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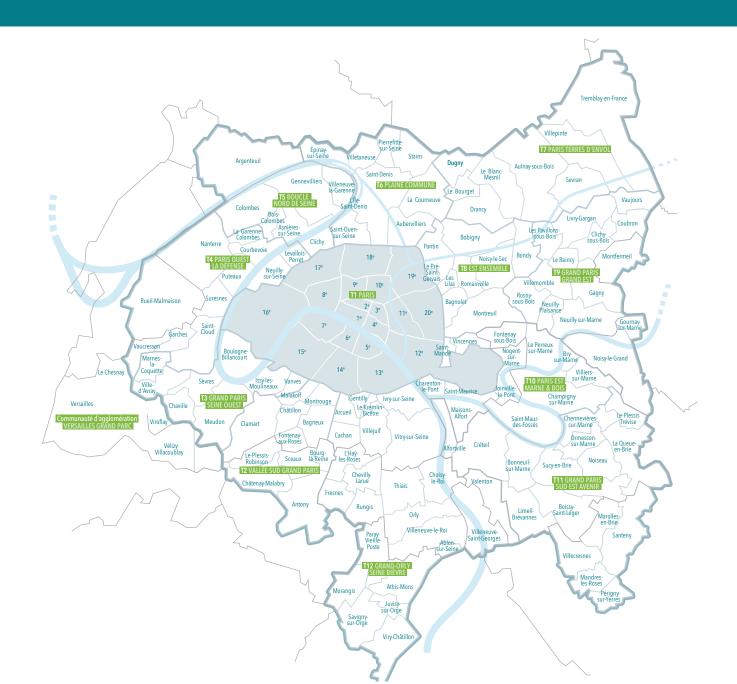
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Since January 26, 2017, Syctom has been administered by a Syndicate Committee composed of 90 local elected officials representing 11 territories of Metropolis of Greater Paris and the Versailles Grand Parc Agglomeration Community.

- It defines the syndicate's policy, votes on its budget, decides on investments and the management methods used.
- It rules on membership and withdrawal requests from local authorities.
- It elects the Board members and the members of the Tender Committee.

The Board is composed of the President, the 15 Vice-Presidents and 20 other representatives, i.e. 36 members in total.

On 20 October 2017, the 90 delegates of the Syndicate Committee unanimously elected Jacques Gautier as Syctom's President. He succeeds Hervé Marseille, who, re-elected senator on 24 September 2017, resigned from the Syctom Presidency pursuant to the French law on the non-accumulation of mandates.



PRESIDENT OF SYCTOM



Jacques GAUTIER Mayor of Garches, Paris Ouest La Défense

T1 • PARIS

CE-PRESIDENTS SYCTOM'S BOARD MEMBERS



Mao PENINOU 1st Vice-President Deputy Mayor of Paris, Metropolitan councillor





François DAGNAUD 6th Vice-President Mayor of 19th arr. of Paris, Metropolitar





councillor

Catherine

BARATTI-ELBAZ

Mayor of 12th arr. of Paris, Metropolitan



Jérôme COUMET Mayor of 13th arr. of Paris, Metropolitan councillor

DE CLERMONT-

Paris, Metropolitan

TONNERRE

Councillor of

councillor

Claire



Pierre AURIACOMBE Councillor of Paris

Jean-Noël

Councillor of Paris

AQUA



Julie BOILLOT Councillor of Paris, Metropolitan councillor

Claudine

BOUYGUES



Maud GATEL Councillo of Paris



Véronique LEVIEUX Deputy Mayor of Paris

Jean-Louis

Deputy Mayor of Paris,

Metropolitan

MISSIKA





ean-Didier BERTHAULT Councillor of Paris, Metropolitan councillor



Philippe DUCLOUX Councillor of Paris

Éric HELARD

Councillor

of Paris,



Hélène BIDARD Deputy Mayor of Paris

Pascale BLADIER-

CHASSAIGNE

Councillor



Galla BRIDIER Deputy Mayor of Paris, Metropolitan councillor

Frédérique

CALANDRA

Mayor of 20th arr. of Paris,



GUHL Deputy Mayor of Paris



ONGHENA Councillor of Paris,





Metropolitan



Daniel VAILLANT Former Minister, Councillor of Paris





Alexandre

Jean-François LEGARET

10 th Vice-President Mayor of the 1st arr. of Paris,



Florence BERTHOUT Mayor of the 5st arr. of Paris, Regional councillor of Île-de-France





Patrick TRÉMÈGE Councillor of Paris



Gypsie BLOCH Councillor of Paris



Virginie DASPET Councillor of Paris





VESPERINI Councillor of Paris, Metropolitan councillor

T2 • VALLÉE SUD GRAND PARIS

SYCTOM'S VICE-PRESIDENT



SCHOSTECK 4th Vice-President Mayor of Châtillon.





Jacqueline BELHOMME Mayor of Malakoff, Metropolitan councillor



Benoît BLOT Deputy Mayor of Plessis-Robinson



Philippe RIBATTO Deputy Mayor of Fontenay-aux-Roses

T3 • GRAND PARIS SEINE OUEST

SYCTOM'S VICE-PRESIDENTS SYCTOM'S BOARD MEMBER SYCTOM'S DELEGATES



André SANTINI 3th Vice-President Former minister, Vice-President of the Metropolis of Greater Paris, Mayor of Issy-les-Moulineaux



Christiane BARODY-WEISS 5th Vice-President Mayor of Marnes-la-Coquette, Vice-President of T3, Metropolitan councillor



Hervé MARSEILLE Senator of Les Hauts-de-Seine, Municipal councillor of Meudon, Metropolitan councillor



Pierre-Christophe **BAGUET** Mayor of Boulogne-Billancourt, President of T3, Departmental councillor of Les Hauts-de-Seine



Pierre CHEVALIER Municipal councillor of Ville-d'Avray

Patrice PINARD

Deputy Mayor of Clichy-

la-Garenne

T4 • PARIS OUEST LA DÉFENSE

SYCTOM'S PRESIDENT



Jacques GAUTIER

SYCTOM'S BOARD MEMBER Éric CESARI



Deputy Mayor of Courbevoie, Metropolitan councillor

SYCTOM'S DELEGATES



Éric BERDOATI Mayor of Saint-Cloud, Saint-Cloud,
Departmental
Councillor of Les
Hauts-de-Seine,
Metropolitan
councillor

Sophie

DESCHIENS

Deputy Mayor of Levallois-

Perret, Regional councillor of Île-de-France



Jean-Christophe FROMANTIN Mayor of Neuilly-sur-Seine, Metropolitan councillor



Norredine IZNASNI Municipal

T5 • BOUCLE NORD DE SEINE

SYCTOM'S BOARD MEMBERS SYCTOM'S DELEGATES



Nicole GOUETA Mayor of Colombes, Departmental Councillor of Les Hauts-de-Seine

Olivier MERIOT

Deputy Mayor of Gennevilliers

Recording



Marie-Do AESCHLIMANN Deputy Mayor of Asnières-sur-Seine, Regional councillor of Île-de-France





Pascal PELAIN

T6 • PLAINE COMMUNE

SYCTOM'S VICE-PRESIDENTS SYCTOM'S DELEGATES



Karina KELLNER 2th Vice-President Municipal councillor of Stains



Delphine HELLE Municipal councillor of Saint-Denis



Michel HOEN Municipal councillor of



SYCTOM'S BOARD MEMBER



Anthony DAGUET



Khaled KHALDI Deputy Mayor of Villetaneuse

T7 • PARIS TERRES D'ENVOL

SYCTOM'S VICE-PRESIDENT



Fouad EL **KOURADI** 14th Vice-President Deputy mayor of Aulnay-sous-Bois

SYCTOM'S DELEGATES



Jean-François BAILLON Deputy Mayor of Sevran



Alain DURANDEAU Deputy Mayor of Tremblay-



Bernadette VANDENABELLE Deputy Mayor of Drancy

T8 • EST ENSEMBLE

SYCTOM'S VICE-PRESIDENT

SYCTOM'S BOARD MEMBERS

Marie-Rose

HARENGER Deputy Mayor of Noisy-le-Sec

Christian CAMBON Delegate Municipal Councillor of Les Lilas



Corinne VALLS 8th Vice-President Mayor of Romainville, Vice-President of the Departmental Council of Seine-Saint-Denis, Metropolitan councillor



SYCTOM'S DELEGATES

ABRAHAMS Deputy Mayor of Montreuil



Jacques CHAMPION Deputy Mayor of Romainville



Stéphane WEISSELBERG Deputy Mayor of Romainville

T9 • GRAND PARIS GRAND EST

SYCTOM'S VICE-PRESIDENT



Jean-Pierre BOYER 13th Vice-President Deputy Mayor of Rosny-sous-Bois

SYCTOM'S BOARD MEMBER



Bernard CACACE Deputy Mayor of Raincy

SYCTOM'S DELEGATES



Pierre-Étienne MAGE Deputy Mayor of Villemomble



Pierre-Yves MARTIN Mayor of Livry-Gargan Metropolitan councillor

T10 • PARIS EST MARNE & BOIS

SYCTOM'S VICE-PRESIDENT



Jean-Luc CADEDDU 15th Vice-President





Florence CROCHETON Deputy Mayor of Saint-Mandé



SYCTOM'S DELEGATES

Jean-Jacques GRESSIER Deputy Mayor of Joinville-le-Pont



Deputy Mayor of Saint-Maurice



Laurent LAFON Senator of Val-de-Marne Municipal councillor of Vincennes



Marie-Hélène MAGNE Deputy Mayor of Charenton-le-Pont

T12 • GRAND-ORLY SEINE BIÈVRE

SYCTOM'S VICE-PRESIDENT



BOUYSSOU 7th Vice-President Mayor of Ivry-sur-Seine, Metropolitan councillor SYCTOM'S BOARD MEMBERS

Samuel



BESNARD Deputy Mayor of Cachan



Jorge CARVALHO





Monique RAFFAELLI Municipal councillor of Kremlin-

tan councillor



Patrick RATTER Deputy Mayor of Valenton



Bamadi SANOKHO Deputy Mayor of Gentilly



ZAVALLONE Municipal councillor of Ivry-sur-Seine

VERSAILLES GRAND PARC AGGLOMERATION COMMUNITY

SYCTOM'S VICE-PRESIDENT



Philippe BRILLAULT 12th Vice-President Mayor of Chesnay, Departmental councillor of Les Yvelines





Luc WATTELLE Mayor of Bougival, Vice-President of the Versailles Grand Parc AC

ALTERNATE REPRESENTATIVES OF THE TERRITORIES

T1 • PARIS

ALTERNATES

Éric AZIERE Councillor of Paris

Marinette BACHE

Nicolas RONNET-OUI ALD I Councillor of Pari

Geoffroy BOULARD Councillor of Paris, Metropolitan councillor

Pierre-Yves BOURNAZEL Councillor of Paris, Regional councillor of Île-de-France

Jacques BOUTAULT

Anne-Charlotte BUFFETEAU Councillor of Paris

Emmanuelle DAUVERGNE Councillor of Paris, Regional councillor of Île-de-France

Nathalie FANFANT Councillor of Paris

Rémi FERAUD Senator, Councillor of Paris, Metropolitan councillor

Léa FILOCHE Councillor of Paris

Afaf GARFI OTAUD

Pierre GABORIAU Councillor of Paris

Jean-Jacques GIANNESINI Councillor of Paris, Metropolitan councillor

Frédéric HOCQUARD Councillor of Paris

Thierry HODENT Councillor of Paris, Metropolitan councillor

Christian HONORE Councillor of Paris

Pénélope KOMITES Deputy Mayor of Paris

Thomas LAURET Councillor of Paris

Catherine LECUYER Councillor of Paris

Didier LE RESTE

Sandrine MEES

Étienne MERCIER Councillor of Paris

Valérie MONTANDON Councillor of Paris

Nicolas NORDMAN Councillor of Paris

Annick OLIVIER

Atanase PERIFAN Councillor of Paris

Karen TAIEB Councillor of Paris

Sergio TINTI Councillor of Paris

François VAUGLIN Mayor of 11th arr. of Paris

Yann WEHRLING Councillor of Paris Metropolitan councillo

Mercédès ZUNIGA Councillor of Paris

T2 • VALLÉE SUD GRAND PARIS

ALTERNATES

Carole HIRIGOYEN Deputy Mayor of Montrouge

Alain LE THOMAS

Serge KEHYAYAN Deputy Mayor of Clamart

Patrice RONCARI Deputy Mayor of Clamart

T3 • GRAND PARIS SEINE OUEST

ALTERNATES

Christine BRUNEAU Deputy Mayor of Boulogne-Billancourt

Florence de PAMPELONNE Deputy Mayor of Meudon

Bernard ROCHE Deputy Mayor of Vanves

Joëlle SUEUR Deputy Mayor of Issy-les-Moulineaux

T4 • PARIS OUEST LA DÉFENSE

ALTERNATES

Jean-François DRANSART Deputy Mayor of Garenne-Colombes

Bernard GAHNASSIA Deputy Mayor of Puteaux

Amirouche LAIDI Deputy Mayor of Suresnes

Dominique LEBRUN Deputy Mayor of Saint-Cloud

Alexis MARTIN Deputy Mayor of Nanterre

Bertrand PERCIE du SERT Deputy Mayor of Levallois-Perret

T8 • EST ENSEMBLE

ALTERNATES

Mireille ALPHONSE Municipal councillor of Montreuil

Asma GASRI

Laurent JAMET

Hervé LEUCI Municipal councillor of Bobigny

Olivier STERN

Municipal councillor of Bagnolet

T12 • GRAND-ORLY SEINE BIÈVRE

ALTERNATES

Françoise BAUD Mayor of Valenton

Elisabeth HUSSON-LESPINASSE Municipal councillor of Gentilly

Alain LIPIETZ Municipal councillor of Villejuif Ludvig LOISON-ROBERT Municipal councillor of Kremlin-Bicêtre

Robert ORUSCO

Jean-Emmanuel **ROUGIER** Municipal councillor of Vitry-sur-Seine

T9 • GRAND PARIS GRAND EST

ALTERNATES

Christine GAUTHIER Deputy Mayor of Pavillons-sous-Bois

François MARTINACHE

Deputy Mayor of Neuilly-Plaisance

Michel RINGRESSI Deputy Mayor of Vaujours

Ludovic TORO Mayor of Coubron, Regional councillor of Île-de-France, Metropolitan councillor

VERSAILLES GRAND PARC AGGLOMERATION COMMUNITY

ALTERNATES

Violaine CHARPENTIER Municipal councillor of Chesnay

Frédéric HUCHELOUP Deputy Mayor of Vélizy-Villacoublay

Marc TOURELLE Mayor of Noisy-le-Roi

T10 • PARIS EST MARNE & BOIS

ALTERNATES

Éric BENSOUSSAN Deputy Mayor of Vincennes

Christian CAMBON Senator, Municipal councillor of Saint-Maurice

Jean-Pierre CRON Deputy Mayor of Charenton-le-Pont

Thomas MURGIA Municipal councillor of Saint-Mandé

Stéphan SILVESTRE Municipal councillor of Joinville-le-Pont

Frédéric TURPIN Municipal councillor of Maisons-Alfort

T5 • BOUCLE NORD DE SEINE

ALTERNATES

Anne-Gabrielle CANTET Deputy Mayor of Bois-Colombes

Anne-Christine JAUFFRET Deputy Mayor of Bois-Colombes

Mohamed MAAZOUZI Deputy Mayor of Villeneuve-la-Garenne

Deputy Mayor of Colombes Frédéric SITBON Deputy Mayor of Asnières-sur-Seine

Samuel METIAS

T6 • PLAINE COMMUNE

ALTERNATES

Jean-François MONINO Deputy Mayor of Aubervilliers

Denis REDON Municipal councillor of Épinay-sur-Seine Christophe ROSE Municipal councillor of Île-Saint-Denis

Laurent RUSSIER Mayor of Saint-Denis

T7 • PARIS TERRES D'ENVOL

ALTERNATES

Michel ADAM Deputy Mayor of Dugny

Claude MARIOT Municipal councillor of Villepinte

Denis DESRUMAUX Municipal councillor of Bourget

Thierry MEIGNEN Mayor of Blanc-Mesnil Regional councillor of Île-de-France

JOINT INTERVIEW

PASSING ON THE BATON FOR AN ACTIVE CONTINUITY

On 20 October 2017, Jacques Gautier, Mayor of Garches and Vice-President of Paris Ouest La Défense, was elected President of Syctom. He thus succeeded Senator Hervé Marseille, who, after 3 years at the helm of the Syndicate, had to resign to comply with the French law on the non-accumulation of mandates. The two men reflect on this year of transition.



 You took over the leadership of Syctom in 2017, in a context of territorial reorganisation of the Metropolis. What are your thoughts on this exceptional year?

Jacques Gautier: First of all, I would like to pay tribute to Hervé Marseille, whom I replaced as the head of Syctom in October 2017. It's an honour to succeed him. Hervé is a friend who has accomplished a tremendous task, which I am committed to pursue. I also wish to mention the

conditions in which I was elected. In fact, the 90 members of the Syndicate Committee elected me unanimously, thus proving their capacity to rise above their political and territorial differences. This cohesion is both strength and accountability, and I am fully aware of it. Finally, I want to emphasise that with my election, Syctom has had its 4th change in management since June 2014! This is why I wanted to retain the entire team set up by Hervé Marseille, for the sake of stability and continuity.

Hervé Marseille: I believe this need for stability is all the more important as the last few months have been marked by changes at the metropolitan scale that have affected Syctom. We had to amend our statutes twice and adapt to the consequences of the NOTRe law, which entrusted public territorial institutions (EPT) with the responsibility for "waste". The EPTs delegate the task of treating household waste to the various syndicates. Syctom, I'm convinced, will pursue this mission, with the strong public service ethos that characterises it.

In your view, what were the most significant achievements in 2017?

JG: They have been numerous and – far from being an end in themselves – they are setting us new challenges! In particular, I want to highlight the progress we made in Ivry-sur-Seine: Hervé Marseille had initiated the public debate, and I closed it; the public inquiry into the construction of a new energy recovery unit has now started.

In Saint-Ouen-sur-Seine, too, 2017 marked a turning point with the vote on the urban integration of the centre into its environment and the continuation of works to modify the treatment of flue gases and industrial effluents. Finally, while a new consensual project is emerging from the consultation

organised in Romainville and Bobigny, we laid the foundation stone for the future selective collection sorting centre in Paris XVII, in the district of Batignolles.

HM: These breakthroughs concern long-term projects, which we have carried out in close cooperation with the elected representatives of the municipalities concerned. They must not overshadow Syctom's continuous policy to improve the performance of its industrial tool and prepare it for the generalised extension of sorting instructions or for the collection of food waste. I stepped down as President of Syctom with the conviction that it will be able to meet these challenges, thanks to the innovation and synergies initiated with the other syndicates.

What are your expectations from the CSR approach, which is undergoing radical restructuring?

HM: I believe that it is still a bit early to assess its results. But I would like to draw attention to the partnership dynamic that underpins it: it compels us to forge new ties with Syctom's member local authorities, within the framework, for example, of target-based contracts that my successor will have to put in place.

JG: The security aspect of the CSR approach is also crucial, and we have made it our top

2017: NFW GOVERNANCE

On 1st January 2016, the Metropolis of Greater Paris Paris was created, entailing an amendment in Syctom's statutes, twice. In March 2016, to integrate the metropolitan status of Paris and the creation of public territorial institutions (EPTs). Then in September, to confirm the dissolution of the two primary syndicates, Syelom for Les Hauts-de-Seine and SITOM93 for Seine-Saint-Denis. This statutory overhaul allowed Syctom to adapt to the challenges of the coming years, by becoming fully involved in metropolitan construction.

Syctom also adapted its governance to adjust to these profound changes. A new political equilibrium was successfully achieved with the establishment, on 26 January 2017, of the new Syndicate Committee extended to 90 delegates, elected representatives from the 12 member territories – 11 territories of the Metropolis of Greater Paris and the Versailles Grand Parc Agglomeration Community.



priority. We need to develop a culture of safety and security in all our facilities, which requires an unprecedented training of the agents.

 This activity report highlights our openminded approach both to the future and to the outside world. What do you think was a perfect illustration of this dynamic, in 2017?

HM: I believe Syctom's intensified relations with the major syndicates testify to this dynamic, as is evident from the many events we shared with them in 2017. More generally, Syctom has made its voice heard on topics that go beyond waste treatment, topics that are part of a more comprehensive reflection on energy recovery, the circular economy or the need to invent sustainable cities. I'm confident that Jacques Gautier will maintain this dynamic.

JG: Our voice and our expertise now go beyond the borders of France, since Syctom has embarked on a strategy of influence with the European Union. We want Brussels to be aware of the constraints faced by public players involved in waste treatment. This approach is very much appreciated by MEPs, who are happy to discuss the subject with the experts. More broadly, we are engaged in a policy of international influence.

In 2017, Syctom took part in COP23 in Bonn and the International Exhibition in Astana, Kazakhstan. In addition, it developed its solidarity and international cooperation initiatives. All of these actions make Syctom a committed player in Île-de-France and beyond, sensitive to global issues, present and future.



Jacques **GAUTIER**

Hervé **MARSEILLE**

The year 2017 also saw the creation of four new committees, on the decision of the Syndicate Committee of 30th March. Their purpose is to prepare and facilitate decision-making on the main strategic areas. Composed of about twenty members and a president, these committees each deal with a specific theme: Territorial coordination, Sorting efficiency, Corporate social responsibility (CSR) and Solidarity and international cooperation programme.

90 DELEGATES elected representatives from the territories

12 TERRITORIES
EPT, City of Paris and the
Versailles Grand Parc
Agglomeration Community

12

MEMBER TERRITORIES OF SYCTOM

11 territories of the Metropolis of Greater Paris and the Versailles Grand Parc Agglomeration Community

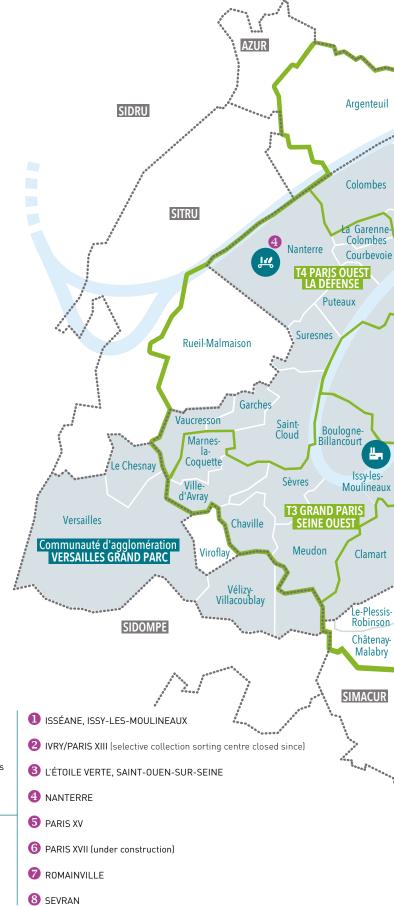
84 MUNICIPALITIES IN SYCTOM'S TERRITORY

5.8MILLION INHABITANTS

i.e. nearly 9% of the French population Estimation based on the last known census

90 DELEGATES

representing Syctom's member territories



Metropolis of Greater Paris

Metropolis of Greater Par

Other syndicates

Syctom's territory

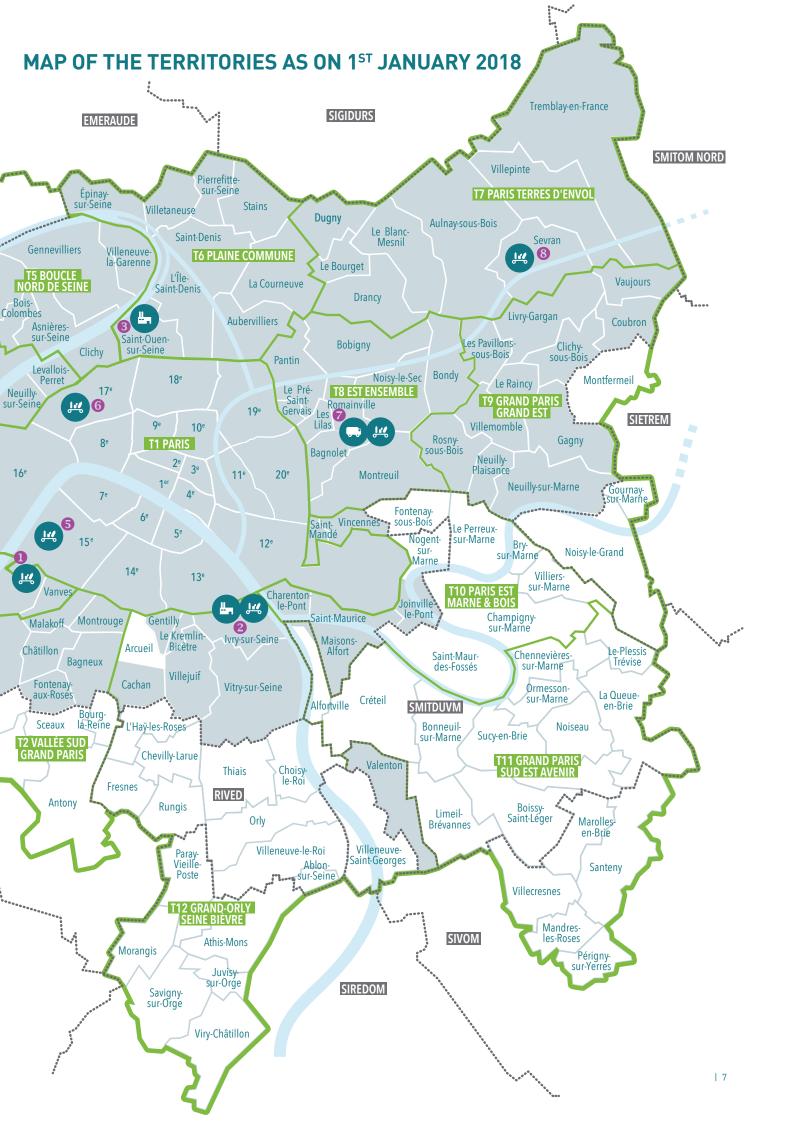
Energy recovery units

Щ

Sorting centres



Transfer centre



Integration of Syelom and SITOM93 personnel.

04 Romainville/

Bobigny: The CNDP entrusts Syctom with the organisation of a preliminary consultation for the centre's transformation project.

(page 18)

26

Ivry/Paris XIII:

The Syndicate Committee approves the new project to transform the centre, taking into account the lessons learned from the 2016 consultation.

(page 18)

Syctom organises the "Diversity, cities of tomorrow and service industries in dense urban areas" workshop at the Palais de Tokyo.(page 37)



05 Romainville/ Bobigny:

Public meeting for opening the preliminary consultation on the new centre project, in Romainville.

(page 34)









28 to 30

Syctom participates in the Exhibition for Île-de-France Mayors 1 at a joint stand with the urban public services in Greater Paris. (page 35)

Zero Waste Design Competition: awards ceremony at the VIA gallery. (page 38)

10 June to 30 September

Participation in the International Exhibition in **Astana 2** in Kazakhstan dedicated to future energy.

(page 40)

CTOBER

05

Participation in the **Grand Paris Circulaire** co-organised by the
Metropolis of Greater Paris and
the City of Paris.

07

Open Days at the Romainville centre as part of the preliminary consultation on the new centre project.

20

Jacques Gautier is elected President of Syctom by the 90 members of the Syndicate Committee.

DECEMBER

07

Participation in the 1st national conference on household waste: "New economy, new waste", organised by Fondation Concorde at the Maison de la Chimie. (page 37)







SEPTEMBER

09 to 13

Syctom is present at Paris Design Week at the Cité de la Mode et du Design to present the Design Zero Waste competition. 3 [page 38]

24

Participation in the Garden Festival in Saint-Ouensur-Seine, to kick-off the requalification and urban integration of the energy recovery centre, L'Etoile Verte. [page 34]

VOVEMBER

06 to 17

COP23 in Bonn (Germany): Syctom works side by side with SIAAP to address water, waste and climate change issues. [page 41]

10 Paris XVII:

Foundation stone laid for the selective collection sorting centre in the presence of Sébastien Lecornu, Secretary of State to the Minister of State, Minister for Ecological and Inclusive Transition.

[page 18]

TURNING WASTE INTO RESOURCES

Waste treatment

2,313,363 t of waste treated by Syctom in 2017



Household waste

1,881,817

treated in the centres incineration with energy recovery or, to a very small extent, landfilling

↓ 1,890,930t in 2016



184,600

treated in selective collection sorting centres

181,110t in 2016



Waste reception centres

29,830

of bulky objects and special household waste received in the 31 waste reception centres

13,764t in 2016







Food waste

2,145

collected separately for composting or methanisation

1,059 t in 2016

Source separation by all (LTECV law)



Bulky objects

214,71

waste collected door-todoor, illegal dumps, and waste from technical services and treated in bulky object sorting centres

1 200,356t in 2016

u

Landfilling

147,43,

household waste, downgraded waste + sorting rejects directed to storage centres

↓ 153,542 t in 2016

2025 - 50% (LTECV law)

Glass: 120,269 tonnes of glass were collected from Syctom's territory and sent directly for recycling without passing through the Syndicate's facilities.

I LEVERAGING ITS FINANCIAL RESOURCES

Supporting local authorities

€6 M for prevention, selective collection, and food waste management

€4.2 M of aid for municipalities that house the facilities

Subsidies to mobilise the residents

20 to 50 €/t for selective collection

30 €/t for food waste

Stable per capita pricing

5.60 €/pers.



Recovery

waste recovered as steam and electricity

2,638 GWh

of steam sold by Syctom's 3 ERUs

heat from the CPCU network

139 GWh

of electricity sold by Syctom's 3 ERUs



recycled waste

new materials including 308,947 t clinkers, ferrous and non-ferrous



Resources conserved



Housing-equivalents heated

 $\textbf{300,000}_{\text{/year}}$



oil equivalent avoided

JU, JU avoided per year



1,131,088





60,000 of waste transported

Promoting recycling with attractive pricing for local authorities

94 €/t of household waste and bulky objects

5 to 30 €/t of selective collection [free for tonnages higher than those recorded in 2016]

5 €/t of food waste

2.3 Mt of waste treated

+1.9%

increase in selective collection of packaging and paper between 2016 and 2017

2,103t
of biowaste treated

8

CSR priorities deployed

FORWARD-LOKING PLAYER

In 2017, Syctom continued to prepare for the future.

A future whose objective is clear: "zero non-recovered waste" As a leading innovative player in the field of waste management and renewable energies, a pillar of the circular economy and the sustainable city, Syctom worked on several fronts. With respect to its industrial tool, of course, with the development of selective collection sorting capacities, the adaptation of the centres to the expansion of instructions aimed to recycle more, the management of new waste reception centres, the modernisation of energy recovery capacities, and the deployment of a set of solutions for optimal biowaste management.

And, to better prepare for future challenges, Syctom also undertook substantial work on its corporate social responsibility (CSR) approach. This new foundational priority, which will expand transversally, is essential to the consolidation of a responsible action.

Open, responsible, the Syctom is focussed on the future.



INCREASINGLY INNOVATIVE TO ACHIEVE OUR AMBITIOUS MISSION OF WASTE RECOVERY

TURNING WASTE INTO A SOURCE OF ENERGY

The combustion of waste in Syctom's three energy recovery units (ERU) generates energy. Though this energy is used to produce electricity, Syctom intends to reinforce the already predominant share of heat production.

At a time when fossil energies are becoming scarcer, the objective is to neglect no possible source. The combustion of waste is therefore monitored very closely. The aim is not only to recover all the energy produced, but also to make the right strategic choices, between electricity production and heat production.

The second avenue, already predominant, is increasingly preferred by Syctom. First, because the efficiency of using steam as heat is greater than its conversion into electricity. Secondly, because, since 2016, Syctom has entered into target-based contracts with the Compagnie Parisienne de Chauffage Urbain (CPCU), which in turn has the obligation to use a certain amount of renewable energy in its energy mix. In 2017, Syctom had to

inject 3,672 million tonnes of steam into the CPCU network. An ambitious target, which it achieved at the end of the year, and which it then slightly exceeded, with a total volume of 3,704 million tonnes of steam sold to the CPCU as on 31 December 2017.

CAPTURING CO2 IN FLUE GASES

In 2016, Syctom undertook an R&D project of nearly 5 years, with the aim of using CO₂ from incineration fumes to cultivate micro-algae which will then be converted into biomaterials (bioplastic or biofuel). For this project, which will be implemented at the Saint-Ouen-surseine centre, Syctom relies on an international research consortium. Led by Setec Energie Environnement, it brings together École Polytechnique de Montréal, MINES ParisTech the Royal Institute of Technology in Stockholm (KTH), the Spanish University of Almeria and the Swedish Research Institute, Sveriges Tekniska Forskningsinstitut (SP).

A precise control of turbine-generator units

To achieve this result, Syctom used some original settings. For the first time, Isséane's turbine-generator unit (GTA), which converts steam from incineration into electricity, was shut down twice in 2017 for Syctom to feed the CPCU heating network more, even if it had to buy electricity for its internal operation. Choosing the periods during which the GTAs are shut down is crucial: it must take into account the needs of the heating network, greater in the winter, but also variations in the prices at which Syctom purchases electricity and the CPCU purchases heat.

The benefits of cogeneration

Even if electricity production remains secondary, it remains useful and Syctom units can greatly benefit from being able to operate both the levers, for more flexibility.

These issues related to energy recovery explain why it is important to manage the facilities using precise calculations and why new research is conducted to develop innovative processes that can further improve the efficiency of energy produced.

GIVING WASTE A NEW LEASE OF LIFE



Martial Lorenzo, General manager of services, Syctom

We are investing in innovative processes to continuously improve the efficiency of our industrial facilities, increase the energy performance of our facilities and produce more heat and electricity through cogeneration."

The fight against wastage not only urges us to consume better, but also to recycle the waste we produce more effectively. It is this second objective that Syctom strives to achieve by modernising its sorting centres and by organising a network of waste reception centres.

In 2022, plastic sorting will no longer be limited to bottles. It must cover all plastic packaging: jars, trays, films, etc. To comply with the Energy Transition for Green Growth Law, which provides for this expansion of the sorting instruction, Syctom is transforming its industrial tool.

In 2016, the sorting centre in Sevran underwent further modernisation, to collect plastic films more effectively and compact sorting rejects for energy recovery. Its treatment capacities also increased

from 17,000 to 20,000 tonnes, as the new sorting instructions do not only imply a technological upgrade but also an increase in volumes treated.



Capacities and performance

This double requirement also guided the choice of the new operator for the Paris XV sorting centre: awarded in September 2017 to the IHOL consortium, the contract provides for works to integrate the sorting of new plastic packaging by the end of 2018 and to increase the centre's overall capacity, which will then reach 31,500 tonnes per year (instead of 20,000 t/year). In the same way, the modernisation of the Nanterre centre undergirds the consultation launched in 2017 for the renewal of its operating contract. The specifications laid down three objectives: adapt the sorting process to the new sorting instructions for plastic packaging and small metal packaging; increase the site capacity and adapt its accesses to facilitate the transport of waste by heavy load trucks.

Finally, the construction of the future sorting centre in Paris XVII, which began in the summer of 2017, will, in 2019, give Syctom a new generation tool capable of handling 45,000 tonnes of waste per year and implement the sorting instructions for all plastic and metal packaging.



SYCTOM IN CHARGE OF 31 OF THE 70 WASTE **RECEPTION CENTRES** IN GREATER PARIS

On 1st January 2017, Syctom took over the management of 29 waste reception centres in Les Hautsde-Seine (3 fixed and 26 mobile). These were previously managed by Syelom, which was following the creation of the Metropolis of Greater Paris and whose responsibility was transferred to Syctom. These facilities were added to the waste reception centres managed by Syctom in lvry-sur-Seine (closed since then) and in Romainville.

Reducing landfill

Apart from the selective collection sorting centres, better recovery of materials also implies increasing the efficiency of the recycling of bulky objects, and of the access and operation of waste reception centres. This observation led to a reflection initiated in 2017 by Syctom and the launch of a technical, economic and legal study to define the outlines of a possible metropolitan network of fixed waste reception centres. Syctom will play a central role in

In keeping with its strategy to limit landfilling, Syctom has been experimenting, since 2016, with the incineration of sorting rejects of bulky objects in its energy recovery units (ERU): in 2017, by increasing the periods favourable to energy recovery from these rejects to 40 weeks per year, landfilling could thus be avoided for more than 23,000 tonnes of waste

310/of waste recycled into new materials

A NEW CHALLENGE: ORGANIC RECOVERY OF BIOWASTE

Because the law will soon require local authorities to offer residents a solution for the source separation of biowaste, Syctom assists its members in the implementation of organic waste sorting and collection.

Installing a composter in the common areas of a residence or in the corner of a garden: this idea has been gaining ground in the minds of many and is garnering support from associations and local authorities. The operation, however, requires specific knowledge, know-how and equipment. Convinced of the advantages of these practices, Syctom designed a support system for its members to promote domestic or neighbourhood composting. Since 2010, it has been granting aid for awarenessraising workshops, the purchase of composters and vermicomposters, the training and monitoring of users, and the control of compost maturation. As almost all the member local authorities have chosen to benefit from this system, more than 30,540 composters have been installed using Syctom's aid, since 2011.



Olivier Meriot,
Syctom Board member
Deputy Mayor of Gennevilliers

The project to build the bio-waste methanisation unit in the port of Gennevilliers, with various partners, demonstrates Syctom's will and commitment to diversifying waste treatment methods."

To develop the source separation of food waste, Syctom set up a support system for its member local authorities to assist in the conduct of feasibility studies in their territory, to encourage public awareness and facilitate the installation of food waste collection bins or take charge of the collection itself on an experimental basis. Syctom also guarantees them outlets for the treatment of food waste, at an attractive rate of €5 per tonne (compared to €94 for residual household waste).

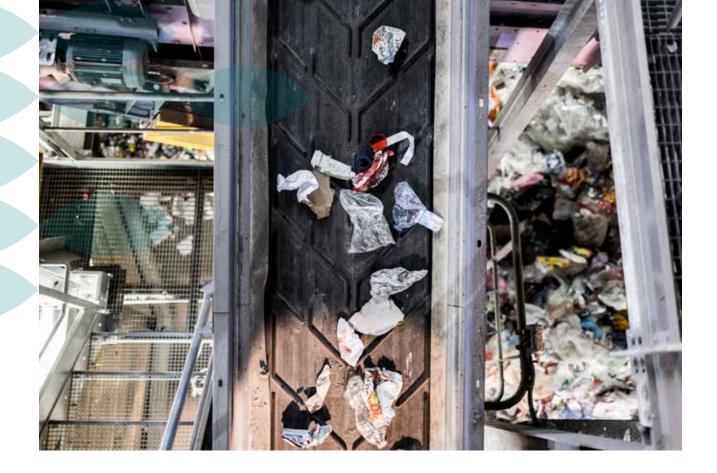
In terms of treatment, Syctom is reflecting on the means to deploy to meet these new needs. Its future treatment facilities will include sufficient biowaste reception capacities and a part of their treatment by composting. The projects to requalify and rebuild the Romainville centre by 2025 and the Ivry/Paris XIII centre in 2027 will ensure a reception capacity of 70,000 tonnes of bio-waste. In addition, the transformation of the Isséane sorting centre into a food waste transfer centre is being planned. In addition, Syctom is carrying out a feasibility study with the Syndicat Intercommunal pour le Gaz et l'Electricité en Île-de-France (SIGEIF) for the implementation of a bio-waste methoanisation plant on the port of Gennevilliers. This could accommodate a part of the food waste expected by Syctom.

TRANSFORMING ORGANIC WASTE INTO ENERGY

In December 2017, Syctom signed an innovation partnership with the SIAAP, the Interdepartmental syndicate for sanitation in the Greater Paris Region, to convert organic matter contained in household waste and wastewater treatment sludge into energy. The objective of this R&D project is, ultimately, to create a comethanisation treatment unit for this waste, in order to extract biogas from it. This biogas could be injected into the natural gas network and used on the industrial sites of both partners.

A major objective of this innovation partnerships to stimulate innovation (4 teams will work on it) to design a new process for this comethanisation.





STRENGTHENING THE INDUSTRIAL TOOL TO BE FUTURE-READY

In order to prepare for the future with facilities that are not only modern and efficient, but also integrated into their environment, Syctom is pursuing medium-term transformation projects for its facilities as well as a policy of continuous improvement of its existing centres.

If the year 2017 was marked, in the spring, by the launch of the construction of the selective collection sorting centre in Paris XVII, in the Clichy-Batignolles eco-district, three other large-scale operations also made major strides forward.

45,000 t

treatment capacity of the selective collection sorting centre in Paris XVII

The transformation of the Ivry/Paris XIII centre achieved new milestones: in view of the conclusions of the third phase of the public post-debate consultation, which took place under the aegis of a guarantor appointed by the National Commission for Debate Public (CNDP), the Syndicate Committee initiated, in early 2017, the procedures for applying for building permits and operating permits for the ERU, which incorporates the objectives of the

Energy Transition for Green Growth Law. Following the public inquiry, scheduled for May – June 2018, the construction of the ERU, next to the current plant, is expected to start at the end of 2018 to be commissioned in 2023. In accordance with the recommendations of the CNDP, Syctom intends to continue the dialogue on the organic recovery unit with local stakeholders, as the consultation has already led to the discontinuation of on-site methanisation and to an increase in the biowaste reception capacity.

Ongoing consultation

With a preliminary consultation phase, which took place from July to November 2017, under the aegis of a guarantor appointed by the CNDP, the project to rebuild the household waste treatment centre in Romainville/Bobigny also advanced in 2017. The project aims to endow the northeast quarter of the Paris region with suitable infrastructure. The exchanges which took place with all the stakeholders in the territory led the Syndicate Committee to approve the overall characteristics of the project in December 2017, taking into account the recommendations resulting from the consultation. These include, among other things, a process for drying residual household waste and transfer to the ERUs by river transport. It was also

decided to continue the process of participation and public information until the opening of the public inquiry.

Lastly, the energy recovery unit in Saint-Ouensur-Seine went through an active transformation phase in 2017, as the various work programmes were launched to improve the centre's integration into the new eco-district of the Docks. By 2021, they will lead - without any interruption in operation to the architectural requalification of the buildings and the construction of an entrance for refuse collection vehicles on the Seine guay, to guarantee the safety and tranquillity of the residents of the Ardoin Street. They also provide for the transition to a dry treatment of flue gas, as is the case at Isséane, to limit the volume and frequency of plumes rising from the stack, as well as the water consumption in the facility. Other aspects, less visible but essential, are also part of the ongoing programme in Saint-Ouen-sur-Seine, such as optimising energy production from the combustion of waste to benefit the residents of the eco-district.



Public meeting on the project in Romainville/Bobigny

Continuous improvements

In addition to these major structural projects, Syctom also pursues a policy of modernising its facilities on a regular basis. Despite the general overhaul of the Romainville facility, some major works were carried out in 2017: its centre for the transfer of residual household waste (RHW) to the ERUs was renovated, for enhanced safety and for improved working and operating conditions. Conducted from March to November, without any interruption in the site activity, the operation made it possible to enlarge and consolidate the RHW reception pit and to better distribute and secure the dumping stations. In line with the same process of continuous improvement of its facilities, Syctom carried out important works to secure the RHW unloading docks in the energy recovery centre in Saint-Ouen-sur-Seine: replacement of the dock barriers, addition fall arrest beams and installation of a radar control and video surveillance system on the dock. Identical works are planned at Ivry/Paris XIII in 2018. Lastly, since August 2016, the Isséane site has initiated a rental policy for some of its premises: four companies (Texet, AD Servio, Patrick Spica Communication and Bouygues Bâtiment Îlede-France) have therefore occupied some 2,200 sq. m. in its administrative building.



Mao Peninou, 1st Vice-président of Syctom – Deputy Mayor of Paris

By welcoming the future sorting centre to the 17th arrondissement, a new metropolitan industrial facility in a sector that is one of the most emblematic of its environmental ambitions, Paris is contributing enthusiastically to upgrading Syctom's recycling capacities."

TOWARDS A BETTER MANAGEMENT OF HOUSEHOLD WASTE STREAMS

Following the reflections carried out in the context of the Call for expressions of interest (CEI), launched in 2016, three objectives were defined to streamline the urban waste logistics in the territory: the establishment of a reception/transfer site to the east of the territory, a temporary household waste storage site as well as the creation of a logistics platform equipped with a stream management and forecasting software tool. The project management assistant, Naldeo/Artelia, supports Syctom in the development of these three projects

These tools, which will be based on the previous weighing volumes and the data transmitted in real time by the operators (pit filling level, for example), will help the centres to anticipate changes in their activity. The aim is to limit the use of external sites, reduce treatment costs and improve energy efficiency. This will make the entire system more streamlined and responsive

In late 2016, Syctom also acquired a software tool for waste weighing management and for invoicing waste treatment. 250 people - operators, member local authorities, Syctom agents - were trained to use SYSPéAU, the "automatic weighing system", commissioned in early 2017. The tool was initially intended for external centres, and then extended to Syctom facilities and finally to all users on 1st May. Feedback has shown the need for new training sessions and possible developments by 2018-2019.



SYCTOM, A RESPONSIBLE PUBLIC PLAYER

AN EXEMPLARY COLLECTIVE DYNAMIC AT WORK

Anchored on three pillars – social, societal and environmental – Syctom's corporate social responsibility (CSR) approach, monitored since July 2017 by a CSR Committee, aims to deepen, in a collective, partnership-based and transparent manner, the efforts already engaged by Syctom to assert itself as a responsible public service.

At the heart of the social component, the safety of the facilities has been enshrined as a cardinal value. This priority explains why Syctom became a member of the Institute for a Culture of Industrial Security (ICSI) in 2016 and why it is deeply committed to defining and implementing a global action plan on safety issues. The societal component focusses on the leverage effect that Syctom's activities can have on the development and use of the territories. Finally, the environmental aspect is reflected in Syctom's determination to design relevant indicators for the sake of transparency. Following these initial results, the firm Deloitte Développement Durable was appointed as project management assistant, both to audit the operators on the identified topics,

to set up and facilitate exchanges with external stakeholders and to build indicators and reporting tools.



Éric Césari, Syctom's Board Member and President of the CSR Committee

Syctom is deeply involved in the CSR approach.
Elected officials and agents, aware of their
responsibilities in terms of transparency and
exemplariness, are determined to build the trust
necessary for a public and citizen action."

Eight priority projects

A seminar was held in-house on 24 November 2017 with all the staff: agents were able to discuss the challenges of the approach, meet public and private stakeholders with prior CSR experience, and suggest courses of action. From this dynamic of co-construction, eight priority operational projects emerged: organise collection alongside member local authorities; set up target-based contracts with member local authorities on the volumes of sorted

waste; develop a culture of safety and security; promote a culture of innovation and become a showcase for it; develop the mobility and autonomy of the agents; seek and arrange responsible financing; to become a reference information centre on issues of waste; coordinate and carry out the reporting for CSR approach.

INTERNAL IMPLEMENTATION

Sorting and recycling of lamps and batteries, energy savings, food waste reduction: the messages posted on the Intranet under the heading "Exemplary Fridays" remind agents of the good practices to adopt for a responsible attitude, even in the office. Thanks to the contract signed in 2017 with Cèdre, a social-purpose enterprise, Syctom strengthened the methods of sorting and collecting office paper. Specific waste bins are emptied every fortnight by this company, which mainly employs people with disabilities. 260 kg of paper per month was recovered in the first five months of collection.



LIMITING THE ENVIRONMENTAL IMPACTS OF ITS ACTIVITIES

Major strategic guidelines, which are part of the CSR approach, are being implemented more and more effectively, whether for the recovery of waste or the limitation of greenhouse gas emissions.

Clinker, the main residue from household waste incineration, is a material that public works companies have long used as base layer in road construction. With competition from other materials, clinkers must find new outlets today. This is why Syctom, anxious to limit its environmental footprint, is thinking of new ways to recycle this material produced in large quantities by its three ERUs.

Ferrous metals, precious metals

It therefore worked with one of its service providers, the partnership company Routière de l'Est Parisien Veolia, to extract from clinkers the fraction of high value-added metals they contain. Even if the quantity is low, it appears sufficient to make the investments necessary for its extraction profitable. Syctom therefore encourages its service providers to embark on this path, which has proven its worth since the end of 2017 at Claye-Souilly, one of the five maturation and processing facilities (IMEs) to which Syctom's ERUs send their clinkers.

In addition, a project to promote clinker recycling, led by a multidisciplinary team including Syctom, won the "technology focus" award at the DRIM'in Saclay event organised in June 2017 by the Chamber of Commerce and Industry of Essone and the association MIM®.

Attentive to the entire chain, from production to recycling solutions, Syctom also launched a call for tenders in 2017 for auditing the compliance of clinker treatment in its ERUs and in the IMEs. Lastly, it worked on a research agreement with laboratories to find new recycling avenues for clinker, apart from its sole function as backfill.

River transport in the spotlight

Apart from clinker, evacuated by water from the three ERUs, Syctom encourages the use of alternative means to road transport for all types of material, in order to limit its greenhouse gas emissions and the nuisances associated with road congestion. It has made this a criterion for selecting companies entrusted with the recovery and recycling of the products generated by its activities and integrates it in its construction projects; the new sorting centre in Paris XVII will use the railways, while those at lvry/Paris XIII and Romainville/Bobigny will make extensive use of river transport.



Measurement campaigns

Syctom's attention to the impact of its activities also involves the implementation of measurement campaigns to ensure compliance with current and future regulations.

Each year, two air emission controls are carried out by the syndicate on each of the ERUs. These monitoring systems are in addition to the mandatory controls mandated by the operator. In addition, atmospheric deposition is monitored with the installation of Owen gauges near each ERU and biomonitoring campaigns are conducted by collecting mosses and lichens.

Analysis of composts

Lastly, the quality of composts is examined thoroughly: in 2017, Syctom's service providers, namely, SGS, Eurofins and Odournet, carried out six substrate analyses on four separate sites (a school canteen and a market gardening site in Romainville, the central kitchen of Bagneux and the greenhouses of Meudon). The aim for Syctom and the local authorities concerned was to verify the relevance of certain processes and to check the compliance of composts dedicated to market gardening.

PRIORITISING RISK PREVENTION

By making safety a cardinal value of its CSR approach, Syctom is sending a strong message to those who work in its centres and to the citizens who live in the vicinity. The new initiatives launched in 2017 concern everyone.

2017 marked a new milestone in the deployment of a safety policy to protect people and equipment within Syctom's facilities.

A contract awarded in April 2017 entrusted the "Naldéo/FPC Ingénierie/ES2/HCFDC services" consortium with a fact-finding mission prior to securing access conditions for people and vehicles in Syctom's centres. The resulting work will complement the security policy that allows Syctom to intervene every year on access to machines, the installation of metal guards or the strengthening of fire detection in its establishments.

Beyond the legal obligations

As the second pillar of risk prevention, the control of the impacts and discharges from household waste collection, sorting and recovery activities gives rise each year to new, ever more demanding initiatives.



ane waste recovery centre in Issy-les-Moulineaux

The results of these various measurements show that the average emissions from each centre are well below the authorised thresholds, as confirmed by Airparif's air quality studies around Syctom's incineration centres.

Capturing unpleasant odours

Lastly, Syctom launched a consultation in 2017 to carry out an odour diagnosis in the vicinity of the ERU in Saint-Ouen-sur-Seine, following complaints from local residents. The results of the study conducted led the Syndicate to commission works,

CIRCUITS
with 13 olfactory measurements every month, near the centre in Saint-Ouensur-Seine

mainly to improve the airtightness of the household waste pit. To ensure regular preventive follow-up, weekly measurements were also organised by specially trained eco-facilitators in the district of Les Docks de Saint-Ouen-sur-Seine. A procedure was also put in place to allow residents to report any odour by email or via an online form on projet-saintouen.syctom.fr.



AN EXEMPLARY MANAGEMENT

Syctom's continuous improvement approach also applies to its management. Following the recommendations made in May 2016 by the Regional Chamber of Accounts (CRC) of Île-de-France, an additional milestone was achieved in 2017 in their implementation.

Syctom put in place modifications and measures for each point raised by the CRC. For example, Syctom launched several consultations to better assess the impact of the investment on operating costs before the construction of waste sorting facilities. For the Syndicate, the challenge is both to explore all the contractual arrangements likely to drive investment projects related to the ecological transition, but also to receive support, legal and financial, in view of renewing and optimising its operating contracts.

Building the future

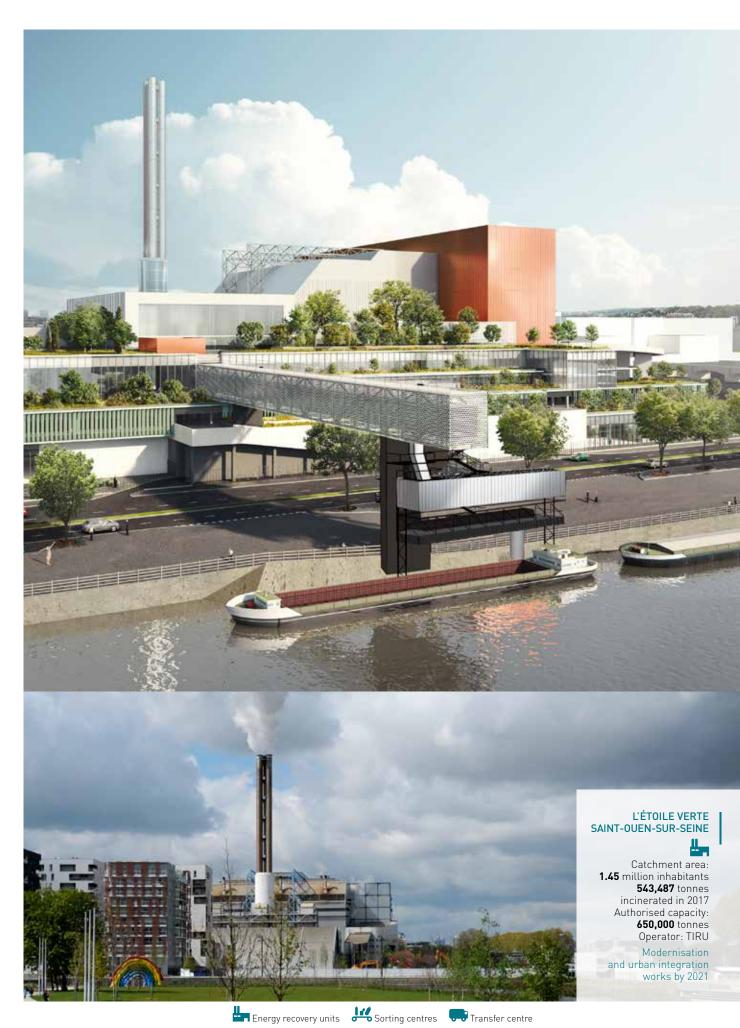
The budgetary developments rolled out in 2017 go beyond a rationale of optimisation. They aim to develop a management method that will serve Syctom's long-term strategy. Articulated around several key-ideas such as revitalising its investments and mobilising its self-financing capacities, this management method aims to ensure the durability of the industrial tool while adapting it to the new regulatory constraints. After a phase of driving the performance of the separate collections of packaging and bio-waste, Syctom's pricing policy will have to evolve to support the development of these collections and ensure the sustainability of the investment programme.

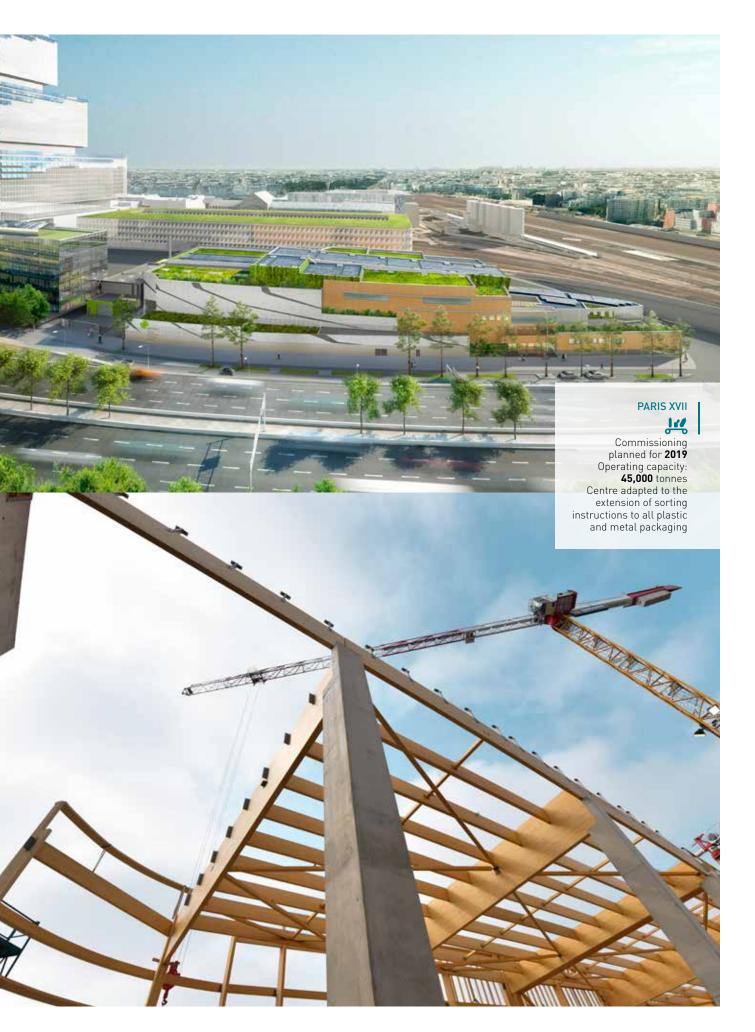
These guidelines constitute the financial translation of the strategic issues raised through the Syndicate's contribution to the development of the future Regional Waste Prevention and Management Plan (PRPGD) of Île-de-France, adopted unanimously by the Syndicate Committee on 20 October 2017. They thus actively contribute to Syctom's ambition to perform its public service mission at the least cost.

















eco-facilitators on the ground (January 2018)

€1M

allocated to the international solidarity programme

submitted for the 2017 Zero Waste Design Competition

57 projects

2,672

visitors to the centres

LOKING LOKING LPLAYER

In 2017, Syctom continued to open up to its stakeholders to fully perform its public service mission. On the ground, it is engaged with member local authorities to raise awareness among all audiences, reduce waste production, develop sorting and build the bio-waste industry. It exchanges views with all the stakeholders to forge a shared vision of waste management and take effective action. With its counterparts, it is moving forward to create the conditions for pooling resources, which is more efficient.

On another scale, Syctom is consolidating its core beliefs: By participating actively in the European reflection, so that waste is considered as a resource.

By working with upstream players – especially design – to limit the production of waste. But also by working internationally: sharing expertise, cooperation, conferences.

Open, responsible, Syctom works with its ecosystem to turn waste into a resource.



WORKING ALONGSIDE THE TERRITORIES

FACILITATING, CREATING AWARENESS, EXPERIMENTING

Syctom's fieldwork continued in 2017, with the same concern to inform transparently and support local projects. Anticipating the implementation of source separation of food waste, which will become mandatory in 2025 in accordance with the Energy Transition for Green Growth Law, Syctom worked at all levels to inform, raise awareness among and support the stakeholders in its territory to achieve this objective.

Developing the practice of composting

To encourage the adoption of new behaviours, Syctom carried out various actions to promote individual and collective composting. For example, it sponsored vermicomposter distribution operations, notably in Paris, where 500 machines were given away to mark the European Week for Waste Reduction. To achieve its goal of doubling the number of households practising collective composting by 2021, Syctom also strengthened its support systems and modernised its communication tools around a new clear identity: "the composting kit". Designed for the local authorities, it includes "turnkey" tools (posters, guides, stickers, etc.) as well as the possibility to mobilise master-composters and train advisers.

Encouraging the sorting of food waste

Syctom provided operational support for the

implementation of numerous experiments on the collection of food waste within its territory. The challenge: implement the sorting, collection and recovery of food waste in volunteer local authorities. After Paris (2nd and 12th arrondissements), several cities also joined the experimentation system. This is the case of Romainville, Noisy-le-Sec and Pantin (Est Ensemble), which started the sorting and collection of food waste in schools or markets. In the Bas-Pays district of Romainville, local residents and professionals were also introduced to this new way of sorting. This initiative has also been carried out in schools in Charenton-le-Pont, Joinville and Saint-Mandé (Paris East Marne & Bois) since September 2017. The territories of Grand Paris Seine West, Paris Ouest La Défense, Boucle Nord de Seine and Plaine Commune as well as the Versailles Grand Parc agglomeration community are engaged in projects for 2018.

To encourage the sorting of food waste, Syctom set up a support system for member local authorities. An awareness campaign was deployed during which a complete communication kit accessible to all was provided. Syctom also launched the website mesdechetsalimentaires.fr to disseminate key information and tips, and to answer all the questions.

Gaining a head start

In addition to these experimental approaches, Syctom is conducting research on treatment solutions for biowaste. It draws inspiration from the examples of Barcelona, Milan, Liège and San Francisco, which spurred an approach promoting bio-waste treatment in the 1990s. A study of these projects highlights the importance of regulation and taxation and shows that separate collection is possible in urban areas, provided that the constraints specific to each territory are taken into account. Thus, whereas San Francisco has 1,500 inhabitants per sq. km, the average density in Paris is 23,200 inhabitants per sq. km. In order to promote the emergence of a long-term stream, Syctom joined the Compostplus network in 2017, made up of local authorities with waste expertise who have set up a programme for the separate collection of biowaste. This is an opportunity for Syctom, which is sought after as an expert, to enhance its experimental projects and benefit from feedback from Compostplus members.



Marie-Hélène MAGNE, President of the Syctom's Territory facilitation committee – Vice-president of EPT Paris Est Marne & Bois

Syctom is providing a broad range of financial and technical support for member local authorities, especially for initiatives to promote local composting and source separation of biowaste. This is a strong incentive and the rapid growth of local projects that we observe demonstrates awareness for the need to act with our fellow citizens."

Pursuing the dynamic of facilitation

The food waste collection experiments launched in 2017 in the territory benefited from the intervention of eco-facilitators in the field, *via* door-to-door

operations, to explain the process to the participants and distribute awareness kits. Deployed in 2016 by Syctom to reinforce the initiatives carried out by the local authorities to promote sorting and prevention, the eco-facilitator system also grew broader and denser in 2017: in total, more than 2,000 operations were carried out that year. To meet the growing demand, the eco-facilitators also grew in number from 28 to 40 people (in January 2018).

904 DOOR-TO-DOOR OPERATIONS

Mobilised on an as-needed basis throughout the territory, they reached out to a varied public (residents, traders, companies), in the course of 294 local events, 904 door-to-door operations but also 255 service quality monitoring missions, such as the regular olfactory monitoring conducted near the centre in Saint-Ouen-sur-Seine. During an active summer campaign, especially in Paris Plages, the eco-animators made passers-by and tourists aware of good practices, taking advantage of the friendly atmosphere to establish a meaningful dialogue.

Reaching out to young children

As awareness on sorting also involves young people, "Le site de Tom", an educational section of Syctom's website dedicated to school children, underwent a makeover in 2017, in order to help young Internet users better understand issues related to waste and how they can contribute. Another strong awareness driver used by Syctom is organising visits to its facilities, which continued in 2017: 2,672 people were welcomed in the various centres across the territory. This was an opportunity for everyone to discover in situ what happens to waste and measure the importance of daily sorting.



RECOVERY CENTRES: REEMPLOYMENT AND PROFESSIONAL INTEGRATION

Promoting the circular, solidarity-based economy is the objective of the 19 recovery centres actively supported by Syctom in 2017. The Syndicate supports the growth of these structures which, in addition to promoting reemployment, strive to foster the professional integration of people in difficulty. Over the year, more than €600,000 was awarded by Syctom to help finance feasibility studies, and to build or develop these emerging sites.

ENGAGING IN A DIALOGUE TO PROMOTE THE ACCEPTANCE OF PROJECTS

Syctom intends to carry out its development projects in close collaboration with its stakeholders, promoting transparency and dialogue as a vehicle of progress.

As part of its various projects for the reconstruction and modernisation of waste treatment facilities, consultation mechanisms were organised. For Romainville / Bobigny, a preliminary consultation was conducted, supervised by the National Commission of Public Debate (CNDP). Between 4 July and 13 November 2017, a multifaceted mechanism allowed the information, participation and expression of all the local stakeholders. To support public meetings, four thematic workshops and a travelling exhibition were organised, as well as an open day for the existing centre. A site specifically dedicated to the project was also designed to allow users to ask a question about the project and monitor its progress: projet-romainville-bobigny. syctom.fr.

For Ivry/Paris XIII, Syctom followed the schedule of the Monitoring committee meetings, faithful to the commitment made at the end of the public post-debate consultation. Thanks to this privileged body and to the website projet-ivryparis13.syctom. fr, exchange of views and provision of information to the stakeholders in the territory are continuing in 2018. And in Isséane, which is celebrating its 10th anniversary in 2018, the dialogue remains active: a group of volunteer "Sentinels" remains involved in the life of the site, with the Environmental quality charter monitoring committee.



A name for the new centre in Saint-Ouen-sur-Seine

To start the dialogue in a more cordial way, Syctom participated as a neighbour in the Fête au Jardin organised on 24 September 2017 at the Grand Parc



The Syctom at the Fête au Jardin in Saint-Ouen-sur-Seine

of Saint-Ouen-sur-Seine. 1,000 residents took part in the numerous events organised by Syctom and contributed to choosing the name of the new centre, as part of the participatory approach launched to associate residents with the project. After a threemonth consultation, "Etoile Verte" was chosen. In September, the website projet-saintouen.syctom.fr was launched for the future centre. This website is a powerful platform for exchanges, and, in addition to detailed information on the project's challenges, it gives residents the opportunity to ask questions, make comments, but also quickly report bad odours.

"EXPERT NOSE" TRAINING

As part of the ongoing partnership with the association Mon Voisin des Docks, composed of residents of the eco-district near the centre in Saint-Ouen-sur-Seine, Syctom scheduled a training programme for them in July. The objective of this approach was to train local residents to recognise odours and thus refine their reporting, with a view to identifying solutions to these nuisances more quickly. In total, twenty residents became "expert noses" in 2017.

New tools for the elected officials

In tandem with its efforts to reach out to the residents, Syctom also strives to enrich exchanges with and provide information to member local authorities. In September 2017, Syctom launched a newsletter to which they can subscribe to receive news regularly. It also launched a new online Local authorities area: this dedicated extranet gives them the option to get information on the support system, order tools or view their own indicators. In order to give a precise overview of its field of action, Syctom also gathered nearly fifty of its elected officials for a training seminar on 23 March 2017. On the agenda: a visit to the centres in Paris XV and Isséane, followed by a presentation of Syctom's activities. This training helped each of them to understand the missions and projects of the syndicate, but also to appreciate the challenges of waste management at the metropolitan level.

INTENSIFYING COOPERATION

The dynamic initiated since 2015 with all waste treatment stakeholders continued in 2017, with one objective in mind: to contribute to the construction of a sustainable metropolis.

The highlights of the collaboration were three meetings between waste treatment syndicates in the Paris region, which took place in 2017 at the initiative of Syctom, in March, July and December. The shared ambitions are considerable: anticipate the impact of territorial reforms, build a concerted approach to the future Regional Plan for Waste Prevention and Management (PRPGD) and prepare for the competition from eco-organisations in the packaging sector.

Promoting exchanges and meetings

In July 2017, during the 4^{th} meeting, the idea of creating an interactive tool to densify links and facilitate communication was born. To meet this expectation, Syctom took the initiative to design a platform that it presented in December. This platform allows its users to interact via a messaging system, to share documents, but also to exchange views on a discussion forum.

Cooperation is also strengthened through on-site meetings. It is in this dynamic that Jacques Gautier, President of Syctom, accepted the invitation of the Semardel Group to visit the facilities of the Ecosite of Vert-le-Grand on 27 October 2017. This trip provided an opportunity to discover the NGV station (Natural Gas for Vehicles) which supplies 25 trucks. The participants also appreciated the work of the platform that injects biomethane into GrDF's natural gas networks.

Meeting of waste treatment syndicates of Île-de-France

An agreement to pool

In 2017, Syctom's collaboration with the SMDO (Mixed Syndicate of the Department of Oise) and the SIGIDURS (Mixed Syndicate for the Management and Incineration of Urban Waste) took shape. These three neighbouring structures wish to be part of a sustainable process of cooperation, to improve the efficiency of waste management in their territory. The syndicates intend to set up an agreement to pool their household waste treatment equipment.

URBAN PUBLIC SERVICES OF GREATER PARIS SERVING THE PARIS REGION

On the occasion of the 21st Exhibition for Île-de-France Mayors, from 28 to 30 March 2017, Syctom once again shared a common standalong with the Urban public services of Greater Paris. The was an opportunity for Syctom, SEDIF (water), SIAAP (sanitation), SIGEIF (gas/electricity), SIPPEREC (energy/digital) and EPTB Seine Grands Lacs (reservoir lakes) to strengthen their synergies and enhance their public service mission.





Alain GOURNAC, President of the Syndicat Intercommunal pour le Traitement des Résidus Urbains (SITRU), Carrières-sur-Seine

Regular meetings between waste treatment syndicates in the Paris region, organised at Syctom's initiative, facilitate dialogue, joint work and the exchange of good practices to promote the public service of waste management.



I SHARING OUR VISION

FUELLING REFLECTION

With its expertise as the leading European public operator, Syctom remains committed to promoting a demanding and ambitious reflection on the treatment of waste within the territory.

Syctom participated in the study group "Treatment of household waste: an opportunity for the French economy?" organised by the Fondation Concorde, a think-tank specialised in economic issues. An outcome of this collaboration was the monograph entitled "Faire enfin des déchets une ressource" [Turning waste into resource], published in February 2017. It explores the waste management model and makes a series of concrete proposals to make France a territory of experimentation and excellence in this field.

Disseminating its expertise

Syctom's contribution is also evident in its participation, on 26th June, in the first meeting of the Consultative Commission for the Development and Monitoring (CCES) of the Regional Plan for Waste Prevention and Management (PRPGD). This meeting was devoted to the planning process and the baseline study in the region with regard to the Energy Transition for Green Growth Law. In November, Syctom stepped up its commitment by presenting its contribution to the future PRPGD.



Entitled "For an ambitious and responsible management of metropolitan waste", it defines forecasts and targets for the years 2025 and 2031. In this study, Syctom draws up an assessment of waste prevention and management, and presents a proactive programme together with courses of action.

During the first national conference on household waste, organised on December 7th at the Maison de la Chimie by the Fondation Concorde, Syctom contributed its expertise to the question of the responsibility of the various stakeholders. Presenting its study to a large panel of experts, Syctom underscored the need to develop the acceptability of waste treatment, from kitchens to the facilities.



Sophie DESCHIENS,

Member of Syctom Syndicate Committee Special delegate for circular economy
of the Regional Council of Île-de-France

The participation of Syctom, a key partner, in the planning, prevention and management of regional waste is essential to refine the objectives and clarify the guidelines of the "framework document" currently under development (PRPGD). This coconstruction undertaken with all the syndicates in the Paris region allows us to build a realistic strategy applicable in our territories."

Innovating for the city of tomorrow

Because waste management is anchored first and foremost in a territory, Syctom brought together nearly one hundred stakeholders as part of an unprecedented workshop on the theme "Diversity, cities of tomorrow and service industries in dense urban environments", organised on 19th April at the Palais de Tokyo in Paris. The purpose of this meeting was to set out the broad outlines of a shared reflection on the social acceptability of industrial facilities in urban areas and the construction of sustainable cities.

PROPOSALS FOR THE CIRCULAR ECONOMY

In charge of the waste management of 6 million inhabitants of the Paris region, Syctom wanted to participate in the reflection initiated by the government. Its contribution to the "circular economy road map" is based on the principle of reality and proposes four key ideas: the territorialisation of solutions, the rebalancing of responsibilities, the development and acceptance of transitional solutions and the clarification of taxation.





LIMITING WASTE, AVOIDING WASTAGE

Every year, Syctom strengthens its commitment to prevention, a major lever for change, requiring the involvement of all.

Convinced of the need to integrate end-of-life products from their design, Syctom once again participated in the Paris Design Week in September 2017, at the Cité de la Mode and du Design. On this occasion, the Syndicate presented the Zero Waste Design competition to professionals and to the general public. The 5th edition of this competition was dedicated to textiles (clothing – decoration – furnishing). It was also an opportunity to launch the 6th edition on the theme of the reduction and management of waste in public spaces. The challenge: invite the designers of tomorrow to propose solutions to limit waste and recycle more and better.

Design and society

This competition is also breeding ground for innovative initiatives: Collective 5.5, sponsor of the Zero Waste Design competition, had the idea to request Syctom to participate in Les Puces du Design, in November 2017. They wanted Syctom to contribute to an exhibition dedicated to the Italian designer Ettore Sottsass to raise awareness around consumption and recycling. About twenty cardboard balls from a sorting centre were integrated into the stage design of this installation. This was a way to challenge visitors about the ecological consequences of our production system, but also to demonstrate the designer's role in society.

Target: Zero Waste

All of these initiatives to raise awareness about prevention and recycling were successful this year. In fact, Syctom won the call for projects "Zero waste, Zero wastage territories" (TZDZG), launched by the Ministry of the Environment and Environment and led by ADEME. Obtaining this certification consolidates the approach we have taken to meet the objectives of the Energy Transition for Green Growth Law. Already recognised as a TZDZG in 2015,

with five member local authorities, this certification was extended to all of Syctom's territory. In October 2017, Syctom therefore embarked on a relay action programme, with the support of ADEME. Multiple awareness-building operations will be deployed in 2018, all over the country, in order to waste less, maximize reuse and recycle all that can be recycled.

ENGAGING WITH ADEME

In order to deepen the actions undertaken in its 2015-2020 plan to support the local authorities, Syctom chose to contract with ADEME. For 3 years, it will receive support for facilitation means and communication actions. In addition to continuing its actions for the prevention and recovery of household waste, Syctom plans to strengthen its operations in 2018 on the themes of the fight against food wastage and the development of industrial and territorial ecology.



Arnaud Leroy, President of ADEME

By engaging a wide range of actions – the development of industrial ecology approaches, support for reemployment, composting, the fight against food wastage ... – Syctom has set in motion a real dynamic that brings together all the stakeholders of its territory towards a more circular economy. It is a driving force for these issues that are of high priority for ADEME."





TAKING COOPERATION TO THE INTERNATIONAL LEVEL

STRIVING TO SHARE EXPERTISE

As a leading player in waste treatment for over thirty years, in France and in Europe, Syctom intends to showcase its expertise beyond its territory and contribute to the development of the French model of waste management.

Launched in 2015, Syctom's international solidarity programme, which is helping to improve waste management in developing countries, continued its deployment with nearly €1 million allocated this year for 12 projects around the world. In accordance with the framework agreement signed three years ago with the major Syndicates of the Paris region, Syctom focused on projects promoting synergies through a joint water/waste approach. In this dynamic, three new programmes were launched in 2017 in Guinea (Kindia), Comoros (Mutsamudu Bay) and Togo (Mango).

Syctom also embarked on projects to promote a materials recovery approach or to implement activities such as pre-collection. In addition, as official development assistance is a long-term process, Syctom continued to invest in actions initiated in 2016, such as the project implemented in Vietnam's Vinh Phuc to professionalise and optimise waste management.

SUCCESSFUL PROJECT IN DAPAONG







Stéphane Weisselberg Member of the Syndicate Committee and President of Syctom's Solidarity and International Cooperation Committee

As global inequalities deepen, I am proud of our ambitious international solidarity programme launched in 2015. It now aims to reconcile sanitation, access to drinking water and sustainable waste management by partnering with SIAAP, SEDIF, NGOs and local authorities involved in projects to support disadvantaged people."

International technical cooperation

The year 2017 was also marked by Syctom's active participation in international cooperation meetings. On 23 March 2017, Hervé Marseille, then president of Syctom, met in the Senate Mr. Moncef Belkhayat, Vice-President of the Casablanca-Settat region in charge of international affairs, within the framework of technical cooperation commitments initiated in 2016 between the Syndicate and the Casablanca-Settat region.

A trip by Syctom officials to Argentina in October also laid the groundwork for an ambitious collaboration. As part of a French delegation composed of players committed to the environment, Syctom helped to present an alternative model to landfilling, widely practised in this country, which is now looking for solutions. In March, a group of Argentine politicians and journalists visited Isséane to discover an exemplary model of integrating an ERU into a dense urban context. This provided an opportunity to define the framework of this partnership, which will take the form of an agreement co-signed by CEAMSE (Metropolitan Area Ecological Coordination Agency, a state-owned company - Argentina), Airparif and Syctom. It will aim at improving waste management and preserving air quality in Argentina.

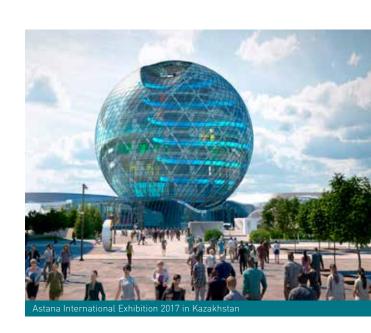
EXCELLING INTERNATIONALLY

In 2017, two international events not only allowed Syctom to develop its visibility and demonstrate its know-how alongside big names in the French industry, but also to initiate partnerships for the future.

Between June and September, invited by the Commissariat Général of France, Syctom participated in the international exhibition in Astana, Kazakhstan, dedicated to future energies. This exhibition attracted some 4 million visitors. Syctom featured prominently in the French Pavilion, visited by nearly 600,000 people and more than a hundred delegations. Three themes were showcased: sustainable city, renewable energies and ecocompatible mobility.

A historical approach to waste

Conceived as an immersive journey, the Syctom space illustrated how successive industrial changes in French history have resulted in energy solutions that respect the environment. The highlight for the Syndicate was the workshop organised on 23rd June, entitled "From waste to energy: what solutions? Which partners?" in the presence of Hervé Marseille, then president of Syctom, and a delegation of elected officials. It was an excellent opportunity to showcase French know-how and inventiveness, but also to demonstrate the potential of waste in terms of energy production.





Fruitful encounters

Syctom's participation in this exhibition also fostered exchanges, particularly with the local authorities in charge of waste management for the city of Astana, which requested its collaboration. The Syndicate's mission was to offer its Kazakh counterpart a range of solutions for treating household waste, including organic waste. This work resulted in the submission in March 2018 of a detailed study taking into account both the legislative and economic context, as well as the specific climatic imperatives of Astana. At the same time, relations with the Nazarbayev

33 INTERNATIONAL DELEGATIONS from 19 different countries

University, also initiated on the occasion of the exhibition, continued in 2017. This collaboration, which resulted in a visit to France by a university delegation, focused primarily on the issue of cogeneration.

Alongside SIAAP at COP23

Syctom was able to share its vision of waste/resource on the occasion of a major international meeting in 2017: COP23 which held in Bonn, Germany from 6 to 17 November, under the Presidency of the Republic of Fiji. Syctom was present with SIAAP to address water, waste and climate change issues. Invited by UNESCO to participate in a workshop on circular economy, the two public operators reiterated the importance of the joint management of liquid and solid waste, illustrated by their co-methanisation project. This ingenious project allows pooling

their resources by treating sewage sludge and the residual organic fraction resulting from the sorting of household waste.



Building new partnerships

Through this event, Syctom was able to share its cross-cutting approach to waste management and water management, as well as to initiate new collaborations, essential to meet the challenges of a circular economy. The discussion times paved the way for closer links with the Partenariat Français pour l'Eau and the Alliance des Mégapoles pour l'Eau et le Climat. These projects reinforce a dynamic of outward-looking cooperation and open up new perspectives on the French model of international waste management.

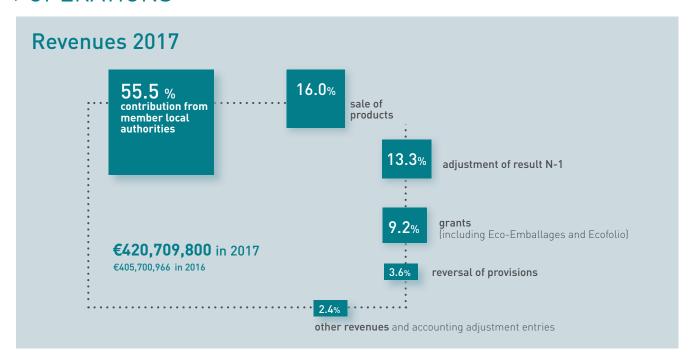


syctom

Technical and financial report

2017

I OPERATIONS



FEES UNCHANGED

In 2017, the fees collected for household waste and bulky objects and bulky objects and the population share remained unchanged with respect to the pricing established by Syctom in 2016 (94 €/tonne and 5.6 €/pers.), thus confirming the decrease since 2015 (-3.5 % for treating tonnages of HW/BO and -12.1 % for the population share). The fees and grants paid for selective collection and bio-waste were also maintained, in order to boost the development of sorting performance and the collection of food waste.

USE OF THE FEES





CHANGES IN THE FEE AMOUNT FOR HOUSEHOLD WASTE AND BULKY OBJECTS

Calculated pro rata from the quantity of waste brought to Syctom and from the population of each municipality or inter-municipal grouping.



FEES AND GRANTS PAID REVENUE STRUCTURE

The income from fees stood at €238 million in 2017 and the grants paid to the members amounted to €7.5 million.

In 2017, the fees charged from Syctom's members accounted for **56%** of its operating revenues, followed by the sales of products (**16%**) and grants from eco-organisations (**9%**).

SALE OF PRODUCTS
AND GRANTS
FROM ECOORGANISATIONS

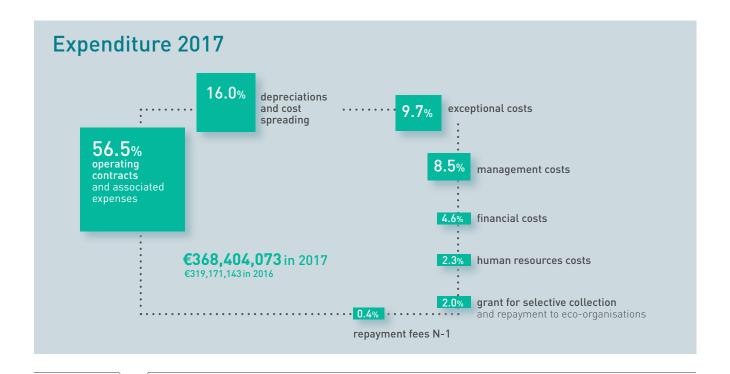
The sale of products corresponds to energy recovery (steam and electricity) and materials recovery (products from sorting of selective collection, bulky objects and the incineration of household waste).

In 2017, steam and electricity revenues increased (respectively +€1 million and +€1.5 million).

The materials recovery item (notably for products from the incineration of household

waste and selective collection) also rose sharply ($\ensuremath{\epsilon}$ 23.5 million compared to $\ensuremath{\epsilon}$ 19.2 million in 2016), due to an increase in the metal buy-back price in particular, compounded by a slight volume effect on selective collection.

The grants paid by eco-organisations (Éco-Emballages, Écofolio, Éco-Mobilier and Ocad3E) and subsidies, however, were relatively stable in 2017 (- €0.4 million).



OPERATING COSTS ON THE RISE

€208M

In 2017, the operating contracts represented an amount of €208 million (€195 million in 2016), or 56.5% of operating expenses (or 63% of operating expenses excluding exceptional expenses). Operating costs increased by approximately €13 million compared to 2016 (+ 6.7%), due to the increase in various items: B0 treatment expenses due to the increase in treated tonnages; landfill expenses due to reduced availability of private incineration centres; major maintenance and repair expenses; sorting expenses due to an increase in the average cost per tonne and selective collection contributions from the local authorities

Incineration treatment on the other hand recorded a downturn. This decrease is explained by the combination of three factors: the reduction in the TGAP (General Tax on the Polluting Activities) by $1 \in /t$, the increase in the VAT recovery rate and the slight decrease in the incinerated tonnage. At the same time, new expenses were incurred in 2017, due to the transfer of the responsibility for waste reception centres by Syelom.

HUMAN RESOURCES COSTS

€8.6M

With a workforce of 127 employees as of 31 December 2017, payroll represented around 2% of Syctom's operating expenses.

INNOVATIVE AND COMPLEMENTARY ACTIONS

€5.4M

- The ramp-up of the ambitious waste prevention and bio-waste development programme: teams of eco-leaders, awareness-raising initiatives among residents, the general public (Paris Design Week) or with students (Zero Waste Design Competition), development composting for collective or individual use.
- The expansion of the international solidarity program in the field of waste leading to 12 agreements approved by Syctom's Syndicate Committee. This programme is implemented within the framework of "1% solidarity" scheme established by the French Law of 7 July 2014.

DEPRECIATION AND SELF-FINANCING

€59.1M

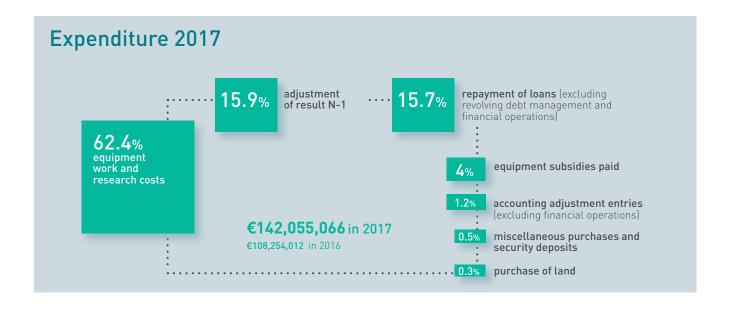
INVESTMENT



ONGOING EFFORT TOWARDS DEBT REDUCTION

Syctom's debt reduction continued in 2017, with the annual repayment of principal amount [€22.3 million]. Market conditions did not allow early repayment in 2017. At 31 December 2017, Syctom's debt stock stood at €409.3 million, compared to €431.6 million at 31 December 2016. Syctom's total debt reduction has been €257.7 million since 2008.

CHANGES IN DEBT AMOUNT 596 570 527 502 467 432 409 BETWEEN 2016 AND 2017 AND -39% SINCE 2008





+42.3%

In 2017, Syctom continued the investment programme implemented since 2015 (€94.5 million compared to €66.4 million in 2016):

- studies for the reconstruction of the centre in lvry/Paris XIII;
- completion of studies and award of major contracts for flue gas treatment and architectural requalification at Saint-Ouen-sur-Seine;
- completion of studies and commencement of work in the summer of 2017 for the selective collection sorting centre in Paris XVII:
- definition of the overall characteristics of the construction project of the Romainville/Bobigny centre;
- continuation of works for the continuous improvement and compliance of the facilities.

Investment programme by site

WORK RELATED TO **EXISTING FACILITIES** OR **NEW PROJECTS**

en M€ TTC

en M€ IIC sites	NATURE 0 PROGRAM		IMPLEMENTATION PERIOD	WORKS FINANCED IN 2017
ROMAINVILLE		project to renovate the selective collection sorting line and civil engineering works	2015-2016	3.74
SAINT-OUEN-SUR-SEINE	Щ,	project to integrate the centre into the urban area - work for landscaping, architectural redesign and flue gas treatment	2012-2021	24.21
OPERATING BALANCES (IS:	SÉANE, PARI	S XV)		0
IVRY / PARIS XIII	4	project for an energy recovery centre	2007-2027	31.53
PARIS XVII		project for a sorting centre for selective collection	2010-2019	24.46
OTHER PROJECTS (ROMAINVILLE AND SYCTOM / SIAAP)			3.40	
TOTAL				87.34

WORKS FOR THE **CONTINUOUS IMPROVEMENT AND COMPLIANCE**OF SYCTOM FACILITIES en M€ TTC

SITES	FINANCED IN 2017
ISSÉANE	2.61
IVRY / PARIS XIII	2.25
NANTERRE	0.52
PARIS XV	0.69
SAINT-OUEN-SUR-SEINE	1.05
SEVRAN	0.04
TOTAL	7.16

GRAND TOTAL OF INVESTMENTS 94.5	0
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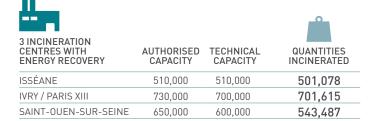
ANNUAL REPORT ON THE PRICE AND QUALITY OF THE PUBLIC WASTE DISPOSAL SERVICE

Pursuant to Decree No. 2015-1827 of 30 December 2015 laying down various provisions for adaptation and simplification in the field of waste prevention and management.

This document will be submitted to a vote by the Syctom syndicate committee, the metropolitan agency for household waste, during its meeting of 22 June 2018.

SYCTOM TREATMENT UNITS AND TONNAGE TREATED

in tonnes



6 SORTING CENTRES			QUANTITIES RECEIVED
ISSÉANE	30,000	24,000	23,794
IVRY / PARIS XIII	36,000	30,000	28,465
NANTERRE	40,000	40,000	38,355*
PARIS XV	20,000	20,000	18,250
ROMAINVILLE	45,000	45,000	46,500
SEVRAN	20,000**	20,000**	18,568

^{*} Including 11,781 tonnes from SITRU

^{**}As part of an amendment to the Sevran operating contract, the annual authorised capacity for receiving waste increased from 17,000 to 20,000 tonnes of waste (prefectural order of 6 January 2017).

31 WASTE RECEPTION CENTRES	QUANTITIES RECEIVED
IVRY / PARIS XIII	6,722
ROMAINVILLE	6,498
GENNEVILLIERS	3,982
MEUDON	5,032
NANTERRE	5,395
26 MOBILE WASTE RECEPTION CENTRES	2,202

OVERALL ANNUAL REPORT

NUMBER OF MUNICIPALITIES WITHIN SYCTOM'S SCOPE	84
NUMBER OF INHABITANTS WITHIN SYCTOM'S SCOPE	
Figures taken from the general population census for 2015 with an estimated change for 2017	5,753,331
GROSS TONNAGES OF WASTE	
Household waste, sweepings and green waste (in tonnes)	1,881,817
Requisitions (in tonnes)	85
SELECTIVE COLLECTION (in tonnes)	
Newspapers and magazines, multi-materials, paper, cardboard	184,600
Glass	0
Bulky objects	214,971
Waste reception centres	29,830
Food waste	2,103
FEES	
Tonnage share (in €/t of household waste and bulky objects)	94
Population share (in €/pers.)	5.6

EXTERNAL UNITS USED BY SYCTOM AND TONNAGE TREATED

in tonnes

!!	
INCINERATION CENTRES	QUANTITIES INCINERATED
ARGENTEUIL (NOVERGIE)	30,419
CARRIÈRES-SOUS-POISSY (NOVERGIE)	5,800
CARRIÈRES-SUR-SEINE (SUEZ+SITRU)	18,348
MASSY (NOVERGIE)	647
CRETEIL (SUEZ)	1,834
SAINT-THIBAULT-DES-VIGNES (NOVERGIE)	1,767
SARCELLES (SAREN VÉOLIA)	36,929
RUNGIS (RIVED EX-SIEVD)	8,429
VILLEJUST (NOVERGIE)	2,318
EMERGENCY CENTRES	7,361

14	
SC SORTING CENTRES	QUANTITIES RECEIVED*
LE BLANC-MESNIL (PAPREC/SITA)	6,815
CHELLES (GÉNÉRIS)	2,302
GENNEVILLIERS (SITA - TRANSFER)	7,699
GENNEVILLIERS (PAPREC - TRANSFER)	1,360
IVRY (DERICHEBOURG - TRANSFER)	182
LIMEIL (SITA)	2,186
NANTERRE (DERICHEBOURG - TRANSFER)	67
RUNGIS (RIVED)	2,859
BUC (NICOLLIN - TRANSFER)	-224
COItimIItim-	

SC: selective collection

^{*} For transfer centres: quantities received = incoming - outgoing

± ø±	
BO SORTING CENTRES	QUANTITIES RECEIVED
BONNEUIL (TAÏS)	6,549
BUC (NICOLLIN)	10,965
CHÂTILLON (TAÏS)	7,784
LA COURNEUVE (PAPREC)	43,334
GENNEVILLIERS (PAPREC)	7,696
GENNEVILLIERS (SITA)	31,577
IVRY (CEMEX)	30,129
NOISY (DRT)	39,626
PIERREFITTE (CDIF)	5,512
GENNEVILLIERS (PAPREC)	Construction BO: 23,005
IVRY (CEMEX)	Construction BO: 12,736
B0: Bulky objects	,

STORAGE FACILITIES FOR HAZARDOUS OR NON-HAZARDOUS WASTE	QUANTITIES
HWSF VILLEPARISIS (SUEZ)	Refiom: 44,093
NHWSF BOUQUEVAL (REP)	24,381
NHWSF CLAYE-SOUILLY (REP)	62,967
IWSF CLAYE-SOUILLY (REP)	5,189
IWSF (PRIVATE BO CONTRACTS)	4,206
OTHER NHWSF (PRIVATE CONTRACTS)	60,698



FINANCIAL INDICATORS

Terms of operation of the disposal service awarded to Syctom, the metropolitan agency

Public contracts

Total annual amount of expenditure for treating waste by Syctom (total real expenditure in the operating section of 2017 administrative account - excluding provisions)

€309.1 M

Terms and conditions for financing the overall treatment service

Contribution from local authorities, aid from Eco-Emballage for selective collection, sale of products

Terms and conditions for setting the special fee for the disposal of assimilated products

not applicable

Annual total of main contracted and paid treatment services (excluding major maintenance and repairs)

€226.8 M incl. tax

Total annual amount of investment and operating expenses (excluding capital transactions)

€510.5 M incl. tax

Repayments for selective collection

not applicable

Syctom grants €2.3 M Repayments for glass €2.8 M

Éco-Emballages **€31.1 M**

Ecofolio €3.9 M OCAD3E €0.1 M

Éco-Mobilier €3.5 M

Itemised amount of aid received from certified bodies

ENERGY

ENERGY

AND MATERIALS RECOVERY



ENERGY AND MATERIALS FROM INCINERATION

Electricity (IN MWH)	138,878
Steam (IN MWH)	2,637,654
Clinkers (IN TONNES)	308,947
Ferrous (IN TONNES)	36,858
Non-ferrous (in tonnes)	2 829



RECYCLING OF **MULTI-MATERIALS** (IN TONNES)

Plastics, paper, cardboard, steel and aluminium, small 133,975 142,670 with electrical appliances



RECYCLING OF BULKY **OBJECTS** (IN TONNES)

Wood, scrap metal, 133.959 large cardboard boxes



WASTE RECEPTION CENTRES (IN TONNES) 16,955



COMPOSTING

1,766

148,046

INCOME FROM ENERGY RECOVERY

in €M excl. tax



INDEX OF REDUCTION

NHWSF

(IN TONNES)

ANDFILL

in the quantities of non-hazardous, non-inert waste admitted into storage facilities Base 100 in 2010



INCOME FROM MATERIALS RECOVERY

Income from access rights to treatment and storage centres at which the local authority is the project owner for assimilated waste

in €M excl. tax



FROM SORTING OF SELECTIVE COLLECTION AND BULKY OBJECTS

Newspapers/magazines	4.7
Plastic packaging	1.7
Cardboard and recovered household packaging	6.9
Paper mix	1.2
Steel	0.3
Scrap iron and non-ferrous metals from B0	1.3
Glass	2.9
Wood	0.0
COST	19.0



FROM INCINERATION

Scrap metal	1.5
Non-ferrous	2.0
COST	3.5
TOTAL	22.5

FROM INCINERATION

PROMINCINERATION	
Sale of steam (Isséane and Ivry/Paris XIII)	33.6
Sale of steam (Saint-Ouen-sur-Seine)	23.5
Sale of electricity (Isséane and Ivry/Paris XIII)	5.3
Sale of electricity (Saint-Ouen-sur-Seine)	0.4
TOTAL	62.8

MEASURES TAKEN DURING THE YEAR TO PREVENT OR REDUCE HARMFUL EFFECTS ON HUMAN HEALTH AND THE ENVIRONMENT

Continuous improvement and safety at Syctom facilities

- Launch of the project studies and drafting of specifications for works to improve the fire network of the Ivry/Paris XIII centre
- Continued participation in the working group of the French Institute for an Industrial Safety Culture "Safety Culture of Industrial Processes" (6 meetings during the year)
- Completion of metalwork to ensure machine compliance for centres in Sevran and Nanterre
- · Launch of metalwork related to the Machinery Directive for the Saint-Ouen-sur-Seine centre
- Continued work to secure and improve working conditions at the unloading dock in the Saint-Ouensur-Seine centre
- Launch of work to install videoprotection in the unloading dock in the Saint-Ouen-sur-Seine centre
- Launch of a diagnosis relating to the management of access, vehicles, pedestrians, in the operating sites
- Launch of a support contract for the improvement of the fire network in the Isséane centre

Control of emissions into the environment

- Modernisation of the ERU at Saint-Ouen-sur-Seine:
- Award of the last two works contracts and construction of the foundations for the new flue gas treatment equipment.
- Treatment of industrial effluents: award of the design-build contract and launch of the execution
- Continued odour diagnosis for the Saint-Ouen-sur-Seine centre initiated in 2016 and development of an action plan to limit odour nuisances.
- Continuation of half-yearly campaigns (conducted by Syctom) to measure emissions from ERU stacks.

BREAKDOWN OF TONNAGE IN DIFFERENT TREATMENT CENTRES IN 2017

Waste treated

by Syctom

2,313,363 t 2,287,219 t in 2016

1,881,817 t 1,890,930 t in 2016

INCLUDING
TONNAGE OF
HOUSEHOLD WASTE

SORTING - RECYCLING OF SELECTIVE COLLECTION (EXCLUDING SELECTIVE COLLECTION FROM SITRU)

184,600 t



SORTING OF BULKY OBJECTS including construction BO

214,971 t 200,356 t in 2016



WASTE RECEPTION CENTRES

29,830 t 13,764 t in 2016

including as-dug gravel from the Romainville waste reception centre sorted at Bonneuil-sur-Marne **3,946** t



HOUSEHOLD WASTE WASTE INCINERATION PLANTS (HWIP) DIRECT CONTRIBUTIONS

1,441,722 t

including downgraded waste from SC

407 t 413 t in 2016



ROMAINVILLE TRANSFERS DIRECT CONTRIBUTIONS

392,357 t 372,987 t in 2016

including downgraded waste

293 t in 2016



DUMPING IN NHWSF

35,959 t

42,702 t in 2016

including downgraded waste

31 t **50** t in 2016



DUMPING IN BACKUP CENTRES

11,624t

11,113 t in 201



BIOWASTE

2,145 t 1,059 t in 2016

including tonnage collected by Syctom in experimentation territories 82 t

xperimentation territories **62**

NOT PASSING THROUGH SYCTOM PASSING THROUGH SYCTOM 120,269 t 118,804 t in 2016 0 t

0 t in 2016

NOT PASSING THROUGH SYCTOM



> Glass 120,269 t

Waste from nondumping municipalities **0** t

161,406 t SYCTOM CENTRES **157,564** t in 2016 23,194 t 23,546 t in 2016 **EXTERNAL** CENTRES

0 t SYCTOM CENTRES **0** t in 2016 218,913 t 204,796 t In 2016 **EXTERNAL** CENTRES

25,883 t SYCTOM WASTE RECEPTION CENTRES 9,324 t in 2016

1,369,379 t 1,379,882 t in 2016 SYCTOM HWIP **63,428** t **EXTERNAL HWIP 79,488** t in 2016

8,915t NHWSF **4,756** t in 2016

315,227 t SYCTOM HWIP **291,513** t in 2016

EXTERNAL HWIP **38,162** t **51,430** t in 2016

39,029 t NHWSF **29,480** t in 2016

35,928 t 42,652 t in 2016 DIRECT CONTRIBUTIONS downgraded waste

1.725 t SYCTOM HWIP **1,352** t in 2016 **8,332** t **EXTERNAL HWIP 2,905**t in 2016 **1,567** t NHWSF

6,856 t in 2016

2,103 t COMPOSTING **1,059** t in 2016 OR METHANISATION downgraded waste

0 t EXTERNAL HWIP **0** t in 2016 NHWSF **0** t 0 t in 2016

133,975 t 132,230 t in 2016 RECYCLING (INCLUDING DOWNSTREAM STOCK) **70** t -147 t in 2016 STOCK VARIATION **UPSTREAM** 46,051 t 43,322 t in 2016 INCINERATED REJECTS **4,504** t **REJECTS PUT IN NHWSF**

133,959 t 125,151 t in 2016 **RECOVERY** 10,459 t 0 t in 2016 INCINERATED REJECTS

22,781 t 15,604t in 2016 **57,969** t **64,042** t in 2016 **REJECTS PUT**

IN NHWSF

19,227 t **8,068** t in 2016 **RECOVERY**

1,357 t 1,255 t in 2016 INCINERATED REJECTS

5,300 t **REJECTS PUT IN NHWSF**

308,947 t 321,551 t in 2016 **CLINKERS** EVACUATED 36,858 t FERROUS SCRAP SOLD **34,665** t in 2016 NON-FERROUS SCRAP SOLD 2,829 t 2,832 t in 2016 **44,849** t **43,390** t in 2016 REFIOM 138,878 MWh 146,418 MWh in 2016 **ELECTRICITY SOLD 1,836** MWh STEAM (OTHER) 41,300 MWh in 2016

2,637,654 MWh 2,666,763 MWh in 2016 (CPCU)

1766 t ORGANIC AMENDMENT 944 t in 2016 (DIGESTATE AND/OR COMPOST)

STEAM SOLD

97 t INCINERATED REJECTS 61 t in 2016

120,269 t 118,804 t in 2016 **RECYCLING**

Total materials recovery 747,370 t 744,245 t in 2016 30.8% of waste CLINKERS FERROUS 🕅 NON-FERROUS **308,947** t



321,551 t in 2016



* Clinkers, ferrous and non-ferrous are subjected to materials recovery. To avoid a double count, this percentage was calculated by subtracting these materials from the total energy recovery tonnage.

All percentages are calculated including glass.

I TREATMENT COSTS

2017











Cost per waste stream and

treatment mode (in €M)	INCINERATION	NHWSF	SELECTIVE COLLECTION	BULKY OBJECTS	WASTE RECEPTION CENTRE	BIOWASTE
Tonnage treated	1,857,511	87,348	184,600**	218,913	29,830	2,063***
Contracts and operating costs*	155.0	8.3	46.5	27.4	5.5	0.4
VAT recovery	-2.0	-0.1	-3.7	-0.4	-0.1	-0.0
Depreciations/Financial costs	63.7	0.5	10.2	-	-	-
FULL COST OF TREATMENT	216.7	8.6	53.0	27.0	5.4	0.3
Revenues from the sale of materials	3.9	-	14.2	1.9	0.1	-
Grants from eco-organisations retained by Syctom	13.2	-	19.2	2.0	0.1	-
Other revenues (e.g. energy for incineration)	67.2	-	1.9	-	0.1	-
TOTAL OWN REVENUES	84.3	-	35.4	4.0	0.2	-
NET COST OF TREATMENT	132.4	8.6	17.6	23.0	5.2	0.3
	71 €/t	99 €/t	96 €/t	105 €/t	174 €/t	166 €/t
Grants/repayments by Syctom for the benefit of members	4.0	0.1	5.7	2.0	0.0	0.1
Grants and material revenues received by Syctom on behalf of members	-	-	5.2	2.0	0.0	-
NET COST OF THE SUPPORT POLICY	4.0	0.1	0.5	-	-	0.1
	2 €/t	1 €/t	3 €/t	0 €/t	0 €/t	30 €/t
NET OVERALL COST (treatment and support)	136.4	8.7	18.2	23.0	5.3	0.4
	73 €/t	100 €/t	98 €/t	105 €/t	174 €/t	196 €/t

 $^{{}^*} treatment \, services, \, transfer \, services, \, taxes, \, major \, maintenance \, and \, repair, \, rents, \, treatment \, of \, rejects \, and \, downgraded \, was tended a constant of a c$

2017

Cost of all streams combined (HW/SC/B0/waste reception centre)	TOTAL COST	TUNNAGE	
	2,296,753		5,725,612
	€М	€/tonne	€/pers.
Full cost****	305.9	133	53
Total own revenues	123.8	54	22
NET COST OF TREATMENT	182.0	79	32
NET COST OF THE SUPPORT POLICY	4.7	2	1
+ Structural charges	18.2	8	3
+ Prevention	4.7	2	1
NET OVERALL COST	209.7	91	37

^{****} excluding double counts such as certain sorting rejects that come under the incineration and SC sorting or B0 sorting columns

Notable factors explaining the changes seen in 2017

- Initiated in 2016 for tonnages that were then very modest, the treatment of biowaste grew rapidly.
- The cost of treating selective collection increased as a result of the increase in depreciation related to work on the Romainville sorting centre received early 2016 and whose depreciation therefore started in 2017.
- The works on the transfer centre in Romainville and their depreciation impacted mainly the cost of landfill, while the impact on incineration per tonne was more modest.
- The net cost of treatment of the waste reception centres increased sharply due to the integration of the Les Hauts-de-Seine waste disposal
- The net cost of treatment by incineration decreased due to the decline in TGAP tax and a significant increase in total revenues.
- The €9 million increase in the total cost (i.e. +4 €/t and +2 €/pers.) is mainly due to the takeover of the waste reception centres of Les Hauts-de-Seine, the increase in depreciation (Romainville), as well as the increase in structural charges and prevention/ experimentation expenditure.

^{**} excluding tonnages received from SITRU at the Nanterre sorting centre

^{***} excluding tonnages and costs for experimentation



2016

INCINERATION	NHWSF	SELECTIVE COLLECTION	BULKY OBJECTS	WASTE RECEPTION CENTRE
1,864,357	81,472	181,110	204,804	13,764
154.6	7.0	43.4	25.0	2.0
-1.4	-0.1	-3.4	-0.3	-0.0
63.5	0.1	7.2	-	-
216.6	7.0	47.3	24.7	2.0
2.7	-	13.1	1.5	0.1
12.9	-	18.6	1.5	0.1
63.4	-	1.9	-	-
79.0	-	33.7	3.1	0.1
137.7	7.0	13.6	21.6	1.8
74 €/t	86 €/t	75 €/t	106 €/t	133 €/t
3.8	0.1	5.4	1.5	0.0
-	-	5.0	1.5	0.0
3.8	0.1	0.4	-	-
2 €/t	1 €/t	2 €/t	0 €/t	0 €/t
141.5	7.1	13.9	21.6	1.8
76 €/t	87 €/t	77 €/t	106 €/t	133 €/t

2015

INCINERATION	NHWSF (SELECTIVE COLLECTION	BULKY OBJECTS	WASTE RECEPTION CENTRE
1,808,099	130,560	179,581	184,545	15,548
159.7	12.6	48.0	20.8	2.1
-1.5	-0.1	-3.8	-0.2	-0.0
62.9	0.3	7.3	-	-
221.1	12.7	51.5	20.6	2.0
3.4	-	12.7	1.5	0.1
12.7	-	17.8	1.4	0.1
44.6	-	-	-	-
60.7	-	30.4	2.9	0.2
160.4	12.7	21.0	17.7	1.8
89 €/t	97 €/t	117 €/t	96 €/t	119 €/t
3.0	0.1	29.2	1.4	0.0
-	-	4.6	1.4	0.0
3.0	0.1	24.6	-	-
2 €/t	1 €/t	137 €/t	0 €/t	0 €/t
163.4	12.8	45.6	17.7	1.8
90 €/t	98 €/t	254 €/t	96 €/t	119 €/t

2016

TOTAL COST	TOTAL TONNAGE TREATED****	POPULATION INSEE 2013
	2,287,219	5,711,843
€М	€/tonne	€/pers.
292.6	128	51
115.8	51	20
176.8	77	31
4.3	2	1
16.7	7	3
2.7	1	0
200.4	88	35

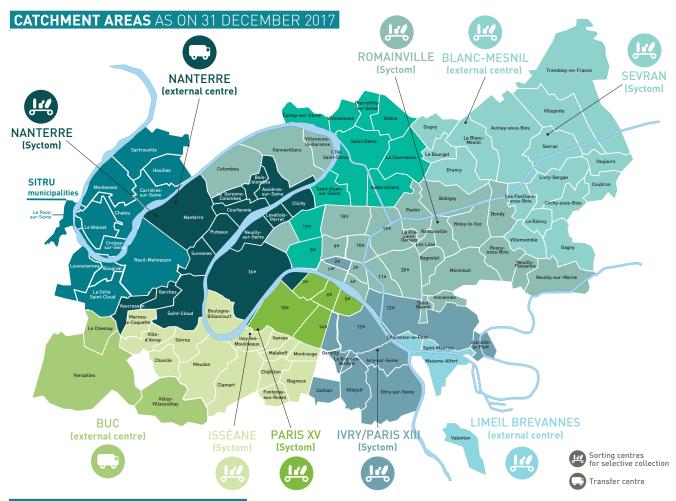
2015

TOTAL COST	TOTAL TONNAGE TREATED****	POPULATION INSEE 2012
	2,274,887	5,700,366
€M	€/tonne	€/pers.
303.2	133	53
94.2	41	17
209.0	92	37
27.7	12	5
14.4	6	3
1.0	0	0
252.2	111	44

Some methodological information

- The policy of support to local authorities (remoteness, hosting, Éco-Emballages repayment, Éco-mobilier repayment) is highlighted because it cannot be assimilated to conventional treatment expenditure.
- The cost calculation is the result of an analysis that performs restatements so that the data presented reveal the most reliable trends possible. It is therefore not the exact reflection of the accounting.
- For example, the previous financial year presented shows an estimation that is as close as possible to reality with respect to certain points. From one year to another, the final data may be substituted for the estimated values.

| SELECTIVE COLLECTION



BREAKDOWN OF TONNAGES 2017

SORTING CENTRES	RECEIVED (including downgraded was	SORTED	Variatio upstream	ns in stock downstream	TONNAGES RECOVERED	OPERATORS
SYCTOM SORTING CENTRES	00.707	00 7/7			47.000	
ISSÉANE	23,794	23,767	-35	120	17,229	TSI
IVRY / PARIS XIII	28,465	28,274	0	0	17,021	SUEZ
NANTERRE (SYCTOM CONTRIBUTIONS	26,574	26,457	-100	320	19,339	VEOLIA PROPRETÉ
NANTERRE (SITRU CONTRIBUTIONS)	11,782	11,782	0	0	8,695	VEOLIA PROPRETÉ
PARIS XV	18,250	18,247	50	-135	14,999	COVED
ROMAINVILLE	46,500	46,140	125	280	37,235	URBASER
SEVRAN	18,568	18,521	30	-50	12,701	IHOL
EXTERNAL SORTING CENTRES						
BUC (TRANSFER)	-224	-224	0	0	0	NICOLLIN
CHELLES	2,302	2,302	0	0	1,397	GÉNÉRIS
GENNEVILLIERS / LE BLANC-MESNIL LIMEIL (SORTING + TRANSFER)	18,061	18,011	0	0	12,534	PAPREC / SUEZ
IVRY DERICH (TRANSFER)	182	182	0	0	0	DERICHEBOURG
NANTERRE DERICH (TRANSFER)	67	64	0	0	0	DERICHEBOURG
RUNGIS	2,859	2,859	0	0	1,519	RIVED (EX-SIEVD)
TOTAL	197,180	196,382	70	535	142,670	



RECYCLABLE MATERIALS RECOVERY CHANNELS

in tonnes



		TONNAGES SYCTOM 2017	DESTINATION	TION FUTURE	
	NEWSPAPERS REVIEWS MAGAZINES	50,430	Paper mills UPM-Chapelle Darblay at Grand-Couronne 76	NEWSPAPER	90 % river (barge or container) the rest by road
	Brown cardboard recyclable household packaging (EMR) + thin cardboard packaging	50,109	Paper mills Europac 76 Saica 02 Emin Leydier 10 BROWN CARDBOARD, CORRUGATED BASE PAPER		40 % of river transport (barge), the rest by road
	PAPER MIX	14,138	Cardboard mills of Gondardennes or RenoDiMedici 62 CORRUGATED OR FLAT CARDBOARD		Road
	LIGHT FOOD PACKAGING (LFP)	1,290	Paper mill Georgia Pacific 45 Nova Tissue 88	TOILET AND HOUSEHOLD PAPER	Road
000	PLASTIC PET BOTTLES	8,694	Mostly FPR Limay factory 78 and Near Europe	GRANULES USED TO MAKE BOTTLES	River transport (barge) after regrouping the streams at Gennevilliers for Limay, the rest by road
	PLASTIC HDPE BOTTLES	3,138	Neufchâteau factories 88 Matière plastique de Bourgogne MPB 71 Lunen D	VARIOUS PLASTIC PRODUCTS	
	PACKAGING IN RIGID PLASTIC (PE, PP, PS)	606	Sorting and grading at Rennes or MPB 71 then recycling at Neufchâteau 88 MPB 71 Lunen D	(cleaning pipes, watering cans, etc.)	Road
	LDPE FILMS AND COVERS	1,028	Different recyclers, sometimes after sorting and grading by Paprec at Blanc- Mesnil	PLASTIC FILMS VARIOUS PLASTIC PRODUCTS	Road
	ALUMINIUM FROM SELECTIVE COLLECTION	493	Regeal-Affimet factory at Compiègne 60 Alunova factory Germany (for the experimental small aluminium streams from Nanterre)	ALUMINIUM USED TO CAST VARIOUS PARTS (particularly in the automotive sector)	Road
	ALUMINIUM FROM CLINKERS	2,667	GALL00 factory at Halluin Belgium	ALUMINIUM USED TO CAST VARIOUS PARTS (particularly in the automotive sector)	Road
	STEEL FROM SELECTIVE COLLECTION	2,809	Arcelor factory at Dunkerque 59		
	STEEL FROM CLINKERS	35,238	Large scrap metal: taken over by GALL00 IDF at Bonneuil s/Marne 94 Small scrap metal: taken over by GALL00 Metal or or other subcontractors Belgium and 59	LOO IDF at Bonneuil s/Marne 94 Il scrap metal: taken over by LOO Metal or or other	

Waste reception centres

1			
WASTE RECEPTION CENTRES	TONNAGES RECEIVED	TONNAGES RECOVERED	OPERATORS
26 MOBILE WASTE RECEPTION CENTRES	2202	1318	SUEZ
GENNEVILLIERS	3982	2160	SUEZ
IVRY / PARIS XIII	6722	5365	SUEZ
NANTERRE	5395	2879	SUEZ
MEUDON	5032	2682	SUEZ
ROMAINVILLE	6498	2552*	Urbaser envi-
TOTAL	29831	16956	ronnement

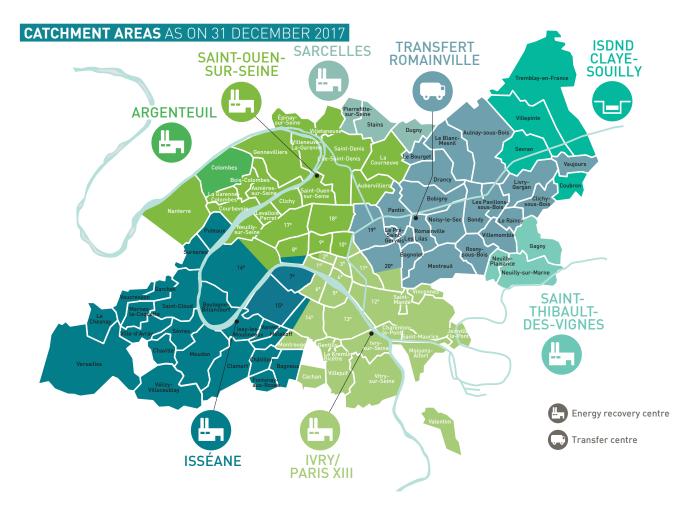
^{*}The as-dug gravel from the Romainville waste reception centre is then sorted in a B0 centre. Tonnages recovered from this sorting are not included here.

Biowaste



RECEPTION SITES	TONNA	GE COLLECTI	ED			
(RECOVERY OF FOOD WASTE)	BY THE CITY OF PARIS	BY MOULINOT	BY SUEZ	TOTAL INCOMING	METHA- NISATION	COMPOST- I ING
Saint-Denis (SARVAL)	948			948	948	
Villeneuve- Saint-Georges (VEOLIA PROPRETÉ)	1074		34	1108	1108	
Noisy-le-Sec (MOULINOT)	0	47		47	45	2
TOTAL	2022	47	34	2103	2101	2

RESIDUAL HOUSEHOLD WASTE



BREAKDOWN OF TONNAGES 2017

	:						•
<u> </u>			4		\cap	X	
INCINERATION UNITS	TONNAGES INCINERATED	Steam sold (IN MWH)	Electricity sold (IN MWH)	Clinkers (IN TONNES)	Ferrous (IN TONNES)	Non-ferrous (IN TONNES)	OPERATORS
ISSÉANE	501,078	728,689	46,497	80,245	10,187	885	TSI
IVRY / PARIS XIII	701,615	853,774	75,598	116,229	14,816	963	IP13
SAINT-OUEN-SUR-SEINE	543,487	1,055,191	8,323	92,709	10,235	819	TIRU
TOTAL SYCTOM CENTRES	1,746,180	2,637,654	130,418	289,183	35,238	2,667	
ARGENTEUIL*	30,419	1,836	7,818	7,594	477	58	NOVERGIE
CARRIÈRES SOUS POISSY	5,800	0	0	859	31	6	NOVERGIE
CARRIÈRES-SUR-SEINE*	18,348	0	0	2,936	0	0	NOVERGIE
CRÉTEIL	1,834	0	0	273	42	17	
SAINT-THIBAULT	1,767	0	642	353	104	29	NOVERGIE
SARCELLES*	36,929	0	0	5,909	815	42	SAREN (Veolia)
MASSY	647	0	0	126	6	0	NOVERGIE
RUNGIS	8,429	0	0	1,349	99	4	RIVED (EX-SIEVD
VILLEJUST	2,318	0	0	366	15	3	NOVERGIE
EMERGENCY CENTRES	7,361	0	0	0	33	4	
TOTAL PRIVATE CENTRES	113,850	1,836	8,460	19,765	1,620	162	
TOTAL	1,860,030**	2,639,490	138,878	308,947	36,858	2,829	

ENERGY

^{*} For external HWIPs, the tonnage given corresponds with the tonnage incinerated on Syctom's behalf.
** This tonnage includes actually incinerated waste, excluding pit level variations in Syctom's HWIPs.

Control of air emissions from Syctom's incineration centres with energy recovery

		NATURE OF DISCHARGES Concentrations in mg/Nm³ at 11 % 0₂ Antimony + arsenic + lead + chrome + cobalt							
	Particles	Hydrochloric acid	Hydrofluoric acid	Sulphur dioxide	Nitrogen oxide	Cadmium + thallium	Mercury	+ copper + manganese + nickel + vanadium	Dioxins and furans (in ng/Nm³)**
Maximum emission values applicable since 28 Dec. 2005 Ministerial order of 20 Sept. 2002	10	10	1	50	200 (80)*	0.05	0.05	0.5	0.1
IVRY / PARIS XIII									
March	4.2	1.6	0.08	23	59	0.002	0	0.13	0.009
April (Syctom)	4.3	1.3	0.06	22	79	0.007	0.001	0.15	0.004
September	2.9	8.0	0.09	23	55	0.002	0	0.03	0.004
October (Syctom)	3.2	2	0.09	25	50	0.003	0.001	0.19	0.002
SAINT-OUEN-SUR-SEINE									
January	0.7	0.9	0.01	5	59	0.001	0.0005	0.03	0.002
May (Syctom)	1.3	1.8	0.03	14	49	0.002	0.004	0.08	0.011
August	1.5	0.6	0.04	5	47	0.001	0.0001	0.09	0.016
September (Syctom)	0.4	0.7	0.04	3	61	0.001	0.00001	0.11	0.002
November (Syctom)	1.7	8.0	0.04	11	58	0.002	0.005	0.14	0.015
ISSÉANE									
February	1.8	1.5	0.04	1.4	30	0.0001	0.0001	0.02	0.009
June (Syctom)	0.2	4.5	0.07	3.6	43	0.0001	0.0004	0.03	0.004
June	0.6	2.4	0	6.5	21	0.0011	0.0085	0.03	0.002
July	0.2	1.9	0	4.1	42	0	0.002	0.04	0.008
October	0.3	1.2	0.028	3	42	0.000001	0.0004	0.02	0.014
November (Syctom)	0.6	2.7	0.009	5.1	41	0.000002	0.002	0.04	0.012

^{*} Ile-de-France region plan for the protection of the atmosphere has set the maximum emission value at 80 mg/Nm³ (the threshold set by the European directive is 200 mg/Nm³). This threshold is reiterated in the authorisation order to operate in Ivry-Paris XIII and Saint-Ouen-sur-Seine. At Isséane, the authorisation order issued by the Prefect of Les Hauts-de-Seine sets the threshold for emission of nitrogen oxides at 70 mg/Nm³.

Waste dumped in storage facilities

in tonnes



VILLEPARISIS (SYCTOM CONTRACT) from		
HWIP in Ivry/Paris XIII	17,447	
HWIP in Issy	14,985	
HWIP in Saint-Ouen-sur-Seine	11,661	
TOTAL HWSF	44,093	



TOTAL IWSF

CLAVE COLILLY (CVCTOM CONTRACT)

CLATE-SUUILLY (STCTOM CONTRACT)	
Rubble from Ivry waste reception centre	3,409
Rubble from Romainville waste reception centre	1,780
TOTAL	5,189
CENTRE EXCLUDING SYCTOM CONTRACT	Т
Rubble from BO private contracts	4,206

1	NON-HAZARDO NHWSFS	OUS WASTE SENT TO)

BOUQUEVAL (SYCTOM CONTRACT)	
HW from Romainville Centre	23,029
HW from backup centres	1,352
TOTAL	24,381

CLAYE-SOUILLY (SYCTOM CONTRACT)	
HW from direction contributions	35,928
HW from Romainville Centre	16,738
HW from Ivry HWIU	629
HW from Saint-Ouen-sur-Seine HWIU	5,466
HW from Isséane energy recovery unit	733
HW from backup centres	216
SC rejects and downgraded waste from the sorting centre at Sevran	3,258
TOTAL	62,967
TOTAL NHWSF (Syctom contract)	87,348

REFIOM: Residues from purification of flue gas from household waste incineration HWSF: Hazardous waste

storage facility
IWSF: Inert waste storage

NHWSF: Non-hazardous waste storage facility

NHWSF EXCLUDING SYCTOM CONTRACT

CONTINUE	
SC sorting rejects from private contracts to Claye-Souilly	738
SC sorting rejects from private contracts to other NHWSFs	296
Sorting rejects from B0	57,576
Put in NHWSF of private HWIPs	2,088
TOTAL NHWSF (excluding Syctom contract)	60,698

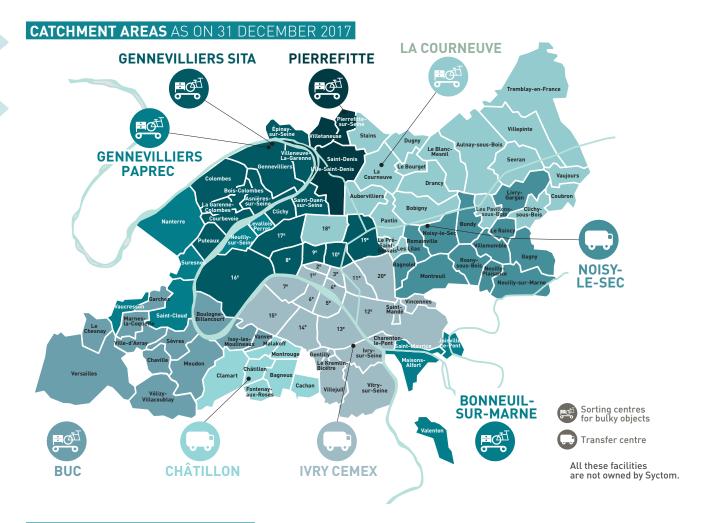
TOTAL NHWSF	148,046
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TOTAL WASTE dumped in storage centres	201,533
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9,395

^{**} ng/Nm³ = nanogram (billionth of a gram) per cubic metre.

BULKY OBJECTS



BREAKDOWN OF TONNAGE 2017

SORTING CENTRES FOR BULKY OBJECTS	TONNAGES RECEIVED	TONNAGES RECOVERED	OPERATORS
BUC	10,965	10,484*	NICOLLIN
CHÂTILLON	7,784		TAÏS
LA COURNEUVE	43,334	22,572	PAPREC
GENNEVILLIERS	31,577	17,123	SITA
GENNEVILLIERS (PAPREC)	7,696	4,194	PAPREC
NOISY REVIVAL	39,626	25,510*	DRT
PIERREFITTE	5,512		CDIF
IVRY (CEMEX)	30,129		CEMEX
BONNEUIL	6,549	18,829*	TAIS
TOTAL	183,172	98,711	

^{*} Recovered tonnages come from bulky objects as direct contributions and as transfers from other sites

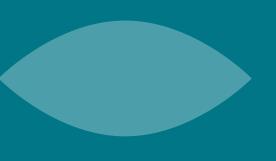


TOTAL	218,913	133,959
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l'agence métropolitaine des déchets ménagers