



confederation of
european paper industries



2050 OUTLOOK

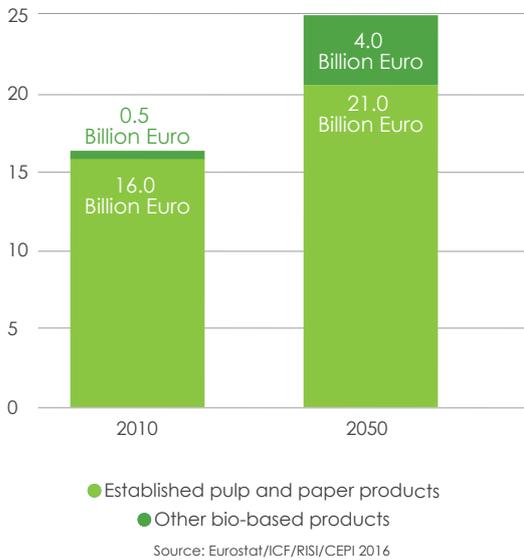
The European forest fibre and paper industry is at the forefront of a low-carbon bioeconomy in which renewable raw materials replace fossil resources, improving the environment, as well as the quality of everyday life.

Our 'Investment Roadmap' follows the 2011 vision to decarbonise by 80%, while creating 50% more added value, by 2050. This vision is based on product innovation, market developments, enhanced productivity and process efficiency.

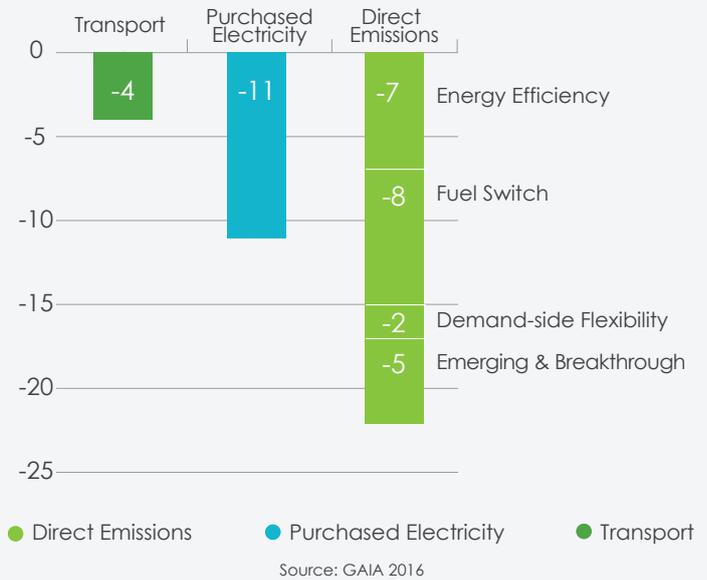
2050 is not as far away as one may think. Due to constant economic changes the time span for action is short. There are two investment cycles for our capital intensive industry in that timespan; in other words, "2050 is two paper machines away". With this in mind, policymakers and industry have fewer opportunities to make the right choices.

We stand by our ambition to make the low-carbon circular bioeconomy a reality in Europe and we can achieve this with the right pro-investment policies and financing conditions in place.

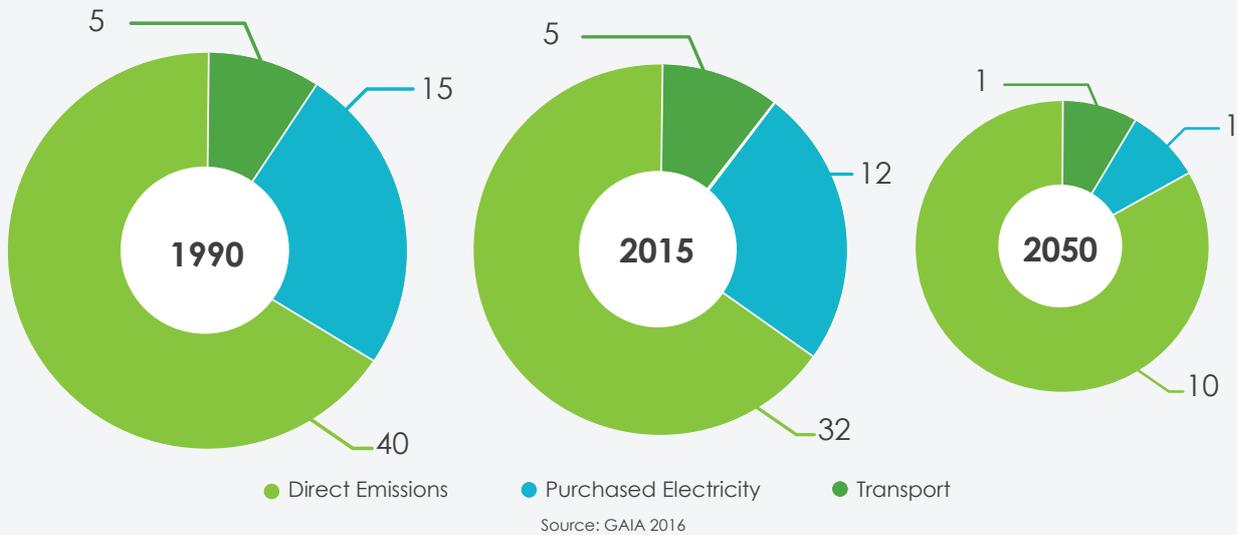
ADDED-VALUE GROWTH PROJECTION FOR THE EUROPEAN FOREST FIBRE AND PAPER INDUSTRY BY 2050 (IN BILLION €)



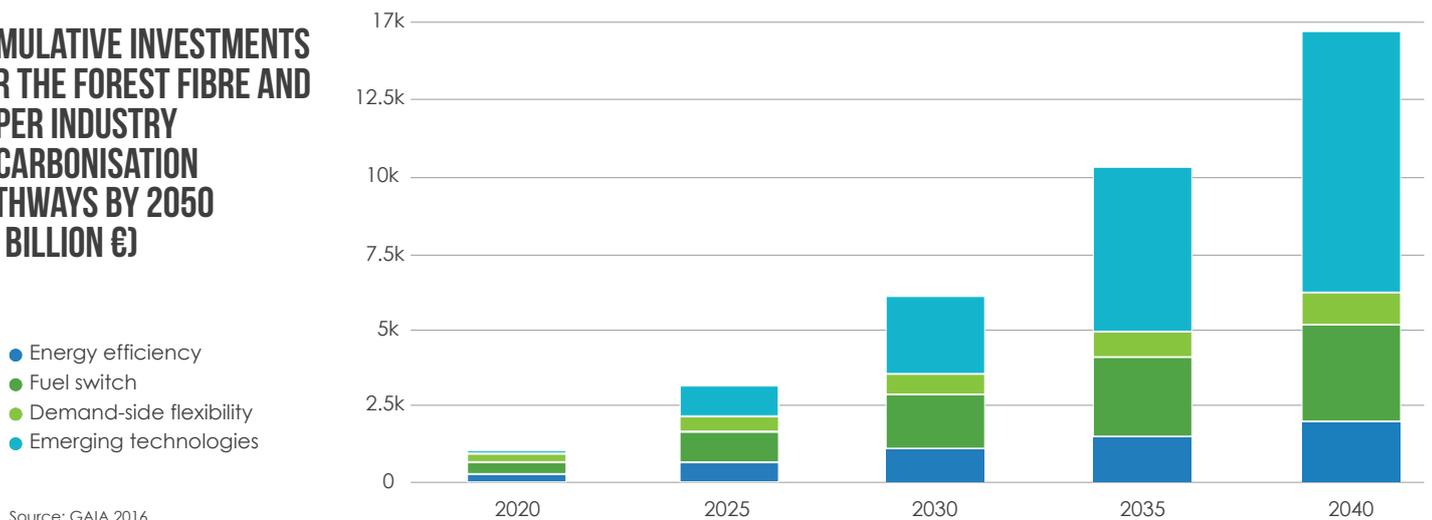
2015-2050 PATHWAYS FOR DECARBONISATION



CO2 EMISSIONS REDUCTION AND DECARBONISATION PATHWAYS FOR THE EUROPEAN FOREST FIBRE AND PAPER INDUSTRY BY 2050



CUMULATIVE INVESTMENTS FOR THE FOREST FIBRE AND PAPER INDUSTRY DECARBONISATION PATHWAYS BY 2050 (IN BILLION €)





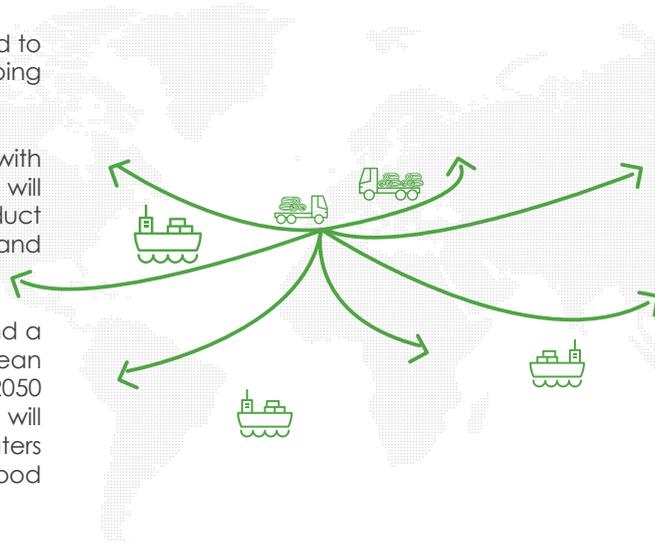
THE MARKET

Europe's shrinking share of global GDP

The growth in European industrial output is expected to slow down in the coming years, while that of developing markets is expected to grow.

We expect our industry to continue to grow in line with EU GDP, by about 1.5% a year on average. We will however see different growth rates in different product categories such as paper used for publications and packaging.

With an increasingly limited amount of resources and a declining share of global output the European economy and industry will need to adjust to the 2050 reality. It is important to ensure policy framework will continue supporting forest management, which caters to the sustainable supply and cascading use of wood resources.



The maturing of European markets and the bulk of global demand outside Europe

While we expect growth to remain steady in Europe, we are likely to see a faster pace in other parts of the world. This means our industry will need to adjust to new customer behaviour, new demands and requirements from society at large.

Although Asia is fast becoming a major producer and consumer of paper products, European consumption per capita will remain higher in the coming years. The paper production capacity in China has and will nevertheless continue to have a big influence on the European forest fibre, pulp and paper markets. In this vein creating value from European pulp and paper products will become even more important.

Our industry's future lies in further integrating our activities with other sectors. New business models, products and services will enhance the use of printing and writing paper and the growing need for innovative packaging and hygiene solutions.

By adding new functions and services to existing paper and board products, such as connectivity, anti-counterfeiting, water-repellence and so on, we will offer new means to differentiate European production from global competition.

From food additives to biocomposites, to advanced biofuels and nanocellulose, these emerging bio-based products will indeed bring even more growth opportunities for renewable, low-carbon bioeconomy that provides a sustainable alternative to a fossil-based economy.

At the same time, the European forest fibre and paper industry is exporting more and more outside of Europe (in 2017, exports rose by 5.2%).

Yet, tariff barriers, applied to nearly half of the exports, and protectionist subsidies for rival goods, create an uneven playing field, restricting market potential. Despite this, we are proud to continue exporting 21% of our production.

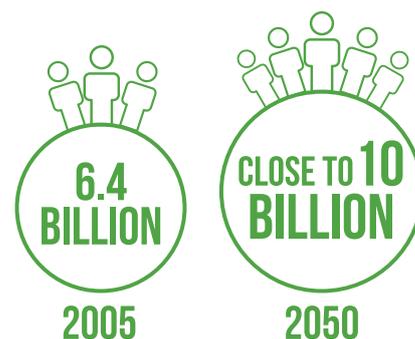


DEMOGRAPHICS

Offering a sustainable alternative in an increasingly populous global economy

The world's population reached 7.5 billion people in June 2017 and the UN predicts this substantial growth to continue until 2050, when it forecasts global population to reach close to 10 billion people.

By 2050 the EU will have a relatively old and educated population when compared to the rest of the world. To maintain economic influence, it will need to extract the highest possible value from limited resources. By developing an economic system based on biological resources, supplied and renewed by nature, the planet can sustain our society. A low-carbon bioeconomy pioneered by the European forest fibre and paper industry could become the greatest single driver of the global economy.



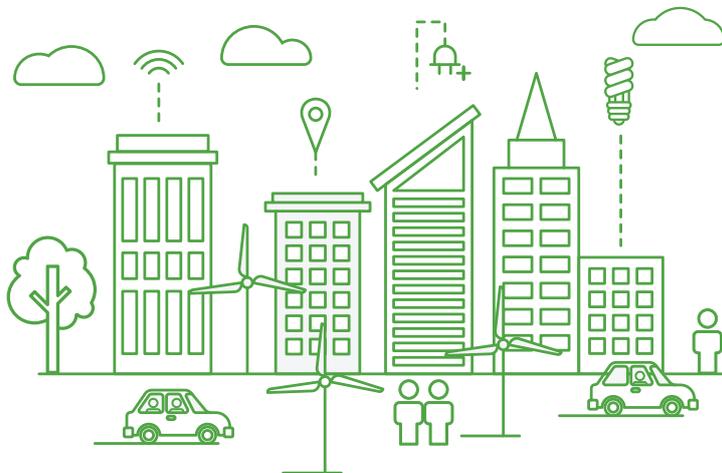


Our products: a sustainable and innovative alternative for the European bioeconomy

With a growing global population and increased per capita wealth, consumers are becoming increasingly conscious of resource scarcity and the need for efficiency. In the context of greater consumer awareness, societal demands for sustainable products will only grow.

The European forest fibre and paper industry believes at its core in a production cycle that maximises the value from wood. At the same time, demand for European wood is growing, notably in terms of bioenergy use.

By mobilising the use of wood in more sustainable ways, together with using more innovative means to optimise the added value of raw materials, this would help better balance supply and demand for wood.



***We can produce second-generation biofuels to replace crude oil, as well as renewable bio-based products. It also provides packaging solutions to limit food waste and it uses residues from the woodworking industry as its raw materials.**

***Once paper has served its purpose, the industry recycles it to make something new, also creating additional products from residues from the recycling process.**



Achieving our vision for the low-carbon bioeconomy will require new skills

The move towards a low-carbon bioeconomy will not only require investment in technologies and new products – but also investment in people, knowledge and leadership.

In order to fully embrace the opportunities the bioeconomy offers, the European forest fibre and paper industry will need the capacity to attract young and talented, skilled employees.

Having a comprehensive approach to education and training that provides European industry with the skilled workers it needs to sustain Europe's low-carbon bioeconomy will be crucial.

You can read more about the steps we are taking to ensure that our future workforce is equipped with the skill sets needed to make this successful transition in our joint publication "[Future skills for the paper industry](#)". This publication was produced together with the trade union association [Industrialall](#) and the support of the European Commission, DG Employment, Social Affairs and Inclusion.





DIGITALIZATION

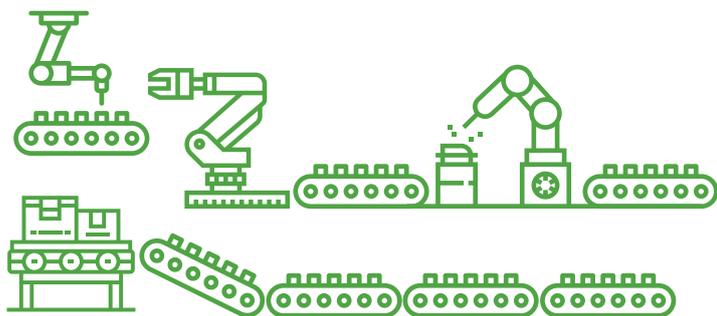
MANUFACTURING

ICT and digitalisation are transforming our production process in more ways than one

As an industry we have the capacity to integrate automation and information technologies into our production processes.

Industry 4.0 is currently being driven by macro-societal trends underpinned by recent technological developments, which we as an industry stand ready to benefit from.

Nevertheless, paper continues to be a particularly potent and effective tool when it comes to reading and learning, despite the digital trend. A multitude of recent studies demonstrate that in an increasingly digital world, young consumers in particular are opting for paper as their preferred means of communications.



At the same time, demand is continuing to increase for different paper-based product segments such as packaging that protects and secures your online purchase. New inventions in 'digital' paper-based product and the growing e-commerce mean the link between paper and digital will be even more prominent in the years ahead."

Demand for hygiene paper is also expected to grow in a world increasingly aware of hygiene and personal sanitary care.

Learn more about how the European forest fibre and paper industry is making 'Industry 4.0' a reality in our joint publication "Paper Industry 4.0 – What digital can do for the paper industry".

DEMAND - Digitalization

By 2020, an entire generation will have grown up in a primarily digital world. Familiarity with technology, and reliance on mobile communications, will transform how we work and consume.

Nevertheless, paper continues to be a particularly potent and effective tool when it comes to reading and learning, despite the digital trend. A multitude of recent studies demonstrate that in an increasingly digital world, young consumers in particular, are opting for paper as their preferred means of communications.

At the same time, demand is continuing to increase for different paper-based product segments such as packaging e.g. the Amazon packaging that protects and secures your online purchase. New inventions in 'digital' paper-based packaging and the flourishing e-commerce markets means the link between paper and digital will be even more prominent in the years ahead.

Demand for hygiene paper is also expected to grow in a world of hygiene and personal sanitary care is of increasingly importance. We cannot rule out a world where a market for 'digital' hygiene paper will also be of importance for tech-savvy consumers.



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DATA QUALITY

We pride ourselves in ensuring that our statistics are third-party quality assured. Deloitte has issued a limited assurance statement verifying the quality of the data we collect.