Mission statement

“The world is facing important challenges in the use of energy, natural resources, and the provision of food, water and health for its population.

Chemistry, Plastics and Life Sciences are essential to making the world’s development sustainable. Our innovative research is crucial to the development of new products, applications and services.

Our industry is central to a successful future and to improving everyone’s quality of life.”
Following on the reports published in 2009 and 2011, essenscia is pleased to present its third sustainability report, setting out the sector’s progress in the field of sustainable development. Again we report on the status of the familiar three P’s - People, Planet and Prosperity – using key performance indicators. This is supplemented by a fourth P for Products. This report demonstrates that the chemicals, plastics and life sciences industry attaches paramount importance to sustainability and is developing innovative products that offer sustainable solutions to societal megatrends.

In order to reach an even wider audience, not only is this report produced in three languages, Dutch, French and English, but it is now available online on www.essensciaforsustainability.be.

By reducing the number of printed copies, this will also contribute to sustainability. In addition, you can download both the full report and individual indicators in a handy pdf. In this way readers can create their own customized reports.

Importantly, this report also looks ahead. This means that in addition to an update of the indicators for each of the P’s, a vision of the future of the sector has been developed.

Finally, the online report is peppered with examples of company good practices and initiatives from the federation and its product groups. In this way, we aspire to bring our industry closer to people and to be recognized as a sustainable and attractive industry that is crucial for our Belgian economy, prosperity and well-being.

This brochure is only a taster of the content of our sustainability report. I invite you to discover the full report on www.essensciaforsustainability.be.
Vision People

The chemical, plastics and life sciences sector in Belgium is recognized worldwide for its highly-trained and particularly competent employees. Our companies are keen to both maintain and expand this superiority, which is essential for the long-term anchoring of our industry.

Studies show that in the foreseeable future the majority of our employees will be older than 50. At the same time, the inflow of young people will not be sufficient. We are threatened by a potentially large outflow of knowledge.

The sector focuses on:
- sensitizing young people to science and technology
- bringing education closer to the chemical, plastics and life sciences industries thanks to on-the-job learning
- enabling our employees to work longer in a safe environment through education and training plans, innovative skills policy, lifelong learning and career guidance.

If the sector is to be a lasting and sustainable player in the Belgian industry, it is crucial that all stakeholders - employees, enterprises, social partners, education and government - work together to achieve these objectives.
Employment

The sector remains a pillar of the industrial employment

Over the last 30 years, employment in the chemical and life sciences industry has remained relatively stable, varying between 90,000 and 100,000 jobs. This stability is remarkable bearing in mind the significant job reductions for manufacturing as a whole, with more than 358,000 jobs lost between 1980 and 2011. The chemical and life sciences industry generates employment in other sectors such as maintenance contracting, port activities, transport and logistics and IT. Each direct job generates 1.64 indirect jobs in Belgium. In 2011, this meant a total of 238,000 direct and indirect jobs.

Age Pyramid

2,600 new hires per year are needed

2,600 people will have to be recruited on an annual basis to compensate for retirements in the coming years assuming the employment level remains stable in the sector. It is essential to attract young people in technical and scientific studies to meet the industry needs. Moreover, higher qualifications in the field of science offer them good opportunities in the labour market. Indeed, all school leavers with a science degree found employment within a year according to a VDAB survey (2011-2012).

Employment by age group

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1/4 of all employees in the sector are over 50

http://www.essensciaforsustainability.be/people/overview
Vision Planet

Energy is essential to our chemical industry. It provides steam and electricity and is also a raw material for our products. Energy efficiency is ingrained in our daily operations and thinking patterns because energy costs are game changers for investment decisions.

The energy revolution is driving the price gap between Europe and other continents to critical levels. The development of competitive energy in Europe is essential. Right now the European Union is focusing too narrowly on CO₂ reduction and renewable energy at any cost, while the United States has committed to competitive energy prices through the use of shale gas.

essenscia invites Europe to change its existing energy objectives and to seek a better balance between energy availability, competitiveness and concern for the environment.

Discover the visions for Biodiversity & ecosystem services Efficient raw materials use on www.essensciaforsustainability.be.
Energy consumption

- The energy mix of the sector has been stable in the last decade: electricity (61%) and natural gas (30%). Steam represents 8% of purchased energy. Petroleum use as fuel (1%) has virtually ceased and coal has been phased out completely.
- Energy represents an important part of production costs and optimizing energy efficiency is crucial.

In 2011 roughly 99% of petroleum (mainly naphtha) and 40% of the natural gas consumption of the sector were directly converted into higher value materials.

Energy efficiency

Continuous improvement

- Since 1990, total production of Belgium’s chemical and life sciences industry has more than tripled. In the same period, energy consumption increased by only 40%.
- The continuous focus on energy efficiency was strengthened by the voluntary commitments of the sector (accords de branche énergie, covenant energy benchmarking, covenant energy auditing). Those agreements cover 95% of the energy use in the sector. A new generation of covenants is currently under approval to continue this successful approach.

Energy consumption in PJ
1990 - 2011 (based on purchased energy vectors)

Share of the sector in the total gas use in Belgium (2011)

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Vision Prosperity

In 2050, there will be 9 billion people living on our planet. The exponential growth in demand for natural resources, energy, food and potable water, and the desire for better quality of life and health will inevitably lead to ‘over-consumption’ of our planet.

European and local policymakers have resolutely opted for sustainable growth. But sustainable development is impossible without innovation. In this area, the chemical, plastics and life sciences industries are playing a decisive role. We are constantly searching for more efficient processes, unique, high-quality and innovative products and customized business models.

essenscia believes in a strong clustering of knowledge and skills in order to leverage further developments in innovation. Only by creating new value chains in open collaboration can we achieve breakthroughs. In this way the innovative power of our technologically advanced SMEs and multinationals can form the basis of a range of new niche products and services.

The transition to a sustainable, innovative chemical and life sciences industry has to be a joint effort of businesses, government and all stakeholders together.
R&D expenditures

More than half of total industrial expenditures

- During the last ten years, R&D expenditures by the chemical and life sciences industry has nearly doubled. Industry spending on sustainable chemistry - biotechnology, renewable resources and green chemistry - is increasing.
- The sector is helping Europe reach its target of R&D investment equal to 3% of GDP. The R&D intensity of the Belgian economy was 2.2% of GDP in 2011.
- The sector accounted for 53% of the total in-house R&D expenditures of all Belgian manufacturing companies in 2011, compared to 38% in 2000.

Total R&D expenditures

Trade balance

Belgium’s export champion

- More than 75% of production is exported. In 2012, the export of chemical, plastic and life sciences products amounted to €110.7 billion (one-third of Belgium’s exports). Belgium accounts for nearly 12% of total EU-27 exports.
- The sector generated a positive trade balance of €24 billion in 2012 (nearly doubled in the last ten years).
- 41% of exports go to Germany, France and the Netherlands; 12% go to North America; 6% to Brazil, Russia, India and China (BRIC).

Trade balance chart

- Chemical and life sciences products
- All products

Source: Belspo-PPS Science Policy

Source: National Bank of Belgium according to the communautarian concept

“Growth is conditioned by innovation. With 10,000 people active in R&D in Belgium, innovation is strategic to our industry”

Pascal Lizin
Director External and Public Affairs GSK Vaccines

Watch Pascal Lizin’s testimony and discover our full Prosperity Vision

http://www.essensciaforsustainability.be/prosperity/overview

€ 2.8 billion
spent on R&D in 2011
Vision Products

Chemicals provide answers to the challenges of tomorrow. Good communication ensures that customers are not only able to choose the most suitable product for a given application, but also that this product is both manufactured and used in a correct and safe way.

essenscia is actively cooperating in developing and implementing an efficient regulatory framework for product safety. The sector is committed to informing the various users of the proper use of a product, the associated hazards and risks, and measures to reduce these risks.

The sector is focusing its innovation efforts on developing sustainable solutions for the challenges facing society. This also includes the final use of a product, which in many cases impacts a product’s life cycle assessment more than its production stage. Our sector continues to focus on closing cycles and thus on reusing or recycling products. It is essential that the whole industrial chain cooperate in this effort.
The Belgian chemical sector: a forerunner of REACH

Chemical substances have become safer thanks to REACH, the European framework for the review and control of chemical substances. This is the conclusion of the European Commission in its 5-year review. Producers and importers have already submitted 40,000 files. The Belgian chemical sector scores well as it occupies the 6th place with 2,733 registration files submitted over the two first registration deadlines (2010 and 2013).

Safe use is a priority

essenscia organizes trainings on product policy to inform companies on the legal aspects of the marketing of the chemical products. Last year only, 912 employees from 473 companies were trained on the subject. In addition, many initiatives are taken by essenscia product groups to promote the safe use of chemicals by professional users and consumers.

Life Cycle thinking

In the development of new products and processes, it is essential to consider all aspects of sustainability through the whole product life cycle. Go online to learn about the numerous initiatives taken by the industry to contribute to this approach.

Discover in our online report how the sector develops innovative sustainable solutions for the societal challenges with a focus on:
- sustainable construction
- health and well-being
- sustainable agriculture.

“Genuine sustainability is about obtaining the highest possible insulation values for the lowest possible consumption of materials”

Tom Debusschere
CEO Deceuninck

Number of REACH registrations

Source: ECHA registration statistics website status 30/8/2013

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Swiss pioneers Bertrand Piccard and André Borschberg are the founders, pilots and the driving force behind Solar Impulse, the first airplane that can fly day and night without fuel. Solar Impulse is a unique adventure that aims to bring emotions back at the heart of scientific exploration, a flying laboratory to find innovative technological solutions for today’s challenges and a vision to inspire each of us to be pioneers in our everyday lives.

The ultimate goal is to circumnavigate-the-globe without a drop of fuel only powered by solar energy. In 2015, André Borschberg and Bertrand Piccard will fly alternatively the aircraft around the world.