

# CRÉATIVES INDUSTRIE

POWERED BY CRÉATIVE FRANCE

KIT FOR THE CAMPAIGN  
TO PROMOTE FRENCH INDUSTRY



The very symbol of France is a symbol of industry: the Eiffel Tower, built in 1889 for the World Exposition, at a time when the country was bubbling over with innovation, producing the Paris métro, the motion picture camera, Foucault's pendulum, inflatable car tyres, and much more.

That is not to say France is trapped in the past. On the contrary, it is forward-looking, an innovator with remarkable talents built upon a tradition of industrial and artisanal know-how. In other words, innovation is part and parcel of our tradition. It is in France's DNA.

France may be home to the Louvre museum, Dom Pérignon, and Foucault's pendulum—but it is also where you will find Airbus, Air Liquide, Thalès, Renault, PSA, Alstom, Michelin, or newcomers like Parrot and Sigfox, and numerous small and intermediate sized companies that easily hold their own in international markets.

Our economic competitiveness comes from a range of assets. We have top-notch training, boundless creativity, impressive productivity, low cost and highly reliable energy supply, and first-rate infrastructure, including the most modern highway and rail systems in Europe. France benefits from a prime location on the European continent, the biggest market in the world today.

France's industrial excellence also lies on four distinct pillars. For centuries we have produced outstanding mathematicians, and our education system continually turns out more. We count more than a million engineers and some of the world's best engineering programmes. Our industrial designers know

how to combine pragmatism with style. And France's entrepreneurs are as plentiful as they are ambitious.

Investors are taking note. For nearly a decade, France has been the top European country for foreign investments in the industrial sector.

We are using every means at our disposal to attract even more investment, to guarantee that companies enjoy the best conditions to grow, develop, and conquer new markets. For example, we have simplified bureaucratic procedures; it is now so quick and easy to create a business in France. We have streamlined labor related procedures. Reduced taxes and social charges are another enticement for foreign companies and their employees as well as a one-shot fiscal incentive for productive investment. And France is now recognized worldwide for the competitiveness of its R&D thanks to a unique tax credit, on top of the quality of our researchers and engineers.

France is innovative, entrepreneurial, creative—and determined to be among the leading countries for industry. We are proud of our unique model, aligning social cohesion with economic vitality for strong and sustainable growth. But we are also open to the world.

I thank all the French companies, large and small, who have come to participate in the Hanover trade fair, promoting the appeal of our country's industry and helping it to shine beyond our borders. And I say to all other companies, you're welcome in France!

**Emmanuel Macron,  
Minister of Economy, Industry  
and Digital Affairs**

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# CREATIVE INDUSTRY PROMOTING THE NATION'S INDUSTRIAL KNOW-HOW AND INGENUITY

From motion picture cameras to high-speed trains to robotic surgical assistants, France's contributions to industry have always combined intelligence, determination, daring, and creativity.

France now presents "Créative Industry," an initiative promoting the nation's industrial know-how and ingenuity.

Créative Industry is part of "Créative France," a label proclaiming the renewed dynamism of this country's innovation and economic activity in sectors as varied as industry, technology, culture, gastronomy, science, and healthcare. France's progress in all of these fields reveals not only a common ambition but an ability to capitalise on the creative potential and entrepreneurial spirit of its people. Creative Industry applies this general movement to a specific theme, and comes at a turning point in the technological and digital transformation of French industry.

The very symbol of France is a symbol of industry: the Eiffel Tower, built in 1889 for the World Exposition, at a time when the country was bubbling over with innovation, producing the Paris métro, the motion picture camera, Foucault's pendulum, inflatable car tyres, and much more.

Today's digital revolution is as disruptive as the industrial one a century ago. Now as then, France claims its place as a creative trailblazer. Its government and people have rediscovered a passion for industry. The young generation is equally enthusiastic: a recent Opinion Way / Ecole nationale supérieure d'arts et métiers survey shows that 76% of French high schools students in science and

technology have a positive opinion of industry. However, only 40% imagine actually working in the industrial sector.

This paradox underlines the importance of transforming industry in order to propose the new generation a digital-friendly, attractive professional playground

And yet, industry is a motor of the French economy, bringing in €263 billion — 13.8% of France's GDP—in 2015. Industrial products represent more than 2/3 of France's worldwide exports, or €420 billion in value, with the agroalimentary sector in the lead.

Foreign companies working in France have come to realise what the vitality of France's economy and industry can offer them. For each of the past several years, France has been a favourite destination for foreign direct investments (FDI). Nearly one employee in eight works in a subsidiary of a foreign company. In industrial manufacturing, that ratio rises to one in five—more than in Germany, Italy, or Finland. The Swiss agroalimentary giant Nestlé counts more than 19,000 employees in France, while Barilla opened its biggest production site—4,300 square metres—in Châteauroux. The Japanese automaker Toyota chose the north of France as its European base. And the American company Hexcel has reinforced its presence in France with a new factory for polyacrylonitrile in Roussillon.

France's long-term strategy has allowed it to build innovation clusters that are capable of competing internationally. Exports are concentrated in strong value-added sectors. The dynamism of the transport materials sector (a 10.5% rise

in exports), led by aeronautics and automobiles, made up more than half the growth of the French export market in 2015.

Airbus, a European project with new headquarters in Toulouse, is another good example. France is home to large factories for Airbus, Airbus Helicopters and Airbus Defense and Space, and the group's staff in France has increased 31% since its creation. Each year, Airbus Group exports more than 20 billion euros worth of aeronautical and aerospace products. The technological and commercial success of Airbus aircraft assembled in Toulouse demonstrates how France, hand in hand with Europe, can invest in complex, long-term industrial projects.

The agroalimentary industry is the French economy's number one sector, known throughout the world thanks to groups such as Danone, leader in dairy products. The automobile industry, one of the most competitive sectors in the world, also exemplifies France's capacity to excel through innovation; France's automobile industry invests more than 5.9 billion euros in R&D and is the industry that files the most patents, ahead of the pharmaceutical industry. More than three-quarters of French automakers' production is sold outside the country.

Alongside these big groups, a dense network of small and mid-sized companies has taken off. Taking advantage of France's industrial dynamism, entrepreneurs from around the world have chosen this country as a place for growth, appreciating its proximity to the immense European market and the strength of its large industrial groups. Such assets, notably France's location at the heart of the European Union, give a boost to foreign investors hoping to develop internationally. One example is the Japanese company MBK's factory in Saint Quentin ; practically 90% of its 150-million-euro turnover comes from exports. Chemchina, a Chinese chemical leader, has multiplied its investments in France via its subsidiary Adisseo, specialising in animal feed additives. More than 90% of its sales come from exports, too.

The Japanese automaker Toyota, in France since 1977, chose the north of the country as its European base. The British group Kingfisher has more than 15,000 workers in France and continues to grow. Siemens, present in France for more than 160 years, counts more than eight industrial sites, 11 R&D centers, and more than 6,900 employees ; in 2015 the German company decided to make Toulouse the world headquarters for its « Val » driverless light metro systems.

Foreign investors recognise France's skill at making equipment, transportation, metals, and chemicals, along with new technologies such as 3D design, virtual prototyping, robotics, and composite materials. These are technologies that require digital transformation—and here, too, France boasts world leaders such as Dassault Systèmes and Atos. Cutting-edge companies and startups are sprouting up all over the country and competing on the international marketplace.

One reason for France's success is that its companies invest massively in industrial innovation. In 2012, they spent 78% of total R&D, or nearly €24 billion, on industry. In 2014, France held sixth place worldwide for the number of patents filed, ahead of the United Kingdom.

Another factor is that French industry boasts a highly talented pool of over three million employees—engineers, mathematicians, designers, researchers, scientists, and specialists, trained in the country's top-notch schools. It is estimated that every industrial job generates three or four more jobs in other sectors, having a positive effect on the overall economy.

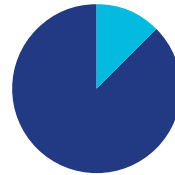
Créative Industry celebrates an exciting time for France, as the country builds upon its reputation as inventors and entrepreneurs, puts to use its remarkable skills and strengths, embraces the digital age, and prepares to re-emerge as a global industrial powerhouse.

# A KEY SECTOR IN FRANCE

The French industrial sector represents **€263 billion of GDP**



**3.1 million** employees work in the industrial sector



**13.8%** of France's GDP

## A POSITIVE EFFECT ON THE OVERALL ECONOMY



**EVERY INDUSTRIAL JOB GENERATES THREE OR FOUR MORE JOBS IN OTHER SECTORS**

**2/3 of France's exports, worth €420 billion, are industrial products**



**less GHG between 1990 and 2012**

## A KEY SECTOR FOR INNOVATION

**78% of total R&D, or €23.4 billion, is spent on industry**



**TOP 10 2015 EXPORTERS FROM FRANCE**

**1** **Airbus SAS / Airbus Operation -**  
Aeronautical and Aerospace  
Construction 

**2** **Renault SAS -**  
Automobile Manufacturing 

**3** **Peugeot Citroën Automobile SA -**  
Automobile Manufacturing 

**4** **Snecma -**  
Aeronautical and Aerospace  
Construction 

**5** **Sanofi Winthrop Industrie -**  
Pharmaceutical Industry 

**6** **ArcelorMittal Atlantique  
et Lorraine -**  
Steel Manufacturing 

**7** **Total Raffinage France -**  
Petroleum Refinery 

**8** **Schneider Electric Industries SAS -**  
Electricity Distribution  
and Management 

**9** **Dassault Aviation -**  
Aeronautical and Aerospace  
Construction 

**10** **Lilly France -**  
Pharmaceutical Industry 

**50% OF THE TOP TEN OF FOREIGN  
INVESTORS ARE INDUSTRIALS  
IN 2015**

**Arcelormittal**



**General Electric  
Company**



**Robert Bosch GmbH**



**Tata Group**



**Volkswagen AG**



**TOP 5 FOREIGN EXPORTERS FROM  
THE IMPORT/EXPORT STANDINGS  
THAT ALSO INVEST IN FRANCE**

**Airbus Group**



**Arcelormittal**



**Ab Volvo**



**Alenia Aeronautica**



**Klesch & Company**



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# 4 UNIQUE TRAITS FRANCE BRINGS TO THE INDUSTRIAL SECTOR

## Unique qualities France brings to industry

Creative thinkers, a highly-trained workforce, capable managers, ambitious entrepreneurs: these are the assets driving France's industrial success. An entrepreneurial spirit is sweeping the land, while an outstanding education system turns out some of the world's best mathematicians, engineers, and designers. They are the key to France's excellence in sectors from aeronautics to healthcare, its original approach, its ability to disrupt, its healthy export market, its overseas appeal, and its position—always one step ahead.

It is no accident that France is the first European country in Thomson Reuters' Top 100 Global Innovators for 2015, ahead of Germany. What's more, 2014 marked the fourth year in a row that France was number one in the Deloitte Technology Fast 500 EMEA.

## Mathematics & scientific Research, a French tradition of excellence

Mathematics has an extraordinary intellectual heritage in France, with a long list of luminaries that includes Cauchy, Descartes, Fermat, Galois, Lagrange, Poincaré, Hadamard, Lebesgue, and the contemporary celebrity Cédric Villani, popularly referred to as the "Lady Gaga of mathematics". He's one of 13 Fields Medal winners from France, placing this country second in the world for the honour, just behind the United States.

The French system detects budding talent and hones it at exceptional math schools such as the École normale supérieure, the Institut Henri Poincaré, and the Institut de Mathématiques de Jussieu. A constant

stream of highly-educated graduates guarantees that France's industry will thrive well into the future.

Math represents 15 percent of France's GDP, or 285 billion euros. It has a direct impact on more than two million jobs. Math is crucial to wide range of industries, from building ships to managing supply chains to virtual prototyping.

In addition to math, France is renowned for the excellence of its scientific research in top institutions such as the CNRS (National Center for Scientific Research), the Inserm (National Institute of Health and Medical Research) and the CEA (Alternative Energies and Atomic Energy Commission). The CEA was ranked as "world's number one innovative government research organism" in a recent Thomson Reuters survey. Their research is supported by a dynamic mix of public and private funding, along with an advantageous fiscal policy that benefits industry, too.

## French engineering, envied around the world

France is famous for the quality of its engineering schools and takes an interdisciplinary approach to educating engineers, offering a solid base in computer science along with mechanics, languages, business management, and more. More than 200 engineering schools produce some 30,000 top-notch graduates per year, and the country counts nearly 1.3 million engineers today.

French innovation once again created a buzz at CES 2016 in Las Vegas. With 190 startups on display, France was the second-most represented country after the United States. Twenty of these startups won a CES Innovation Award.

## **Designers making a difference**

Throughout history, France has been home to great artists and designers. These days, many are applying their skills to industry, helping companies to come up with attractive, pragmatic, and user-friendly products of all kinds.

Following in the footsteps of Philippe Starck, a new generation of French design stars has emerged, such as Patrick Jouin, whose ecologically-driven creations include the “Vélib” bicycle, or the Bouroullec brothers, who recently designed a television for Samsung.

Also trained in excellent schools, French designers know how to combine pragmatism and sensitivity. They have a knack for responding to commissions with practical solutions that remain pleasing to the touch or the eye. Their work now appears in every sector—product design, digital technology, green business, new composite materials for automobiles and aeronautics. This trend will continue to grow as companies find that first-rate design helps them rise above the competition.

## **French entrepreneurs—striking out on their own and succeeding**

There is a boom of entrepreneurship in France, notably among the young generation. Today, 19 million French people say they would like to start their own business, and every year 500,000 take the plunge. Those between the ages 18 and 34 are particularly enthusiastic—more than half express a strong entrepreneurial desire and 34 percent plan to strike out on their own in the next two years.

That’s 3 million new entrepreneurs by 2018. French entrepreneurs of all ages succeed at home and overseas. Joséphine Goube, 27, lives in the UK and tops the Forbes list of the 30 most influential personalities under 30 in the category “social entrepreneur.” New York-based internet entrepreneur Fabrice Grinda is a super angel, with more than 200 investments around the world. In France, the world’s largest ridesharing community, BlaBlaCar, has become a tech unicorn, as is Criteo, a performance marketing company conceived by three Frenchmen in a Paris café.

**CREATIVE THINKERS,  
A HIGHLY-TRAINED  
WORKFORCE,  
CAPABLE MANAGERS,  
AMBITIOUS ENTREPRENEURS:  
THESE ARE THE ASSETS  
DRIVING FRANCE’S  
INDUSTRIAL SUCCESS**

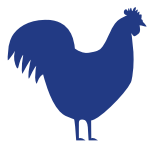


# NEW FIELDS OF EXPLORATION

France's excellence in mathematics, engineering, design, and entrepreneurship means it can create, innovate, and perform in many different areas of industry.

## INTERNET OF THINGS

One of the newest areas is the Internet of Things, where French players such as Sigfox are already making waves on the global stage. The French robot NAO by Aldebaran Robotics has become the world's bestselling robot companion. And last year, three hours from Paris, the Cité de l'Objet Connecté opened its doors: 10,000 square metres dedicated to smart, connected devices.



**FRANCE IS RANKED AMONG THE TOP FIVE FOR HIGH-PERFORMANCE COMPUTING**



**8 SMART OBJECTS WERE AMONG 32 FRENCH PRODUCTS THAT WON AWARDS AT THE LAS VEGAS CONSUMER ELECTRONICS SHOW**

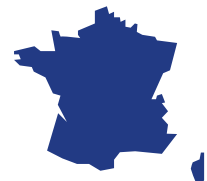
**2<sup>nd</sup> European country** for technical textile production

**80** devices expected to be connected to the Internet by 2020

## BIG DATA

France has fully embraced the digital age. Big Data is one of the areas where the country plans to show the way and add nearly 140,000 jobs by 2020. One star performer is the digital operator Orange, a world leader with network coverage in 220 countries, experience handling large amounts of data, and unrivalled end-to-end security. Criteo, the flagship of the French data economy raised \$250 million in a NASDAQ IPO in 2013.

**NAO, ONE OF THE WORLD'S BEST-SELLING COMPANION ROBOTS, WAS DESIGNED AND PRODUCED IN FRANCE**



**In France, Big Data will represent €9 billion by 2020**

## SMART CITIES



# 10 FRENCH FIRMS

which are already global leaders in this sector. A **36%** reduction in energy use in the building sector by 2020

## MEDICINE FOR THE FUTURE



European biotechnology producer

# ↑ 20%

economic growth in pharmaceutical biotechnology by 2020

## DIGITAL SAFETY



# the 5G network capacity by 2020

## HEALTHY AND CUSTOMISED FOOD

# 1<sup>st</sup> agricultural producer in Europe. Developing a world-class industry for proteins and ferments supply.



## NEW RESOURCES

# 2<sup>nd</sup>

place in Europe in terms of **biofuel production** and size of its chemical sector



less stored waste by 2020

## ECO-MOBILITY



**1** electric terminal per 80 km on Paris-Lisbon highways by 2020

# 1<sup>st</sup>

**sodium-ion battery** prototype for renewable energy storage

## NEXT GENERATION TRANSPORTATION

# A STRONG AIRCRAFT INDUSTRY, GENERATING €40 BILLION IN ANNUAL TURNOVER



**E-Fan**, the first hybrid aircraft by 2030



France is home to the world's third largest rail industry generating **€6.6 billion** in annual turnover

## AN INTERNATIONAL CAMPAIGN LAUNCHED AT THE HANNOVER FAIR

HANNOVER MESSE IS THE WORLD'S BIGGEST INDUSTRIAL FAIR AND THE PERFECT SHOWCASE FOR FRANCE TO LAUNCH CRÉATIVE INDUSTRY. AT THE FAIR, FRANCE WILL DEMONSTRATE ITS COMPETITIVE ADVANTAGE IN SEVEN KEY SECTORS OF TECHNOLOGICAL INNOVATION, WITH CUTTING-EDGE COMPANIES TO ILLUSTRATE EACH.

Each one of the French companies featured on the Creative Industry's stand (**Enertime, Flax Technic, ESI Group, BA Systèmes, Prodways, STIL, Diota Soft**) is a major player, transforming industry and helping to build the factory of the future—the backbone of a company's competitive edge.

# ENERGY EFFICIENCY

With climate change high on the global agenda and energy consumption a constant concern, energy efficiency and sustainable innovation have become a priority of industry. Digital tools and innovative processes such as thermodynamics can help companies reduce energy costs and CO<sub>2</sub> emissions while maintaining or even improving business outcomes.

## Enertime

Enertime uses thermodynamics to produce CO<sub>2</sub>-free electricity from renewable resources. The French company's Organic Rankine Cycle (ORC) turbomachines recover heat from various sources—waste heat, biomass, geothermal, exhaust pipes in ship engines—and use it to vaporize organic fluid in a turbine supplying a generator. Enertime's customised solutions improve energy efficiency as well as reliability.



# CRÉATIVE FLOW

By converting heat into electricity, France's sustainable solution boosts the energy efficiency of companies today and tomorrow.

**CRÉATIVE INDUSTRY**  
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**BUSINESSFRANCE**

# NEW MATERIALS AND COMPOSITES

Visions of the future often involve flying machines and other curious modes of transport. But real-life technological wonders such as France's Airbus 380 could never have gotten off the ground without high-tech materials and composites. High-performance, lightweight materials such as titanium, carbon fibre, nanocrystals, and technical flax optimise the performance of machines of every kind while ensuring energy efficiency. The specificities of those highly technical materials need to be taken into account at the earliest stage of design, thanks to cutting edge material modeling and digital solutions for which France has demonstrated a strong leadership.

**Flax Technic**  
Proving that nature can be a source of innovation, Flax Technic uses a natural material—flax—to produce technical flax composites that are lightweight, high-performing, renewable, and recyclable. The company's technical flax fiber serves as sandwich panels in cars, in racing boat pulleys, in building walls—it's even in bamboo bicycles. Going forward, the company plans to use technical flax to reinforce bio-based high performance thermoplastic composites in the automotive, aerospace, marine, and building industries.



# CRÉATIVE LIGHTNESS

The aeronautics, aerospace and automotive industries increasingly use lighter, more energy-efficient **French composite materials.**

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## DIGITALISATION OF THE VALUE CHAIN

The digitalization of factories and their entire ecosystem provides new ways to optimize the value chain at every step, from prototype to final user with a critical impact on performance and cost. Offering a clearer picture of all the possible scenarios, virtual universes allow us to harmonize manufacturing and logistics operations, improve factory ergonomics and imagine sustainable innovations.

### ESI Group

ESI Group was born 40 years ago as a consulting business, and was the first company to develop simulation software for vehicle crash tests. Headquartered in Paris, it has become a global leader in virtual prototyping software and services. Working in industries from transportation to power, ESI Group's solutions can virtually test the acoustic performance of mining equipment, simulate a nuclear power plant for safety concerns, even predict how sports footwear can protect the body from impact. ESI Group can also provide an immersive virtual reality experience of a factory in the design stage.



**CRÉATIVESPECTRE**

French virtual reality tools continuously drive the digital development of faster and more precise production lines.

**CRÉATIVE INDUSTRY**

POWERED BY **CRÉATIVE FRANCE**

**BUSINESSFRANCE**

# AUTOMATION AND ROBOTICS

There are clear advantages to using automated equipment for specific tasks in factories. Robots can do jobs that require superhuman strength or are hazardous to human beings. Automated factory lines are more predictable, with fewer defects and higher rates of production. Robotisation is a safe and effective way to optimise production in terms of cost, time, and quality.

## BA Systèmes

BA Systèmes is the French leader in internal logistic systems for AGV (automated guided vehicles), providing automated handling and storage. Ways in which the company's solutions improve productivity, efficiency, and safety include allowing for a just-in-time manufacturing process, moving unstable loads, and automatically sending waste to be recycled. Currently, the company is helping to develop a pioneering robotics system to transfer containers in shipping ports.



**CRÉATIVE  
BALLET**

**French robotics**  
now plays a central role  
in the manufacturing process  
and on production lines,  
creating safer, more comfortable  
work environments.

**CRÉATIVE  
INDUSTRY**

POWERED BY CRÉATIVE FRANCE



# MONITORING AND CONTROL

In a world of strict government standards and ever-more vigilant consumers, quality compliance is essential to a company's success. Information technology can often see what the human eye cannot. It can analyse production, take stringent measurements, improve precision. Associated to digital environments providing a single source of truth of the project updated in real time, both are guaranteeing compliance at every stage of production.

**STIL**  
STIL stands for Sciences et Techniques Industrielles de la Lumière—harnessing the power of light to make high-performance optical instruments. STIL is the world leader in confocal chromatic distance sensors, for high-resolution measurement without contact. Its sensors can measure all types of samples—transparent, opaque, rough, smooth—and materials of any kind from metal to glass, plastic, fabric, and semiconductors. They can measure the curvature of aircraft turbine blades, find defects in glass bottles, verify the connectors of a mobile phone socket, or guarantee the precision of a luxury timepiece.



**CRÉATIVE CASTING**

**French control technology** makes it possible to monitor production lines in real time for optimal precision.

**CRÉATIVE INDUSTRY**  
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## THE ROLE OF PEOPLE

Factories might be digital and connected, but the heart of the industrial process is still human. Fortunately, digitalisation of manufacturing is good for workers. Technologies such as augmented reality and exoskeletons offer whole new ways to enhance human safety, well-being, and productivity. Augmented reality glasses can give technicians real-time information during training and maintenance. Mechanical outfits augment human capabilities, helping people lift heavy loads while reducing the stress on the body.

### Diota Soft

Diota Soft's augmented reality solutions give technicians real-time information on the factory floor by connecting to industrial information systems, collecting data, and converting it to digital content that operators can visualize on tablets, projectors, or smart glasses. By making complex data immediately available, Diota Soft's technology allows workers to conduct better training or maintenance while being more productive and efficient.



**CRÉATIVE  
TEAM**

More companies are using people-centred **French technology** to improve working conditions and raise productivity.

**CRÉATIVE  
INDUSTRY**

POWERED BY **CRÉATIVE FRANCE**

BUSINESSFRANCE

The graphic features a stylized human hand in shades of orange and brown on the left, and a metallic, grey robotic hand on the right. The text 'CRÉATIVE TEAM' is prominently displayed in blue and light blue. Below it, a short paragraph describes the use of French technology. In the bottom right corner, the 'CRÉATIVE INDUSTRY' logo is shown in a blue box, with 'POWERED BY CRÉATIVE FRANCE' underneath. The 'BUSINESSFRANCE' logo is in the bottom left corner.

# ADDITIVE MANUFACTURING

Additive manufacturing has revolutionised the way we build objects —adding ultrathin layer upon layer of material through processes such as 3D printing or rapid prototyping. The applications are vast, from medical implants to aircraft. The materials are similarly limitless, including metal, glass, and all sorts of plastic. Economical, fast, and remarkably precise, additive manufacturing is completely transforming manufacturing techniques and business models, allowing to offer mass-customization at a very low marginal cost.

## Prodways

France's leader in additive manufacturing was originally founded by André-Luc Allanic (currently director of R&D), who helped to build one of the first 3D printers in Europe, then developed groundbreaking 3D technology called MOVINGLight. In 2013 he sold his company to the French industrial group Gorgé. Together, they multiplied Prodways' turnover by 20, working for industries from dentistry to fashion, continually developing better, faster printers, diversifying into development of high performance polymers, and launching an aerospace division last year. Prodway has announced its intention to become no. 3 in the world for additive manufacturing.



**CRÉATIVE  
TAILOR**

**French 3D printing technology**  
allows users to reproduce identical industrial components faster and at a lower cost.

**CRÉATIVE  
INDUSTRY**

POWERED BY CRÉATIVE FRANCE

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The advertisement features a blue 3D printer with a silver wheel component being printed. The printer is set against a white background with a blue geometric pattern. The text is in a bold, sans-serif font, with 'CRÉATIVE' in dark blue and 'TAILOR' in light blue. The Creative Industry logo is in a dark blue box, and the Business France logo is in the bottom left corner.

# ADDITIVE MANUFACTURING

## **Fives and Michelin joined forces to create a leader in metal 3D printing.**

In 2015, Michelin and Fives combined their expertise and industrial experience to create a player in metal additive manufacturing, Fives Michelin Additive Solutions, with the ambition to make it one of the world leaders in the sector.

These two groups combined their assets in additive manufacturing:

- Since 2007, when it took its first steps in this area, Michelin has acquired a unique level of experience in mass producing complex mold parts, in addition to using the parts on an industrial scale for day-to-day tire production. It now achieves high productivity and high quality of the parts it manufactures.

- As an industrial engineering Group, Fives is an expert in the design, production, industrialization and maintenance of reliable & precise industrial machines and equipment, and possesses expertise in process automation for the world's largest industrial groups including the aluminium, steel, glass, automotive, aerospace, logistics, cement and energy sectors.

This expertise meets manufacturers' needs worldwide, thanks to locations in 30 countries and a network of people dedicated to services.

Under the AddUp brand, Fives Michelin Additive Solutions will offer a comprehensive industrial solution, in three main business sectors: machines, parts manufacturing, and a service offer:

- design and manufacture of machines, and their integration into a complete production line;
- metal parts production to support a start-up project in additive manufacturing or an additional manufacturing need;
- A transversal service activity, including redesign and machining associated services to support manufacturers search for the best technological solution.

AddUp stands out for its personalized offers, tailored to each customer's industrial projects. The company also pays particular attention to environmental issues and the safety of the machines' operators.

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**Créative France digital platform:**

[creative.businessfrance.fr](http://creative.businessfrance.fr)

**Digital Press Kit:**

[epresspack.net/creative-france](http://epresspack.net/creative-france)

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#CreativeFrance



Business France is the French government agency supporting the French economy's globalization and is responsible for boosting French business exports, while promoting and facilitating foreign investment in France. It promotes France's companies, business reputation and attractiveness as an investment destination, and also runs the VIE international internship program. Founded on January 1, 2015 when UBIFRANCE merged with 'Invest in France', Business France has 1,500 employees both in France and 70 other countries throughout the world, who work with a network of public- and private-sector partners.

For further information, please visit: [www.businessfrance.fr](http://www.businessfrance.fr)



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