

Paprec's Magazine for a greener planet

paprec

Mag n°50
June 2023

DOSSIER
High-tech
collecting
by Paprec

REPORT
Saint-Barthélemy:
a crown jewel in green
energies production

SPONSORING
Yoann Richomme,
winner of the
Route du Rhum

STRATEGY

International : Paprec steps up its expansion



PAPREC



Trivalo 18 (Bourges)

With a capacity of 30,000 tonnes per year, Trivalo 18 sorts and recycles the plastic packaging of over 500,000 inhabitants. Under a design-build-operate contract awarded in June 2021, this sorting centre for pre-sorted waste collection began operations in January.



«Tackling this century's issues together »

■ PETITHUGUENIN FAMILY

Dear customers and partners, you hold in your hands our 50th issue of Paprec Mag. Next year, the group founded by our family will celebrate thirty years of this incredible industrial adventure. Starting with only 40 employees in 1994, we now employ over 13,000 people in ten countries. This issue tells the story of our ever accelerating international expansion.

Since 1994, we have felt that the waste of the 20th century would become the resources of the 21st. We were visionaries. Preserving natural resources, limiting CO2 emissions and developing our energy autonomy have become this century's major challenges. Ludovic Subran, Chief Economist at Allianz, Europe's largest insurer, has been kind enough to give us an insight into how governments and companies can adapt to these challenges. The key word here is collaboration.

In 29 years, we have become a key player in recycling and green energy production. As a matter of fact, collaborating closely with our customers - our partners- we tailor our solutions to meet their specific needs. Another of our trademarks is our constant drive to offer innovative solutions using the best available technologies. In these pages, for example, you can discover our high-tech collecting systems and take a look at our eco-pole in Saint-Barthélemy. A true showcase of what an exemplary island can be in terms of recycling and local low-carbon energy production.

We hope you will enjoy your reading.

paprec
Mag n°50

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Selection

TO REMEMBER
THIS QUARTER

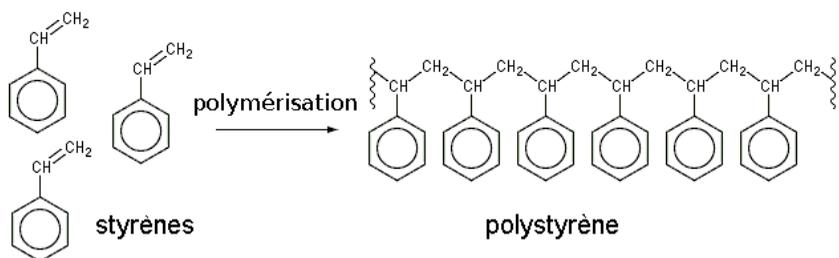
DEVELOPMENT

Paprec, France's No. 1 plastic recycler, and TotalEnergies enter the plastic waste chemical recycling market

Paprec and TotalEnergies have signed a long-term alliance to develop France's first chemical recycling process for plastic film waste.

Under this agreement, Citeo, the main eco-organisation in charge of the end-of-life of French household packaging, will supply flexible plastic waste from post-consumer packaging sorting. These will be transported to the Paprec Plastiques 80 plant in Amiens, where a dedicated sorting and preparation line will be built. TotalEnergies will use this household waste to produce recycled plastics with characteristics identical to those of fossil plastics, suitable for food packing reuse.

This agreement will secure supplies for the future chemical recycling plant for plastic waste located on the Grandpuits platform, a former refinery. With a processing capacity of 15,000 tonnes of waste per year, this chemical recycling plant, built by TotalEnergies (60 %) and Plastic Energy (40%), will be commissioned in 2024.



DEVELOPMENT

Futura Energies, a new Paprec Group entity

Futura Energies, a new subsidiary of the group, is responsible for maximising the use of green energy such as electricity, steam, and biomethane. This type of energy is obtained from waste-to-energy plants, organic waste-to-energy plants/ biomethane plants, photovoltaic parks, and non-hazardous waste storage facilities. It also manages the group's energy purchases.

Futura Energies manages the group's energy volumes, negotiates prices, and handles risks, similar to how FCR manages raw materials. In light of the unpredictable energy markets and regulatory shifts, prioritising risk and cost management is crucial. The newly established entity, formed in August 2022, is dedicated to identifying opportunities arising from the current energy context and creating effective solutions for them.

«Thanks to Futura Energies, we'll have proper expertise to handle the group's energy challenges. The aim is to be able to take an internal view of the energy markets and adopt a coherent strategy for our energy purchases and sales», explains **Sophie Demartini**, Managing Director of Futura Energies.

futura energies

DEVELOPMENT



Paprec, leader in pre-sorted waste collection in France

Paprec, the leading recycling company in France, is responsible for sorting the yellow garbage cans of one in every four French households. The company is dedicated to strengthening its position in this longstanding industry, as evidenced by its recent efforts to design, construct, and modernise five new sorting plants for pre-sorted waste collection. Bourges (18), Tours (37), Damazan (47), Richwiller (68) and Seiches-sur-le-Loir (49). Over the past two years, investments in these plants have amounted to no less than 150 million euros. Today, Paprec is one of the few operators in the market to own part of its sorting centres, i.e., half of the 30 centres in France.

Selection

TO REMEMBER
THIS QUARTER

DEVELOPMENT

Paprec will be replacing coal with biomass of the Cordemais plant

EDF and the Paprec Group are supporting the «Ecocombust» project, which aims to transform a former coal-fired plant into a biomass power station. This project received approval from the French government in January 2023. The objective is to construct a fuel plant, named «Ecocombust,» at the Cordemais location in Loire-Atlantique. The plant will produce 160,000 tonnes of «black pellets» per year will gradually replace coal. These high calorific pellets are made from wood waste and are manufactured using EDF's steam-cracking process. It represents a major investment, estimated at between 200 and 400 million euros. Commissioning of the plant is scheduled for 2026. «*This is a major project for the Paprec Group and for EDF, which is fully in line with the energy transition. It will be the world's first black pellet production unit to use class B wood,*» explains **Stéphane Leterrier**, Managing Director of Paprec Energies.





COMMITMENTS

Paprec among France's top employers

Paprec is an exceptional employer! For the second year in a row, it has been recognised as one of the top companies globally in Capital Magazine's February 2023 ranking of France's top 500 employers. The group is ranked second out of 25 companies in the «environment» sector, behind Montpellier-based Nicollin. «What I like about this ranking is that employees in the sector and in our company are surveyed without our knowledge and without us having asked for anything. It's not a study we're paying for to promote our employer brand,» says **Stéphane Gérard**, the group's HR Director. A ranking that perfectly illustrates Paprec's performance and human resources policy!

DEVELOPMENT

Paprec is urging the development of river transport as a solution to the energy challenge

Why haven't we switched to river transport yet? An opinion piece signed by ten business leaders, including Paprec's CEO **Sébastien Petithuguenin**, raises the question. It has been noted that the use of river transport can alleviate traffic congestion on other modes of transportation and reduce greenhouse gas emissions. The group prioritises the use of river transport to move excavated materials from their construction sites in accordance with this belief. This was the

case, for example, during the deconstruction of La Samaritaine in Paris: 35% of the volume of waste from this department store's worksite was transported via the Seine, reducing road traffic by a factor of 3.5. Generally speaking, at Paprec, river transport is utilised for all locations situated near a river and have access to a quayside. «Part of Paprec's DNA is to offer its partners and customers the best possible solutions for a more environmentally friendly

waste treatment», emphasises **Sébastien Petithuguenin**. This solution is winning over more and more customers, such as SYCTOM, which renewed its contract with Paprec Chantier IDF in April. This new contract for sorting bulky construction site waste will be marked by a major change, with the implementation of alternative river transport for 100% of the waste stream.



Selection

TO REMEMBER
THIS QUARTER

Paprec figures



13 000
employees



300
industrial sites



2,5 BILLION
euros in sales by 2022



Industrial presence in
10 COUNTRIES



70,000
industrial customers



The group sells in
65 COUNTRIES

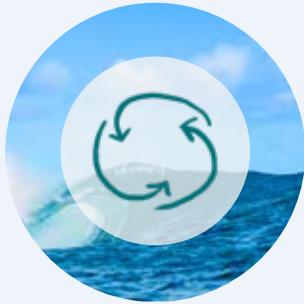


16 MILLION
tonnes of waste collected
and processed



**29 WASTE-TO-ENERGY
PLANTS**
with a capacity of 4 million
tonnes of waste per year

Our business



MATERIAL RECYCLING

8 million tonnes

- Papers
- Cardboard
- Plastics
- Scrap metal
- Metals
- Wood
- Ordinary industrial waste (OIW)
- Bulky goods
- Recycling
- Waste electrical and electronic equipment (WEEE)
- Construction waste
- End-of-life vehicles (ELV)



ENERGY RECOVERY

4 million tonnes

- Incineration
- Solid Recovered Fuel (SRF)
- Heat and power generation



BACK TO EARTH

2 million tonnes

- Composting
- Green waste
- Amendment
- Methanisation
- Capturing methane gas from landfills



STORAGE

2 million tonnes

- Production of biogas from methanisation

Live

LUDOVIC SUBRAN,
CHIEF ECONOMIST
AT ALLIANZ



« The only way out of the economic shock: collaboration »»

Head of economic research and investment strategy at Europe's leading insurer Allianz, editorial writer at Les Echos - among others! - Ludovic Subran is one of the leading thinkers on major economic trends. For him, resisting economic shocks and tackling the energy transition will require a united Europe that plays a collective game in the face of the challenges and greater collaboration within companies.

Ludovic, you're Chief Economist at Allianz. Can you tell us more about this major group and your job?

Ludovic Subran : Allianz, a German-company, is the leading insurer and investor in Europe. We supply over 120 million individual and corporate customers in 70 countries and manage more than 800 billion euros in proprietary assets and 2,000 billion euros in third-party assets

(to give an idea of the scale of our business, France's GDP is about 2,200 billion euros). It's quite a challenging task! Working alongside a group of economists and strategists, my goal is to analyse and predict significant economic patterns to enhance our investment strategies. ●●●



« Everyone will have to do their bit, at their own pace, according to their purchasing power and constraints. »

BIO EXPRESS

Ludovic Subran

A researcher in macroeconomics, Ludovic Subran is a graduate of ENSAE and Sciences Po Paris. After working for the French Ministry of Finance, the United Nations and the World Bank, he is now Chief Economist of the Allianz Group, Europe's leading insurer and investor. From 2013 to 2019, he was one of Le Figaro and Institut Choiseul's 100 economic leaders of tomorrow.

●●● **You say that, with the pandemic and the energy crisis, we've experienced an unprecedented economic period. Can you tell us how?**

L. S. : With the pandemic, never before in history have governments helped the economy so much. With a clear objective: no bankruptcy, no unemployment. For me, this is a cardinal moment in non-wartime economic history. States put the world on pause and injected money. Ten points of GDP worldwide were devoted to the provision of liquidity by central banks, and a further ten points to measures to support companies and households (guaranteed loans, short time working, etc.). The result is that, in 2020, 2021 and even 2022, there were half as many bankruptcies in France as in a normal year, and unemployment is at a 15-year low, particularly among young people. This willingness to intervene continued with the energy crisis, accelerated by Russia's invasion of Ukraine. As a result, Europe has spent 250 billion euros by 2022 to prevent people from being too hard hit by the energy crisis.

Will this French and European government mobilisation continue?

L. S. : Not in the same way, certainly, but maintaining this European mobilisation action by public authorities is essential if we are to combat climate change and absorb the current energy crisis. These crises are now multifactorial, and working together will be the only way to get through them.

These climatic and geopolitical crises have made withdrawing from gas imports all the more urgent - particularly Russian! - and accelerate the decline in consumption. How can Europe help?

L. S. : Europe's energy consumption is relatively stable, but its energy local production has fallen by a third in recent years. As a result, our dependence on imported gas has increased, accounting for 40% of our needs. Germany leads the way, which currently has no regasification capacity. Of course, we're going to have to speed up consumption savings and energy efficiency, but we're still going to have to use gas. The alternative «reliable» LNG comes mainly from the United States... and therefore from fracking gas, which is just what Europe wanted to avoid, and which led it to put its head on the block for Russian gas! The cost is soaring here because China has the same concerns and needs as we do, and tension is set to increase.

Why is collective action essential?

L. S. : Vaccination during the pandemic is a very good example of this. In the UK, they ordered their stocks and quickly vaccinated their population. In Europe, it's true that we took a little longer. Because we had decided to vaccinate everyone, with equal access to the vaccine for all countries. Well, I can tell you that, in the long run, it was much more important to do it together, to go more slowly, but to do it for everyone. In fact, vaccination rates in Europe are now the highest in the world and, above all, we've avoided a cannibalistic approach that would have made us more vulnerable and would have led to a dead end. What's needed is a more collective, sup-

portive approach. At both national and corporate levels, it's by getting as many people around the table as possible that we'll find more innovative solutions. This will be at the heart of all transformations over the next ten, fifteen, twenty years. Crises are exponential, systemic, and probabilistic. They call for complex, adaptive, and coordinated responses.

You talk about the collective, but you also say that to tackle climate change, everyone has to do their bit...

L. S. : Indeed, public authorities, companies, but also each and every-one of us will have to do our part to reduce our energy consumption. Everyone will have to do their bit, at their own pace, according to their purchasing power and constraints. But without falling into the «tragedy of the commons». «We can't expect everyone to make the same effort, because initial conditions and trajectories differ from one individual or country to another. We're in a bit of a bind at the moment: comparing ourselves with others and finding that our neighbour isn't doing enough! All the more so as a climate of fear is fostered around these issues. Communication around climate change is a bit like that around the pandemic, and that's a fatal mistake because fear paralyses action!



What part does Allianz play in this decarbonisation of the economy?

L. S. : At Allianz, we've joined forces with 75 other pension funds, insurers and sovereign wealth funds to be carbon neutral by 2050 on our balance sheet (800 billion euros). In other words, we have committed ourselves to a trajectory of 1.5 degrees without going over, which is very ambitious and will require some major adjustments both in terms of exclusions (oil, gas, coal) and in the search for technologies and assets that are carbon sinks. Suffice to say, there's a lot of work to do!

Why do you consider Paprec's mission essential?

L. S. : Clearly, the mission of Paprec is essential to this transition. We will have to aim for circularity above all in energy as well as in raw materials. And not only is the company's mission essential, but the Paprec spirit - both entrepreneurial and collaborative - is the right one. Our problems are global, and we need to learn to manage them together. In this respect, our quest for innovation and co-design with partners and local authorities is remarkable! •

Strategy

DEVELOPMENT



International : Paprec ramps up its development

Paprec and its historic recycling business has already been present in Switzerland for over ten years. The Group has taken a new step since the creation of Paprec Energies in 2021. Since then, it has expanded its operations in both material recycling and energy recovery, not only in Europe (Spain, the UK and Poland), but also in Africa (Morocco and Togo), the Middle East (Sharjah) and Asia (India and Thailand). The strategy is twofold: to respond to major green energy production projects around the world, and to develop its recycling businesses in several European countries based on its «à la française» growth model. In each case, the ambition is to offer the very best in innovation and technical expertise, while adapting to local specificities.

Strategy

The three pillars upon which Paprec is built are expertise, customer focus and proximity, choice of the best technologies. Paprec has thus established itself as a leader in the French waste treatment market. The Group is now applying this strategy internationally, in all the markets in which it operates. What are its key selling points? «*Our ability to design tailor-made, innovative solutions, always with a view to generating as much value as possible from waste, whether in terms of materials or green energy,*» sums up **Mathieu Petithuguenin**, Paprec's Managing Director.

Strategy tailored to local markets

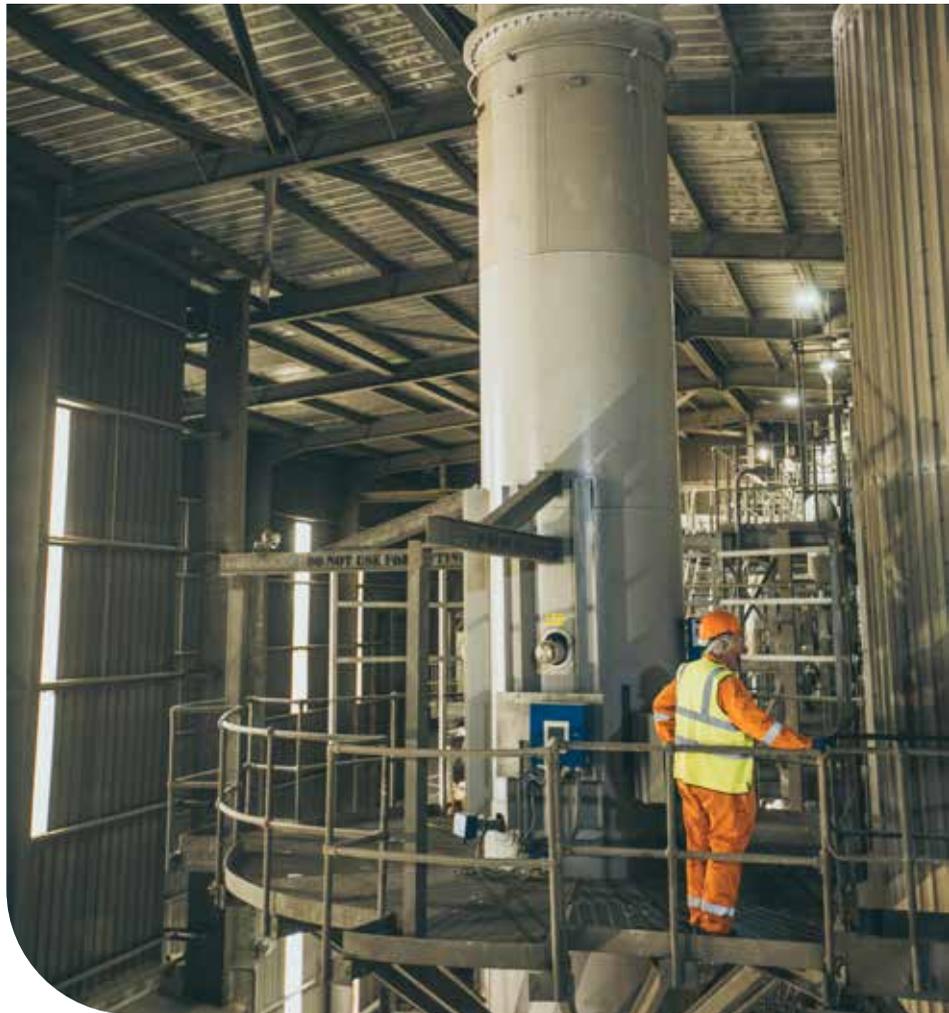
The aim is to expand into new countries in all the Group's businesses, from waste collection and storage to recycling and now green energy production.

The vision remains the same in each case, but the Group adapts its expansion and strategy to each market. There's no question of duplicating the same methods in every country: the Group varies its approach according to local specificities, such as regionalism in Spain or the weight of private investment in the UK: always keeping in mind that customers, be they local authorities or industry, are part of the ecological transition.

Becoming a key player in production of green energies

According to Paprec Energies, «*our ambition is to become one of the spearheads of green energy worldwide,*» explains **Jean-Luc Petithuguenin**, the Group's founder. We have unique and remarkable technical skills, in particular through the Paprec Energies engineering division». All the more reason to open doors in the Middle East and South-East Asia! In concrete terms, the actions and solutions proposed by Paprec limit the use of fossil fuels and contribute to the necessary decarbonisation of the economy. «*Wherever we set up in the world, we will be providing solutions to accelerate the ecological transition and meet the challenges of this century,*» says **Sébastien Petithuguenin**, President of Paprec Energies.

Step by step, the Group is laying the foundations for its international development, with the ambition of making a greener planet!





Zoom in on Switzerland

The Group has been present in Switzerland for over ten years, and is now a major player with six branches, 200 employees and 200,000 tonnes of materials processed in the country. The market structure for recyclable waste is somewhat different, with more sorting at the source than in France. Paprec Switzerland is best known for its confidential destruction brand, Reisswolf SA.



Zoom in on Poland

After Gdansk, Paprec launches a second waste-to-energy plant in Poland. In a country still heavily dependent on coal, the Krosno plant in the south of the country will convert waste sorting residues from the 300,000 inhabitants of the city and 27 neighbouring municipalities into electricity and heat.



Zoom in on Togo

In Togo, Coved West Africa has been operating a vast storage centre near the capital since 2018. Paprec provides a wide range of consultancy and expertise services, notably on waste management and the proper management of the biogas network.



Zoom in on Asia

Based in Chennai, CMPL (CNIM Martin Private Limited), the Group's Indian entity, has just signed a major contract for the Deopar UVE, near Bombay. Paprec's Indian entity will be in charge of the design of the boiler and part of the supplies, as well as supervising the construction of this essential waste treatment site in a region where existing facilities are reaching saturation point. A similar contract is underway in southern Thailand. These emblematic projects firmly anchor the Group in this strategic geographic zone.

Paprec conquers Spain

At the beginning of 2022 in Madrid, Paprec set up its first teams in Spain, with the aim of expanding in the same way as in France: by winning contracts and by external growth. At their head is Sylvain Cortes, who has been present in the country and in the recycling sector for over 30 years. He explains Grupo Paprec's ambitions and strategy.



Why is Paprec interested in the Spanish market?

Sylvain Cortes : Unlike France and other northern European countries, Spain lags behind by several years in terms of waste treatment. One of the reasons for this is structural. For a long time, landfill was the preferred option, but this is now on the wane! The country is making rapid progress and intends to quickly reach the highest global standards. As a result, we expect the market to undergo radical change and grow rapidly over the coming years. It's the perfect time to set up shop!

How does Paprec do it?

S. C. : In Madrid, seven employees of Paprec Spain's team are in charge of all our development based on external growth. Our job is to identify high-potential structures that we can acquire. To date, we have completed four acquisitions of local companies: Recimed (Valencia), CTR (Castellón), EcoReinares (Basque Country), Eco Actrins (Almansa) and we have taken a majority stake in GBi Serveis (Catalonia). All in all, one year after its creation, Grupo Paprec has 630 employees and sales of 66 million euros!



So it's a nationwide development?

S. C. : Yes, and one that takes into account one of Spain's distinctive features: regionalisation. Each self-governing region operates relatively independently, with deeply-rooted local cultures, particularly in the Basque Country and Catalonia. We therefore have local referents who speak the regional language and master local subtleties. This Spanish way of working leads to another major difference: its political culture. Regionalism blurs the traditional boundary between right and left in local politics. We need to understand this dimension and deal with alliances that, might seem unnatural from a French point of view. Finally, another of the country's specificities is its GDP. Even if Spain is catching up, it remains a poorer country than northern Europe. I'm used to saying that the environment remains a concern for rich countries. The minimum wage, which stood at €850 three years ago, has only just risen to €1,080... Our offers must therefore also take this aspect into account.

Grupo Paprec has also positioned itself in the public sector market. What is your strategy in this area?

S. C. : We respond to public procurement tenders, facing stiff competition from four very well-established Spanish players - some of which have annual sales of over two billion euros. However, we have already won four public sector contracts representing total sales of 40 million euros over the life of the contract.

What makes you different?

S. C. : In one of the calls for tenders, we simply got the best technical score. I think our synergy with Paprec's teams in France enables us to build innovative, tailor-made solutions that make all the difference in return. Another advantage is Paprec's strike force. With large truck orders, for example, we can equip a municipality in just a few months, whereas it takes Spanish players over a year to obtain the same equipment. A clever blend of know-how and solid partnerships!

How would you sum up your first year in business?

S. C. : The beginnings of Paprec Spain are promising. The team, whose members have all left structures generating over a billion in sales for a brand-new entity, is delighted with this bold choice. As am I! There's a start-up feel to it, with the construction of new solutions on a daily basis and the need to adapt at every moment, which is exhilarating! When you think about it, it's actually quite dizzying, because we're starting from a blank sheet of paper... but we've already achieved some great successes! We're going to continue to develop medium-sized contracts, to build our reputation and establish references. This will enable us to pursue our external growth strategy and, in time, position ourselves to win major tenders, while accelerating our focus on recycling, which remains Paprec's DNA!



Heading for the United Kingdom

With the formation of Paprec Energies in 2021, the Group has gained a foothold in the UK. The acquisition of Tiru and CNIM, in 2021 and 2022, positions Paprec in the English market, thanks to the two incineration sites already operated there by Tiru and CNIM. There are plenty of opportunities in the UK, provided you understand this particular system largely based on the private sector.



A promising start! While the Paprec teams have moved into their offices in central London, close to St Pancras station, the field teams are continuing their work in Exeter and Grimsby. « *The British market is based on private initiative, which is deeply rooted in the country,* explains **Tanguy Carrabin**, Paprec UK Sales Director. *It's up to the companies in the sector to find the financing and models to build their processing solutions. First of all, we have to identify the need, develop innovative solutions to meet it, and build the processing centres, in order to be able to compete.*»

In this context, the Group's know-how, proven technological solutions and reputation are solid assets. In fact, several Middle Eastern countries, such as the Sultanate of Oman, the United Arab Emirates and Qatar, operate along the same lines as the UK, developing their management and financing solutions from the City of London... Potential opportunities for Paprec!

Paprec's high-tech collecting

As France's leading recycler, Paprec is also at the forefront of innovation in waste collection. For the 6,000 local authorities that place their trust in it, the Group has developed a whole series of digital tools within the NODUS offer. The aim is to optimise and improve services, while sharing as much information as possible with customers.

It's 8:15 a.m. at the Coved Buc branch, which manages the contract for the Versailles Grand Parc conurbation (Yvelines). In the digital referent's office, the route of the collection trucks is displayed in real-time. «I'm in charge of all customer reporting linked to collection operations,» explains **Vanina Grabette**. *My role is to be the main contact for the transmission of digital data, concerning both rounds and the incentive fee, as well as any incidents such as sorting errors or user complaints.*

Continuous service improvement

Digital technology is now an integral part of the collection services provided by Coved/Paprec agencies. The use of such tools guarantees quality service for residents. These services combine data and geolocation, all on a single platform, My Nodus Services.

One of the tools used to improve service is geoguidance, which optimises collections. On contracts benefiting from the My Nodus Services offer, trucks are equipped with a GPS system called Simpliciti to ensure real-time tracking of rounds. Using his tablet, the driver signals any slowdown due to traffic or road conditions (obstructed parking, roadworks, etc.). It's then up to the digital referent and the scheduler to take the necessary steps to avoid delaying collection, for example, by sending another crew as a backup.

Report any malfunctions

On-board computer systems can also be used to report any events that prevent the smooth running of the collection: at the rear of the vehicle, refuse collectors are equipped with a sensor that activates the photography system above the hopper, in order to signal sorting errors, overflowing or broken bins, etc. («Nodus Tri +» offer). In the cab, the driver can use his ●●●





••• tablet to report any malfunctions, such as faulty parking or bins not taken out. A camera on the front of the vehicle also records the environment continuously. The images can then be used as evidence in the event of a user complaint... This device, of course, complies with the RGPD: faces are blurred and no personal data is recorded... («Nodus Replay» offer).



Residual waste has been lowered by 30-50% in places where digital tracking tools for collection bins and the introduction of incentive-based invoicing have been implemented.

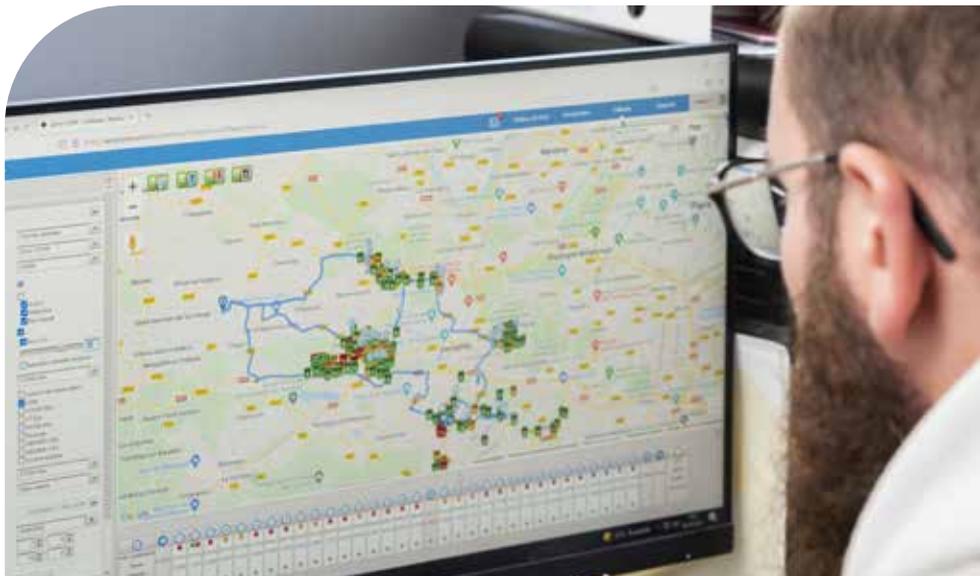


An optimised budget

The Paprec Group's aim is to offer ever more efficient collection solutions at optimised cost. The introduction of incentive-based invoicing is clearly part of this strategy. Paprec is currently the leader in incentive-based invoicing in France, with 41 contracts. This concerns no less than 1.3 million inhabitants. The principle is simple: household waste bins are fitted with an RFID chip that is recognised by a sensor installed in the collection truck. Users are billed on a pro rata basis according to the number of times their household waste bin is lifted, in excess of the annual fee set by the local authority. And the results are there to see: a 30-50% reduction in residual waste in areas where incentive-based invoicing has been introduced, thanks to digital tools for tracking collection bins.

Service control

Digital technology also enables Paprec customers to keep track of their contracts on a daily basis. On My Nodus Services, they have access to a dedicated digital portal where they can find all contract information, as well as daily data relating to services. «All the digital solutions we offer are in response to the expectations of our customers and their local authorities, guaranteeing them the maximum quality of service and optimised budgeting,» explains **Pierre Allain**, Director of OM Collection Innovation. *We keep a constant watch on technical, digital and organisational developments so that we can adapt our collection service to the changing regulatory context and expectations of society.»*



Digital collection at Paprec in figures



5 million
inhabitants served



80 contracts
My Nodus Services
with local authorities



1,3 million
inhabitants with
incentive-based pricing



99%
guaranteed reading and
transmission of chip numbers
to the local authority within
48 hours



Report

AT THE HEART
OF OUR BUSINESS



Paprec Energies in Saint-Barthélemy : a crown jewel of green energies production

Living on an island means facing the dual challenge of waste management and energy generation. For the past twenty years, Saint-Barth's waste-to-energy plant has been helping to solve both these issues by transforming the island's waste into energy - enabling water desalination in particular. Thanks to recent conversion work, the plant has almost doubled its capacity with a new furnace. The site is a real eco-centre, where ordinary industrial waste, plastics, wood and electrical and electronic equipment are recycled. An exemplary project for the island's needs.



200 km from Guadeloupe, on lies the 21 km² island of Saint-Barthélemy. One of its characteristics is that it is entirely without drinking water. This territory lies 7,300km from the French mainland and is inhabited by 10,000 people. The peak season for visitors is during the end-of-year celebrations. This is one of the biggest problems of the festive season. How do you get rid of household waste? Above all, how do you get drinking water?

The first factory, an engineering challenge

Twenty years ago, Bruno Magras, the Territory's visionary president, decided to solve all these problems at once. The existing incinerator was outdated and barely up to standard. It was decided to wipe the slate clean and install an industrial jewel in its place: a waste-to-energy plant capable of transforming the island's household waste to generate a third of the energy needed to run the water desalination plant.



●●● The plant had to be ultra-modern, but also resistant to the elements. «We designed a plant capable of withstanding earthquakes and cyclones. The framework, the concrete blocks... Everything had to be thicker! When cyclone Irma devastated the island in 2017, the plant was shut down and local teams managed the feat of restarting it in less than three days,» reveals **Stéphane Bertrand**, Paprec Energies Development Director.

This is the island's other problem: with cyclones, waste accumulates. For example, while Ouanalao Environnement recovers 20,000 tonnes of miscellaneous waste a year, cyclone Irma in 2017 generated 30,000 tonnes in just a few hours! In addition, as on every island, many products are imported and over-packaged. Tonnages are therefore increasing...



A technology patented by Tiru, a subsidiary of Paprec Energies

To deal with these surpluses, the local authority gave the go-ahead in November 2019, for the addition of a second 800 kg/h furnace. This is technically half the output of the first furnace, but with the modernisation of processes, it enables waste to be managed with the highest calorific output. This «ROCK» furnace, renowned for its efficiency, is the intellectual property of Tiru, now a subsidiary of Paprec Energies.

To reach Saint-Barth, the boat had to cross 7,300 km. The 1,000 tonnes of equipment needed for construction

arrived in Gustavia from Le Havre, Bordeaux, and the Italian ports of Genoa and Livorno. «*Manufactured in Normandy by the Lemarchand Group, the 8-meter by 3-meter, 15.2-ton oven left the port of Le Havre in May 2021 and was transported on a container ship. It's a major operation because to my mind it's only the second time a cell has been transported by ship over such a distance*», explains **Fred Questel**, the plant manager.

While the first plant was delivered in its entirety and then assembled on site, the second had to be planned differently: «*We didn't have the space for this. We had to organise a continuous flow of*

supplies of machines and materials: a whole other kind of logistical headache...» recalls **Fred Questel**. «*A transit platform was set up to ensure that the site never came to a standstill - despite the pandemic. The gamble paid off: the plant was delivered on schedule!* »

The plant's new life thus began in the summer of 2022, supported by the determination of the new president of the conurbation, Xavier Ledée, to make the island a model of energy transition.



Waste management in Saint-Barth: maximum efficiency with minimum space requirements

Paprec Energies not only manages the waste-to-energy plant but has also been awarded a public service contract to manage all the island's waste, except for deconstruction. The company manages a sorting centre and a composting facility. It also recovers WEEE and end-of-life vehicles (ELVs).

In the final analysis, we're talking about a genuine eco-pole, bringing together on a 1 ha site (equivalent to four soccer pitches): two incineration units, a sorting centre, a composting platform, a WEEE management centre, another for ELVs, a shredding platform, a drop-off centre for private individuals and one for professionals, and finally administrative premises for around twenty people!

Sponsoring





Route du Rhum : Yoann Richomme becomes a legend

Grand winner of the 12th Route du Rhum, the Paprec-Arkéa skipper crossed the finish line in 14 days, 3 hours and 8 minutes, in the Class 40 category, setting a new record and, above all, far ahead of all competitors in his category. The sailor is the only person to have won this transatlantic race twice in this category.

PAPREC ENERGIES 01 (Bourg-en-Bresse)

Since 2012, the agency has been managing a DBOM (Design, Build, Operate and Maintain) contract on behalf of the ORGANOM syndicate. Since 2016, it has been treating and recovering all residual household waste and part of the syndicate's green waste, i.e. some 65,000 tonnes a year, using a sorting-methanisation-composting process. As a result, nearly 11,000 MWh and 15,000 tonnes of compost are produced every year!

