ACTIVITY REPORT



2016





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MARK THYS
PRESIDENT OF THE BOARD OF DIRECTORS



HERVÉ DOMAS CHIEF EXECUTIVE OFFICER

A CHALLENGING YEAR, AND THE PROJECTS FOR THE YEAR TO COME

With almost 335.000 tonnes collected, or the equivalent of more than 44 million passenger vehicle tyres, 2016 was once again a record year for Aliapur. This is all the more remarkable given that the eco-tax remained the same as in 2015. Above all, I would like to take this opportunity to acknowledge the work of the whole team. The year was not one of the easiest: we had to deal with the calls for tender for our service providers, the temporary closure of Morocco's borders, the search for, and implementation of, new outlets, as well as huge amount of work within the company regarding the future. All this whilst continuing our day-to-day business in a linear and effective manner. I would also like to acknowledge the work of everyone in the field all the reliable, competent and enthusiastic companies that work with us, sharing our commitment.

At the regulatory level, this year was marked by fundamental work on the dossier to stop end-of-life tyres being classified as waste. In 2016, there was considerable progress at this level, and we would like to thank the French State Department for the Environment for their support.

Being classified as waste is still nevertheless a handicap for the development of other recycling methods (material recycling and energy recovery), sometimes for administrative reasons, and very often as a result of prejudice or lack of understanding of the characteristics of our rubber. It will thus be necessary to continue this process into the next stage: stop granulate being classified as waste. We are determined, and naturally, we will remain motivated throughout 2017.

Very fortunately, our progress in R&D has allowed certain sectors of activity, already deeply involved in the use of materials obtained from recycling processes, to appreciate end-of-life tyre rubber as a quality resource. This is particularly the case for the construction industry and, in 2016, we launched a study in this field in order to identify which applications are liable to be able to use granulate. It turns out that tyre rubber has obvious qualities in terms of shock absorption and sound-proofing. Similarly, there is a new opportunity opening up for us: thermal insulation. We have every intention of studying the matter in detail.

Given these results, and because we are convinced that there are still many other applications waiting to be discovered, in the autumn we launched an open innovation project with the help of specialist consultants. With this flexible method, rarely used in our sector, we will put our knowledge and experience and thus a large part of our make-up - at the disposal of an ecosystem of start-ups that focus on innovation on collaborative platforms. The idea is to give these companies the means to reflect on their own terms and thus differently to us - regarding the use of tyre rubber and to identify creative, feasible and innovative recycling methods. In addition, we also intend to provide them with the means to implement their ideas and test any prototypes in real-life situations. We put great stock in this initiative, which was piloted internally by our R&D department, accompanied by all our other departments.

NEW SOLUTIONS AND NEW DESTINATIONS

2016 was a rich yet complex year.

First, it was a year of calls for tender because the contracts with our collection and transformation service providers expired on 31 December. Still accompanied by a specialist consultancy to guarantee the impartiality of the procedures and transparency of the approach, we signed new contracts with 27 collection companies (instead of the 29 previously) and 12 transformation sites (11 previously). To allow these companies to bring security to their sector, better anticipate changes in the professions and spread out their investments, we decided to extend the duration of these contracts by one year, meaning they will now run for a four-year period (2017-2020).

2016 was also a transition year for the recycling of the tyres entrusted to us.

In the summer, we were faced with an unusual situation, requiring us to be both reactive and creative in order to solve the problem. Our deliveries of tyre shred, for use as an alternative fuel source in the Moroccan cement industry, were suddenly stopped. The quality of the product from the French sector was not the reason: we were simply the victim of a unilateral decision made by the Moroccan State Department for the Environment. This decision affected several countries in Europe. It was thus necessary to reallocate part of the volume of tyres destined for Morocco and find new outlets.

We turned to new destinations and, from autumn, new partners received deliveries in Japan, Turkey or India. The Moroccan incident allowed us to demonstrate, in a new way, that our policy for diversification in end-of-life tyre recycling methods is both justified and efficient

In France, we focused on urban and industrial heating systems. Aliapur has provided made-to-measure shred for a Swedish urban heating system since 2008, and we are convinced that similar heating systems in France – both those that exist already and, above all, those being developed – would gain immeasurably if they, too, used tyres as fuel. Tyres are an abundant resource that cost little and are found close to hand. Tyres could thus replace expensive fossil fuels. We will continue to work in this direction, with industrialists, communities and the Ademe.

Finally, we finished the year by setting up an "innovation committee", bringing together all the granulators and the Ademe, once again, to assess and diversify the possibilities for tyre granulate. Rubber granulate, which is standardised, characterised, reliable and of constant and homogenous quality, is ready to be used in the manufacture of new products. The aim of this committee is to meet three times a year, to mark the stages in our common – and permanent – research into new recycling solutions.

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| YEAR 2016 IN BRIEF | | YEAR 2016 IN BRIEF |

JANUARY

On **01 January**, the Direction for computer systems expanded to include a project manager for the development of computer applications specific to the sector.

On 14 January, the French State Department for the Environment applied the first financial sanctions to cheaters, professionals who put tyres on the market without paying the corresponding eco-tax.

MARCH

On **10 March**, Aliapur launched the call for tender for the renewal of the end-of-life tyre collection contracts.

In **March**, Aliapur signed a contract with the Spanish granulator, GMN, a new recycler in the sector.

On **31 March**, the Rhone Chamber of Agriculture, which chose to entrust the processing of silage tyres in the Rhone département to Aliapur, visited the company Eurec to better understand the sector.



FEBRUARY

Aliapur's Direction for operations launched a satisfaction survey among garages, whilst the Direction for computer systems started work on an overall review of the Visiopur shred measuring tool ("SML").

APRIL

On **1 April**, Aliapur launched the call for tender for the renewal of the end-of-life tyre transformation contracts.

In **April**, Aliapur changed its visual identity with a new logo and a new tagline: "collecting and recycling your tyres" replaces "recycling sector for end-of-life tyres". At the same time, the logos of Aliabase and Aliastocks also changed.

MAY

At the Board Meeting on 11 May, Aliapur changed president: Mark Thys, the CEO of Goodyear Dunlop France took over from Serge Bonnel, the CEO of Continental France. The new president is appointed for 2 years.

JUNE

Aliapur put on line its Frequently Asked Questions on its extranet, Aliabase, the link between all the key players in the sector. At the same time, a new telephone voice server was installed, providing automatic orientation for incoming calls to the appropriate departments.

JULY

Morocco suddenly decided to refuse imports of waste. Aliapur was particularly affected by this measure and immediately set to work to find alternative outlets.



AUGUST

On **27 August**, Aliapur launched the call for tender for the end-of-life tyre transportation contracts.



OCTOBER

SML, Visiopur's new measurement tool, was installed for two service providers for a pilot phase until the end of the year.

In **October** and November, Aliapur received all the service providers retained for the period 2017-2020, for the official signature of the contracts.

At the international level, Aliapur signed a contract with several Indian granulators. This contract, of which the details remain confidential, concerns many thousands of tonnes per year for material recycling. It also concerns a pyrolysis unit.

DECEMBER

On **8 December**, Aliapur and SGS tested, on a pilot transformation site, the use of a drone equipped with a camera to carry out the annual inventory of end of year volumes of whole tyres and tyre shred present on the site.

In **December**, the specifications were finalised for the optimisation tool for the sector's logistic road map. Ultimately (2018), this tool should make it possible to considerably improve the logistic circuits in the company and reduce their costs.



SEPTEMBER

On 1 September, Aliapur signed a partnership with experts and industrialists in the public works sector to create and test a jointing compound made from tyre granulate.

On **15 September** the collection and transformation call for tender process came to an end: the service providers for 2017-2020 were decided.

In **September**, Aliapur signed a three-year contract for the delivery of shred with a Japanese industrialist.

NOVEMBER

Aliapur sent its first shiploads of shred to Turkey, for the local cement industry which has become a new recycler in the sector to the tune of several thousand tonnes. At the same time, the deliveries to Moroccan cement works started up again after an interruption of more than four months

On **25 November**, Aliapur launched the InPURRPlast project for the integration of tyre powder into plastics for direct use. This project is supported, including financially, by the Ademe.

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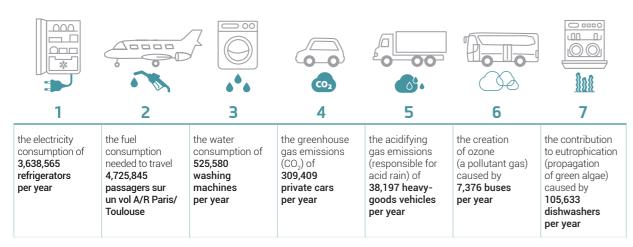
ENVIRONMENTAL ADDED VALUE 2016

Excluding re-use (re-use and retreading), 263,057 tonnes of end-of-life tyres were recovered by Aliapur in 2016, or the equivalent of 34. million passenger car tyres. The recovery of these tyres has made it possible

to make savings in natural resources and environmental impact. The LCA of end-of-life tyres makes it possible to express these savings as equivalents of uses of equipment and actions from day-to-day life.

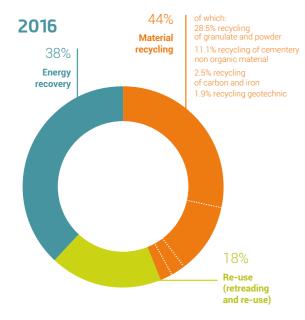
263,057 tonnes

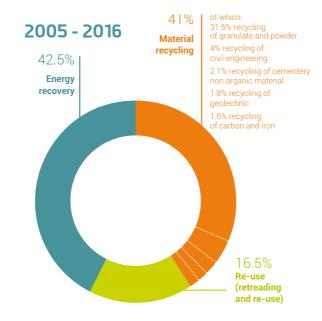
of end-of-life tyres (excluding re-use) allow the economy of:



- 1 235 liter, class A fridge-freezer
- 2 Return flight Paris-Toulouse, 1,200 km in a medium-haul plane
- 3 5 kg, class A washing machine / 220 standard cycles per year / water consumption split between the standard 60°C «cotton» programme, full load / half-load and 40°C half-load
- 4 vehicle emitting 130 g of CO2 per year (target attained in France in 2010) and with annual kilometres of 12,000 km (average km travelled by a private individual in Europe)
- 5 16-32 tonne heavy-goods vehicle «euro 5» travelling 60,000 km per year
- 6 average public transport type bus or coach travelling 38,000 km per year (average km in France)
- 7 standard dishwasher (280 cycles per year) no notion of class A because we only talk of the pollutants rejected by the washing water and cleaning products.

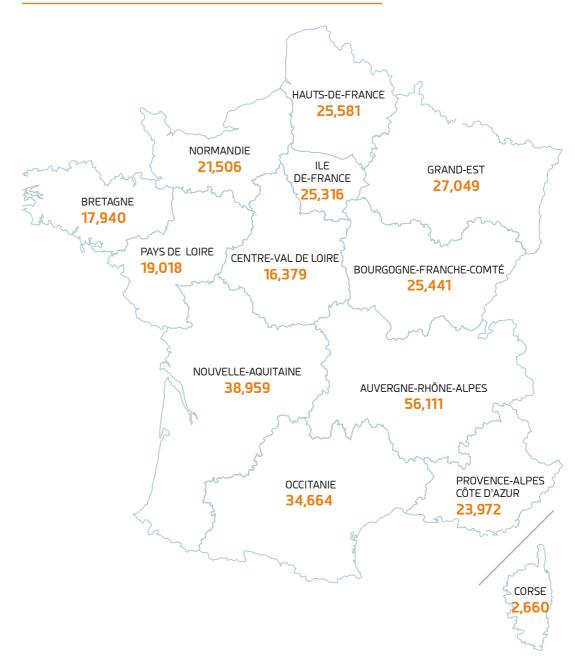
Recovery distribution

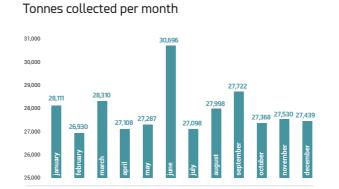


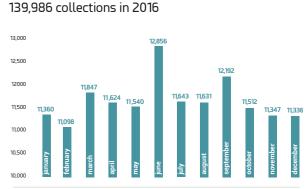


334,597 tonnes of used tyres collected in 2016

or the equivalent of 44.2 million passenger car tyres







10 I ACTIVITY REPORT **2016**

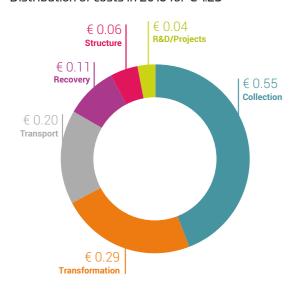
ADMINISTRATION AND FINANCES CONTRIBUTION

STRUCTURAL COSTS UNDER CONTROL

Aliapur in a few key figures is::

- Another record year, with turnover of de €54.6M, an increase of +2.7% in relation to 2015. Of this sum, €52.5M correspond to orders from 2016 producers for 330,490 tonnes.
- Net income in 2016 of €304k, or 0.56% of turnover.
 In accordance with our statutes, no dividends are paid to shareholders and we monitor our costs very strictly.
- Total net processing costs (collection, shredding, transport and recycling) **92.3%** of expenses in 2016.

Distribution of costs in 2016 for € 1.25*



*€1.25 : eco-tax for a passenger car tyre

Non-operating costs:

- All non-operating costs decreased in 2016 (7.7% versus 8.2% in 2015) thanks to improved budget control, particularly in IT.
- €619k in R&D, or 1.1% of turnover, were devoted to material recycling actions.
- €435k in communication, or 0.8% of turnover.
- €1.040k in IT, with developments around our SML software (measuring shred) and Aliabase (the sector's professional tool).

The shareholders

Shareholders	Shares	representative on the Board
Bridgestone France	124	Mr Benoît RAULIN
Mrs Brigitte GBAGBA	1	Mrs Brigitte GBAGBA
Continental Holding France	124	Mme Pascale WOITTEQUAND
Mr Serge BONNEL	1	Mr Serge BONNEL
Goodyear Dunlop Tyres	249	Mr Grégory BOURCHARLAT
Mr Mark THYS Président du Conseil d'Administration	1	M. Mark THYS
Manufacture Française des Pneumatiques Michelin	249	Mr Pierre-Yves COMBY
Mr Thierry MARTIN-LASSAGNE	1	Mr Thierry MARTIN-LASSAGNE
Pneus Pirelli SAS	124	Mr Laurent CABASSU
Pneus Pirelli SPA	1	Mr Matthieu BRINON
TOTAL	875	

Statement 2016

Statement 2010				
30000	Other debts 2.398 Fixed assets 355	Deferred income 3.350		
25000				
20000	Accounts receivable 12.101	Debts 16.211		
15000				
10000	Treasury 14.692	Equity 7.598		
5000				
0		Provisions 2.388		
	asset	liability		

Financial results (in thousand Euros)

Result	2015	2016
Turnover	53.191	54.636
Sector costs	45.601	47.758
Operating margin	7.590	6.878
Gross operating surplus	1.104	805
Net result	527	304

3rd YEAR OF STABILITY FOR THE ECO-TAX

At the meeting of the Board on 04 October, Aliapur's shareholders decided to maintain the eco-tax 2017 at the same price as in 2015 and 2016 for all categories of tyre. Passenger vehicle tyres, the category that alone represents two thirds of collections, thus remain at €1.25.



It should be noted that this 3rd year of stability in the tax comes in a context in which the volumes collected continue to increase both significantly and regularly, as do the requirements in terms of the quality of the preparation and recycling of the tyres. Aliapur and its network of service providers thus continue to progress both qualitatively and quantitatively, whilst maintaining funding that has been at the same level for three years.

Eco-tax exc. VAT for category A (passenger vehicle) tyres



Eco-tax per type of car tyre

Aliapur Category	Average weight	Type of tyre	Price exc. VAT 2017	Evolution exc. VAT 2004/2017
A1 (3 to 5 kg)	4.06 kg	Motorbikes, quads, all tyres between 3 and 5 kg	€0.75	-25.00%
A2 (5 to 20 kg)	7.57 kg	Cars, 4WD, small utility vehicles, all tyres between 5 and 20 kg	€1.25	-43.18%
A3 (5 to 20 kg)	7.57 kg	Special tyres (pluggable, equipped with extra features), on the condition that they be easy to identify during sorting	Price defined in relation to tyre specificities	
B1 (20 to 80 kg)	56.11 kg	Utility vehicles, truck, all tyres between 20 and 80 kg	€9.10	-15.74%
B2 (20 to 80 kg)	56.11 kg	Special tyres (pluggable, equipped with extra features), on the condition that they be easy to identify during sorting	Price defined in relation to tyre specificities	
C1 (80 to 130 kg)	92.12 kg	Agricultural, civil engineering, public works, maintenance vehicles	€19.50	-27.75%
C2 (130 to 200 kg)	161 kg	Agricultural, civil engineering, public works, maintenance vehicles	€32.30	-42.68%
D1 (200 to 450 kg)	257.17 kg	Agricultural, civil engineering, public works, maintenance vehicles	€54.15	-63.90%
D2 (more than 450 kg)	465 kg	Agricultural, civil engineering, public works, maintenance vehicles	€101.65	-37.54%
E (less than 3 kg)	2 kg	Scooters, all tyres less than 3 kg	€0.48	-42.17%
F1	Average 77 kg	Commercial aircraft	€17.10	-36.55%
F2	Average 6 kg	General aircraft	€1.45	-30.95%
F3	Average16 kg	Military and regional aircraft	€3.15	-43.75%

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INFORMATION SYSTEMES

NEW FUNCTIONS FOR THE EXTRANET, ALIABASE

The extranet Aliabase was designed from scratch under the authority of the Direction for information systems (DSI) to allow all the operators in the sector to interact with Aliapur and with each other: car industry professionals, collectors, transformation sites and recyclers. Since 2010, it has become the sector's liaison tool par excellence, from garages asking to open an account and requests to collect their tyres, to the final destination for the collected tyres. It is no surprise, in such conditions, that the tool is permanently being optimised.

In 2016, Aliabase underwent major changes, starting with a partial redesign of the graphic and visual charter, a task that will continue into 2017. The aim is to make using the tool more intuitive, more fluid and thus easier. Furthermore, this redesign has integrated the possibility, for each collection point, to download directly its annual Environmental savings certificate (including certificates from previous years), which should now bring an end to their – sometimes rather haphazard – transmission via e-mail.

Another major modification is the inclusion of a search engine combined with a Frequently Asked Questions section which, in this respect, had been lacking. The FAQ section covers all the questions that might be asked by professionals keen to join the Aliapur network, and provides solutions to any difficulties encountered. The whole is presented in a didactic, pedagogical and practical manner, thanks to a wealth of illustrations.

At the same time, the geolocalisation of the sites that stock tyres has been improved, allowing collectors to



visualise more easily the position in a given geographical area of the garages that have requested collection of their tyres. In the same way, putting together the collection timetable is also made easier. Also for the collectors, the pre-invoicing module has been entirely redesigned, making more reliable the data exchange flows that are used to establish the invoices that the service providers send Aliapur for their collection services.

Visiopur goes online



Visiopur is both a software programme and a measurement tool that is one of a kind given that it was created by and for Aliapur. Visiopur is equipped with a camera and is connected to a computer. The cabin is installed at all of Aliapur's transformation site service providers. Visiopur makes it possible to analyse regularly (at least once a week) the quality of the tyre shred produced. Aliapur can thus guarantee both recyclers and industrialists that the shred is of the same quality throughout the country, regardless of the transformation site from which it comes or the type of shredder used.

In 2016, the software programme was rewritten on a web platform. This "SML" programme, as it is called, is now accessible from any work station that has an internet connection, instead of having to be downloaded on to a single computer. At the same time, the ergonomics have been redesigned and new functions have been added, particularly for the optimisation of the photo function and to be able to compare several measurements with each other. Two transformation service providers have tested this new SML since October 2016. As the results

Two transformation service providers have tested this new SML since October 2016. As the results are conclusive, the new software will be rolled out generally in spring 2017.

AN OPTIMISATION TOOL FOR THE LOGISTICS OF THE SECTOR

In 2016, Aliapur started to consider equipping itself with a tool for optimising the logistics road map. The call for tender for the renewal of the service providers' contracts effectively made it possible to carry out a number of simulations regarding tyre transport flow. The result was that a rational, mechanical decrease in costs is possible, from collections of tyres to their recycling. For that, it is necessary for Aliapur to equip itself with a means of simulating logistics circuits and flow management, a tool that is capable of taking into consideration the constraints of each operation, and anticipating unknowns (if an actor defaults, diversion of flows, etc).

The specifications for this road map were drawn up in 2016. The call for tender will run in 2017 and the tool will be implemented in 2018.

A NEW LOGO FOR ALIAPUR









2003-2015

Aliapur's logo was created in 2003, when the company was created. As "Aliapur" is a proper noun and not an acronym, the logo deliberately chose to highlight a stylised tyre, symbolising the activity of the company. This tyre itself imposed a square format. For the colour, the decision made was for a green colour, but not the one usually associated with recycling activities, but instead an original version of the colour. Finally, the logo was accompanied by a deliberately technical baseline, "end-of-life tyre recycling sector", as this seemed essential at a time when everything still remained to be done in this sector of activity.

Thirteen years later, the sector is now at full maturity, and it seemed necessary to make changes to the logo, without completely reworking it all the same. This is why the colour has been retained: it is easy to recognise and is part of the company's DNA. But the form of the logo has become rectangular, better highlighting the Aliapur name. The stylised tyre has been retained, but it is both more modern and more discreet. The very classical font used in the original logo has been replaced with a gentle yet dynamic font. The baseline

KEY FIGURE

5483

...or more specifically 5483 C: this is the Pantone reference for Aliapur green. Although it is a little difficult to reproduce perfectly on printed documents - because it is so specific - Aliapur green has the advantage of being highly recognisable. It is often associated, more than with the company in the strictest sense of the term, with the sector as a whole. Several Aliapur service providers have also decided, since well before the most recent calls for tender, to use this colour for their collection skips and even, in certain cases, for the renovation of their sorting line (at Gilles Henry, for example) or their shredder (notably Procar).

has also changed: "collecting and recycling used tyres", and is now inseparable from the logo itself.

From April, all the company's dematerialised documents bore the new logo, with paper documents modified as they were printed or updated. It should be noted that the logos for the extranet, Aliabase (liaison tools between all the actors in the sector), and Aliastocks (Aliapur's subsidiary responsible for associated missions) were also modified in spring.

JUST GIVE US TWO MINUTES...

Since 2013, Aliapur has made use of a corporate video to describe the journey of a tyre in the sector, from when it is collected from a garage to its second life, whatever that may be. With its English translation, it is a good thing that this video exists at all, as well as being easy to understand, and permanently topical. The video has been published in the video library on the Aliapur web site, along with around 40 other videos. It has also been uploaded, without hype, on to YouTube, where it has been viewed more than 100,000 times.

At the end of the year, Aliapur made a new corporate video, this time using "motion graphic design", that is, using animation and titling. In 2 minutes, the main stages in the processing of end-of-life tyres are retraced. Beyond the pedagogical benefits of this type of video, it also has the advantage of being flexible as it can quickly and easily be updated, in terms of both the images and the information they contain. In 2017, other motion graphic design videos will follow, notably to explain how tyres are shredded and granulated once collected by Aliapur.



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| REGULATORY NEWS |

ALIAPUR JOINS THE FRENCH NATIONAL WASTE COUNCIL

In November 2016, Aliapur's CEO Hervé Domas was appointed as a member of the French National Waste Council (FNWC). This consultative institution is competent in the field of waste and was created by the decree of 5 July 2001. For Aliapur, this is rewarding recognition of the actions carried out in the name of the tyre sector, such as the efforts for the responsible management and efficient processing of end-of-life tyres.

The National Waste Council can effectively be questioned by the Secretary of State responsible for the environment on any issue concerning waste, its production, its impact, the preventive methods for reducing its production, etc. It also gives its opinion on draft laws or regulations that have an impact in the field of waste, including transposing European law into French law. It can also, on its own initiative, study any question that it deems important in the field.

The CND is composed of 33 members appointed for three years by the Secretary of State. It brings together elected officials, representatives of professional organisations, environmental and consumer protection associations, State administrations, public establishments and qualified personalities. It is presided over by Gérard Miquel, the Senator-Mayor of the Lot *département*.





ALIAPUR in the regions for the NOTRe law

The driving force of the territorial reform is the law on the New territorial organisation of the Republic (NOTRe), which was enacted on 7 August 2015. As such, the regions in particular find themselves entrusted with a new skill, which was previously the remit of the départements: they must now draw up their regional plan for the prevention and management of waste (plan régional de prévention et de gestion des déchets, PRPGD), coupled with planning of this waste management over periods of six and twelve years.

As the regional plan includes a section devoted to the circular economy, it was at this level that Aliapur was contacted by all the new regions to accompany them in implementing this organisation and their technical work groups: Auvergne Rhône-Alpes, Normandy, Occitanie, and others, such as Brittany, Provence Alps Côte d'Azur, etc.

THE FIRST CHEATS PUNISHED BY THE STATE DEPARTMENT

The first sanctions were handed out on 14 January 2016. And they were sanctions that hit where it hurts: the wallet. After several prior warnings sent to the parties concerned but remaining without response, the State Department for the Environment effectively punished two distributor-importers who had introduced tyres on to the French market without paying the eco-tax. Although the exact amount of the fines remains confidential, they are at least several thousand Euros each and, above all, the cheaters have been informed that they must conform with the regulations, that is, declare the tyres that they put on to the market.

COLLECTIONS THAT INCREASE AGAIN

With 334,597 tonnes of tyres, from all categories, or the equivalent of 44.2 million passenger vehicle tyres, 2016 was once again a record year for collections of end-of-life tyres.

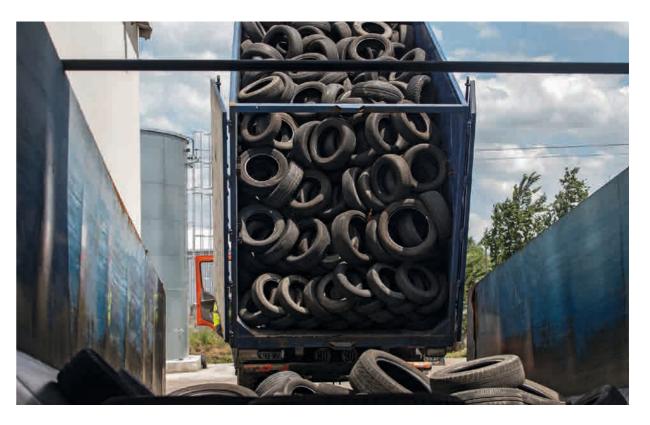
Of course, this record is the direct result of a dynamic tyre market, as shown in the declarations of tyres put on the market by Aliapur's historic clients, but is also in part the result of the work carried out in collaboration with the French State Department for the Environment and the Ademe to fight against dishonest people putting tyres on the market without declaring them. Aliapur thus noted in 2016 an increase in its number of clients thanks to the combined effects of educational approaches and coercive measures with fines sent by the State Department at the start of the year. There are

thus less and less tyres put on the market "illegally", that is, without having paid the eco-tax which makes it financially possible to process them once they reach the end of their life.

KEY FIGURE

1.24%

With excess collections of 4,106 tonnes in relation to orders placed by the clients who put tyres on the market in the sector (330,490 tonnes), Aliapur's 2016 objectives were perfectly attained in 2016 – and even exceeded, reaching 101,24%.



AN INCREASE IN NEW ACCOUNTS OPENED

This year, Aliapur received 6,800 requests to open an account from tyre professionals and car industry professional wanting to have their tyres collected by the sector – that makes 27 requests per business day! As a comparison, Aliapur "only" recorded 4,200 requests in 2015... Aliapur only fails to satisfy these requests in two very specific cases: if a professional buys tyres from a supplier that does not pay the eco-tax to the sector, or if the person making the request has been identified as not respecting the collection conditions (tyre sorting for unauthorised resale before handing tyres over to the collector, for example).

For those that were accepted, 57% of the accounts opened were the result of companies being created, and 10% were the result of professionals wanting to change sector and join Aliapur. The remaining 34% were in reality requests to re-open accounts. Professionals who do not make a request for end-of-life tyres to be collected for 14 consecutive months are considered as being inactive – and their account is automatically deactivated.

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|CALLS FOR TENDER | CALLS FOR TENDER |

27 COLLECTORS AND 12 TRANSFORMATION SITES FOR THE NEXT FOUR YEARS

The calls for tender to renew the contracts of the service providers for the collection, transformation and transport of end-of-life tyres mobilised the Aliapur teams a great deal in 2016. Five months before the procedure for transport contracts (see page 22), two other consultations were launched simultaneously in April for collectors and transformation sites. The candidates were asked to apply for the usual 3-year period but also, for the first time, for 4 years: this is a duration that, by definition, gives even greater visibility

in the future, making it possible to create even greater job security and investment, whilst also making economies of scale possible in the sector. On reading the applications, the principle of opting for 4-year contracts soon appeared to be the obvious choice. Thus, from 2017 to 2020, collections will be made by 27 service providers instead of 29 in the 2014-2016 period. Tyre transformations (preparation, shredding) will be carried out by 12 platforms instead of 11 at present.

02 HENRY **AUTO PNEU** 55 57 LE FEUVRIER CHRONO ROUTE BRETAGNE East zone TRANSPORTS CASSIER 71 RECYCLAGE 87 West zone 24 33 ALCYON 32 **EUREC SUD** 31 09 In hatched colors: departments having changed collector in January 1st, 2017

To accompany Aliapur in the rational, objective and pertinent decision-making process for its service providers, the consultants at BravoSolutions were once again appointed. These consultants were responsible for managing all the procedures through a dematerialised portal that was opened specifically for the occasion. As during previous calls for tender, it was the applications of the highest bidders that were retained, rather than those of the lowest.

Given the quality requirements which have evolved as the sector and the profession have matured, the companies were selected on the basis of several criteria: their technical capacities for treating volumes of tyres (as much for collections as for transformation), their logistics, their material organisation and their ability to adapt to an increasingly tense market. Above all, Aliapur took into account the human resources, and, in particular, the involvement of the companies in the professionalization and training of its operators. In practical terms, 18 départements will have changed collector on 01 January 2017: Ain (01), Hautes-Alpes (05), Ardèche (07), Aveyron (12), Côte-d'Or (21), Doubs (25), Gard (30), Indre (36), Jura (39), Loir-et-Cher (41), Lot (46), Lozère (48), Haute-Marne (52), Mayenne (53), Morbihan (56), Haute-Saône (70), Saône-et-Loire (71) and Var (83).

The services expected

For the collectors: position as the primary contact for holders of tyres and good knowledge of their area of activity, collections from holders of tyres (garages, car centres...), grouping together and sorting reusable tyres with a view to recycling them (sale and wholesale trade), optimising loads.

For the transformation sites: reception of end-oflife tyres (ELT), transformation using pre-defined specifications (whole tyres and shred), storage (whole tyres and shred) and optimisation of loads of products obtained from the transformation process. At the same time, the network of transformation sites will have one new operator: Granulatex, located in Haute-Savoie.



Allotment stimulated competition

562 possible batches were proposed in the collections call for tender. Allotment consists in coupling all the départements needing collections with their neighbouring départements. This principle made it possible to increase the number of offers submitted by the candidate companies, and to actively stimulate competition in all regions. Furthermore, this procedure guaranteed that all the companies were processed in an equal manner, regardless of their size, whether they were already service providers in the sector, or if they wished to join it.

KEY FIGURES

65 and 31

65 candidate companies downloaded the call for tender application form from the dedicated dematerialised platform, and 31 for the transformation call for tender.

TWO MEETINGS WITH THE SERVICE PROVIDERS

In January, as every year, Aliapur brought together all its service providers for a day devoted to operational, regulatory and legal information. The day also made it possible to review the results in terms of R&D, IT developments and, of course, the calls for tender for the sector's collection and transformation markets.

A second meeting was organised in November, this time bringing together the service providers retained for the 2017-2020 period. More than merely a chance for the newcomers to get to know the companies already used, it was also an opportunity to present the details of the contracts which now bind Aliapur and its service providers, as well as in the programmed evolution in the missions, in an ever-more demanding general economic context.

20 LACTIVITY REPORT **2016**

| CALLS FOR TENDER | OPTIMISATION |

2017-2018: 33 TRANSPORTERS FOR 340 LINES

Since 01 January 2014, transport has been the subject of independent calls for tender. In parallel to the renewal of the contracts for service providers in the collection and transformation of end-of-life tyres, Aliapur launched a call for tender for the "Road transport of end-of-life tyres (whole or shred)". The start date for the mission has been set at 01 January 2017, with a contractual duration of 24 months.

For this period, transport concerns 340 lines between 27 dispatch sites and 61 delivery sites, for an annual volume of 335,000 tonnes of whole or shredded tyres. These journeys have been optimised in order to limit CO2 emissions and empty returns for the vehicles. The lines cover all of mainland France and a part of Europe, for a budget of around € 7 million per year, for two years.

Great variety in the types of company

The 2017-2018 service providers must guarantee the transport, delivery, follow-up and traceability of the tyres transported, as well as management of schedules, the positioning of the vehicles and their weighing, both empty and loaded. As for the collection and transformation service providers, Aliapur opened a dematerialised portal devoted to this call for tender, allowing the candidate companies to submit their applications online. Once again, the offers retained were the highest bids (and not the lowest), for obvious

reasons of optimising transport at the best price, with priority given to quality of service.

What was revealed by this call for tender was that, of the 33 companies retained, 29 were already Aliapur service providers and just 4 were newcomers. There was great variety in the types of company: national actors or groups; regional companies renowned for their level of service; SMEs capable of providing a made-for-measure service for product flows that are as specific as those of whole or shredded tyres, and finally, service providers already present in the collection and transformation sectors, but with a transport activity in parallel.

It should be noted that the decision to limit these calls for tender to two years (instead of four for tyre collections and transformation) can essentially be explained by the potentially rapid evolution in transport flow and, for tyre shred, the receiving recyclers. For Aliapur, it is also the guarantee that cost efficiency is preserved, whilst having the assurance of working with service providers who know how to maintain the quality of service at the level required.

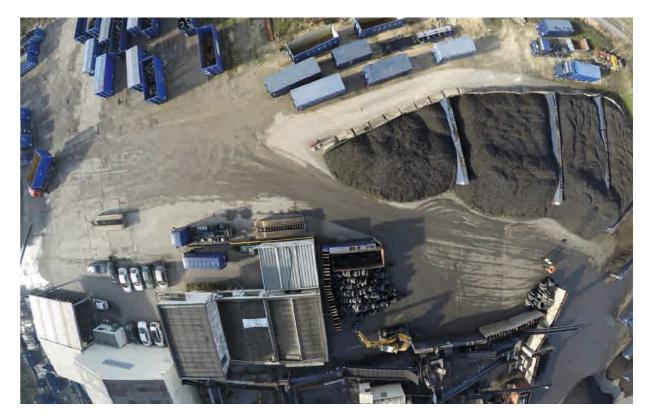
KEY FIGURE

105

...companies responded to the 2017-2018 transport call for tender on the specially dedicated dematerialised portal



DRONE TESTS FOR STOCK INVENTORIES



Stock inventories for whole tyres and shred remaining on transformation sites at the end of the year is a task that is obligatory every year. It is used to compare the volumes physically present on the premises of the service providers with the data recorded in Aliapur's computer databases.

Until 2014, the inventories were made by weighing all the stocks. This procedure, which was essential for obtaining reliable data, was as long to perform as it was fastidious. Above all, it obliged a truck driver to be available for one or two days on every site, also resulting in the subsequent CO₂ emissions from the vehicle used for the great many weighing operations.

First laser inventories...

In 2015, Aliapur contacted the certification organisation, SGS, and conducted experiments with laser inventories, capable of recovering each stock in 3D and thus calculate the volume with incredible precision. This meant an end to moving mountains of shred and tyres with trucks; from the top of a nacelle attached on high to the side or even directly over each stock, calculating cubic volume by laser made the operation considerably easier and saved a large amount of time. From one to two days, inventories took no more than half a day at most.

In 2016, SGS suggested to Aliapur that they move on, replacing the nacelle with a drone. In practical terms, the only thing that hinders a drone is poor weather: high winds, heavy rain, fog. The test was carried out in perfect weather conditions in December on the premises of Alcyon, a collection and transformation service provider located near Bordeaux.

...then aerial imaging techniques

As aerial imaging techniques provide unequalled precision, the drone recorded perfectly reliable data, without interrupting the activity on the site. Better still, there is no longer any need to move a nacelle over each storage area: the drone is piloted by a single operator with video feedback, and is capable of simultaneously analysing all the tyre and shred stocks present on the site in the course of a single session. The entire operation takes less than an hour, preparing the drone and camera included. Even the final data processing stage has been optimised as they were recovered in their definitive form 4 hours after the flight.

Aliapur plans to make stock volume calculations using drones general practice for all its service providers from 2017.

| RECOVERY COMPANIES |

RECOGNISING THE QUALITY OF SERVICE AND OF THE PRODUCTS

From July to November, the sudden termination of deliveries of shred to the Moroccan cement industry obliged Aliapur to redirect part of the shred flow initially destined for Morocco, and to find new outlets. This is where the recycling method diversification policy conducted by the company, and in particular for export, took on all its meaning.

Of the contracts signed in 2016 with new partners, certain destinations are as far away as they are unexpected. This confirms not only that the quality of the shred from the sector has been validated at the international level, but also that Aliapur and its service providers know how to be reactive without having an impact on the quality of either the service provided, or the products delivered.

For the most distant destinations, Aliapur signed a contract in Japan with a major manufacturer of television screens in need of alternative fuel sources to supply its production equipment. This manufacturer wanted to conduct tests with French tyre shred, prepared in particular formats. The sector has also signed an important agreement to send bales of tyres to granulators in India and shred to cement works in Pakistan. A little closer to home, Aliapur has signed a contract to send shred for the cement industry in Turkey.

It should be noted that these recyclers all wanted to pass long duration agreements, with growing volumes over the duration of the contract.

In Europe, the sector has intensified its presence in Spain as Aliapur delivers whole tyres to the granulator GMN, and has also signed contracts with two cement works, Cemento Lemona and Fym Anorga, to send small-sized tyre shred. Finally, Aliapur delivers shred to the Portuguese cement works, Avecimport.



EXPORTS DOWN, BUT WITH MORE DESTINATIONS



With 100,202 tonnes dispatched, or the equivalent of 13.2 million passenger vehicle tyres, exports were down 25% in 2016 in relation to 2015.

In July, following a decision by the country's State Department for the Environment, Morocco brought an abrupt end to imports of waste to be used as an alternative fuel source by the local cement industry. This decision affected all of Europe.

Transferring the product flow

The quality of the tyre shred sent by Aliapur since 2004 is not in question, but the French sector paid the price for this unilateral decision and the situation remained deadlocked until November. Above all, as Morocco was the largest consumer of exported French shred, the product flow had to be transferred to a new destination without delay (see facing page). Spain, Portugal, India, Japan, Turkey and Pakistan have thus become the new destinations for "made in France" shred.

The truth remains, though, that although the 34,000 tonnes in 2016 represent only half, more or less, of the annual volumes sent to Morocco in recent years, Aliapur

has maintained sea-river transport as its top priority: almost 10,000 tonnes of tyre shred have been loaded on to barges capable of sailing on both rivers and the sea. The sector effectively decided to use this hybrid transport method since the start of its operations in 2004. The company has used these methods whenever possible, with the aim of limiting the circulation of heavy goods trucks on often very busy main roads, and thus also avoid their corresponding CO₂ emissions.

This year, 3,000 tonnes have thus been sent to Morocco from the river port of Salaise-sur-Sanne, on the banks of the Rhone (south of Lyon), and almost 7,000 tonnes from Saint-Aubin, a river port on the Seine to the east of Rouen. Overall, this represents savings of 300 heavy goods trucks.

KEY FIGURE

336

...ships loaded with end-of-life tyres shred have been sent out by Aliapur since 2004, for all destinations.

ASSOCIATED MISSIONS ASSOCIATED MISSIONS

VIRTUOUS RECYCLING OF SILAGE TYRES



In 2002, the sector's founding decree considered silage tyres, which are very common in the agricultural industry, as a recycling method in their own right. These large numbers of tyres had for a long time simply been used to cover the tarpaulins under which animal fodder was placed, weighing it down to limit the amount of air let in and thus improve conservation.

Since 01 October 2015, French regulations concerning the management of end-of-life tyres have changed: farmers are no longer considered as recyclers and are encouraged to adopt alternative techniques to replace tyres.

The support of the chambers of agriculture

In this context, they are obliged to recycle the often very old tyres that are covering their silos. However, even with the best will in the world, the cost of this is sometimes very high. To minimise the costs while still being in conformity with the regulations, farmers have turned to their local Chamber of Agriculture. These organisations make an inventory of the volumes to be collected and contribute financially to their processing.

In this field, Aliapur has no desire to intervene directly: it is quite simply not part of its mission. On the other hand, the company is perfectly familiar with the specificities of all types of tyre, their characteristics and, for each type,

the best adapted recycling methods. Above all, within the Aliapur network, there are recyclers capable of taking them and recycling them. For this reason, Aliapur lets its subsidiary, Aliastocks, intervene.

3,000 tonnes in the Rhône département

In 2015, Aliastocks won a call for tender launched by the Rhone département's Chamber of Agriculture for the processing of 3,000 tonnes of silage tyres whilst respecting environmental requirements. Aliastocks was the pilot for this operation, execution of which was entrusted to the company Eurec Environnement. Eurec placed skips in certain farms, and they were used as collection points where farmers could dispose of their own tyres. Of course, the tyres had to be rimless and free of any waste that could hinder their recycling (dried mud, gravel, oil, etc.).

In 2016, 1,686 tonnes (the equivalent of more than 200,000 passenger vehicle tyres) were collected in this way in the regions of the Pays de l'Arbresle, the Vallons du Lyonnais, the Pays Mormantais, East Lyon and the Pays de l'Ozon. The tyres were recycled as an alternative fuel source for cement works. This action will continue in 2017 up to the total of 3,000 tyres stipulated in the contract. But on the strength of this experience, Aliastocks will position itself in the future in other call for tender processes from other Chambers of Agriculture.

KEY FIGURE

260

...farms in the Rhone département disposed of their tyres in the collection points made available by Aliastocks and its service provider, Eurec Environnement.



SOUILLAC: RECYVALOR IN ACTION

The association Recyvalor was created in 2008 to ensure the evacuation and recycling of more than 11 million tyres identified on 61 sites in France. Since 2012, the association has worked on the site in Lachapelle-Auzac (Lot département), the so-called "Souillac site", to eliminate the largest historic stock of end-of-life tyres in the country. Following a call for tender, the mission was entrusted to the company Alcyon, and the work at the Souillac site started with the removal of 1,443 tonnes of tyres in the first year, then 3,501 tonnes in 2013, in collaboration with the State and the Town Hall of Lachapelle-Auzac. In 2014, the site was temporarily suspended as Recyvalor's actions were focused elsewhere and the budget could not be extended. Things started up again in 2015, with the removal of 4,329 tonnes, and continued in 2016, with 4,715 tonnes. Altogether, 14,000 tonnes have been removed, or the equivalent of more than 1.8 million passenger vehicle tyres. But the real question mark in Souillac is the veritable extent of the stock: 25,000 tonnes? More than that? Or at least 3 million tyres in total, and almost certainly more. Despite state-of-the-art measurement tools, it has been nearly impossible to estimate the cubic volume of the site. As the tyres are removed, the nature of the land becomes visible:

where it was believed to be more or less flat, it is found to in fact contain sinkholes, that is, huge holes into which many more tyres than originally estimated have been crammed. Recyvalor nevertheless hopes to finish the Souillac site in 2017

Given their age and condition, 95% of the tyres evacuated in 2016 were processed in energy recovery as an alternative fuel source for cement works. The remaining 5% were divided between public works and recycling in geotechnics (filling quarries at the end of their useful life).

Two other sites

Excluding Souillac, two others sites were processed in 2016: one that was almost symbolic given the modest size it represented (159 tonnes, or 20,000 tyres), situated in Cuges-les-Pins (Bouches du Rhone *département*). The other was in Le Noyer (Cher *département*), from which the 1,900 tonnes (250,000 tyres) were removed between August and December by the company Gilles Henry. The two service providers were retained following a call for tender. The tyres obtained from these two stocks were recycled in their entirety in cement works.





ELV: A STABLE YEAR

With total collections of 5,195 tonnes, or more than 680,000 passenger vehicle tyres, 2016 was a stable year in terms of collections of end-of-life tyres from end-of-life vehicles from the 261 ELV centres. For this mission, Aliapur turned to its subsidiary, Aliastocks, which has built up loyalty from the car manufacturers on behalf of whom it makes collections: the GVF group (Volkswagen, Audi, Seat, Skoda...), Suzuki, Honda and Porsche. On the other hand, we observed a further decrease in the recycling rate for tyres that can be resold on the second-hand market — down to 5.4% last year. This figure has never been this low before, essentially because of the aggressive disassembly methods used, and which damage the casings.



|PROJECTS|

STATE OF PROGRESS OF R&D PROGRAMMES



Research

Surface treatment

Biotechnologies applied to granulate

Fire behaviour of materials

Powder - asphalt interaction

Filtration of wastewater

Characterisation / Micronisation

Evaluation of the nanoparticles present in ELT

Expertise in the products

obtained from pyrolysis

Production of polyurethane-based end of life tires

Analysis of PAHs

Sorting optimization ELT

Aliapur Innovation

Exploration of the approach open innovation

Characterisation / Standardisation / Leaving waste status

Development

Odours

Noise barrier

Sustainability of performances Granulate in turf

Procedure for generating high-yield powder

Granulate / powder

in acoustic insulation

Molded parts formulation

Conception of ELT-based seal for pavement

Granulate in steelworks

Environment and Sustainable Development

Industrialisation

Physical and chemical characterisation of shred

Physical and chemical characterisation of granulate

Physical and chemical characterisation of textile fibres

Physical and chemical characterisation of wire

Physical and chemical characterisation of powder

Cement composites

Thermoplastic composites made from granulate

Diffusion/deployment

Granulate in equestrian floors

Visiopur cabin

Shred in foundries and steelworks

Whole tyres in the rehabilitation of quarries

Environnemental harmlessness of granulatein synthetic turf

Surfaces for athletics tracks

LCA for 9 recovery methods

Inorganic rates in ELT

Biomass of ELT

Positioning ELT as a fuel source

Recycling wire in steelworks

Market research for granulate in Europe

Mosquito filters

Market study of granulates - sports ground application

Fitness and urban sport floor covering

Coating grounds fitness

Publication of Technical Data Sheets for granulate

TYRE POWDER IN PLASTICS: A REAL POSSIBILITY

As part of the company's constant research for new recycling solutions, Aliapur has committed itself to a development method for compounds that include tyre powder in plastic bases. These compounds must be usable directly, that is, as a raw material. The project was started in October and is scheduled to last 30 months. It brings together GénéomaT, a management consultant specialising in R&D and industrial trials of new materials, and the company Spherex, which manufactures "master-batch additives", that is, the association and formulation of different chemical substances with basic resins (polyethylene, polypropylene, polystyrene...).

Ready-to-use mixtures

Called InPPURPlast, for "Integration of recycled endof-life tyre powder into plastics", this research project was selected by the Ademe (the French environmental and energy control agency) as it is eligible for partial funding

In practical terms, it is a question of finding industrial openings for tyre powder by including them in the plastic dies so as to offer industrialists ready-to-use mixtures that can be used on hot-forming tools: injection, extrusion, rotomoulding, thermoforming, etc. The initial trials in the fields of injection and extrusion have already been carried out by GénéomaT in both laboratory and production conditions. These tests made it possible to highlight the feasibility of the concept, which is obviously a very good sign for the continuation of the project.

Resolve a few issues

At the same time, however, a few technical and technicoeconomic constraints have also appeared, and it will be necessary to resolve these issues in order to be able to ultimately propose high performance products that are, above all, financially competitive. The first constraint is the odour that can be emitted when hot-forming a compound containing tyre powder. This odour is liable to persist in the finished product. Next, there is the natural incompatibility of certain materials with each other, such as for example thermosetting elastomers and thermoplastic polymers. This requires

KEY FIGURE



...of the total, this is the potential amount of funding from the Ademe for the InPPURPlast project. the addition of specific additives to the final product, making the process more complex and increases the production costs. Finally, it is necessary to take into account and study both the flammability and the durability of the compound (earth, water, sun, etc.), as well as its possible environmental impact in case of direct contact.

Once these issues have been resolved, the three partners hope to be able to offer industrialists a range of blends that are ready for immediate use. Ultimately, it is also a question of proposing compounds that are made-to-measure in relation to the final applications.



3D READING OF TYRES

The project was implemented by Aliapur and Archipel in the course of the year with an ambitious aim: to find an automated method for "reading" end-of-life tyres as they move along the sorting belts used by collectors. This would make the work of sorting operators much easier.

Initially, this project consisted in identifying the different techniques for reading the markings on tyre sidewalls. Secondly, it involved conducting tests to compare the various results on the basis of several criteria: how easy the technique is to implement, its reliability, and its overall cost.

The study revealed the feasibility of 3D acquisition of the markings on tyre sidewalls. But their specificity, and particularly the fact that the information to be read on the tyre is the same colour as the tyre itself, will nevertheless require IT development to manage the 3D acquisition, analysis and image processing, particularly to recognise the characters, logos and symbols.

Aliapur hopes that the 3D reading project will come to fruition in the course of 2018.

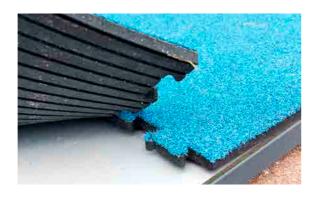
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|INDUSTRIALISATION| | NDUSTRIALISATION|

KEEP IN SHAPE WITH TYRE RUBBER BENEATH YOUR FEET

Obviously, Sébastien Chabal does not need presenting. Although the former French rugby player is still one of the most popular personalities in France, the not-yet-forty retired player has now been working on his professional reconversion for several years, but has not abandoned sport. On the contrary, he is even behind the importation into France of a concept that was first developed in the United States: urban nomad sports grounds. For their creation, Sébastien Chabal turned to Aliapur which, in partnership with the company BA Loisirs, took charge of the sports surface, designed with tyre granulate.

The principle behind these compact sports grounds, designed to be installed in outdoor areas, is simple: 7 fitness areas, including 6 with equipment, for 7 movements in 7 minutes. The exercises have been developed for everyone, from teenagers to the elderly, regardless of their normal level of sport. In fact, everything depends on the movements chosen on each piece of equipment and the degree of intensity of the activity. Amateurs can keep in shape, whilst more accomplished sportsmen and women have everything they need to work out more intensely. On offer: core muscle strengthening, squats, leg presses, lunges, pull downs, agility, and spinal/abdominal exercises.



In practical terms, there are two versions of this outdoor structure. The first is a nomad version measuring 45 m² that is easy to transport. The second is a permanent version measuring 100 m² that can be integrated into public or private sports facilities in a durable manner. The nomad version was developed first: it toured the Côte d'Azur and Ile-de-France in the summer of 2016, which made it possible to confirm the enthusiasm of athletes for the concept and the comfort of use, as well as the advantages for potential buyers (either municipal groups or private clubs).

For this project, Aliapur went into partnership with the company BA Loisirs (Bioret group), which is already a



recycler in the sector as Bioret designs surfaces for the comfort of agricultural animals. BA Loisirs uses tyre rubber to manufacture tiles that are 2 cm thick, 1.20 m long and 60 cm wide. These tiles are shaped like jigsaw puzzle pieces. The idea was to design a surface that could be installed and put away easily by just one person. Not only do the tiles fit together easily, but the principle of the jigsaw puzzle means that the finished product is resistant to continual use. Given all these constraints, tyre granulate is the ideal compromise: its rubber is resistant, regardless of the intensity of the activity, and

it retains the shock absorption flexibility necessary for users. A thin layer of synthetic fibre covers the product to give it the blue colour chosen by Sébastien Chabal. In principle, 25 grounds could be marketed as early as 2017.

KEY FIGURE



...weeks, no more. This is the time it took for the highly reactive BA Loisirs to imagine and design this sports ground made from tyre granulate.

A TROPHY FOR INNOVATION FOR ALIAPUR AND AEDES

Zika, dengue, yellow fever, chikungunya... These major epidemics transmitted by mosquitoes are understandably an important source of worry for the general public as at present there is no radical treatment available. However, an innovative solution that is easy to implement was first noticed a certain time ago. This solution is called Aglostic, and was developed by a company from New Caledonia, Aedes System. Aliapur accompanied the development of this product until it was awarded, in November in Grenoble, on behalf of both companies, the Bref Eco Innovation Trophy in the category for Town planning innovation and sustainable construction.

99 % effective

Aliapur devotes a significant part of its budget to industrial research and supporting innovative projects. The programmes supported must be ecologically irreproachable, be innovative in their nature, and generate real added value. In light of this, Aedes System, which has been working since 2013 on an innovative system that aims to prevent mosquitoes from breeding, contacted Aliapur. It took three years of research to arrive at the filter, Aglostic. This filter provides a response that is 99 % effective with regard to the problem of breeding grounds, and thus the proliferation of the mosquitoes. Aglostic is made from 88 % of rubber obtained from end-of-life tyres. It is installed in gutters, traps and even flower boxes.

Thanks to the studies piloted and financed in mainland France by Aliapur, which is perfectly familiar with the intrinsic qualities of tyre rubber, the gum agglomerate, size of the granulate and degree of flexibility of the filter have been calibrated to allow the rain water to pass through without any difficulty whilst blocking the mosquitoes which thus no longer have access to the stagnant water in which they lay their eggs. The design of the filter was conceived to present a certain roughness on the surface, preventing the wet leaves from sticking and blocking the evacuation of the water. Above all, once installed, Aglostic does not require any maintenance and is highly resistant to both time and the elements.



Jean Philippe Faure, Directeur R&D d'Aliapur, a reçu le Trophée Bref 2016 au nom d'Aedes et d'Aliapur, remis par Alban Dumont (Cabinet Germain Moreau)

TWO LICENSING AGREEMENTS AND A PRODUCTIVE TRADE FAIR

The economic model adopted by the company Aedes System is based on issuing business licences accompanied by the transfer of the technology and expertise. Two licensing agreements for Aglostic were signed in 2016, one in Guadeloupe and Martinique with a Caribbean industrialist, the other for mainland France and Reunion Island, with a company from Burgundy.

Between 16 and 18 November in Paris, Aedes System also participated in an international trade fair on the fight against pests, Parasitec, where Aglostic stood out particularly well. This is perfectly logical, as it is the only anti-mosquito solution available that does not contain any chemical products.

|MARKETS|

SYNTHETIC TURF: STILL A SAFE SOLUTION...

The distrust of sports grounds equipped with synthetic turf is a long-running story that keeps cropping up in public opinion. Yet, in the last fifteen years or so, sports grounds filled with tyre granulate have successfully completed natural grounds: they do not freeze in winter, do not dry out in summer, require little maintenance (no mowing, no fertilisers, no plant protection products,...), remove the need for watering, and make possible game play sensations that are almost identical to those of natural turf. Synthetic turf can be used on average around fifty hours a week, versus 6 to 10 hours in general for natural turf which is, by nature, more fragile. In France, many football and rugby clubs are equipped with synthetic turf, whether for their main ground or their training ground. This is the case, for example, for French teams such as Olympique Lyonnais, Olympique de Marseille, FC Nantes or PSG – and even the French national football centre in Clairefontaine, or the French national rugby centre in Marcoussis. We believe that in addition to this, there are more than 60 grounds accredited every year by authorities such as FIFA, the



KEY FIGURE

13 000

...synthetic football pitches have been installed in Europe since FFF (French football federation) or the FFR (French rugby federation).

For more than a decade, Aliapur has tested, evaluated, analysed and carefully characterised the granulate obtained from the end-of-life tyres collected by the sector and which is used to fill synthetic sports grounds. From a health and environment point of view, the result is that the rubber from the tyres collected by the Aliapur sector is strictly conform with respect to the latest regulations – and thus the strictest, as the regulations become more severe every year.

For the sporting performances of the product, it appears that this rubber corresponds in every way to French and European standards. In fact, granulate even goes further as it also satisfies the even stricter requirements of FIFA in terms of flexibility, bounce, shock absorption and energy return. The tyre rubber used in synthetic turf thus shows that it has retained all its intrinsic qualities, thus making intensive multi-sport activities possible, by both professionals and amateurs, whilst resisting rain and humidity perfectly.

A new European study

In addition, in 2016, the ETRMA decided to launch a new study of the impact on human health and the environment of the granulate used to fill the turf, in order to respond to the questions raised, this time, in the Netherlands. The ETRMA is an association that represents tyre manufacturers and the manufacturers of technical rubber parts at the European and international level. This study echoes an initial audit carried out on the same subject by the ECHA (European Chemical Agency). The analysis made by this reference organisation in Europe on chemical risks concluded that there are very low risks for users of sports surfaces, even children. This conclusion once again shows just how relevant using this type of material is for play areas. It goes without saying that Aliapur, which has been deeply involved in the ETRMA work group, will use all the means at its disposal to answer any other questions from the ECHA.

SPOTLIGHT ON SPORTS SURFACES

In parallel to the studies carried out at the European level, and accompanied by the consultants Nova 7, Aliapur was looking for a more exhaustive vision of use of tyre granulate in sports surfaces. The main industrialists in the sector were questioned. What we learned was that this market is both mature and of significant size, but it is also stable, even in terms of price. In exchange for this stability, there is little prospect for growth.

CONSTRUCTION: NEW MARKETS TO CONQUER

In the autumn, Aliapur appointed the consultants Julien Lebourgeois, a company that specialises in the construction industry, to identify the recycling methods in which the use of recycled rubber, as either a raw material or a by-product, could be relevant and an advantageous replacement for manufactured raw materials.

This study focused on three categories of application: those that exist already in France and deserve to be supported and communicated; those that exist abroad and that could be used in France; and finally, applications that do not exist yet but which could be imagined and developed. For the study, the consultants Lebourgeois carried out 42 interviews, studied around twenty existing applications, and performed an almost exhaustive bibliographical search: Aliapur now has not only a very realistic image of the state of the art, but also has promising directions for the future.

Sound-proofing, insulation and seals

Generally speaking, in the course of this study it was shown that the properties and qualities of tyre rubber in granulate form are still widely unknown in the construction industry, both in terms of forms and durability, and at the level of its performances in reduction and acoustics. However, granulate is a material that is easy to combine with concrete, cement and even wood, which has made it possible to identify applications likely to be developed at a very large scale: for example, underlays and acoustic barriers (sound-proofing), uncoupling parts (seals) and flowing screeds for mortars (insulation). The feasibility of these applications must of course be studied in greater depth, which will involve significant investments in R&D, and associations with industrialists keen to test new products in the construction industry.

Finally, it should be noted that other applications have also been identified for their advantages, but current knowledge is insufficient, making it impossible to evaluate their potential with any precision. This is the case for tile or supports for equipment (such as photovoltaic panels or air conditioning units), for example. Aliapur continues to monitor these subjects actively.





SEALS FOR PUBLIC WORKS MADE FROM TYRES

Industrialists in the public works sector are regularly confronted with the problem of seals cracking in civil engineering sites, paving and natural stone slabs. Perhaps tyre rubber is the solution... Aliapur is convinced that this solution deserves to be explored further, and has thus joined forces with a laboratory, Neoformula, which has expertise in the formulation of products for construction and industry, and two industrialists: Roccatech, which manufactures through subcontracting products destined for public works; and the company TP Maia Sonnier (civil engineering and town planning).

Since September 2016, they have all been working on a common R&D project, with the aim of developing a formula for a flexible jointing compound for slabs, made from tyre powder, in the field of construction. It is necessary to characterise the materials used, optimise and improve the formulae and, naturally, test them.

If the initial results are conclusive, a second stage will consist of carrying out full-scale pilot tests with a view to industrial production. This project has been scheduled to last 9 months.

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DIRECTORY

392 CLIENTS IN 2016

Aliapur's clients are companies concerned by the end-of-life period of the tyres that they put on to the French market. For this reason, they mandate Aliapur to fulfill their obligations for collecting and reprocessing the tonnages of used tyres equivalent to their sales in the preceding year.

MANUFACTURERS

APOLLO VREDESTEIN FRANCE
BRIDGESTONE
BRIDGESTONE EUROPE
CAMOPLAST SOLIDEAL FRANCE
CONTINENTAL
COOPER TIRE & RUBBER COMPANY
FRANCE
GOODYEAR DUNLOP TIRES FRANCE
HANKOOK
KUMHO TIRE FRANCE
MICHELIN
MITAS
NOKIAN TYRES

PIRELLI WEB SITES

1001 PNEUS ALLO PNEUS CLASSIC ONWAY DELTICOM AG EASY 4D GETTYGO GOEGGEL FRANCE IHLE **ISONDO** LAJANTE,FR **OXYO PNEUS** PNEU WYZ PNEUMACLIC.COM **PNEUMARKET** TOOPNEUS **TYREDATING** TYRES IN STOCK FRANCE VAN DEN BAN GROUP VO TECH

DISTRIBUTORS OF TYRES

AB SERVE AB SERVE INDUSTRIES **ACTION PNEUS** AD HOC PNEU AGRI PNEUS ALEXANDRE SAYER AUTOMOBILES ALFA PNEUS ALLIANCE AUTOMOBILES ALLO CASSE AUTO ALLO OCCASE ALSACE PNEUS ET SERVICES AMBITION AUTOMOBILES **AMERICARS** AMUNDO ANDELLE PNEUS ANDRIEU AUTOMOBILES ANNEMASSE PNEUS BIS

ARGO FRANCE AS2G ATELIER ESPACE AUTO ATLANTIC PNEUS AUCHAN AUTO AGI AUTO CASSE FERRARI AUTO CENTRE PONTIVY AUTO GARAGE MEC'ADDU AUTO IMPORT SCHOEN AUTO INTER EUROPE AUTO LOOK PERFECT AUTO PRO TECH **AUTO SECURITE AUTO SERVICES EXPRESS AUTO SERVICES SEGREEN** AUTOCAR CORSE MEDITERANNEE **AUTODISPRO AUTOREPARE** AUTOSTICK AVENIR AUTO MARMANDE **AVENUE AUTO** AVIGNON MOTO CASSE AYE NEGOCE BEAUVOIS AUTOMOBILES BERTRAND PNEUS BERTRAND PNEUS CHAMPAGNE BIHR BM PNEUS SERVICE BMW GROUP FRANCE **BOLLON PNEUS** BONNOT 2000 BONY AUTOMOBILES SODAVI **BOULAY AUTO PIECES BOURGUEIL PNEUS BOUSSEL AUTOMOBILES** BR EXPORT PNEUS RAFFIN **BRESSOLS AUTO BRIARE PNEUS** BRP EUROPE NV **BRUNEL PNEUS** CAILLEAU PNEUS CARROSSERIE ALBALAT CARTIER PNEU CASH AND CARRY CASH AUTOS SERVICES CASSE AUTO LANNEVAL **CBS PNEUMATIQUE** CDS PNEUS CENTRAL PNEUMATIQUES CENTRE AUTO LOUDEAC CENTRE DU PNEU CENTRE DU PNEU D'OCCASION CENTRE FA AUTO

CHALLANS PNEUS

CHAMALAU PNEUS

CHATRAS PNEUS

CHAUMONT POIDS LOURDS CHEVILLARD AGRI CHOLET PNEUS **CHOUTEAU PNEUS** CLASSIC CAR CHAROLAIS CLINIC AUTO **CLOBER COFIRHAD** COMPTOIR AVEYRONNAIS COPADEX **CORSE PNEUS** COURILLEAU PNFUS COURILLEAU PNEUS NIORT **CREPY PNEUS** CRISTAL AUTO CS DISTRI DA PONTE DATCH DISTRIBUTION **DELIT PNEUS** DG AUTO CENTER **DICRIS** DIMOFF PNEUS SERVICE DISALCO MOTORS FRANCE DISTRICASH DPM PROGARDEN DRAG'ON DUCATI WEST EUROPE DUJARDIN E-MOTORS **EQUIPNEU** ERIC FOUCHERAND STATION MOBILE RIC'AUTO ERRIC ESCANDE PNEUS
ESPACE AUTOMOBILES AUVERGNE **ESPACE PIECES AUTO ESTPNEUS** ETS DUPRAY BERTRAND ETS MORA **EURO PNEU IMPORT** EUROGARAGE EUROMASTER **EUROPNEUS EVOBUS FRANCE** FAVOPNEU FEDIMA TYRES FEU VERT FK CAR STYLING FONTAINE DISTRIBUTION AUTOMOBILE FORREZ INTERNATIONAL FRANCE POIDS LOURDS FRONTONI AUTOMOBILES G+ SERVICES

GADEST

GASTOU PNEU

GGF 2 SOUZA

GGE AMAND GGE CAFFON BOILEAU GGE CHRISTOPHE GGE CLDA **GGE CONTANT** GGE D4 GGE DE LA MULATIERE GGE DELOMMEZ GGE DEMAY CHRISTIAN GGE DES DOLMENS GGE DES PRAS GGE DILLMAN GGE DU GRAND LAUNAY GGE DU MOULIN GGE DU MOUTIER GGE DU PETIT PONT GGE DUCHAMP GGE DUCLOS GGE ESCH GGE FABRIS **GGE FENEIS** GGE FREDDY FASTER GGE GELLEE GGE GRAND JACQUES GGE GUITARE OPEL GGE GUN57 GGE HEMMER SARL GGE JSA GGE LENTIN GGE LESAULNIER GGE MADEC GGE MOBILE RIGAUD GGE MOREU GGE NAYROLLES GGE NOMINE DENIS ET FILS GGE POUJOL GGE PRADES ET PLAN GGE PUJOL GGE SCHIEBEL GGE SCHLESSER GGE SCHNEIDER GGE STOETSEL GGE YANN MORVAN GOMAX GOUPIL AUTO GPA **GPVO** GRAND GARAGE PARIS LYON GROUPE MP SA (MASSA) GT ENTRETIEN HANAU PIÈCES AUTO HARLEY DAVIDSON FRANCE HAUT ANJOU PNEUS HEBERT DOMINIQUE HENNETTE PNEUS HOLDING SIMON HONDA MOTOR EUROPE HT DIFFUSION HUTCHINSON HYPERPNEUS **IBOS PNEUS** INEO SUPPORT GLOBAL ISEKI FRANCE IVECO FRANCE JAP DISTRIBUTION JBN IMPACT AUTO JC BONNET JEAN LAIN AUTOMOBILES CHAMBERY JEAN LAIN AUTOMOBILES SEYNOD JEANDOT PNEUS JMD PNEUS JP PEDRON JS PNEUS JUMBO PNEUS

KANAIR KAWASAKI MOTORS EUROPE NV KEIYAMA TYRES KERYADO PNEU KIKOPNEUS KING JUMBO MILORD KISS AUTOMOBILES KRAMP FRANCE KUSTOM STORE KVERNELAND GROUP FRANCE LA CLINIQUE DU PNEU LADOUGNE LALLEMAND PNEUS LALLY PNEUS LALOYER PNEUS LANDRAU ECOPIECES LD AUTO SERVICES LDI LUBERON LEMKEN FRANCE LENORMANT SAS LIBOURNE PNEUS SERVICES LITTORAL PNEUS SERVICES LM CONCEPT MAD VENTE MAISA 37 MAISON DU PNEU GRAY MAISON DU PNEU MARIOTTE MAISON DU PNEU PONTARLIER MAN TRUCK & BUS FRANCE MANITOU MARCEL FRANCE MECANO GALVA MATEQUIP MD AUTOS MECAPNEUS SERVICES MERCEDES BENZ FRANCE **METIFIOT** METZ PNEUS MG PNEUS MICHEL MALLARD ETAPE AUTO MIDI PNEU HN MISTRANGEL O PNEUS MONDIAL PNEUMATIQUES EUROTYRE MONFROY MONCHY MONT BLANC PNEUS MORACO MOTANA SAS MSD NANTES EQUIP'AUTO NICOLAS RIZK NIPPON PIECES SERVICES NORD EST PNEUMATIQUES ORLEANS PNEUMATIQUES OZEN AUTO PACIFIC AUTO PARAY PNEU PARIS SERVICES V.I. PENGLAOU PNEUS PERIGORD PNEUS PEUGEOT DELMAS PEUGEOT MOTOCYLES PICAUD PNEUS PLANAS PNEUS PLANETE PNEUS PNEUS BAIE DE SEINE PNEUS EXPRESS PNEUS KRUPP FRANCE **PNEUS LEGROS** PNEUS OSTERSTOCK POIDS LOURDS 86 POINT PNEUS GUERIDO POINT S FRANCE POINT S PNEUS ET ENTRETIENS PROMOPNEU MARIOTTE **PYRAME**

RC MECA

RENAULT LOUIS GRASSER

RENAULT TRUCKS FRANCE

RENAULT RONCOLATO

RENAULT WIETRICH RF AUTO PIECES ROADY ROCADE SUD AUTOMOBILE **ROMAGNAT PNEUS** RONAL FRANCE ROUEN AUTOMOBILES RS CAR DESIGN **RUTOWSKTI MATHIEU** SAINT FLORENT PNEU SAME DEUTZ FAHR SARAN PNEU SARL DU PNEU SARRE UNION SASU MECA PNEUS SCAPAUTO SCPI - SIFAM TRADING SELF PNEUS SERVIPNEU SHOWROOM AUTOMOBILES SIDAN SIMA SIPAN SIRPLAI ROADY SLPA SOBEDI SOCABA INTERMARCHÉ SOCIÉTÉ NOUVELLE PNEUS MULTI **SERVICES** SODIPNEU RACING SODIP-PNEUMALIN SOFAY SOLOGNE PNEUS SOMTP CENTRE SOMTP NORMANDIE SOMTP OUEST SONODIS SOS PNEUS SOVIA SPAREX SARL SPORT PNEUS SSR PNEUS STATION PNEUS STEVE COSTA PNEU STIHL STURNY SUD IMPORT DISTRIBUTION SUD PNEUS 81 SUZUKI TARARE PNEUS TECHNIGUM THOUERY FRERES TMT WEB TOM AUTO TOUPNEU ALSACE TOURNUS DEMOLITION TOUTAUTO TRANS 4 EQUIPEMENTS TRIUMPH TYGROO PNEUS UGIGRIP VERNIÈRES FIST STOP VERTS LOISIRS VIERZON CENTRE VIVA PNEUS **VOIRON DISTRIBUTION** VOLKSWAGEN VOLVO TRUCKS FRANCE VORTEX **VULCALUC PNEUS** YAMAHA MOTOR NV YC YO PNEU ZETOR FRANCE

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K IMPORT

|DIRECTORY|

COLLECTORS

ALCYON

♥ 16 - 17 - 24 - 33 - 87 33440 Saint-Louis-de-Montferrand 05 56 77 19 19

AUTO PNEUS NORMANDIE

AUTO PNEUS VARENNES

♥ 08 - 51 14570 Clécy 02 31 59 21 31

BATI RECYCLAGE

♥ 85 85280 La Ferrière 02 51 07 22 00

CHRONOROUTE BRETAGNE

♥ 35 - 44 - 53 - 56 35320 Crevin 02 99 42 43 25

DROHE RECYCLAGE

♥ 09 - 31 - 32 - 46 - 82 31800 Labarthe-Inard 05 61 95 59 17



ENVIRONNEMENT SERVICES

Q 20

20501 Ajaccio 04 90 10 90 33

ERRIC

♥ 10 - 45 - 52 - 77 - 89 77650 Jutigny 01 64 08 62 10

EUREC ENVIRONNEMENT

♥ 26 - 38 - 69 69780 Saint-Pierre-de-Chandieu 04 78 40 23 12

EUREC SUD

11 - 12 - 34 - 66 - 81 34500 Béziers 04 67 26 87 60

GROUPE CHARLES ANDRÉ

♥ 13 - 83 - 84 13340 Rognac 04 42 10 41 63

GILLES HENRY

♥ 54 - 55 - 57 - 67 - 68 - 70 - 88 - 90 54200 Chaudenay-sur-Moselle 03 83 64 84 90

GOMMAGE

♀ 62 - 80 62210 Avion 03 21 28 30 55

GRANULATEX

GURDEBEKE

♥ 02 - 60 60400 Noyon 03 44 93 25 21

HENRY RECYCLAGE

♥ 27 - 28 - 75 - 76 - 78 76410 Saint-Aubin-les-Elbeuf 02 35 64 65 80

LE FEUVRIER

♥ 61 61100 Flers 02 33 66 63 50

MEGA PNEUS

♥ 37 - 36 - 49 - 72 - 79 - 86 -41 37310 Reignac-sur-Indre 02 47 91 08 07

OURRY

♥ 91 - 92 - 93 - 94 - 95 77390 Champdeuil 01 64 14 18 00

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♥ 30 - 07 07170 Lavilledieu 04 75 94 31 75

PROCAR-RECYGOM

♥ 03 - 15 - 19 - 23 - 42 - 43 - 48 - 63 63350 Joze 04 73 70 26 22

DIRECTORY

RAMERY ENVIRONNEMENT

♥ 59 62440 Harnes 03 21 14 00 00

TFM CENTRE

♥ 01 -25 -39 01600 Trévoux 04 74 00 55 18

TFM SUD EST

♥ 04 - 05 - 06 - 83 83170 Brignoles 04 93 65 03 79

TRANSPORTS CASSIER

♥ 18 - 21 - 58 -71 58340 Cercy-la-Tour 03 86 50 57 26

TRIGONE

♥ 22 - 29 22530 Saint-Guen 02 96 26 08 91

VALPAQ

♥ 40 - 47 - 64 - 65 40160 Ychoux 05 58 82 34 48

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ALCYON

05 56 77 19 19

TRANSFORMATION SITES

33/1/0 Saint-Louis-da-Montfarra	nnc

13340 Rognac 04 42 10 41 63

PROCAR-RECYGOM 63350 Joze

BROYAGE VAL DE LOIRE

GILLES HENRY

04 73 70 26 22

37310 Reignac-sur-Indre 02 47 91 08 07

GROUPE CHARLES ANDRÉ

RAMERY ENVIRONNEMENT

54200 Chaudeney-sur-Moselle

62440 Harnes 03 21 14 00 00

EUREC ENVIRONNEMENT

GRANULATEX

74550 Perrignier

04 50 72 51 93

03 83 64 84 90

TRIGONE

69780 Saint-Pierre-de-Chandieu 04 78 40 23 12

22530 Saint-Guen 02 96 26 08 91

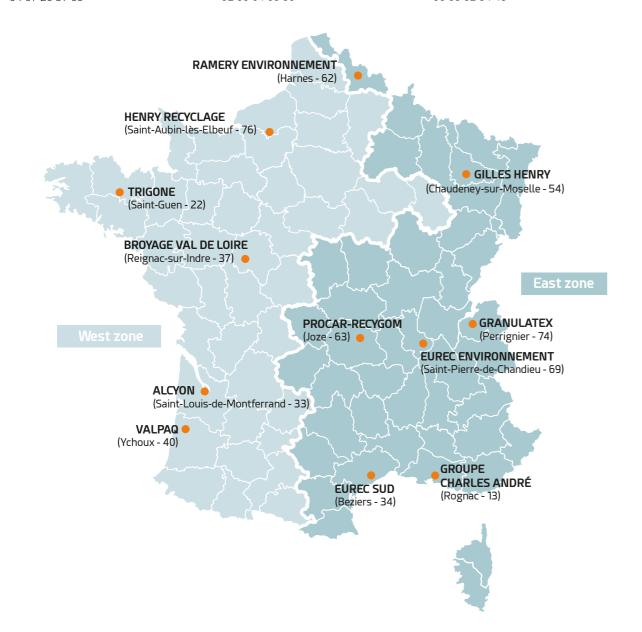
EUREC SUD

HENRY RECYCLAGE

VALPAQ

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41160 Ychoux 05 58 82 34 48



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