

# Can the unique success of Loos-en-Gohelle be repeated elsewhere?

by

■ **Jean-François Caron** ■

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(2015 United Nations Climate Change Conference)

## Overview

Loos-en-Gohelle is a town which has many features. Originally, it was a small coal mining community in the Pas-de-Calais *département*. More recently it was affected by the downturns in this industry, and is now part of a pilot experiment to monitor the effects of energy transition and to test an alternative social model. The mayor's deep-rooted dream is to create a better world for and with his fellow citizens and, in so doing, he is reinventing politics. Leading researchers and political decision-makers from all over the world have come to see what the next steps will be for the inhabitants of this region who seem to stop at nothing. The town has a spoil heap as high as the Egyptian pyramids, wrapped in a wool scarf, with a solar power station at its feet. Everything which has taken place here over the past twenty years could well herald what our society will be like in the coming decades if others dare to dream and follow suit.

Report by Pascal Lefebvre • Translation by Rachel Marlin

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### Beneficiaries of sustainable development

Our region has experienced one hundred and fifty years of intensive coal mining within a narrow band extending from Poland to Wales in which more than 100,000 kilometres of galleries have been dug. Some galleries in our area are one kilometre deep, but above ground, there are more than one million inhabitants. Generally speaking, towns grew up around pits and so there are no real town centres. This presents a considerable problem with regard to urbanism. In Loos-en-Gohelle, where nine sites were operating until recently, there has been subsidence of up to fifteen metres as a result of mining. Streams now run in the opposite direction to their original courses, and low levels keep changing, leading to situations which are very difficult to manage in terms of sanitation.

Therefore, I tend to say jokingly that I represent the generation of beneficiaries of ‘non-sustainable development’ in this mining band. A great deal of wealth was created from an extremely capitalistic activity which is why the main investors in the 19<sup>th</sup> century were successful textile families from northern France.

When the mines closed, the population had to deal with the after-effects. When I became mayor in 2001, I had to manage problems relating to ground pollution: water from the water tables which was impossible to use because it contained twice the amount of nitrates allowed by the French government, and a countryside which was spoiled because its sole purpose had been to service industrial activity for which the region and the population were merely adjustment variables. The coal mining area lost a total of 220,000 mining jobs which led to a high rate of unemployment despite attempts to introduce new industries to the region – such as the automobile industry.

Added to this, the population had a large identity problem. For a very long period of time, miners had been the jewel in the working-class crown, steeped in myths and cultural history. When coal mining came to an end, this image was turned on its head, and the inhabitants of the Nord-Pas-de-Calais region became known as the ‘freaks’ of France. Banners were displayed in the Parc des Princes stadium in Paris saying ‘Northerners = half-bloods, paedophiles, alcoholics’. When the media latched on to this, it merely reinforced the negative image which Northerners found unbearable. From that moment on, television documentaries about the North featured people who spoke the local dialect (and therefore it was decided that the viewer needed subtitles). They also featured children whose noses were running, and broken windows. These sorts of images are disastrous because individual or group dynamics are hugely tarnished by this lack of recognition. Repairing this lost dignity was therefore an essential part of my strategy.

### Bounce back or die

From that moment, we could bounce back or go under, because everything which had brought us together had disintegrated. A number of strategies were possible. Jean-Paul Lacaze, a civil engineer, suggested reducing the urban area by one-third of its local population and moving this population to an unspecified location. Several thousand inhabitants relocated to Fos-sur-Mer, but this did not solve the problem. Other strategies reproduced events from the past, including attempts at reindustrialisation, but often this betrayed our history.

In the past, coal mining towns were well organised and supervised. Nine geographical groups incorporated nationalised mines in northern France known as ‘Les Houillères’, and each group had its own maternity unit, stadium, churches, housing, associations, social security offices, and so on, with the notable exception of cemeteries. Supervision was so strict that a miner was liable to lose part of his salary if he did not maintain his garden, as gardening was judged to be a beneficial activity because if a miner was gardening, he was not in the local *bistrot* or trade union office. Central mining cooperatives (*Coopérative Centrale du Pays Minier*) issued families with booklets of coupons, and each purchase made using these booklets was immediately deducted

from the miner's salary. Mayors of mining towns at this time had no jurisdiction whatsoever over 90% of their region. These extreme conditions ensured an obedient population who found it very difficult to adapt to changes in modern society.

Of all of the towns in the Nord-Pas-de-Calais region, Loos was the first to see the situation from a different angle. The old development model was moribund because it was not sustainable. Based on what the philosopher Bernard Stiegler called 'compulsional capitalism', the model linked the promise of happiness to that of the desire to own objects, and suggested that one needed 'to have' in order 'to be'. The twentieth century therefore represented a loss of meaning because this model is not only unsustainable (especially with regards to access to fossil fuels), but, as all the indicators show, it does not make us happy.

I work closely with Jeremy Rifkin who suggested theories about changes which lead to a Third Industrial Revolution, each change being characterised by a form of energy and a method of communication. The first industrial revolution was the carbon and printing revolution; the second, the oil, electricity and telephone revolution. We are now faced with the emergence of the third revolution characterised by renewable energy and the Internet. The combination of smart grids and new means of production should be at the heart of a new concept which is less driven by production and more economic in terms of energy.

Therefore, we are at the end of one concept and on the threshold of a profound change in civilisation, but people are unsure because the new model has yet to emerge. This lack of knowing which direction to take is a major difficulty because one must convince people that it is in the course of this transition that this new model will emerge.

## Towards a new society

Until now, this model has only been visible because of weak signals. A tendency is starting to appear, showing a transition from the disposable to the recyclable. This heralds the arrival of a circular economy based on an analysis of life cycles, eco-design, and everything which is contrary to manufacturers' planned obsolescence.

We have also noticed shifts from a vertical, hierarchical powerbase to a lateral, co-operative authority. This is particularly visible in the energy production sector where co-operative production groups have emerged, setting themselves apart from the traditional centralised models.

Given these trends, the question of a new world arises. In Loos, I try to make it clear that we have the right to use our imagination in order to create a project for our society. To do so, we need to create a new 'story' about changes in the town which is forward-looking so that with this 'story telling' people can easily project themselves into the future without hanging on to the past.

I was lucky enough to have been elected in 1992, and I had a broad understanding of the region because I was its vice-president. I was also the president of the French Green Party. Working on land planning schemes and particularly instructive foresight exercises helped me to appreciate the national landscape in terms of industrial transition, and what is happening in towns and regions. Therefore, I have both a global framework which has enabled me to work with interesting people like Jeremy Rifkin, and a local framework – or ecosystem – which represents reality. Both these frameworks help to create a vision of the territory as a place where both young and old, the unemployed and graduates can live together. This is the area in which mayors carry out their work.

## Justifying politics again

Getting involved and working together are crucial in Loos. It is relatively easy to handle technical problems such as lighting a church using solar electricity, using methanation processes, or creating a competitive cluster based on the circular economy, but it is much more difficult to organise people from different sectors. This is one of my skills. Those involved include people who work in economic sectors as well as all those in training programmes and associations. In Loos, we have worked hard on the processes of democracy where we try

to involve the population, a concept which I consider contrary to a participative democracy which refers to people who want to use state money to solve their own needs and merely adds to the list of requests. I think we have to make people more accountable for their actions because if we do not, the population considers that the common good is our elected members' responsibility. My slogan is 'Participation without accountability = a scam!'

We are obviously in a period of major change in which we cannot understand everything which made us what we are, but we are still going to have to assume our place in the 21<sup>st</sup> century nonetheless! In Loos, our main objective is to get the local population involved and make them aware of their responsibilities. Sustainable development is not just about sorting waste, but if people are prepared to do this, then they are already a small part of this movement, and this involvement can be expanded upon. An additional advantage of such an approach is that it generates recognition. This is important in our society where many people are isolated because of their age, health and unstable social circumstances. If we are able to discuss these difficulties with them this would be a means of reintegrating them into a society from which they are excluded.

The more we work with the local population, the better feedback we have from the 'expert' inhabitants who use the services of the region, and consequently our projects are more relevant. Loos has become the reference of the product-service system (a model aimed at providing sustainability of both consumption and production) and the co-operation economy.

Representative democracy is more justified by these collective processes. Today, people do not grasp the complexity of being in politics or living in a society, and even despise politicians. However, when they see and understand the difficulty of devising collective projects, they are more appreciative of the skills needed to make the right choices. I am convinced that the more one involves people, the more one justifies politics, and we need this in the face of risks from extremism.

Finally, political actions which are joint efforts are more efficient because they are better accepted. One can start a discussion as an inhabitant and a consumer, defending one's own interests, but one leaves the process as a citizen, aware of the common good, having understood that coexisting and planning land-use are necessary even though they are difficult to implement.

Furthermore, the inhabitants of a town become more lucid and even impertinent, and question politicians. It is a process which, once started, cannot be reversed. A politician can no longer be content with just managing a mass of followers to whom he has made all sorts of promises; but he has to be very transparent and cannot sidestep anything to which he has committed himself.

As elected representatives, we manage large groups, and involvement is a process which requires not only technical but also social skills. For example, it is not easy to know how to deal with controversy. One of the first things I taught my team was how to handle the first half-hour of meetings and say nothing while people get their complaints off their chest. After this, it is possible to talk about more concrete problems, and to begin a constructive process. It is all a matter of detail and well-controlled methodology. My slogan has become 'the quality of group situations makes it possible for individual cases to be expressed'. It is therefore my responsibility to ensure that there are high quality group situations.

## Resilience in Loos

In the 1980s, when the mines closed, people started disowning the region's history and some even said that they were sorry to have existed. Loos refused to take this point of view, and declared that one could not build any future if one denied one's past.

My father, who was the mayor of Loos before me, was a 'self-managed' socialist, and a close supporter of the French politician and former Prime Minister Michel Rocard. In his travelling experience, he had been struck by the importance which certain places can have. In Loos, we have two wonderful soil heaps which at 146.50 metres are the highest in Europe. They are the same height as the Great Pyramid of Giza. If we are able to marvel at the Egyptian pyramids, why should we look down on these symbols of manmade activity as if they were made by God?

This remark was the starting point of the creation of the 'Chain of Soil Heaps' environmental association which, in 2012, resulted in the inscription on UNESCO's World Heritage List of our coal mining area. In 1995, when I joined the town council (led by my father) as the municipal councillor in charge of land-use planning and the environment, I began working on people's perceptions and self-esteem in the context of coming to terms with our region's history. Many of our fellow citizens have Polish, Hungarian and North African surnames which are witness to the role played by the mines in our history, and in the construction of these people's identities. Telling them that they are now the wretched of the Earth and nobodies, while at the same time telling them that they should be part of the 21<sup>st</sup> century by being creative and enterprising, would have been pointless.

We started by doing 'land art' (a movement in which a landscape and work of art are inextricably linked), working with young people who were trying to get into the workforce. Then, in the 1990s, when the land-use plan was revised, we started developing a town project. We embarked on a collective process of developing a new vision for the town of Loos over a period of eighteen months. We worked with experts, and made environmental analyses regarding urbanism, landscape and social diagnoses of neighbourhoods. We expanded our work to include local shopkeepers and farmers, and gradually a town project emerged.

Unfortunately, at the same time, a number of problems appeared. We were paying twice the average price for water in France even though the water was twice as polluted as anywhere else. Because this was a strategic question, we started to make use of the infiltration of storm water. This required restoring groundwater and ensuring natural filtration water which we could also recover it. As a result of this, for the last fifteen years, all our municipal buildings have been equipped with stocks of storm water so that now we do not use any more drinking water for town use.

Because miners did not pay for the coal to heat their homes, insulation was not a major concern. Their houses were not very well insulated anyway, but it had become extremely expensive to heat them because of fuel costs. Green building processes and structures (which use processes which are environmentally responsible and resource-efficient) and thermal retrofitting have become essential.

All our initial experiments were a result of these situations. We had no green spaces and so we created fifteen kilometres of 'green infrastructure' in the town with bike paths, renovated and reconverted trails, and so on. We had one of the worst new-born alcohol rates in the world, and this was also the case for Type II diabetes and cancer. These pathologies are largely caused by social problems. Consequently, we carried out studies in all these areas focussing on eating habits.

In 2001, when I was elected mayor, I immediately focussed on sustainability in an attempt to change the town's method of organisation. As a councillor, I had been in charge of initiating innovative projects. Now as mayor, I also have to manage the daily running of the town including the highway department and the municipal budget for example, without losing sight of my commitment to sustainable development. I recruited a new administrative director and I changed the organisational charts. The new team has implemented a large number of new management processes, and have trained town hall staff to carry out projects using methods which are generally more common in companies than in local government.

Each success will help enhance the momentum. In 2008, I was re-elected with 82.1% of the votes, the largest majority in the Nord-Pas-de-Calais region. As a Green Party mayor in a mining region, I am clearly an anomaly as theoretically mining activity is light-years away from any ecological concern.

For the past fifteen years, we have had a scientific committee which brings together experts from France and abroad who evaluate our work. Cyria Emelianoff, whose research on sustainable cities is a definitive reference<sup>1</sup>, studied thirty European towns committed to sustainable development. She identified the two most advanced cities to be Stockholm and Loos-en-Gohelle, the first because of its achievements on a large scale, and the second

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1. Cyria Emelianoff is a university lecturer (University of Maine, Le Mans, France) and researcher at GREGUM-ESO UMR 6590 CNRS. She is the author of 'La ville durable : l'hypothèse d'un tournant urbanistique en Europe', *L'information géographique* (pub. Armand Colin, 2007/3).

because she noted the strongest commitment of the local population to the organisation of change. Gradually, the media regarded Loos as a pilot town for sustainable development.

The problem with sustainable development is that it is invisible. We have to show it in order to be able to talk about it. Around the town, we have created a tour circuit with sixty-nine terminals equipped with QR codes which can be read by Smartphones, and which tell the story of the town's most important achievements in enhanced reality.

## The town with the solutions

Everything relies on the involvement of the population so that the inhabitants become participants. For example, the town created a 'learning garden' for children, but it is their parents and grand-parents who maintain it. We doubled the number of associations and there are now one hundred and fourteen in Loos. We increased the amount of money given to each inhabitant (less than 1,000 Euros per person) tenfold for small activities such as neighbourhood parties or trips to the seaside for children who have never seen the sea, and so on. We also created the '50-50' concept: if inhabitants take initiatives, the town contributes by creating a charter defining the roles. Planting flowers in neighbourhoods located outside the town centre, and which had not had flowers before, is a project which was jointly developed with the municipality. The town defines the conditions and limits, and this teaches people about safety conditions and makes them aware of the costs. The town provides the window-boxes and the flowers at the beginning of the season, and the inhabitants do the rest. We have just resurfaced our agricultural roads and farm tracks with help from farmers. They provided their skips to carry the various materials, we rented the steamroller, and as a result, the cost of the operation was reduced from 100,000 Euros to 30,000 Euros. Now farmers take more care of the paths... We built a skate-park for teenagers who were also involved in defining the rules and understanding the costs. We organise shows in which people can take part with artists, as well as a number of 'sound and light' shows, all of which are co-produced with the inhabitants. Young people also organised activities (a ['carrotmob'](#)!) during a day outside a *boulangerie* which had been selected on the merits of its intended project. There was a considerable increase in sales. The owner of the *boulangerie* had agreed to give the proceeds to the energy transition project and subsequently changed the lighting in his *boulangerie* to LED lights. These '50-50' projects can involve all sorts of people and give rise to projects where people work together in the town.

Having been asked to take part in projects, some inhabitants of Loos started original initiatives themselves. Women who worked in the elderly residential home knitted wool squares which secondary school children sold for 1 Euro. The proceeds went towards an association for feeding the homeless. This is an interesting 3-way inter-association triangle. The knitters were so enthusiastic about taking part in a collective project that the children were unable to sell all that they produced. The mayor had asked them to take initiatives, and so they did just that: without my knowledge, the knitters contacted Phildar, the wool manufacturers in Roubaix, who provided them with a lorry-load of free, downgraded (seconds) wool. The problem they then faced was that there were not enough knitters!

They let the local population know about the situation, and every Wednesday, the large municipal hall was full of knitters. Their aim was to make a blanket for the soil heap! I had to negotiate with them because the weight of such an object would have required using heavy handling machines to install it and make it safe, especially since the soil heap is close to a motorway. In the end, we agreed they would knit a long scarf which would be wrapped around this spoil heap, from top to bottom. The event of putting on the scarf took place much to the delight of the Loos population, many of whom came to watch. It was also televised. Decorating a soil heap with a scarf had no specific function, but this was what made it wonderful. It was a group achievement which grew from the pleasure people found in undertaking an activity together and being part of the soil heap's recognition and its addition to the UNESCO World Heritage Site list. The event ended with a giant picnic.

Loos was presented as 'the town with the solutions' and it was chosen as the only site to be visited by a delegation from the COP21 when their meeting took place in France in 2015. A high-speed TGV train should have brought 500 leaders from all over the world from Paris to Loos. We had been preparing for this event for



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The spoil heap's scarf

a year. Unfortunately, the terrorist attacks in Paris on November 13<sup>th</sup>, 2015 meant we had to cancel the visit which we had been looking forward to so much.

### An approach based on use

We work a great deal on the product-service system, in other words, the approach based on product utilisation which implies a close connection with the users in order to determine together the answers to questions which we are asked.

We are developing a new agricultural and food model for the town. Sometimes we may buy products which have travelled around other European countries before we find them on our shelves, and yet they may have been produced in France. So we decided to create a large number of circuits in order to supply ourselves directly from local farmers. Five of them have already started producing organic food. Their farming area represents 10% of the town's total area, compared to 4% as a national average. Our aim is to supply school canteens in Loos and surrounding towns, but we must diversify production in order to have a wider range of produce. We are currently working on this. Other town halls are starting to join us on specific projects by making bulk purchases, for example.

We are also working with contractors who cater for school meals, and we make sure that they have a vegetable processing area to handle fresh, local produce. If they do not have this sort of equipment, they would have to be supplied by food manufacturers. Such a complete change in the food 'ecosystem' requires an organisation which has a degree of authority and is able to bring together around a table all those involved in a given area. For these reasons, Loos is a pilot study on a national level with respect to the product-service system.

We also try to act in accordance with the circular economy (an economy which promotes greater resource productivity and reduces waste). I am the president of TEAM<sup>2</sup> (*Technologies de l'environnement appliquées aux matières et aux matériaux*: Environmental technologies applied to natural and recycled materials), a structure which created the only French competitive cluster in this sector. Its main purpose is to help companies to carry out innovative projects and devise new ones. Since its creation, the cluster has brought together the most important people and the bodies involved in the industry, research and training in these sectors. The platform for the analysis of the life cycle of materials is in Loos. Our main focus is eco-materials and we work with all those concerned in the Nord-Pas-de-Calais region.

Since 1997, we have been developing all the forms of bio-construction, both for new and old buildings including public buildings, social housing, and so on. All our vehicles are powered by natural gas. We have developed an entire economic sector in this area, and have created a number of jobs.



© Ville de Loos-en-Gohelle

Social housing in bio-construction

All these factors make Loos-en-Gohelle a major testing ground for the circular economy, the energy economy for natural materials and their certification. Purchases made by town halls are an extremely efficient way of helping the transition. Our legal department (which prepares the purchasing requests) is reluctant to use this way which could allow new economic models to appear. We are spending more of our time discussing economic models with respect to bio-activities as well as traditional activities. There has been a marked increase in the number of shops in Loos which now means that the town does not have enough suitable premises. The positive image of the town and its strong commitment to innovation encourages people to start businesses there.

ADEME (*Agence de l'environnement et de la maîtrise de l'énergie*: the French Environment and Energy Management Agency) assessed all this and carried out about one hundred interviews with various people. In its conclusions, it emphasised the fact that the strategy of change management also has an impact on people who are not the inhabitants of Loos. We work with the French building trade association whose relationship with the town has changed a great deal. Even though we have very different approaches, we can still manage to move forward together.

Another example is the Fondation d'Auteuil (a foundation to help young people and families in social difficulty) which set up training facilities for three hundred and fifty apprentices in the bio-construction industry in Loos-en-Gohelle. Loos is also home to the Lumi watt solar power station which tests about one hundred innovative technologies, and helps to develop high value-added skills in the solar energy sector in partnership with different engineering and architecture schools in the region.

There are many examples of projects we have carried out, such as the renovation of a large engineering institution using purely eco-materials. The University of Artois installed a large number of sensors to follow the changes and to record their performance over time. As long as the outside temperature does not fall below  $-7^{\circ}\text{C}$ , fifteen people are needed to heat the building. In some social housing, the inhabitants now pay less than 150 Euros a year for heating which is a real change for a former mining area. It is relatively easy to persuade people to change over to sustainable development methods when their electricity bill is ten times more expensive without it.



## Our values

I would like to try to sum up our characteristics. We have a bedrock of core values. They are our foundation and everything we do is based on them. These values include courage, simplicity and conviviality. If we want to build our future, firstly we have to see where we have come from and where we are now, and help people to project themselves into the future.

To do this we rely on four tenets. Firstly, the involvement of the inhabitants is vital. Secondly, in the municipal team, we have to think and manage in a business-like way by trying to limit negative externalities and even to create positive externalities. To achieve this, we have to implement processes between the various departments, and this is not easy.

Thirdly, we need a 'shining star' or a vision which makes us dream and makes us want to do what is necessary to advance towards this new model of society. Figuratively speaking, we also need small, white stones to line the path which leads to this star. When we fixed solar panels on the local church, it did not change the world, but it did enable us to work with the Catholic community which then became involved in the transition. Now these small, white stones are visible everywhere in the town and this helps people to have a tangible grasp of this new world which otherwise might appear abstract and distant.

Finally, one must create conditions in order to change the model. These concrete circumstances allow us the right to make mistakes. An innovation is a form of disobedience which has been successful. One should therefore start by disobeying politically correct thought, and to do so it is necessary to create a framework of collective security without which no initiative can emerge. Making a work of art out of a soil heap was inconceivable at the time, and so one had to be daring to do it.

The main result of using these four tenets is that trust has been renewed. Tragically, French society has become distrustful. Renewed trust is firstly one's trust in oneself, followed by trust in one's neighbour and in elected representatives. Trust changes daily life and allows one to undertake a variety of things by creating a breeding ground for innovation and by changing how inhabitants perceive their region.

## Discussion



**Question:** *Your success seems to be based on the population's remarkable ability to listen. Was that your initial priority?*

**Jean-François Caron:** Yes, listening is essential in order to understand the state of mind of those involved and to implement and to carry through initiatives. I am convinced that we will no longer be able to change very much using government action, but that the answers will come from people who have so-called 'deviant ideas' compared to the dominant model. By pooling their projects, and then deciphering and analysing them, they will be able to develop and systemically speed up suggestions coming from the bottom of the hierarchy. Such co-operation supposes that groups are not hierarchical but peer groups, and that each group brings its view of a variety of sectors which can then contribute to a comprehensive approach. This model is different to the ENA (the *élite* French National School of Administration) model which I consider to be a good illustration of how a dominant model is constantly reproduced. In today's complicated times, many initiatives are taken everywhere and by analysing what takes place in the field, governments will be able to justify their actions.

*Q.: How are you financed? And what is the role of the State and the regions?*

**J.-F. C.:** Loos is proof that even in one of the poorest towns in France, sustainable development can take place. Because the surrounding area has relatively few projects and we have many, we have been able to benefit fully from European financial aid. President Sarkozy wanted one thousand projects: when the Prefect called us, we had finished writing our solar power station project and the financing came immediately with the State paying for 90%. It is therefore possible to find money for innovation. On the other hand, we have very little money for everyday management. Because our investment capacity is very weak, we have to find new solutions, such as partnerships with the private sector, like insulation in our schools which was a test operation in collaboration with Engie Cofely.

*Q.: You have not mentioned the role of women in your project for change and yet their role was undoubtedly pivotal. What did it consist of?*

**J.-F. C.:** With regards to ecology, the role of women is obviously dominant as analysis by a number of studies have shown. Women have a vision which is generally much more systemic than men with oversized egos! In the field, men are much less involved in everyday management which explains why one finds more women in associations.

Nevertheless, the problem we have come across is the relative absence of women when one changes level. Many women are involved at the town level, but there are virtually none at the conurbation level. Of the thirty-six towns in our conurbation, there is only one female mayor, and so the dominant males squabble between themselves! Even though on the local, regional and national level everything runs smoothly due to the functioning of the voting system, on the conurbation level there are more problems of potential competition between the male mayors. This can then make transfers between the different levels complicated.

## A unique experience

*Q.: You said that as well as being mayor, you are a consultant for other local authorities and help them to organise the energy transition, drawing on Loos-en-Gohelle's experience. How do you work with other mayors who ask you for help?*

**J.-F. C.:** Currently, we are the only example in France of this sort of change, and ADEME is making a model out of what we are doing in order to see if it could be transposed to other regions. About six regions have been identified which have agreed to the intervention of consultants in order to analyse how a certain number of approaches, which have taken place in Loos or elsewhere, can bring about change.

Furthermore, I am in contact with Navi Radjou who works in Silicon Valley on 'frugal innovation', and who wants to use Loos' experience in his next book. He is in favour of frugality which he claims is necessary to create a major paradigm shift. What is important is to plant a seed in the long term in France and abroad and to make it spread.

*Q.: The method of story telling is fundamental in innovation in order to build images of what the future might look like and to imagine new uses. However, for this to take place, we have to let people disagree and promote risk-taking. If we do not, we will fall back very quickly into our old ways.*

**J.-F. C.:** I can identify the mechanisms of collective intelligence and networking which can bring this about. However, the benchmark we made puts things in perspective. It is rare to find places where one can find people who want to be involved, good results and an holistic system all at the same time. As far as Rob Hopkins – the reference regarding research about towns in transition in the world – is concerned, Loos' experience

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2. Navi Radjou and Jaideep Prabhu, *Frugal innovation — How to do more with less* (pub. Éditions Diateino, 2015).

with its social and economic results is still unique. In discussions with ADEME, I maintain that we will only manage to achieve energy transition if we change our governance model.

*Q.: Do you think that the model which you put forward can spread quickly?*

**J.-F. C.:** I have no idea! One of our difficulties is that it is very difficult to assess what we are doing when we are in the process of doing it. Even though our scientific committee is very strong, there are many things which elude us which would be worth analysing. Many theses have been written about us. One thesis' subject was 'citizen empowerment', in other words, the possibility that people will be able to take back a hold on their lives. It appears that trust is the be-all and end-all of every success. I am convinced that as a group we feel very strongly that our current model is coming to an end. However, a town of seven thousand inhabitants cannot alone change the economic habits of an entire employment area.

■ Presentation of the speaker ■

**Jean-François Caron:** health executive, physiotherapist; mayor of Loos-en-Gohelle; vice-president of the Lens-Liévin conurbation in charge of innovation and the transition towards the Third Industrial Revolution; president of the *Centre de développement des éco-entreprises*, and of the Lumiwatt association focussed on solar energy

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