurement is a powerful tool to encourage innovation. We support the European Commission’s efforts to use green and energy efficient criteria in public procurement. But these criteria need to be elaborated in close cooperation with the business community in a transparent, non-discriminatory process.

• **Funding mechanisms**
  The EU’s political objectives must be matched by adequate financial incentives. The new multi-annual financial framework (2014-2020) must support long term measures to help achieve the objectives of the EU 2020 Strategy. European funding mechanisms such as structural funds and project bonds play an important role. More are needed to finance the energy and green infrastructure that is required to make the 2020 strategy a reality. The promotion of a venture capital culture which supports innovation should be actively encouraged by European institutions such as the European Investment Bank.

• **Research schemes**
  Current funding mechanisms, such as the Framework Programme (FP7), have proven to be difficult to access for many private firms, small and large. Research grants can account for only 50% of the cost of a project, while in the US they can reach up to 100%. By increasing the size of grants, reducing the stipulated size of consortia, and building in stricter timetables and evaluation criteria, Europe could build a more flexible and attractive research funding regime. In particular, GE calls for strong and consistent support for the Strategic Energy Technology (SET) plan, including smart grid deployment.

• **Intellectual property rights**
  By protecting intellectual property rights, the EU rewards innovators and helps ensure their goods and services reach the market. Legal certainty and cost effectiveness are key:
  - GE supports the current high quality patent but suggests it be provided at a more reasonable cost to users. While the EU patent may be one way of achieving such a system, improvements to the European and national patent offices and courts as well as wider adoption of the London Protocol could be equally effective.
  - Moves by some EU countries towards “Intellectual Property (IP) free” public procurement should be halted as these would achieve the opposite of the 2020 objectives and limit commercialisation of innovative technologies in the EU.
  - We believe that the EU, as an export powerhouse, should continue to take a strong stance bilaterally and at international bodies in favour of a strong IP framework and should resist calls for restrictions on patentability or the imposition of broad compulsory licensing.
  - Collaboration among the world’s major patent offices to permit broader work sharing will be critical to reducing serious backlogs that are a drag on innovation and technology investment.

GE Global Research – Europe

GE’s Global Research Centre in Munich employs scientists and technologists from over 20 different countries dedicated to bringing new technologies to market. It is home to several dedicated labs, each with its own research focus. The alternative energy lab, for instance, focuses on power generation from sustainable energy sources such as wind turbines and solar thermal plants. This team is exploring a number of advanced concepts for power plants with built-in waste heat recovery.
Investing in sustainable growth

Sustainable growth means being greener - and more competitive. Already, in 2005, GE launched ecomagination - our business strategy designed to promote cleaner and more efficient sources of energy, reduced emissions and abundant sources of clean water. We have since developed a portfolio of 110 ecomagination products that significantly and measurably improve customers’ operating performance or value proposition and their environmental performance.

Through our ecomagination commitments we have, at the same time, reduced our own carbon footprint: in 2010 GE cut 24% of our greenhouse gas emissions, and 22% of our water use. Moreover, of the €4.4B we spent on R&D in 2010, over €1B or almost a quarter was spent on developing clean technologies.

- **Sustainable Power Generation and Supply**
  GE Energy is one of the world’s leading suppliers of power generation and energy delivery technologies, it provides an array of solutions for plants using traditional energy sources as well as those driven by renewable resources. Our expertise in SmartGrid technologies means we can efficiently deliver sustainable, economic and secure electricity supplies to our customers. We also develop wind, solar and Combined Heat and Power (CHP) solutions that provide a cost-effective way to reduce CO₂ emissions. GE’s Jenbacher gas engine, for example, can reduce a project’s life cycle costs through lower fuel consumption, while simultaneously cutting greenhouse gas emissions.

- **Energy Efficient Products**
  GE Lighting’s 8,000 employees at eight manufacturing sites across Hungary and Spain produce some of the most cost-effective and environmentally efficient lighting solutions available today. These solutions were put to the test in Motril, Spain, where GE replaced 70% of the city’s low-output, inefficient lamps with 2,238 GE fittings and lamps. Overall, the city has been able to achieve average energy savings of 25% and the project has been recognised as a Benchmark of Excellence by the EU.
How can the EU drive sustainable growth?

By capitalising on its leadership in developing new sustainable technologies and production methods, Europe can maintain a competitive advantage in the green economy. The global market for low carbon goods and services is estimated to be worth over €3.2 trillion and should continue to expand over the next decade. The European eco-industry alone is worth €319B and is growing at an annual rate of 8%.

According to a 2009 European Commission study, achieving a 20% target for use of renewables by 2020 would create an estimated 410,000 additional jobs across the EU, while a 30% reduction of CO₂ emissions could yield an increase of 1.1 million jobs in the same period.

To help unleash this potential, governments and industry need to actively support the transition to a low carbon economy, fostering investment in sustainable technologies by both public and private sectors. This requires greater market and regulatory certainty allowing companies and individuals to invest in and facilitate the development and commercialisation of green technologies such as electric vehicles. The EU and Member States can play a pivotal role in making this happen:

- **Trade**
  Removing tariffs and non-tariff barriers for clean technologies and services governments would boost green trade. We believe that, independent of the future of the WTO Doha Development Agenda (DDA) negotiations, the EU should systematically push in all its trade negotiations for the elimination of tariffs and non-tariff barriers affecting green trade.

- **Efficient Energy**
  Energy efficiency begins with efficient energy. This means producing and delivering more energy for final consumption from fewer primary energy sources and other natural resources, notably water and land. This is what we call “efficient energy”. Our primary focus is on the supply of more resource-efficient technologies and many of these solutions are available today. However, current policies do not fully support their deployment or help overcome the financial, infrastructure or regulatory barriers inhibiting the development of more efficient energy production in Europe.

- **Life Cycle Approach**
  Sending the right price and investment signals to markets is key to help drive eco-innovation and resource efficiency. We need a life cycle approach to pricing. Prices need to reflect the cost of the use and reuse of resources and the cost of pollution. Calculating the true cost of using energy and resources and putting a price on pollution and exploitation of resources, is important to drive growth sustainably.

- **Internal Market**
  The EU should continue its work towards a single market in energy sector through closer harmonisation of policies among Member States (in particular on electricity taxation) and by implementing existing directives. These efforts should be underpinned by a reliable and more uniform long term Emissions Trading Scheme (ETS) regime buttressed by stronger regulation to remove national variations. At present, poor visibility on carbon prices going forward means that short term investments could undermine EU emissions goals by locking in carbon from unabated fossil fuel power plants for many years to come.

**Justus Lipsius going green**

GE and its providers are working for the Council of the European Union to improve the energy efficiency of the Justus Lipsius building, its Brussels headquarters. GE equipped the building with a GE Jenbacher cogeneration unit, which helps to generate heat and electricity for the building. The project will help reduce CO₂ emissions with 18% and lower the building’s electricity bills.
Investing in inclusive growth

Inclusive growth is about spreading the benefits of the EU to all European citizens - ensuring people of all ages and backgrounds and across all regions can enjoy productive work and share the benefits of wealth-creation. GE is investing in inclusive growth by improving access to affordable, high-quality healthcare, providing finance for businesses across the whole region and investing in remoter areas.

- **Healthcare**
  GE Healthcare’s expertise in medical imaging, medical diagnostics, patient monitoring systems, drug discovery and biopharmaceutical manufacturing technologies is helping clinicians around the world develop new ways to predict, diagnose and treat disease. Through our healthymagination strategy and products, we are committed to reducing costs, increasing access to and improving the quality of healthcare for all. GE will invest €2B in R&D in healthymagination products by 2015. We will also provide €1.4B in financing for advanced healthcare IT over the next five years.

- **Financing Growth**
  GE Capital, our financial services business, provides a wide range of financial products and services to SMEs and multinationals in 16 European countries. As the leading provider of working capital and asset finance, GE Capital enables over 350,000 European companies to successfully run their operations. It works with government and manufacturers of micro renewable energy systems, for example, to build innovative funding solutions that make it easier for SMEs to invest in greener technology.

- **Regional Presence**
  GE is also partnering with regions likely to enjoy high-growth. GE maintains a large presence in Central and Eastern European. For example, in 2000, GE partnered with the Warsaw Institute of Aviation to build its Aviation R&D Centre in the Polish capital that now employs almost 1,000 people, including 700 engineers.

**Banking on Women™**

GE’s Banking on Women™ programme provides financial knowledge and resources to empower disadvantaged women around the world. Since 2008, Banking on Women has helped over 32,000 women in nine countries get the business expertise and resources they need to run their small businesses. In Poland, for example, we partnered with Newsweek Poland to provide specialised training for disadvantaged women to gain financial and personal independence. To date, we have invested over €85,000 in developing these teaching tools.
How can the EU drive inclusive growth?

To generate inclusive growth, the EU should work towards a more integrated economic system. This means drawing on regional and structural funds to create a stronger, more dynamic, and more competitive Europe.

• Regional Policy
The gap between the quality of infrastructure in western and eastern Europe remains wide; this is hampering overall EU competitiveness. Continuing support for the economic development and integration of newer member states in the Central and Eastern Europe region, which enjoy a huge growth potential, is a vital tool to promote EU growth as a whole in an increasingly competitive global economy.

Some Member States remain unable to absorb available funding. GE therefore supports the EU's efforts to give greater attention to capacity building and project implementation. It is also encouraging to see the initiatives from the EIB offering financial solutions to public authorities but we would like to see more flexibility in overall programmes and an increase in the project co-financing limits for certain countries.

• Workforce Mobility
Improving workers' mobility in the EU is crucial for the proper functioning of the single market and higher employment levels. In particular, the proposed directive on intra-company transfers - making it easier for firms to recruit key staff from overseas on a so-called Blue Card basis - would enable us and other companies to grow our business more effectively within Europe.

• Financial Regulation
Financial institutions are a vital source of funding for new businesses which are the engine of economic recovery and job-creation. The aftermath of the crisis has produced a raft of proposed regulatory changes and we support the drive towards a more secure regime governing the financial sector. But changes should be tailored to promote the sector's ability to lend, especially to small and medium-sized businesses, and avoid choking off vital sources of funding, particularly for SMEs.

Improved health can raise work force productivity and reduce absenteeism; it can enhance the quality of life of Europe's ageing population. This has been recognised in the EU's flagship Active and Healthy Ageing Innovation Partnership which aims to increase the healthy lifespan of EU citizens by 2020 and nurture economic and social improvements. GE is well placed to contribute to the Partnership and advocates innovative solutions that can improve healthcare delivery. These include:

• Healthcare Information Technology
Healthcare IT promises smarter, better coordinated and more efficient healthcare. The EU should place greater emphasis on policies that promote the uptake of healthcare IT and telemedicine throughout the region. This will benefit patients greatly, improve healthcare systems, reduce medical errors, compensate for growing shortages in health professionals, and help address the issues raised by an ageing population.

• Disease Prevention and Early Diagnosis
It is vital that modern healthcare systems place a greater emphasis on preventative medicine, including early diagnosis to prevent the onset of disease. Greater use of diagnostic screening within at-risk populations can detect the earliest signs of illness and enable swifter intervention with more positive outcomes, including the saving of lives. Patients will need early and speedier referrals from primary care to specialised diagnostic services. This in turn requires investment in primary and secondary care to provide the required technologies.

• Healthcare Finance
How to transform mature healthcare systems so they better use new technologies and bring care closer to communities is a critical priority in an era of spending cuts in many countries. We believe public private partnerships, technology leasing schemes and innovative financing can help governments to fund the long term improvements their healthcare systems require. GE Healthcare's Performance Solutions business can also work with hospitals and healthcare providers to ensure the best use of their human, capital and technical resources.