

# Hauts-de-France :

## A smart, sustainable and connected region



rev3

THE 3<sup>RD</sup> INDUSTRIAL REVOLUTION  
IN HAUTS-DE-FRANCE

[www.cci-international.net](http://www.cci-international.net)



L'Europe à la portée de votre entreprise.



## HAUTS-DE-FRANCE KEY FIGURES

RIGHT AT THE HEART OF NORTHERN EUROPE

### 5 European capitals

are accessible in less

than **3 hours** by high speed train

A maritime complex structured around

### 3 major ports :

Calais, Dunkirk and Boulogne

At the heart of major economic European flows: at the centre of the Paris-London-Brussels triangle



**GDP of 153 billion €**  
in 2013 (comparable to Ireland, Hungary and the Italian Piedmont region)



**282,000 companies**  
based in the territory



**33% < 25 years old**  
France's most youthful region

### MAIN REGIONAL ECONOMIC SECTORS



**1<sup>st</sup>** french region for **automobile and rail industry production**



**2<sup>nd</sup>** region for **technical textiles and Digital hub**



**3<sup>rd</sup>** most important region for **logistics in terms of jobs**



**2<sup>nd</sup>** university hub in France



**8 major clusters**



One of France's **main exporting regions**, the leader in the food industry and a global logistic hub.

## A SUSTAINABLY-DEVELOPING, CONNECTED AND JOB-CREATING REGION

### THE WORLD OF TOMORROW IS IN MOTION!

Who would have thought, 20 years ago, that internet would change our lives? No one today can say with any certainty what the world will be like in ten years' time, but there's one thing we can say for certain: the world of tomorrow is already in motion, and it will be connected and sustainable! With all the possibilities offered by digital technology and the concern to save resources, we have already

changed how we produce, consume, live, travel and exchange. We are gradually moving towards a society and an economy that are more responsible, more sustainable, better connected and more collaborative: the modes of a new world. New initiatives and innovations are constantly increasing throughout the world.

**In Hauts-de-France, we call this 3<sup>rd</sup> industrial revolution : rev3.**

### A PIONEER REGION OF THE THIRD INDUSTRIAL REVOLUTION

Rev3 is a master plan launched in partnership with the private sector, local authorities, schools, universities and the citizens of Hauts-de-France, a Region aiming to be the pioneer of tomorrow's economy and the leader in terms of competitiveness and jobs creation.



#### A connected society

Sharing resources intelligently thanks to cutting edge technologies and the collaboration approach

**1**



#### A sustainable economy

Supplied by renewable energies

**2**



#### A JOB-CREATING TRANSITION

Building new economic models by promoting citizen-based systems; social entrepreneurship, circular and sharing economy...

**3**

**Join rev3 dynamic and participate in the construction of a unique 3<sup>rd</sup> industrial revolution development model on a regional scale !**



#### COLLABORATION WITH JEREMY RIFKIN

In 2012, the Northern France Chamber of Commerce and Industry and the Regional Council called upon the American economist Jeremy Rifkin, author of 'The third industrial revolution', to turn Northern France into an experimental territory for the Third industrial revolution.

"The 2<sup>nd</sup> industrial revolution is dying, and what we need now is a bold new economic narrative that can take us into a more equitable and sustainable future".  
Jeremy Rifkin



# FROM THE FIRST TO THE THIRD INDUSTRIAL REVOLUTION

## HAUTS-DE-FRANCE : A UNIQUE DEVELOPMENT MODEL

The Northern French development model is unusual. Renowned for its coal mines, Hauts-de-France was the champion of the 1<sup>st</sup> industrial revolution, suffered in the 2<sup>nd</sup>, and is already switched on for the 3<sup>rd</sup>.

**The region is transforming its towns and cities, with their rich past and sometimes deep scars, by relying on the incredible mobilisation of all actors (institutional, economical, academic and the civil society).**

## THE HAUTS-DE-FRANCE MASTER PLAN

For almost a year, elected representatives, entrepreneurs, academics, union representatives and citi-zens worked with Jeremy Rifkin's team to develop a master plan for the Nord-Pas de Calais region. The goal : to meet all energy needs with renewable energy by 2050 and thus to become one of the first regions in the world to enter the post-carbon era.

"Rev3" is the way forward to build the world and economy of tomorrow"  
Philippe Vasseur, President of the Chamber of commerce and industry

"The main project of the region is rev3, it will create new jobs and establish our region as a leader in France"  
Xavier Bertrand, President of the Hauts-de-France region.

"This unique model in France is allowing us to test new energy solutions at a full-scale to answer the challenges of energy transition"  
Didier Cousin, Territorial director, GRDF Nord

## REVOLUTIONS THAT CHANGED THE WORLD

1<sup>st</sup>

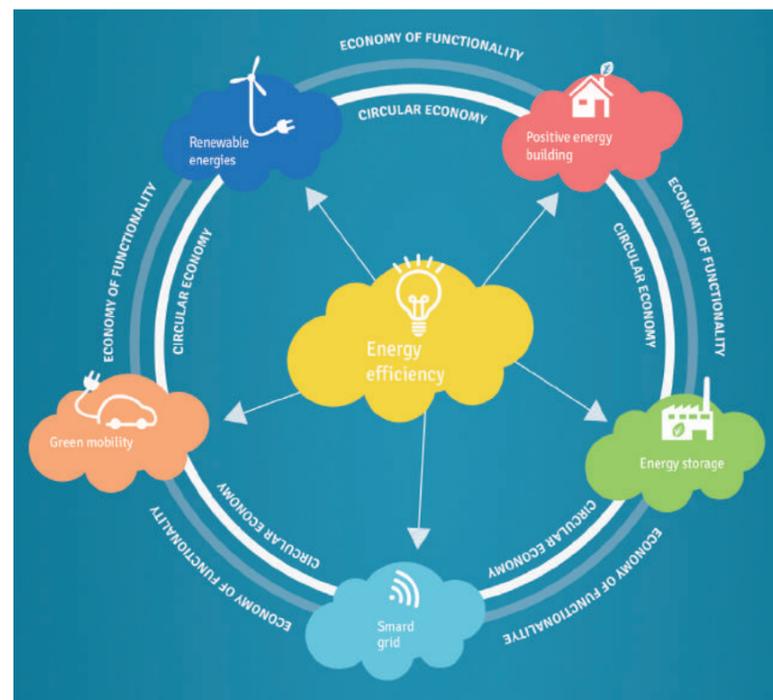
The first, with coal and steam engines, resulted in the birth of the railways, opening up the formerly remote rural regions.

2<sup>nd</sup>

The second, with oil, electricity and telecommunications, produced consumption society, the motor car, and urban spread.

3<sup>rd</sup>

The third, characterised by the conjunction of new methods of communication and new sources of energy, is the one we are experiencing today. The internet revolution has already begun and the transition to renewable energies is set to accelerate.



# HUNDREDS OF INNOVATIVE PROJECTS

350 pilot-projects across the territory

11.5 M€ transferred by citizens in the savings account devoted to rev3 projects

24 companies financed by rev3 loans, including 12 start-ups

A new investment fund of 50 M€

500 M€ investments per year needed for rev3

A SHARED REV3

## THE ARCHIVES DU NORD FRANCE'S FIRST POSITIVE ENERGY ARCHIVE BUILDING



has housed one of the department's largest stores of archives since 2013. The building produces more energy than it consumes thanks to its high-performance casing, its solar panels and its vegetable oil cogeneration. A powerful thermal control also guarantees optimal storage conditions. Its stainless steel outer skin, decorated with a foliage motif, protects the facade from direct sunlight and provides light in the heart of this old district of Lille.

## MOUVAUX L'ESCALETTE : A PARTICIPATIVE URBAN REGENERATION PROJECT



300 houses built in 1950 will be renovated and new ones will be built which will produce more energy than they consume in a PPP scheme. This innovative urban regeneration method, called HEP (Positive energy resident) can be duplicated both in other parts of France and abroad. The success of this renovation project is based first and foremost on a participative process including the residents' needs and expectations in their usage.

## THE MULTIMODAL URBAN DISTRIBUTION CENTRE (CMDU®) REINVENTS CITY URBAN LOGISTICS



A genuine service platform, the CMDU provides a solution to the increasingly pressing problem of managing the flow on merchandise in the city. The CMDU (2,500m<sup>2</sup>) receives multimodal bulked merchandise, stores it, and then prepares the merchandise to supply stores based on their needs. By mobilising the available transport capacity, optimising the delivery circuits and favouring sustainable transports, the CMDU contributes significantly to reducing traffic in the city centre and to its drawing power.



### THE COMPANY DBT-CEV IS THE EUROPEAN LEADER FOR ELECTRICAL QUICK CHARGE SOLUTION



DBT-CEV has developed the Quick Charger solution, a technological advance thanks to which it is now possible to recharge the batteries of electric vehicles in less than 20 minutes. With 75% of the rapid chargers sold outside France, DBT's products are now present in 33 countries worldwide, in Europe, South Africa and as far afield as New Zealand.

### THE EEL TIDAL ENERGY CONVERTER IS A UNIQUE TECHNOLOGY CONVERTING THE UNDULATIONS PRODUCED BY MARINE CURRENTS INTO ELECTRICITY.

Manufactured in Boulogne-sur-Mer, converts the energy of marine currents thanks to an undulating membrane like an eel. The technology is subject to an international patent. The prototype has been tested and its industrial deployment is scheduled for the end of 2016. This technology, which is applicable to all types of currents, has potential for worldwide applications and promises to produce far more electricity than traditional hydraulic turbines (power up to 5MW).

### EUROBIOREF THE BIO-REFINERY OF THE FUTURE



Managed in Lille, the Eurobioref European project involves 15 countries and is revolutionising chemistry in Europe with the development of a new generation of bio-refineries capable of transforming various sources of biomass (castor oil plant, willow, thistle etc.) into high added value products. 33 patents have been applied for within the framework of this project, partnerships with regional and world companies have been created.

**CIEL ET TERRE IS FULLY DEVOTED TO FLOATING SOLAR PV** since 2011 with its patented innovative technology : Hydrelío®. This solution is an innovation made simple, designed to resist to extreme conditions and to produce cost-effective solar electricity. Also, it is compatible with a wide range of panels and adaptable to many types of water bodies, such as drinking water reservoirs, irrigation ponds, quarry lakes, or canals and dams. Today, Ciel & Terre installed Hydrelío systems in 7 countries: Japan, Korea, China, UK, France, Brazil and USA.



### Méthania BIOMÉTHANE. L'ÉNERGIE DE DEMAIN

Hauts-de-France aims to become **EUROPE'S FIRST BIOMETHANE PRODUCING REGION, WITH THE GOAL OF ATTAINING 40% OF GAS PRODUCTION** through agricultural methanation by 2050. To achieve this goal, the region boasts rich sources of agricultural, urban and industrial organic waste, and a programme, Méthania, designed to link small and medium-sized businesses with the methanation markets.



In Dunkirk, the State is supporting the **GRHYD DEMONSTRATION PROJECT**, a hydrogen energy storage project led by ENGIE, working with a group of industrial partners. The idea: to transform electricity produced by renewable energies outside of the consumption periods into hydrogen, and then to recycle it via the usages of natural gas (heating, hot water, fuel etc.). Injected into the natural gas networks, the hydrogen will provide fuel for a new district. Furthermore, the Dunkirk Urban Community buses already run on natural gas and hydrogen !



### EURATECHNOLOGIES AN ECOSYSTEM DEVOTED TO DIGITAL TECHNOLOGY



This 150,000 m<sup>2</sup> activity park located in Lille is home to one of the most dynamic ecosystems in Europe. It successfully unites the worlds of entrepreneurship, research, and academics in the field of digital innovation in a single location. An exemplary part of the entire French Tech approach, it is a truly emblematic Lille French Tech site and one of France's top digital venues.

EuraTechnologies is hosting major international economic players including IBM, Cap Gemini and Tate.

### THE DIGITAL GREENHOUSE A UNIQUE REGIONAL COLLABORATIVE PROJET,



endorsed by the Chambers of Commerce network, gathering 3 schools (design, animation and video games), one incubator, and one centre of research and

technology transfer as well as one virtual reality centre. Inside a high efficiency building heated by geothermal energy, the Digital Greenhouse is embodying the regional ambition towards a transversal and collaborative economic model.

### DECIMA PLACING SMART GRIDS AT THE SERVICE OF EFFICIENT ENERGY MANAGEMENT

This is Decima's goal. This northern company has developed remote management systems for railway station platform lighting, enabling the lighting to be adapted to passenger flow, as well as systems for the remote piloting of buildings : temperature management, alarms, and even over-consumption anomalies. Tested in their digital home, these cutting edge technologies reduce energy consumption by 25% and up to 54% at Lille railway station (with 21 million passengers per year).

**OVH, EUROPEAN WEB HOSTING LEADER**, has developed an eco-responsible cooling system in the gravelines data centre - one of the largest in the world.

In Northern France, several players have succeeded in reducing the electrical consumption of the massively energy-guzzling data centres.

**CIV** has also built the first green data centre, guaranteeing high-security data storage that respects the environment.



### HERE AS RARELY ELSEWHERE

- An ecosystem of dynamic players.
- Numerous projects in place and as many potential partners.
- A competitive region: numerous companies, investors, infrastructures.
- In 2014, 34,500 entrepreneurs created their businesses within the region.
- Transferable skills and know-how to foreign businesses: methodology and project engineering, technical expertise etc

## A JOB - CREATING TRANSITION



### GECCO MAKES FRYING OIL A SOCIAL AND SOLIDARITY LEVER FOR THE TERRITORY



Gecco, a truly social company, manages a local network to collect and recycle used food oils and fats, transforming them into biodiesel for public transport. It is also a scientific research laboratory: they optimise the sector's ecological footprint, notably by applying the principles of eco-design. In 2015, the company collected 1,100 tons of oil and successfully raised funds of 1,120,000€ to ensure the continuation of their activity. A unique initiative in France !

### LE RELAIS FIRST FRENCH OPERATOR IN TEXTILE COLLECTION AND RECYCLING,



has been working for over 30 years to rehabilitate socially excluded individuals, and to date has created almost 2,700 local long-term jobs throughout France, Africa and Portugal. The Relais is the only organisation capable of managing the entire textile recycling chain: it undertakes 55% of the collections in France and recycles 99% of the textiles collected, thanks to its 31 local sites, which share the management of over 19,000 textile containers. Through the recycling of used clothing they create insulating material made with recycled textile fibres, the Relais defends a model that is firmly focused on a circular economy and a social and solidarity-based economy.

Based close to Arras, **ROLL-GOM IS THE EUROPEAN CHAMPION IN THE FIELD OF TYRE RECYCLING** and the recycling of rubber through the process of vulcanisation. Their activity illustrates the merits of a circular economy: from whole used tyres, the company has integrated the entire recycling chain, enabling them to transform them, from when they leave the factory, into new products with commercial value once again.

### SUNRISE, A SMART URBAN NETWORK DE- MONSTRATOR FOR A SUSTAINABLE CITY LARGE SCALE DEMONSTRATOR, IN LILLE1 UNIVERSITY:



Initiated in 2011, based on a public-private partnership (university, local authority, clusters, and companies), with a budget of 12M€, Sunrise is a demonstrator with the size of a small town (110 hectares, 140 buildings, 25,000 users, 70km of urban network) collecting and analysing the data 24/7 from the gas, water, electricity, public lights, and heating networks allowing in 4 years between 40 to 50% energy savings. Introduced to the European Parliament and the World Bank, Sunrise is now an international reference for smart city projects. THE Zero Carbon University PLAN.

### LOOS-EN-GOHELLE, PILOT TOWN FOR SUSTAINABLE DEVELOPMENT

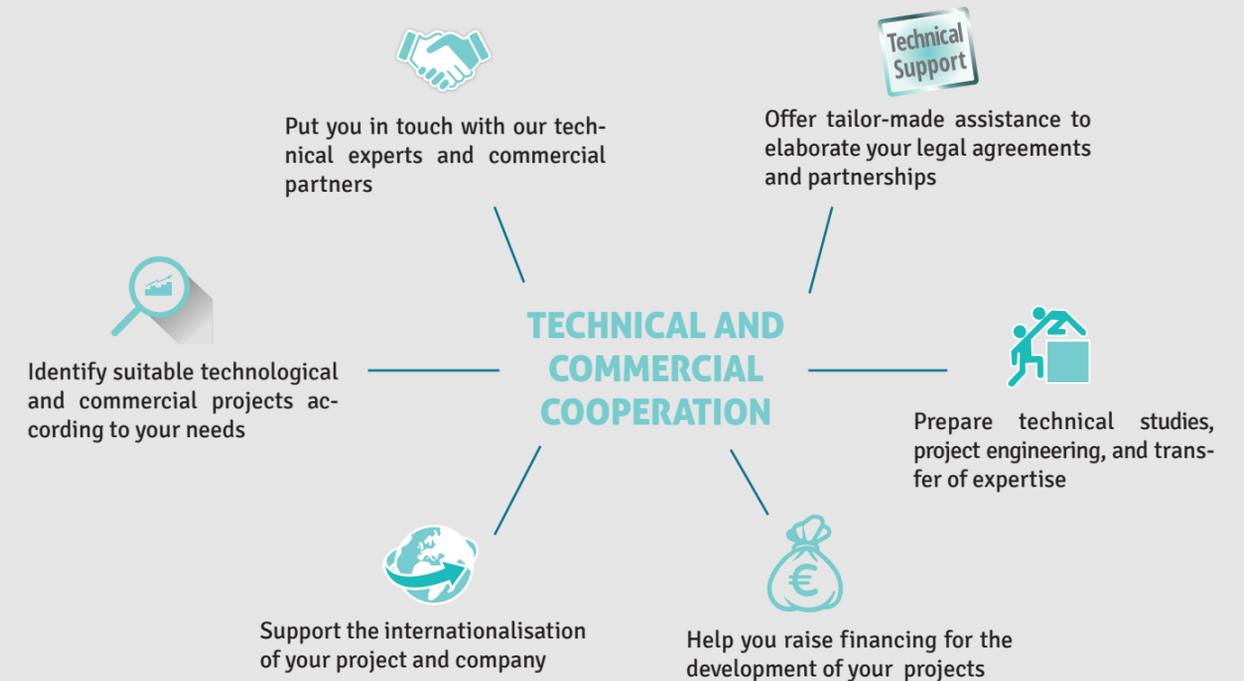
Located at the heart of the Nord - Pas de Calais mining area, this town of 7,000 inhabitants managed to bounce back after the closure of its mines to become the "pilot town for sustainable development" : a territory of innovation, ready to learn and resilient, that shares its experience (both its successes and its failures) and bases its methods of change, for over 20 years, on the total implication of the local players and on co-production with the residents.

The town showcases numerous concrete results: energy transition, sustainable food system, biodiversity, eco-building, social actions, new economic models A "sustainable town" national demonstrator, the town is a perfect illustration of the ongoing transition towards a new model of development.



## LET'S DEVELOP PROJECTS TOGETHER

Are you looking for technical expertise or for a specific 3<sup>rd</sup> industrial revolution technology ? Would you like to develop a project in partnership with a rev3 company ? We are a multi-disciplinary team of rev3 and international experts from the Hauts-de-France Chamber of Commerce and Industry, and we are able to :



### NETWORK AND COMMUNITIES

We offer you, through themed clubs, to exchange and share your experience and develop partnerships in a collaborative setting.

- **THE REV3 ENTREPRENEUR'S CLUB** currently has 1,500 directors and project leaders implicated in the 3<sup>rd</sup> industrial revolution dynamic.
- **ENTERPRISE EUROPE NETWORK:** helping SMEs to make the most of business opportunities in the EU and beyond
- **THE 3D PRINTING CLUB:** devoted to additive manufacture, the club brings together major market players for networking and the discovery of the latest innovations in the field.
- **THE WORLD TRADE CENTER BUSINESS CLUB** of Lille and its satellite Arras offers networking, coaching and premium events for all the region's international companies.

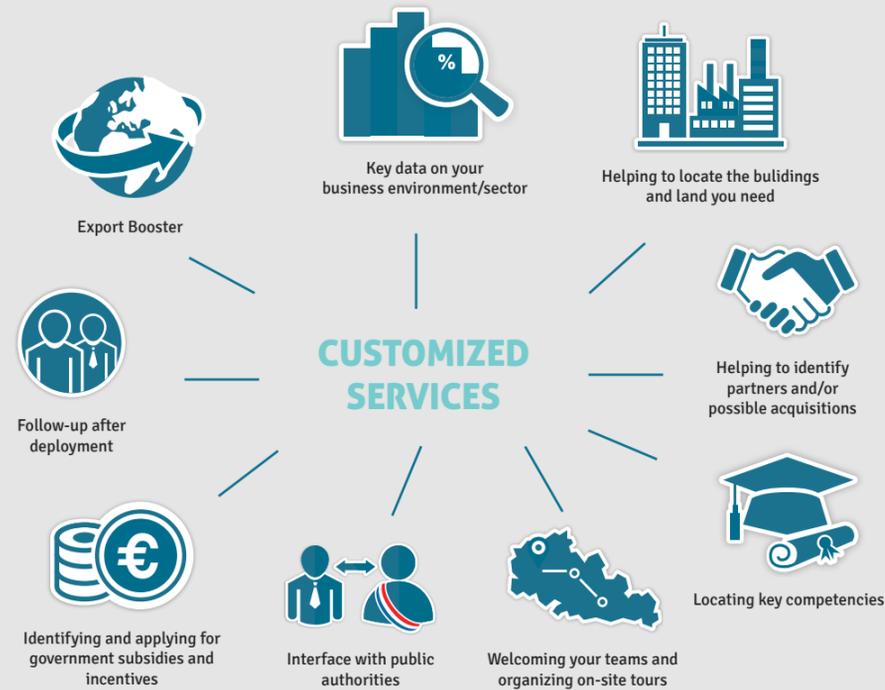
### INTERNATIONAL CHAMBER OF COMMERCE AND INDUSTRY AT A GLANCE

- 50 experts devoted to the development of international trade and to the promotion of expertise and partnerships
- Experts on countries, sectors of activity and technical areas present throughout the region from the north of Paris to the Belgian border
- 2,000 clients assisted every year and close to 3,600 support services provided
- Companies assisted individually throughout the entire export process
- 14 languages spoken

Contact : Cédric Van Riel - International sustainable development advisor  
+33(0)3 59 56 21 48 - +33 (0)6 71 76 15 10 - c.vanriel@cci-international.net

## YOUR SETTING UP IN NORTHERN FRANCE

Nord France Invest assists you in setting up your company in our region's economic ecosystem to ensure the success of your projects. Nord France Invest assists foreign companies that plan to set up their business in Hauts-de-France providing support in terms of Human Resources, Real Estate Solutions, Incentives, Networking, etc..



Contact : David DECROCK - Project Manager - +33 (0)3 59 56 23 09 - d.decrock@nfinvest.fr

## INNOVATIVE FINANCING TOOLS

### ■ THE REV3 SAVINGS ACCOUNT

Additional to the other classical types of financing, the savings account finances projects linked to the rev3 dynamic. It offers an innovative response for those who wish to know the concrete objective of their money : the citizens invest in the future of their region thanks to their savings and the eligible companies can obtain a loan (at least € 12,000 at a subsidised rate) with flexible, long-term accompaniment. This is a first in France !

### ■ THE REV3 INVESTMENT FUND

A first in France and dreamt up by the Hauts-de-France Regional Council and the Northern France Chamber of Commerce and Industry, the investment fund (CAP 3RI) has been designed to finance regional companies whose projects fit into the rev3 dynamic and create employment in the Hauts-de-France region. With an initial 37.5 million euros, provided by Crédit Agricole Nord de France, the European Investment Bank and the Hauts-de-France region, the investment fund can only grow.

### ■ THE FINANCING HUB

A financing HUB brings together private and public players (banks, investors, public organisations, venture capitalists, solidarity-based finance) to accelerate the search for financing for the rev3 companies : you present your project to the region's principal financiers.

Here is where it's all happening!  
Take your place in the rev3 world  
and participate in the construction  
of a unique 3<sup>rd</sup> industrial  
revolution development model on  
a regional scale !



#rev3

rev3.fr

**SAVE THE DATE**  
**REV3 DAYS**  
**FEBRUARY 9<sup>TH</sup> AND 10<sup>TH</sup> 2017**  
**INTERNATIONAL BUSINESS**  
**MEETINGS IN LILLE**

**THE 3<sup>RD</sup> INDUSTRIAL REVOLUTION**  
**IN HAUTS-DE-FRANCE**

Contact CCI International :  
Cédric van Riel  
International sustainable development advisor

 [c.vanriel@cci-international.net](mailto:c.vanriel@cci-international.net)

 +33(0)3 59 56 21 48 - +33 (0)6 71 76 15 10

