

**WORKING
TOGETHER**
FOR A CIRCULAR
ECONOMY

2024 ANNUAL REPORT

ecosystem
recycler c'est protéger



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GLOSSARY

The acronyms that are found throughout the report are defined hereafter:

SECTOR AND EQUIPMENT STREAMS

HWT

Hot Water Tank

(W)EEE

(Waste) Electrical and Electronic Equipment

CRT Screens

Cathode ray tube screens

LHA cold

Large household cooling appliances

LHA excl. cold

Large household appliances – excluding cooling appliances

LPA cold

Large professional cooling appliances

LPA excl. cold

Large professional appliances – excluding cooling appliances

LMT

Light means of transports

SFE

Small fire extinguishers

SHA

Small household appliances

SPE

Small professional equipment

SLI

Starting, Lighting, Ignition (car battery or lighting starter)

EV

Electric vehicles batteries

COMPONENTS AND POLLUTANTS

CFC

Chlorofluorocarbons

HC

Hydrocarbons

HCFC

Hydrochlorofluorocarbons

HFC

Hydrofluorocarbons

PCB

Polychlorinated biphenyls

POP

Persistent organic pollutant

OTHER ACRONYMS

AGEC Law

French Anti-waste law for a circular economy

ANSSI

Agence nationale de la sécurité des systèmes d'information (French National Data Protection Agency)

DGPR

Direction générale de la prévention des risques (French Directorate General for Risk Prevention)

DREAL

Direction régionale de l'environnement, de l'aménagement et du logement (Regional Directorate for the Environment, Planning and Housing)

ESG

Environment, Social and Governance

SSE

The Social and Solidarity Economy

WMO

Waste management operator(s)

QWL

Quality of working life

EPR

Extended Producer Responsibility

CSR

Corporate social responsibility

SDIS

Service départemental d'incendie et de secours (County Fire and Safety Service)

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EDITORIAL



In 2024 more than ever, our company stepped up to address the key challenges of ecological transition and the circular economy that our society faces.

Nathalie Yserd,
CEO

ecosystem has intensified its performances and brought together the EEE sector's stakeholders to focus on its objectives: by contributing to extending the life of electrical and electronic equipment through repair or reuse funding, reducing greenhouse gas emissions by removing pollutants and saving resources by recycling materials. Its capacity to bring different stakeholders on board, social and solidarity economy partners, retailers, those in possession of waste, local authorities and operators, as well as other producer responsibility organisations, makes 2024 the year of working together.

Joining forces and sharing skills were at the heart of the merger with Corepile, the producer responsibility organisation in charge of batteries and accumulators, driven by its CEO, Frédéric Hédouin, who I wholeheartedly thank for his commitment to the sector. This merger marks the birth of a new innovative and efficient company and enables the European "Battery" Regulations to be met. ecosystem is now the sole producer responsibility organisation to cover both batteries and electrical and electronic equipment. 2024 also marks the end of the authority approval for small fire extinguishers with the successful transition of this activity to a new producer responsibility organisation, ECOPAE.

Our capacity to unite has also enabled new social and solidarity economy organisations to benefit from the Reuse Fund thereby further reinforcing the links between the circular economy and solidarity. Alongside repair professionals and companies, ecosystem assisted in the growth of the Repair Bonus measure contributing in the push to boost new, virtuous behaviour by the French population for the circular economy and the environment.

2024 was also marked by the strengthening of the sector's partnerships and strategic collaboration. I have especially in mind the research projects that we are developing with the Urban Mines Chair (*Chaire Mines Urbaines*) to be able to address strategic challenges such as the recycling of critical metals and the development of artificial intelligence tools in collaboration with major retail stakeholders in order to improve the traceability of appliances and, in particular, overcome obstacles regarding their second lease of life.

The values of working together allowed ecosystem to federate, convince and achieve its ambitious goals. Global collection of +15%, driven by the huge increase in professional equipment (+64%) and a rise of +8.4% in household equipment. In three of our four business sectors we have obtained a collection rate that is equal to or higher than the rate set by regulations!

My thanks also go to Michel Touzeau, who stepped in as ecosystem's Chairman following the passing of Alain Grimm-Hecker, thereby providing a stable and reassuring working environment for all our teams. I hereby give a warm welcome to our new Chairwoman, Sonia Artinian-Fredou, whose arrival has brought a breath of fresh air to our producer responsibility organisation.

A WORD FROM THE CHAIRWOMAN



It's with enthusiasm and determination that I have taken up the position of Chairwoman of ecosystem this year.

Sonia Artinian-Fredou,
Chairwoman

My goal is clear and ambitious: to assist ecosystem in recasting its model; a transformation that is essential if we are to accompany the major changes in the sector and more globally, society. Historically focused on collection and recycling activities, over the last 3 years ecosystem has been reinventing itself in order to broaden its scope, integrate new stakeholders and respond to new regulations.

The EEE sector is currently facing many challenges: the sustainability of its economic equilibrium, the sovereignty of our industry which constantly calls for innovative recycling processes as well as the eco-design of products that we need to undertake for the future. All at once, the sector must act for the good of the planet, for consumer buying power and for national sovereignty: the circular economy is currently clearly at the heart of history! And ecosystem has a central role to develop it.

This is the path we have chosen to take: by integrating new activities resulting from the AGECLaw and by merging the Batteries/Accumulator and EEE schemes. Aware of the major challenges to come, ecosystem has very recently started to recast its strategy and organisation. This involves finding the right balance between our mission-based company status and an acceptable financial approach. We are also committed to refocusing our activities to have a more "client-based" approach. This is a very operational, strategic recast which will enable us to deliver as quickly as possible.

To meet the numerous social, economic and environmental challenges we must work together more than ever before. A vision that our new strategy will very tangibly embody. In addition to this position as leader in the EEE sector, ecosystem must in my opinion federate a real coalition of engaged stakeholders. In the face of complex changes, the solutions found must be concerted, shared and innovative. This is why we wanted our report to emphasize the collective spirit and to reaffirm our commitment to: "Working together for a circular economy"

I am especially proud to assist ecosystem in this immensely important time for the sector's future, and proud to work with teams who are highly motivated, experts in their fields and agile in order to address this transformation. I'm also proud of our stakeholders' commitment without whom, we could not be progressing as fast as we are currently doing. In 2026 ecosystem will be 20 years old: I look forward to celebrating with you the success of this pivotal year in our history!

GOVERNANCE

ecosystem is a non-profit organisation approved by the public authorities. Our capital is held by 43 companies among the sector's producers who are bound by the Extended Producer Responsibility (EPR) requirements and who ensure the implementation of solutions for repairing, collecting, reusing, decontaminating and recycling their products.

GUIDING PRINCIPLES AND METHOD

Our governance is based on a balance between two guiding principles:

- The autonomy of producers and the guarantee of their decision-making powers within their respective areas of business;
- The desire for cohesion of the entire sector, in particular its financial equilibrium.

Since the launch of the scheme in 2006, our method consists in making decisions after having consulted our stakeholders: members, collection partners, associations, public authorities, in order to achieve a consensus or wide majorities. This decision to co-construct makes it easier to effectively implement the decisions made upstream. This organisation is formalised through our Stakeholder Committee which met four times in 2024.

Producer engagement in ecosystem's governance

Our governance bodies allow producers to be involved at all levels of decision-making both upstream and downstream of projects:

- Definition of objectives (for collection, R&D, communication campaigns, etc.);
- Participation in defining the resources to implement;
- Approving the budget.

A strong and involved governance

Since 1 of July 2024, Corepile is now a 100%-owned subsidiary of ecosystem. We have authority approval for several groups of equipment:

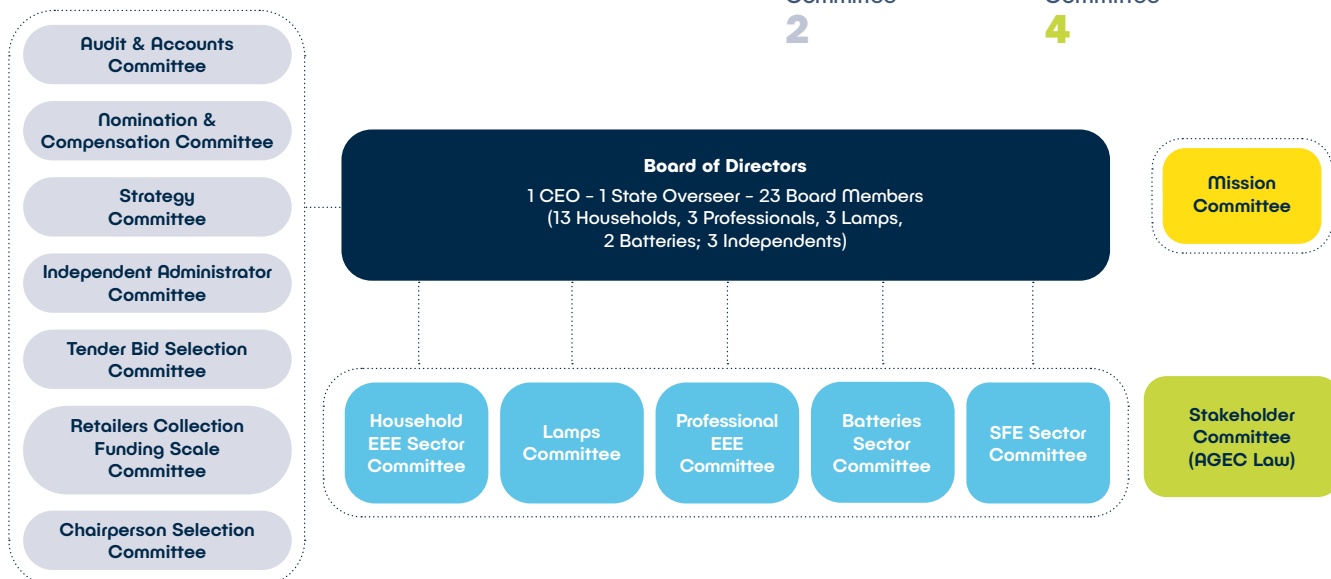
- Professional electrical and electronic equipment (EEE);
- Household EEE;
- Lamps;
- Batteries since 1 July 2024;
- Small fire extinguishers, until 31 December 2024.

GOVERNANCE COMPOSITION

Governance is structured around a 23-member Board of Directors, four permanent cross-disciplinary committees and four sector committees. Temporary committees are also created in order to meet specific issues: A Chairperson Selection Committee, a Tender Bid Selection Committee and a Retailer Collection Funding Scale Committee. This organisation ensures a coherence of the whole whilst finely managing the different business sectors. In addition, ecosystem also created a Stakeholder Committee as required by the AGECE Law, and a Mission Committee since 2022.

Number of meetings held in 2024

Board of Directors	8	Independent Operator Committee	2
Strategy Committee	3	Household EEE Sector Committee	3
Audit & Accounts Committee	4	Lamps Sector Committee	2
Nomination & Compensation Committee	4	Professional EEE Sector Committee	2
Chairperson Selection Committee	2	SFE Sector Committee	1
Tender Bid Selection Committee	2	Mission Committee	4
Retailers Collection Funding Scale Committee	2	Stakeholders' Committee	4



HIGHLIGHTS

LOOKING BACK
OVER 2024,
A YEAR FULL OF
KEY MOMENTS

ecosystem

January



- Increasing the Repair Bonus amounts

March



- "R&Day" Day, co-organised with the Urban Mines Chair
- The passing of Alain Grimm-Hecker, ecosystem Chairman

May



- Third edition of the Prevention of Fire Hazards Convention (*Assises sur la Prévention du risque incendie*)

June



- Launch of a call for projects for a 6th hot water tank treatment unit in western France.
- Awareness-raising campaign on sorting errors made for small electrical appliances
- Launch of the "jedonne-monelectromenager.fr" service in the Greater Lyon (*Grand Lyon*) area

Corepile



- The Batteries and Accumulators scheme celebrates its 25th anniversary



- Corepile becomes an ecosystem subsidiary
- Arrival of the teams in ecosystem's offices

July

- ecosystem present at the *Tour de France*

August

- At Vigeant (Vienne), the 1st hot water tank treatment unit has sprung from the ground

September

- Sonia Artinian-Fredou takes up her new position as ecosystem Chairwoman

.....



- European battery recycling week celebrates its 10th anniversary

November

- Launch of the Product Passport (*Passeport Produit*), with Fnac Darty
- Launch of a call for projects for the reuse of professional EEE

December

- Cyclone Chido in Mayotte: implementation of a crisis team with all producer responsibility organisations
- Launch of a "Standard logistics" tender

.....



- Renewal of the portable Batteries and Accumulators authority approval for 8 months, until 18 August 2025

BACKGROUND & DEVELOPMENTS

2024 was a transitional year marked by significant regulatory changes within a difficult economic climate as well as a change in ecosystem's scope of business in response to a desire to focus on activities around the world of electrical and electronic equipment integrating the batteries sector.

The handing over of activities related to small fire extinguishers to the new producer responsibility organisation, ECOPAE

In response to a desire to focus on its activities giving a second lease of life to electrical and electronic equipment, ecosystem wanted to cease its small fire extinguisher activities. To ensure a transition under the best possible conditions, the authority approval was renewed for a further 2 years until 31 December 2024. 2024 was therefore a year of transition to ensure the sustainability and stability of the scheme.

It's within this context that the new producer responsibility organisation, ECOPAE, founded by 9 fire extinguisher manufacturers, gained public authority approval on 5 November 2024. To ensure the continuity of services, ecosystem assisted the manufacturers and the new producer responsibility organisation.





New Battery EPR scheme obligations: ecosystem and Corepile join forces

2024 also marked the merger of Corepile and ecosystem. Announced by the two producer responsibility organisations in March, both companies wanted this merger to take place in order to provide a simplified and pooled service for the stakeholders of both schemes – in particular Producers – and whose challenges are closely linked. Thereby, ecosystem has now become the only producer responsibility organisation to cover both batteries and electrical and electronic equipment.

For further information, go to page 45.

This merger enables both companies to join forces and develop an innovative and even more efficient scheme having a broader scope in 2025 with the implementation of the new European regulation. As from 18 August 2025, all battery marketers will be concerned by the Battery EPR obligations.

CHANGE IN BATTERY CATEGORIES

Before August 2025



Portable
battery



Lead
starter battery



Industrial
batteries



After August 2025



Portable
battery
≤ 5 kg



Light means
of transport
batteries
≤ 25 kg



Industrial
batteries
≥ 5 kg



Starting, lighting
and ignition
batteries in
vehicles (SLI)



Electric or
hybrid vehicle
battery (EHV)



Alexandrine Fadin,
Circular Economy
Director, GIFAM

The change in eco-modulation criteria, implemented in 2025 is the culmination of three years of work. In this long and complicated process, the exchanges with the producer responsibility organisations were constructive and effective.

The main challenge is to find a balance between the many issues we face: the promotion of eco-design practices, which is the main goal of eco-modulation; the control of fraud in order to maintain the sector's equilibrium while limiting the complexity of implementation for our members.

Eco-modulation has led to significant changes for our members. The move from percentage-based to fixed amount-based bonuses and penalties, as well as the requirements to declare the reference in relation to the reparability index, complicate management.



New eco-fee modulation criteria: encourage eco-design

2024 saw the eco-modulation criteria change for household and professional EEE which became effective as from 1 January 2025. In-depth work and extensive exchanges took place, especially with the DGPR, to ensure the implementation of new measures.

As from 1 January 2025, the AGEC Law introduces new eco-modulation criteria that are applicable to household and professional EEE, with the aim of encouraging eco-design through a bonus/penalty system in terms of the eco-fee.

The new regulation entrusts ecosystem with an evaluation mission based on the new eco-modulation criteria such as the quantity of materials used, the incorporation of recycled materials, the use of renewable resources managed sustainably, durability, reparability, the possibility of redeployment and reuse, recyclability, the product's advertising or promotional target, the absence of ecotoxicity and the presence of hazardous substances.

THE 6 HOUSEHOLD EEE ECO-MODULATION CRITERIA

1 criterion allowing the application of a bonus or a penalty

- Battery separability: **a bonus** if it is possible to separate the battery from mobile phones and tablets;
A penalty when it is not possible to separate the battery from the piece of equipment.

3 criteria resulting in the awarding of a penalty

- The presence of HFC gases (only for washing machines, tumble dryers and dishwashers);
- The presence of brominated flame retardants in plastics < 25g;
- Disposable equipment

2 additional "supermodulation" criteria allowing a bonus to be awarded

- The reparability index (index higher than the defined threshold according to the type of appliance);
- The incorporation of recycled materials made from post-consumer waste from EPR schemes (open and closed loop).

THE 4 PROFESSIONAL EEE ECO-MODULATION CRITERIA

3 criteria leading to the awarding of a **bonus**

- The absence of brominated flame retardants in plastic >25g;
- The provision of spare parts for a defined period of time for each piece of equipment;
- The incorporation of recycled plastics coming from post-consumer waste from the EPR schemes (open and closed loop).

1 criterion resulting in the awarding of a **penalty**

- The non-separability of a battery.



Review of the eco-fee scale

ecosystem's financing relies on an equilibrium between business-related costs (recycling, pollutant removal, collection, awareness-raising, repair and reuse funding, etc.) and the eco-fees paid which depend on the placement of products on the market by producer members.

Since 2017 and despite both an increase in collection and actions carried out by ecosystem to promote a circular economy, the eco-fee scales have remained stable. To take in to account the rising costs of our activities, linked not only to inflation but also to repair and reuse funding measures provided for by the AGECL law, the eco-fee scales were reviewed this year. This work was carried out together with our stakeholders and implemented in two phases:

- In June 2024 for some product categories such as hot water tanks, electric bikes or telephones;
- in January 2025 for the other categories.

This review coincides with the implementation of eco-modulation which aims at reducing eco-fee costs for the most environmentally-friendly products.

QUANTITIES PLACED ON THE MARKET IN 2024

Household EEE

1,245,000

tonnes

Professional EEE

222,361

tonnes

Lamps

5,346

tonnes

Small Fire Extinguishers

1,660

tonnes

2024 KEY FIGURES

In 2024 ecosystem achieved its ambitious objectives for collection and, for three of its four business sectors, it obtained a collection rate equal or higher to those required by regulations. This performance was achieved despite a sharp fall in the quantities placed on the market compared to previous years.

ITEMS PLACED ON THE MARKET



	in number	Change vs 2023	in tonnes	Change vs 2023
Household EEE	467,000,000	+ 7,9%	1,245,000	- 1,4%
Professional EEE	356,300,775	- 0,9%	222,391	- 2,3%
Lamps	101,350,000	- 11,9%	5,346	- 24,8%
Small fire extinguishers	770,290	-2,6%	1,660	-1,6%
Total	925,421,065		1,474,397	

BREAKDOWN OF PRODUCER MEMBERS

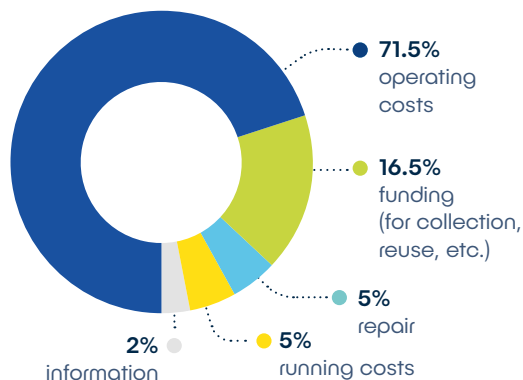
	Membership contracts	Net eco-fee paid
Household EEE	3,477	€251,554,000
Professional EEE	2,094	€24,586,000
Lamps	811	€18,144,000
SFE	43	€1,006,000
TOTAL	6 425	€295,290,000

+ 313

Membership contracts
vs 2023



BREAKDOWN OF ECO-FEE USAGE (HOUSEHOLD EEE, PROFESSIONAL EEE, LAMPS AND SFE)



**REPAIR**

(more informations on page 24)

7,393

repair points nationwide

12,327

technicians

- including 3,980 field technicians

€14,619,535

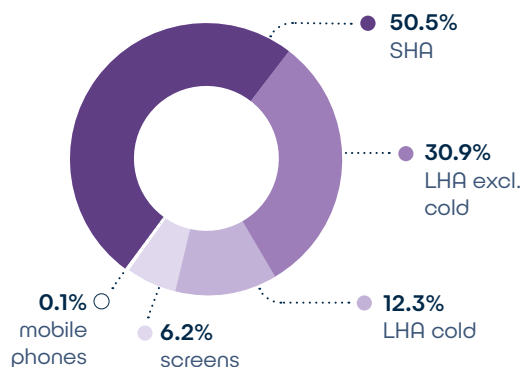
of Repair Bonus paid by ecosystem

€33

average amount per Bonus

**BREAKDOWN OF HOUSEHOLD EEE TONNAGES REUSED BY STREAM**

(more informations on page 36)

**REUSE** (more informations on page 36)**Household EEE****23,655**

tonnes reused

- i.e. 7,840,017 appliances reused

- including **12,876** tonnes by the SSE

- i.e. 1.36 million appliances reused by the SSE

320

SSE organisations referenced

€15,940,000

of funding paid to the SSE

Professional EEE**3,578**

tonnes reused

- i.e. 169,597 appliances reused

- including **351** tonnes by the SSE

- i.e. 3,275 appliances reused by the SSE

14

SSE organisations referenced

€238,000

of funding paid to the SSE





ACTIVE COLLECTION POINTS

13,018

Household
EEE



6,717

Professional
EEE



15,923

Lamps



362

Small fire
extinguishers

TONNES COLLECTED BY SECTOR (more information on page 28)

	2023	2024	Change	Items collected
Household EEE	641,030	694,815	+ 8.4%	142,290,278
Professional EEE	88,992	145,744	+ 63.8%	N/A
Lamps	5,321	4,937	- 7.2%	60,955,649
Small fire extinguishers	459	527	+ 13%	223,626
Total	735,802	84,023		203,469,553

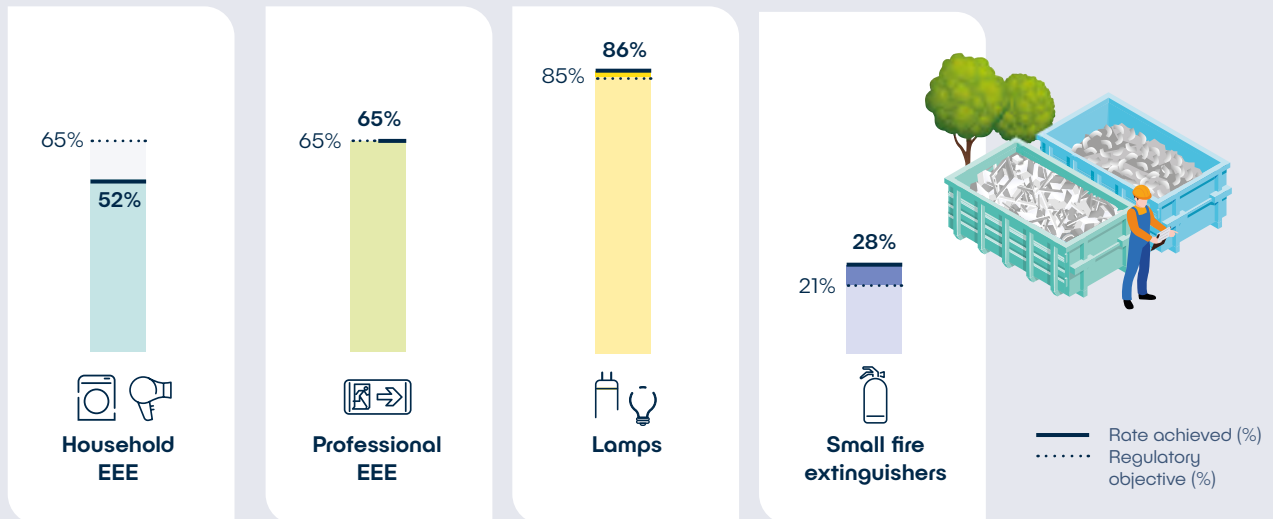
+ 8.4%

tonnes
of Household EEE
collected vs 2023

+ 63.8%

tonnes
of Professional EEE
collected vs 2023

2024 COLLECTION RATE



Although the target has been reached, the collection rate of lamps is generally decreasing, which can be explained by the technological change in equipment (LED) the service life of which is longer and longer as demonstrated by the high decrease in market placements.

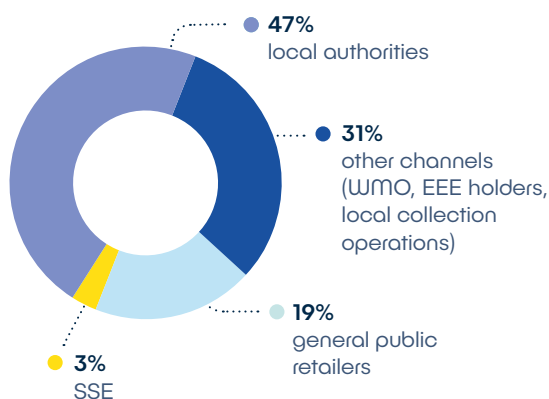
A study in the efficiency of lamp collection started in 2025 in order to set up action plans to best adjust our collection offering, especially in urban areas.



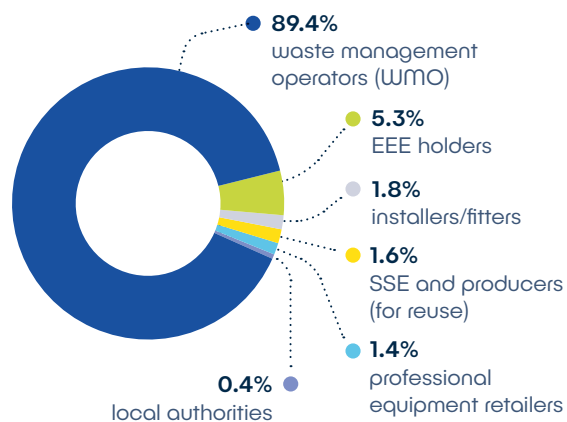
BREAKDOWN OF COLLECTION PER STREAM



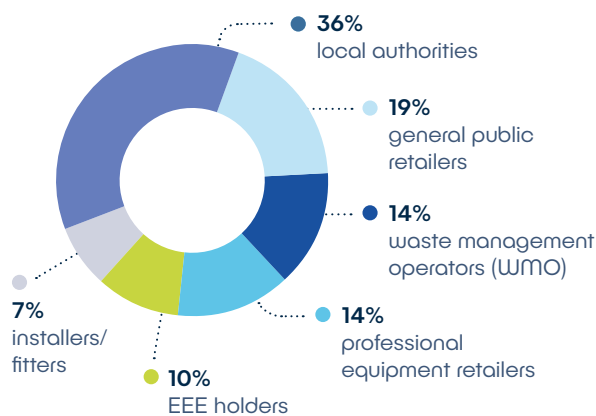
HOUSEHOLD EEE



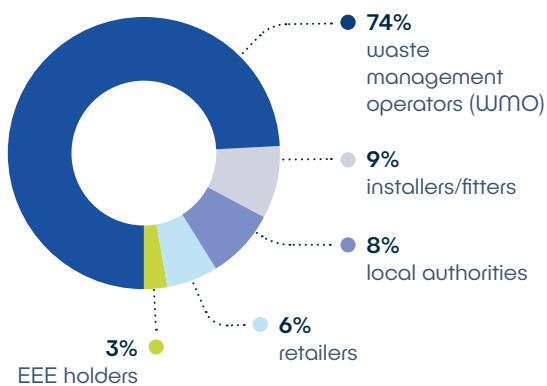
PROFESSIONAL EEE



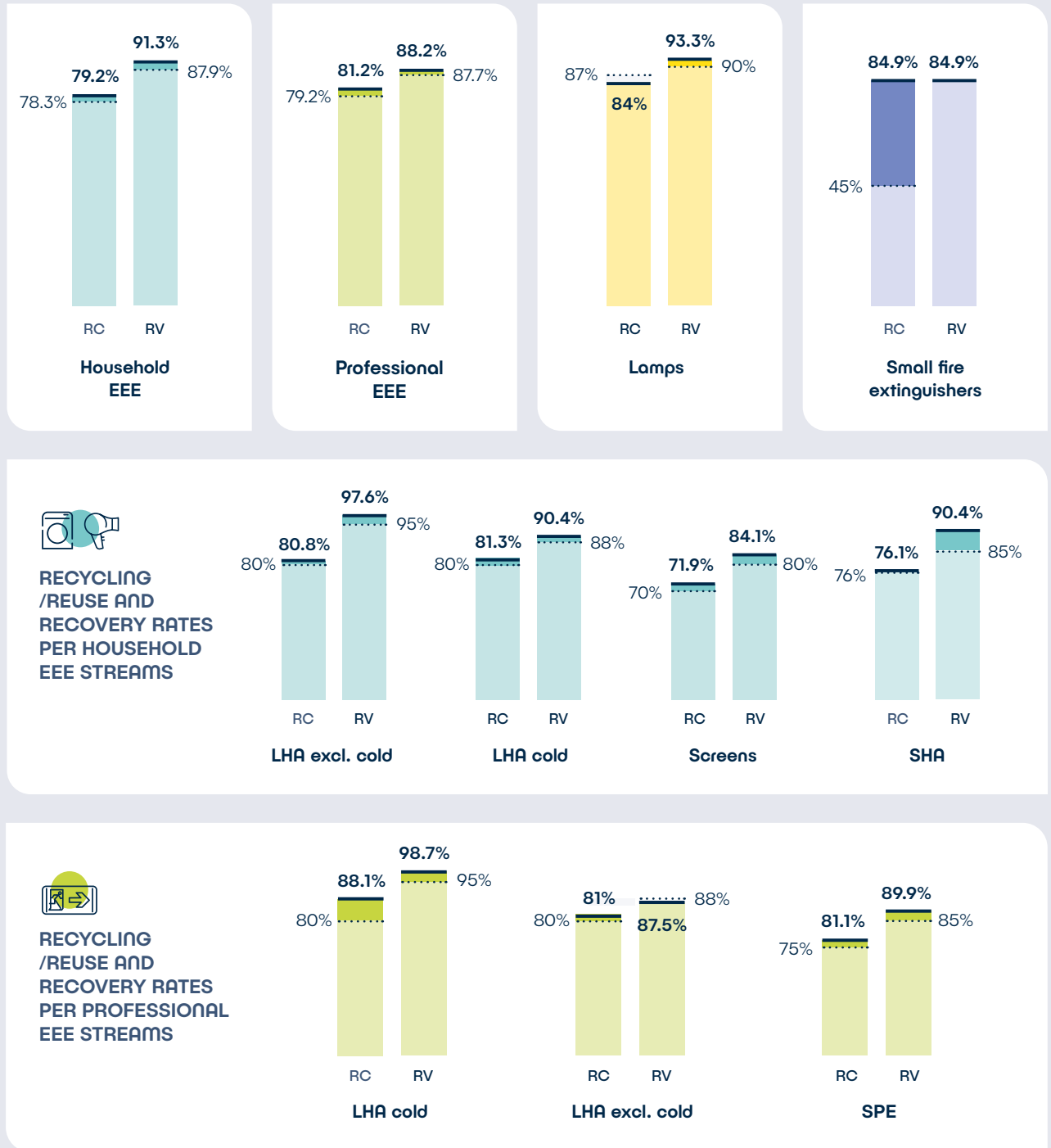
LAMPS



SMALL FIRE EXTINGUISHERS



RECYCLING/REUSE AND RECOVERY RATES 2024



The recycling rate of screens is increasing thanks to an industrial project carried out in 2023 to improve CRT screen treatment and the technological change that naturally lowers the amount of CRT screens in collection.

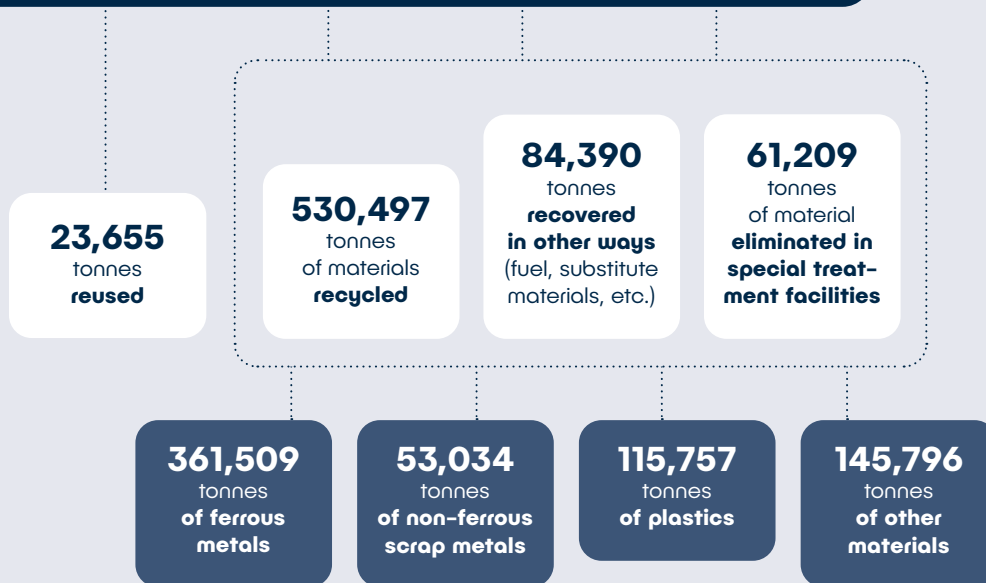
RC Recycling/Reuse
RV Recovery

— Rate achieved (%)
..... Target rate (%)

2024 MATERIAL BALANCE (more information on page 40)



699,752 tonnes of Household EEE and Lamps collected in 2024, including:



2024 ENVIRONMENTAL RECYCLING AND POLLUTANT REMOVAL INDICATORS

(more information on page 40)

The collection and recycling of materials from Household EEE and Lamps contributed to:

avoid the emission of
507,832 million tonnes of CO₂
compared to the extraction of raw materials

avoid the extraction of
4.15 million tonnes materials
by placing recycled materials on the market instead of raw materials

Removing pollutants from Household EEE containing gases (refrigerators, freezers, hot water tanks) enabled:

1.07 million equivalent tonnes of CO₂
to be extracted and eliminated,
corresponding to gases with a high global warming power that these pieces of equipment contain

BATTERIES AND ACCUMULATORS: COREPILE 2024 KEY FIGURES



PORTABLE BATTERIES SECTOR

10,963

tonnes collected
in 2024

33,452

active collection
points

161

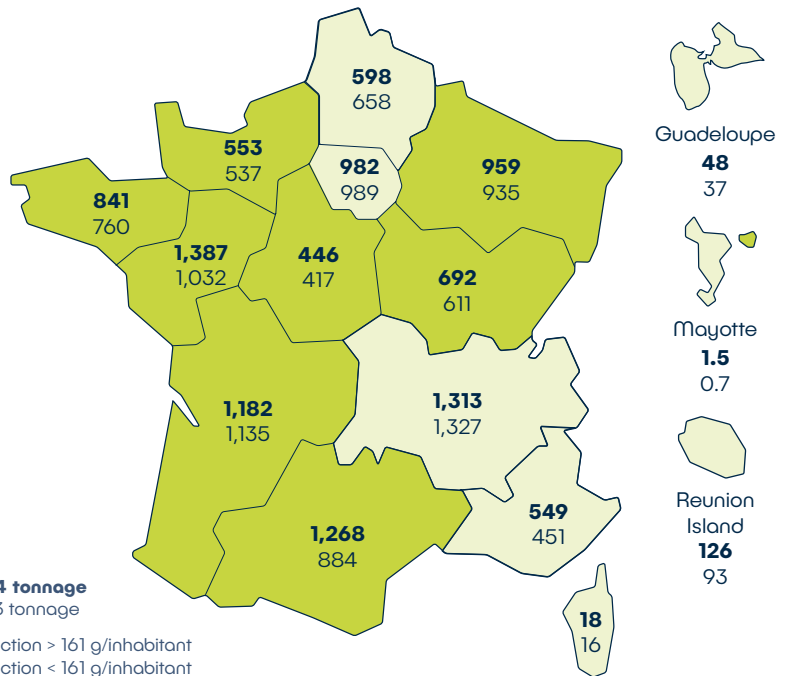
g/inhabitant
collected

47.5%

2024 collection
rate

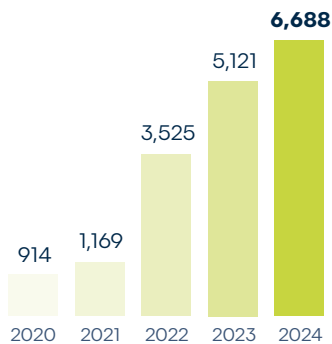


COLLECTION PER REGION (IN TONNES)

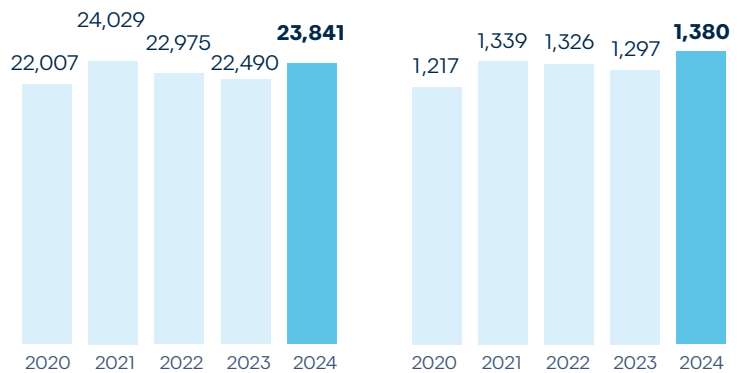


00 2024 tonnage
00 2023 tonnage

● collection > 161 g/inhabitant
● collection < 161 g/inhabitant



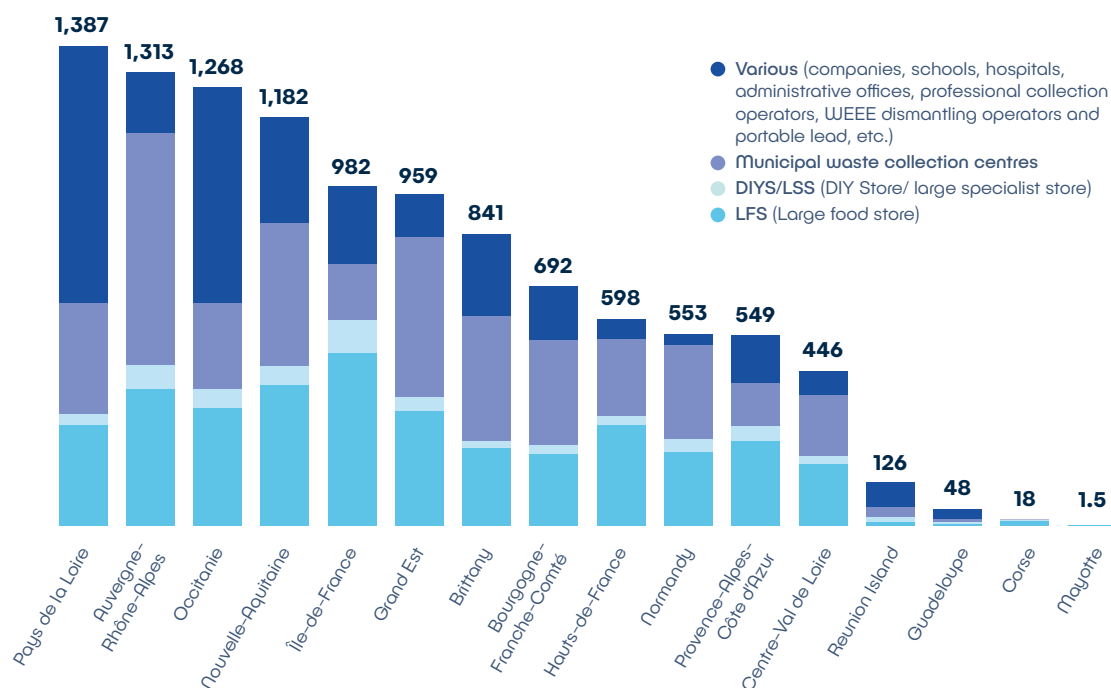
Number of members



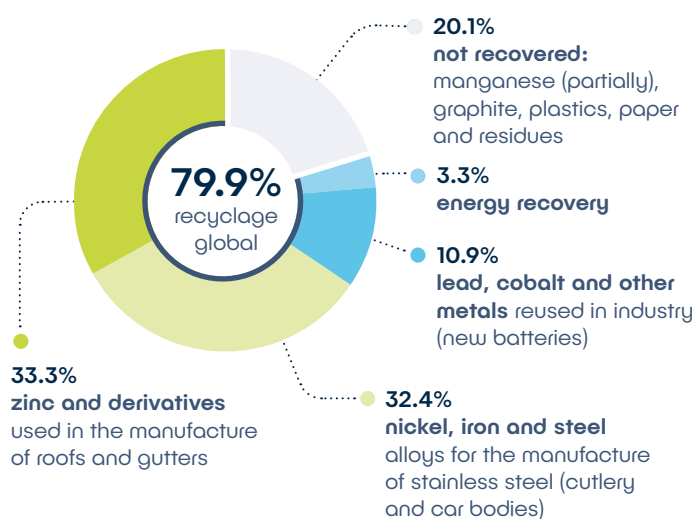
Items placed on the market



BREAKDOWN OF QUANTITIES PER REGION



RECYCLING RATE



MOBILITY SECTOR (LMT)

155

members
in 2024

1,882.4

tonnes placed
on the market

192

tonnes
collected

675,680

items placed
on the market

2,080

active
collection
points

RESEARCH & DEVELOPMENT



Innovation and research are at the centre of ecosystem's mission to guide the sector in its circular economy challenges. In 2024, ecosystem rolled out new tools to boost the traceability of appliances, initiated major reviews on the recycling of metals and drove a forward-looking approach within the sector.

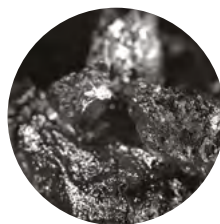


Vincent Semetey,
Urban Mines Chair
Manager - Mines Paris-
PSL, Chimie ParisTech-PSL,
Arts et Métiers

"Urban Mines" designates certain resource-rich electrical and electronic waste, particularly the ones rich in critical metals, that are essential for our products. Recycling allows their potential to be harnessed. The Chair works on identifying these metals in waste and in developing innovative processes to recover them.

It also explores eco-design and new economic models in recycling. A current project focuses on antimony, a strategic metal mainly produced in Asia. An industrial group has shown much interest in a recovery method from WEEE, developed by a researcher, which will shortly be patented.

The "R&Day" events co-organised with ecosystem give the opportunity to share the advances made in research and to rally the entire sector, reinforcing synergies between stakeholders.



Critical metals: what treatment solutions exist currently and in the future?

Metals, such as copper, lithium and tantalum, rare earth metals and antimony, play a crucial role in the batteries and electrical and electronic equipment industries.

In 2014, aware of the major challenges for strategic sovereignty and the development of a circular economy, ecosystem co-founded the Urban Mines Chair, in partnership with three prestigious schools: Arts et Métiers, Chimie ParisTech-PSL and Mines Paris-PSL.

During the "R&Day" event organised by ecosystem and the Chair on 12 March 2024 at the *Maison de la Chimie*, experts, institutions and companies addressed the major industrial, geopolitical, regulatory and environmental challenges regarding "critical" metals. Nathalie Yserd stressed the strategic importance in recycling these metals which can be found in waste electrical and electronic equipment.

More than 200 French and European participants accepted ecosystem's invitation to take part, thereby demonstrating its capacity to federate the entire industry around this major issue for the circular economy (European Commission, Ministries, institutions, the electrical and electronic equipment sector's industrials, consulting and research entities, etc.).

200 +

participants at the
2024 "R&Day" event

10 years

of the Urban
Mines Chair

12 research theses

11 post doctorates

2 patents filed



Improve the traceability of appliances: the ODAIA pilot

How can operators be helped to identify the reuse potential of EEE? ecosystem has designed a portable application based on artificial intelligence, called ODAIA (Artificial Intelligence Decision-Making Tool, in French, *Outil d'Aide à la décision par l'Intelligence Artificielle*).

Developed in 2023 and tested in the field in April 2024, this application is characterised by the fact that it is easy to use. The method is simple: the user takes a photo of the appliance and its data plate, specifies its general condition and the application immediately indicates the appliance's potential to be reused. ODAIA uses algorithms based on the type of equipment, the brand, the age and the need of reuse centres participating in the project.

This innovation developed by ecosystem also has numerous potentials which could be beneficial to the entire industry, in France and in Europe, by providing, for example, quality equipment to stakeholders.



Frantz Molerat,
Performance Director,
"Envie Nord"

By scanning the appliance's data plate, the application recognises the brand, the serial number and how old the appliance is. It very quickly shows if the appliance can be reused or has to be recycled. This is a precious decision-making aid.

The tool enables reuse of the appliance to be secured and at the same time to train employees who work for us under a social inclusion contract, with new skills. It also saves us time so that we can focus on other tasks.

With the setting up of the Repair Fund, the service life of appliances will be prolonged. The assessment phase needs to be fine-tuned and the ODAIA tool is an essential first step. Before, we spoke about appliances in "tonnages", now we speak about them in terms of brands, models and ages.





Amélie Gombeaud,
Environment Expert

In parallel to the detection of an appliance's reuse potential, ODAIA will allow us to go further in traceability issues too. The application allows appliances to be identified in a unique way going as far as the serial number. This unique identification method is in reality the first building block necessary for the creation of a digital passport for products that are not new.



Product passport: guaranteeing a successful 2nd life

In continuity with the ODAIA project and in order to anticipate future European regulations in 2027, ecosystem joined forces with Fnac Darty in 2024 to launch the first digital passport for household appliances.

Accessible using a QR code on the product, developed using the Arianee open-source protocol and based on the blockchain, this new tool will allow consumers and repair and reuse companies to track all the appliance's life cycle events, from when it was manufactured right up to its recycling.

The product passport provides a solution to one of the major obstacles in buying reconditioned appliances: the lack of information about the product's life, contributing to a buyer's lack of confidence in buying second-hand products. Thanks to this new tool, ecosystem intends to ensure that purchasing reconditioned appliances is firmly instilled in consumption habits.

The product passport is open to all stakeholders involved in a product's life cycle: manufacturers, retailers, repair operators, reuse and recycling companies. This is a collective approach driven by ecosystem that contributes to lengthening a product's service life and to reducing waste. Within the framework of this trial, digital passports will be created for the different stages of an appliance's life cycle: manufacture, during its sale, during its repair or when it is collected with a view to reusing it and reselling it second-hand. The experimentation is continuing into 2025 and 2026 and will

bring together even more stakeholders from the entire value chain to validate the interoperability of the solution and give the possibility to stakeholders to enter in the passport incidents that have affected the appliance.



An award-winning circular economy Certificate

Resolutely committed to the sector's stakeholders to promote and boost the circular economy, in 2022 ecosystem developed in partnership with l'École des Mines and l'Université Paris Dauphine, a French-language training course for companies wishing to actively play a part in changing production systems and our society's way of consuming. These works echo ecosystem's commitments as a mission-based company.

This certificate, entitled "Circular economy: transform your organisation through innovative approaches and tools" was designed to train company employees on the circular economy and its new business models in recycling, reuse, repair or job creation activities.

This was a particularly federating initiative that won a "Talents for the Planet" trophy on 10 October 2024 at the Produrable Trade Faire, in the "Training", Professionalisation prize category.

REPAIR



In 2024 ecosystem contributed to lengthening the service life of appliances by encouraging people to have their appliances repaired. The organisation worked towards developing the QualiRépar network by facilitating the certification of small repair operators all over France and by rolling out national communication campaigns aimed at the general public.



Making the Repair Bonus accessible nationwide

Launched in April 2022, the QualiRépar certificate is awarded by independent certification organisations (Bureau Veritas, SGS and the AFNOR) to professionals repairing electrical and electronic equipment.

On the consumer side, when going to a QualiRépar-certified repair operator with an appliance for which the warranty is no longer valid enables the consumer to benefit from the Repair Bonus which is directly deducted from the bill.

The growth of the network of certified repair operators and the increased number of repairs benefiting from the Bonus were confirmed and even accelerated in 2024. At the end of 2024, 1,257 companies had been certified since the launch of this measure, 487 of which joined the QualiRépar network in 2024. This growth can be explained by the personalised assistance that ecosystem and Ecologic provided to repair operators during their certification process. This certification process has been simplified for companies with 11 or fewer employees. A documentary audit now replaces the in-situ audit of the repair sites, thereby encouraging small, local repair operators based all over France to join the QualiRépar network.

QUALIRÉPAR CERTIFICATION: THE CHANGES IN 2024

The certification and Repair Bonus underwent major changes in 2024, benefiting both repair operators and consumers.

For repair operators



Provision of assistance

to repair operators during the certification process



Extension of certification for **distance repairs**



Documentary audit

instead of *in-situ* audits for small repair companies

For consumers



Doubling up of the Bonus

for 5 appliances (TV, washing machine, tumble dryer, vacuum cleaner and dishwasher)



Increase of the Bonus by €5

for 21 other appliances



Increase of the Bonus by 20%

when a spare part coming from the circular economy is used

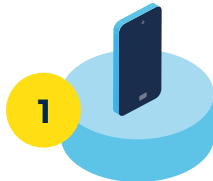


Handling of **broken screens**



24 new appliances now eligible

THE TOP 3 MOST REPAIRED APPLIANCES



Mobile phone

26%



Washing machine

17%



Dishwasher

16%



REPAIR

In 2024, **715,227 repairs** were carried out for a total of **24.3 million euros** of Bonus paid out. This represented:

441,921

repairs having benefited from the Repair Bonus funded by ecosystem for an amount of **€14,619,535**

€33

of Bonus paid on average

4.69/5

Average consumer satisfaction score following a repair having benefited by a Repair Bonus

50%

of consumers having benefitted from a Repair Bonus said that it had a strong influence on their decision to have the appliance repaired

1,257

companies certified since the launch, **487** of which were certified in 2024, representing in total:

- **7,393** repair points all over France (including the French overseas territories)

- **12,327** technicians, including **3,980** field technicians



TRAINING REPAIR OPERATORS: A KEY FACTOR FOR THE FUTURE OF REPAIR

To develop the repair of electrical and electronic appliances the training of new professionals is crucial for the sector. With this in mind and in line with public authority goals, the first milestones of the Training Fund (*Fonds Formation*), operational in the first half of 2025, were laid in 2024. Its purpose is to boost the national network by supporting the development of skills among employees in QualiRépar-certified companies by financing recognised and Qualiopi certified training courses.

“The Repair Bonus, everyone will agree!” communication campaign

To publicise and promote the development of the Repair Bonus, a national communication campaign carried out jointly with Ecologic took place during March and April 2024.

Three, 30-second educationally-focused radio commercials were broadcast on twenty national radio stations and 128 local and independent radio stations. The commercials stage an off-beat discussions about repairing 3 different appliances with a simple conclusion: “The Repair Bonus, everyone will agree!” (*Le Bonus Réparation, il va mettre tout le monde d'accord!*).

The radio media plan reached out to 79% of the French population from 18 to 59 years encouraging them to

have repairs carried out by QualiRépar-certified repair operators. A digital campaign was rolled out in addition to the radio campaign: podcasts, banners and social media. In 2024, ecosystem also carried out a series called “Mission Repair” consisting of 12 episodes to enable the population to familiarise themselves with repair.



140,000

visits to our repair pages following the campaign

1.9

million views on YouTube for “Mission Repair”

COLLECTION



In 2024, collection experienced considerable growth achieving or exceeding the objectives set for professional equipment, lamps, batteries and small fire extinguishers. Alongside local authorities, ecosystem boosted its work to secure sources and organise the collection of equipment following the occurrence of natural disasters.



A sharp increase in the collection of professional and household EEE

In 2024, overall collection rose by 15%, driven by the exceptional rise in professional equipment (+ 64%) and the 8.4% rise in household equipment.

These results are the direct outcome of our local presence and the assistance provided to major collection stakeholders to protect appliances, in particular against theft and looting and to develop the collection network.

In the Household appliances sector, and particularly that of large household appliances, the rolling out of the

"jedonnemonelectromenager.fr" service in Lyon, as well as the growth of the service in the Île-de-France and Alpes-Maritimes areas boosted preservation-oriented collection and encouraged reuse.

We have also worked with major mass retailers in order to monitor take-back during delivery by its customers, regardless of whether this is a service provided internally or subcontracted, in order to prevent equipment from being diverted from the authority-approved system.

TONNES COLLECTED PER SECTOR

	2023	2024	Change	Items collected
Household EEE	641,030	694,815	+ 8.4%	142,290,278
Professional EEE	88,992	145,744	+ 63.8%	N/A
Lamps	5,321	4,937	- 7.2%	60,955,649
Small fire extinguishers	459	527	+ 13%	223,626
Total	735,802	846,023		203,469,553

COLLECTION RATE

65%
52%

Household
EEE

65%
65%

Professional
EEE

85%
86%

Lamps

Rate
achieved (%)

.....
Regulatory
objective (%)



For small household appliances, the rise in collection was encouraged by a public awareness-raising campaign on recycling small household appliances, which are often incorrectly disposed of in bins or packaging sorting bins. In the format of a saga, this campaign also covered bulbs which suffer the same sorting errors as small household appliances (see page 33).

Lastly, the development of and support to the waste management operator network resulted in a rise in the collection of professional equipment which significantly progressed for large professional equipment.



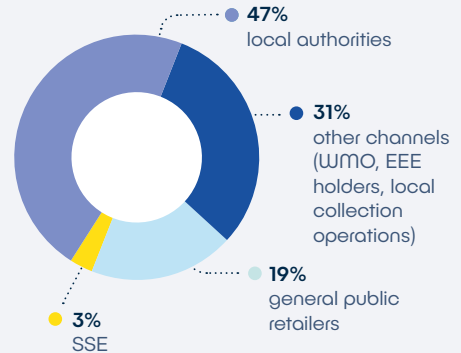
Sébastien Partida,
Deputy Manager, Development Department

Several factors explain the extremely good results in 2024, in particular by strengthened local support and the development of a collection network. In addition, we have observed an increase in donations to SSE stakeholders. Lastly, we have boosted our relations with waste management operators (metal recovery, shredding and industrial waste operators), contributing to the increase in the amount of professional EEE collected.

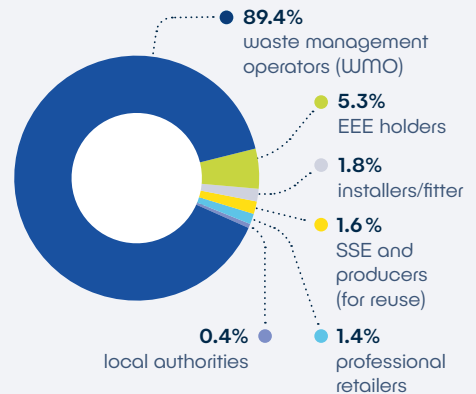


BREAKDOWN OF COLLECTION PER STREAM

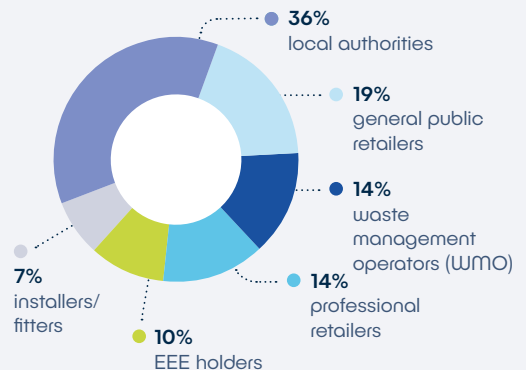
Household EEE



Professional EEE



Lamps



Supporting local authorities in the face of economic and climate change challenges

Combating theft and looting: providing local support and tangible solutions

We estimate that around 1/4 of EEE sources* elude the authority-approved system. EEE has value and fuels illegal systems. Theft and looting have serious environmental consequences because the pollutants from stolen equipment cannot be removed and the equipment cannot be recycled. It also has social consequences because it can create difficult working conditions for the employees of waste collection centres.

In addition, as local authorities receive financial support in exchange for the tonnages returned to the sector, theft and looting cause genuine financial loss. To cope with this, ecosystem spends several million euros per year on protecting sources in order to increase collection rates and uses legal, financial and operational solutions:

- An increase in the funding scale to protect sources especially through the installation of video protection systems;
- The provision of a guide for filing complaints to increase the chances of criminal prosecution;
- Ecosystem handles complaints filed by local authorities and ensures a follow-up by the scheme's lawyer in the event of theft and damage;

- Operational follow-up with more than 400 annual meetings with local authorities and nearly 5,000 visits per year at collection sites;
- The adjustment and increase of the number of collection rounds, particularly in the zones most at risk of theft.



Natural disasters: providing support to local authorities

2024 was marked by many natural disasters in both the French mainland and the French overseas territories.

Faced with consequences of climate change and notably the resurgence of natural hazards (storms, flooding, submersion, etc.) ecosystem has intensified its local support. The handling of EEE in the event of a natural disaster is already part of the standard contracts signed with local authorities four years ago but ecosystem also responds to a detailed action plan, three phases of which enable working with other local stakeholders to be continually improved (more information on page 32).

WORKING ALONGSIDE LOCAL AUTHORITIES

33

complaints
handled by the scheme's lawyer in 2024

10

rulings,
all resulting
in convictions

CYCLONE CHIDO

On 14 December, Mayotte was badly affected by Cyclone Chido, causing immense human and material damage. Crisis meetings were held with the other producer responsibility organisations locally present and as soon as communications were re-established on 28 December a weekly meeting was held with the local authorities and our local coordinator to implement an emergency action plan, effective from 14 February.

* Household and professional EEE. Source: *Sources of EEE study*, OCAD3E, 2021.



Olivier Mallet,
East Region Collection Development Team Manager

Ecosystem's strength in being able to provide support to local areas in the event of a natural disaster lies primarily in its regional managers' detailed knowledge of local stakeholders. Upstream to a disaster, this relationship helps us to provide information to our partners and to establish useful responses. All our meetings with local authorities and partners now include an item on "natural disasters", which is invaluable in delivering this type of information downstream.

A great number of areas were affected by natural disasters in 2024. I particularly have in mind northern France at the beginning of 2024 in addition to the Île-de-France, Ardeche, Rhône and Haute-Loire areas in October 2024 when flooding and mud slides occurred. As waste quantities were huge, we set up specific skips in municipal recycling facilities or in spots designated by the local authorities. Collection sometimes proved to be difficult: an increase in theft from the skips placed in unprotected zones, WEEE mixed with other streams in the skips, appliances that were sometimes damaged following collection using grabs making them impossible to treat. We are working hand in hand with the local authorities to respond as best we can to the needs and constraints of these exceptional circumstances.

Nearly

200

tonnes of WEEE

collected following storm KIRK in the Essonne, Eure-et-Loire and Seine-et-Marne counties (tonnages from skips specifically deployed and excess tonnages registered in municipal recycling facilities in the weeks following the storm).

PHASE 1



Gathering information

Before the crisis: raise awareness and be identified by local stakeholders who are not the usual contacts (town councils for example).



During a crisis: rapidly identify the zones affected and evaluate the quantities of waste to be collected based on the number of buildings affected and their typology (residential buildings, shops, businesses).

PHASE 2



Operational phase

Implementation of solutions suited to the quantity of waste, either through existing collection points or using skips at locations defined by the town councils affected.

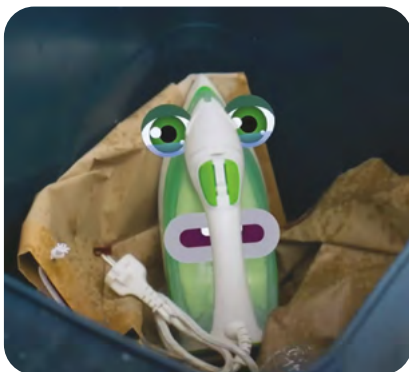
PHASE 3



Assessment

The tonnages collected are first tracked and recorded. Then, an assessment is carried out with the local authorities concerned and, if necessary, with decentralised government agencies (*Préfecture, DREAL*). Internally, feedback is given in order to continually improve the system.

Raise the awareness of the French population on the collection of electrical appliances and bulbs



Lamps and small electrical appliances

Every year, nearly 120,000 tonnes of small electrical appliances finish up in household waste bins or packaging sorting bins.

To help people to better identify that any mains-operated or battery-operated appliance can be recycled including small appliances, ecosystem launched an awareness-raising campaign in July 2024. The principal: change behaviour by giving meaning to recycling.

Three 15-second films were shown on segmented TV in order to better target audiences in addition to video-on-line platforms and on social media, all with a strong message: "Adopt best practices!".

**Segmented TV
+ VOL:**

72

million views

**Social
media:**

29

million views

Tour de France: ecosystem shares best practices

ecosystem travelled the roads of the Tour de France for the 5th year in a row, with three key tools: an educational vehicle upstream to the publicity caravan, the "starting line" tool and the publicity caravan!

At the heart of this lies the forging of relations and awareness-raising at several levels:

- Meeting the public to raise awareness locally;
- On social media, through the commitment of our community with "Tour de France special" contents;
- During special discussions with our stakeholders such as local authorities or partners who we have invited to come and join us throughout the event.



94%

of people intend **to recycle**

79%

of people intend **to repair** appliances through to the Repair Bonus

65%

of people intend **to donate**

A survey of Tour spectators revealed that the number of people intending to implement best practice has again risen this year.

(source: Kantar 2024)

A few weeks before the start of the Tour de France, ecosystem renewed its "Great Solidarity Collection" of mobile phones. This year a competition was organised with primary schools located in the Tour's stopover towns.

661

**telephone
collection
points,**

- and 20 school participating for the competition

22,934

**telephones
collected**



"Laisse parler ton cœur" (Listen to your heart): the great solidarity Christmas event

In 2024, the great solidarity event "Laisse Parler ton Cœur" (Listen to your heart) celebrated its 15th anniversary. Organised each year by ecosystem and for the second year running in partnership with Ecomaison, the authority-approved producer responsibility organisation for the games and toys sector since 2022, this event enables people to give away toys no longer played with, so they may be reused or recycled.

Donations are given to 90 charities recognised as being of public interest, including the Red Cross, Emmaüs, Restos du Cœur, Secours Catholique, Secours Populaire or independent organisations responsible for sorting, supplementing, testing, cleaning and restoring games and toys so as to offer them to low-income families or to resell them at socially affordable prices near Christmas time.

66

local authority partners

90

association partners

675

collection points

42,982

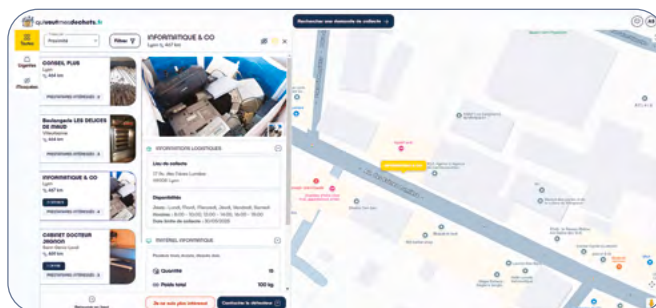
kg of toys collected



The quiveutmesdechets.fr platform is overhauled

To provide the best support possible for professionals from all sectors looking for tailor-made collection solutions for electrical and electronic equipment, the quiveutmesdechets.fr was overhauled in 2024.

A new more user-friendly interface with improved functionalities has been developed in order to facilitate exchanges between waste holders and ecosystem-referenced partners. For the platform to be known by professionals, a launch of its new version was announced via a campaign on LinkedIn and its referencing was boosted via Google Ads.



Focus
on battery &
accumulator
collection

European Battery Recycling Week

A key moment in battery recycling awareness-raising, the European Battery Recycling Week is held around 9 September each year, a date marking the birth of the inventor of electricity, Luigi Galvani.

Organised in France by Corepile, the association Eucobat is at the origin of this week-long event that brings together producer responsibility organisations collecting portable batteries and accumulators in Europe. This event is the perfect opportunity to remind people of the importance of disposing of their waste batteries and small waste batteries at collection points and to encourage them to clear out their drawers of any batteries they may have!

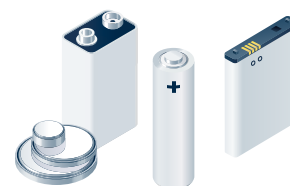
For the last 10 years Corepile has been sending out the following messages:

- Return your waste batteries and small waste batteries to one of the 35,000 collection points located throughout France;
- All waste batteries and small waste batteries can be recycled including

rechargeable ones. Also remember to remove them from your old appliances;

- Up to 80% of metals contained in batteries and small batteries are extracted and reused in industry;
- Encourage your neighbours, friends, colleagues and family to do the same.

The measures offered by Corepile are based on mobilising its network of partners. We encourage them and support them in their efforts to organise events (free equipment orders) or communicate on their social media.



In 10 years

7,000

physical events

500

press articles

TONNES COLLECTED IN 2024 BY THE SECTOR

	2023	2024	Change
Portable batteries	9,881	10,963	+ 11%
LMT (Light means of Transport)	159	192	+ 20.8%

+ 11%

tonnes
collected vs 2023
for Portable batteries

+ 20.8%

tonnes
collected for LMT

REUSE



In 2024, ecosystem consolidated its role in improving reuse practices in France, contributing to the development of new skills and funding social and solidarity economy organisations. ecosystem has initiated a major review to increase the quantity of appliances for reuse and to accelerate the reuse of professional equipment.



HOUSEHOLD EEE REUSE IN 2024

320

social and solidarity economy
organisations referenced,
including

- **76** new organisations
referenced in 2024

35,886

tonnes of EEE given to the SSE
organisations in 2024, i.e.

- **+ 15%** vs 2023

1.36 million

household appliances reused
by the SSE, i.e.

- **12,876** tonnes

€15.94 m

of funding engaged
from the Reuse Fund



Reusing household EEE: clarifying the methods to access sources and funding

In 2024, ecosystem established the fundamentals to respond to the transformation of the market for the reuse of household appliances which includes an increasing number of stakeholders with different profiles and is seeing a subsequent rise in demand for available reusable appliances.

ecosystem has launched a review aimed at meeting several challenges: comply with regulatory requirements, facilitate the SSE organisations' access to reusable EEE and meet existing pressures in terms of the demand for appliances for reuse.

A reuse master plan, establishing the main allocation principles of EEE to SSE structures was drafted with the sector's different stakeholders and gradually implemented at the end of 2024.

Furthermore, the funding scale for those stakeholders benefiting from the Reuse Fund was reviewed at the end of 2024, was approved by the Stakeholder Committee (*Comité des parties prenantes*) and became effective as from January 2025. This new clear, transparent and intelligible scale has enabled rules to be streamlined for all stakeholders and is based on two fundamental principles:

- Providing more support for reuse (vs recycling), in particular large household appliances;
- Three levels of funding, depending on the level of a stakeholder's social impact: a basic scale allocated to all referenced SSE actors, additional funding for associations and a third level of support for social inclusion stakeholders.

Preserving household appliances collected to improve their reuse

"jedonnemonelectromenager.fr" conquering the Grand Lyon!

In June 2024, ecosystem deployed its "jedonnemonelectromenager.fr" service in the Grand Lyon area. The principle: free home collection of large household appliances, upon appointment.



1.3 million inhabitants who live in the 58 towns in the Grand Lyon area can now benefit from this service. The launch was accompanied by ambitious communications campaign deployed by the city (urban poster displays, social media, local media, etc.), and by a customised service. This service is based on the "lloé" sorting platform created by the Metropole de Lyon and various waste management operators, which Envie Rhone-Alpes uses for the reuse of appliances.

HOW DO ECOSYSTEM HUBS WORK?

The appliances that are collected from homes via the "jedonnemonelectromenager.fr" service or when taken back by certain retailers during deliveries, are regrouped at three platforms: Bercy in Paris, Carros near Nice and lloé at Villeurbanne since 2024, where the appliances are sorted and evaluated. The appliances that can be reused are then given to reuse organisations. ecosystem divides up the lots of reusable appliances to match the needs and capacities of each organisation and ensure that allocations are as fair as possible.



IN ÎLE-DE-FRANCE, PACA*
AND THE GRAND LYON AREA IN 2024

* Provence-Alpes-Côte-d'Azur

98,340

appliances
collected

25,637

appliances handed
over to SSE partners



Mathilde Maillard,
Social and Solidarity
Economy Officer

Platforms are additional sources of quality equipment for our SSE partners. Thanks to "hubs" implemented 2 years ago, we have seen the reuse rate gradually rise, reaching 30% by the end of 2024. In addition to Envie and Emmaüs, we are testing the hubs with other reuse organisations who have recently integrated the Reuse Fund as well as stakeholders from the commercial sector. In 2024, the service was developed geographically when "jedonnemonelectromenager.fr" was rolled out in the Grand Lyon area.

INCLUDING, IN LYON AREA

6,900

appliances collected
at 31 December 2024
since the launch on
17 June 2024

Accelerating the reuse of professional equipment



Fabien Laleuf,
Managing Director, ABB
France and Vice-President,
Marketing and Electrification
Sales France

World leader in energy management technologies, ABB deploy electric vehicle charging stations. Engaged in the ecological transition, the group wanted to develop local reuse solutions for its equipment.

Within the context of a call for project proposals by ecosystem, we formed a partnership with Envie Rhône-Alpes to build a reliable solution, integrating strong social values. The project aimed at creating a solid charger reuse system enabling local jobs to be created, waste to be reduced (1 tonne avoided), a 75% reduction of CO₂ emissions and a saving of 85% in the use of mineral resources compared to a new charger. Around 350 charging stations should be reconditioned each year whilst training 4 employees under social inclusion contracts.

We would like to extend this reuse model to other products in keeping with our global circular economy commitments, supported by concrete actions at a local level.

ecosystem's "Reuse" call for project proposals

In October 2024, ecosystem launched its 2nd call for project proposals to support projects focusing on the reuse of professional electrical and electronic equipment and to assist in building skills, diversification and the industrialisation of SSE organisations.

The goal: encourage reuse and extend the service life of professional equipment.

For this 2024 edition, eleven projects were selected by the call for projects' committee of experts, covering various equipment groups, among which featured partnerships between SSE organisations, producer members and ecosystem reconditioning operator partners, thereby reinforcing the structuring of sustainable and efficient reuse systems.

On this topic ecosystem has spent nearly 700,000 euros via the Reuse Fund and is ambitiously aiming to reuse 350,000 items of electrical and electronic equipment by 2027.

700,000

euros spent within the context of the call for project proposals

Providing support to producers in the reuse of professional equipment

In addition to this call for project proposals, other actions took place in 2024 to assist and support producer members in the reuse processes.

Webinars and targeted communication took place to improve the recovery and the traceability of reused equipment. Trials in accessing resources were also undertaken with producer members.



PROFESSIONAL EEE REUSED

3,578

professional EEE tonnes reused, including:

● **351** tonnes by the SSE

14

referenced SSE organisations

€238,000

of financial aid paid out

POLLUTANT REMOVAL & RECYCLING



Protecting the environment, natural resources and health are part of ecosystem's *raison d'être*. To successfully fulfil its mission, ecosystem undertakes to remove pollutants or hazardous substances with, for example, the emergence of a new industrial hot water tank pollutant removal process. In 2024, ecosystem boosted its awareness-raising initiatives on fire hazards for all of the sector's stakeholders.



Removing pollutants from equipment to neutralise hazardous substances

One of the key factors in recycling is the extraction and then neutralisation of hazardous or regulated substances present in equipment.

In 2024, from the 845,496 tonnes of EEE (Professional and Household) and Lamps collected, the following were extracted and removed when necessary:

753

tonnes of CFC, HCFC, HFC and HC gases et oils containing CFC (gases with a major impact on global warming)

411

tonnes of toner cartridges with pigments containing pollutants

23,668

tonnes of plastics containing brominated flame retardants

22,633

tonnes of liquid crystal screens and backlit screens using gas discharge lamps

2,201

tonnes of batteries and accumulators

466

tonnes of capacitors containing polychlorobiphenyl (PCB) which is a persistent organic pollutant (POP) and electrolyte capacitors containing hazardous substances

369

kilos of components containing mercury

6,521

tonnes of cathode ray tubes, with lead-containing glass



assises
sur la Prévention
du risque incendie
dans la filière DEEE



Mathieu Grosset,
CEO, Demain Group

Demain, our cooperative group, has worked with ecosystem since 2002. Our social inclusion companies collect, dismantle and recycle WEEE mainly in the Jura, France.

We had to halt our operations after a first fire in June 2022, followed by a second one in November 2023 at which time we had to completely shut down the production line. To prevent this from happening again, we have taken action in three areas: strengthening personal training in fire risks; more effective detection with thermal imaging cameras, spark and smoke detectors, and increased fire-fighting capacity by using remote intervention.

On ecosystem's initiative we implemented "stress tests" to test our responsiveness at the start of a fire. This also gave us the opportunity to strengthen coordination with the local fire brigade and to share our feedback with ecosystem.

Fire risk management linked to lithium batteries: ecosystem boosts operator awareness

The increase in the number of fires caused by lithium-ion batteries in EEE has sharply risen all over the world. Occurring at transport service provider sites, bulking-transfer stations or treatment sites, fires start nearly every day requiring the intervention of the local fire brigade once or twice a month and can go as far as destroying EEE treatment facilities.

Industrials are often helpless in the face of these fires. To help them reinforce their fire prevention and crisis management systems, ecosystem and Corepile organised the Prevention of Fire Hazards Convention (*Assises sur la prévention du risque incendie*) on 30 May 2024.

Fully aware that the issue covers the entire sector, ecosystem and Corepile worked with two other producer

responsibility organisations (Ecologic and Screelec), and invited manufacturers, industrials, the public authorities and experts to discuss this major issue.

The programme for this 3rd edition of the Convention made it possible to:

- Assess the fire risk related to lithium batteries and its evolution over time;
- Share information on tangible fire prevention solutions and the resources required;
- Provide information on areas of improvement in technical and managerial terms to manage this risk.

By bringing together all the EEE sector's stakeholder, ecosystem enabled a joint policy to be established to limit the risk of fire and contributed to the protection of personnel and assets.

FIRE RISK MANAGEMENT IN THE FIELD

To help our logistics and treatment partner improve their crisis management practices in the event of a fire, we implemented stress tests throughout the year at different sites. The goal was to put teams in hypothetical situations involving the start of a fire. Feedback with a detailed report of the events was then established to identify best practices and areas of improvement to better manage fires.



In 2024, ecosystem organised

21

stress tests in mainland France

6 of which were at treatment centres,
13 in bulking-transfer centres,
2 at "waste management" sites

Removing pollutants from hot water tanks: ecosystem, a player in this new industrial process

For the last few years, various stakeholders have been working on creating a French sector specifically for capturing greenhouse gases that are present in hot water tanks (HWT), thereby reducing their impact on the climate, the ozone layer and pollution.

The insulation foam in HWT contains gases harmful to the environment and health if they escape during equipment

shredding. Aware of the environmental and health issues involved, ecosystem launched a call for project proposals in 2022 for the treatment of hot water tanks in confined spaces. The very first treatment centre in the world totally dedicated to pollutant removal and treatment was opened in spring 2025 in Nouvelle-Aquitaine, France, and will be followed by the opening of 5 other centres in France between 2025 and 2026.



AN AWARD-WINNING DOCUMENTARY AT THE DEAUVILLE GREEN AWARDS EVENT

Within the context of its authority approval, public information and awareness campaigns are among ecosystem's missions, in the same way as waste collection, pollutant removal and recycling. The 44-minute documentary "[These gases that blow hot and cold](#)" (*Ces gaz qui soufflent le chaud et le froid*), produced by ecosystem with the producer Gilles Raillard to explain the removal of pollutants, won a Silver Trophy at the 2024 Deauville Green Awards.

ORGANISATION



In 2024, to better respond to the creation of a new "*Batteries*" sector and the new challenges for marketers everywhere in Europe, ecosystem made changes to its organisation. Addressing society's major environmental and social challenges, ecosystem is committed to the digital transformation of its processes and has been implementing initiatives to support its human capital.



Nicolas Zehnder,
eco-design manager,
Socomec Group

The merger between Corepile and ecosystem came naturally to us: batteries and accumulators are integrated in our equipment and handling its end-of-service life thereby follows a shared rationale. This merger will make collection, bulking and the transfer to the correct treatment facilities easier. It will provide a one-stop shop for declarations, allow better control of costs thanks to synergies and gains in efficiency. It also provides a unified voice for public authorities, ensuring that manufacturers' interests are taken into account in a rapidly evolving EPR sector.



The merger between Corepile and ecosystem: towards a broader sector

In March 2024 Corepile (the producer responsibility organisation for batteries and accumulators) and ecosystem formalised their strategic merger. This merger was a natural choice for both producer responsibility organisations, who were already closely linked by a shared vision and by the type of equipment collected. In fact, 60% of "Batteries and accumulators" marketers are also part of the electrical and electronic equipment sector.

The merger between the two producer responsibility organisations will allow better integration in the operational chain, the control of costs, simpler procedures for producers and collection partners, the sharing of reuse initiatives, and the streamlining of public awareness-raising on sorting.

Furthermore, marketers for this market will be able to access a one-stop shop concerning their regulatory obligations. In future, collection or logistical partners will have a single point of contact for both schemes.

The merger of two producer responsibility organisations will also make managing fire prevention and risks easier, as well as the handling of products containing lithium batteries. A quarter of electrical and electronic equipment placed on the market contain batteries.

Lastly, the new organisation formed by these two producer responsibility organisations aims at a positioning in 2025 on five new categories covered by the European "Batteries" Regulations and to develop a broader, innovative and even more efficient scheme.



Christian Ludwig,
Chairman, PRONEXA

Created more than 10 years ago, PRONEXA (formerly weee Europe) is a platform founded by ecosystem and other producer responsibility organisations to simplify the management of the Extended Producer Responsibility (EPR) requirements in Europe. PRONEXA assists companies in their compliance obligations for EEE, batteries, packaging in 30 countries. Thanks to this single interface, it centralises procedures, facilitates reporting and limits the number of complex administrative tasks to be accomplished.

As a founding member, ecosystem provides its valuable expertise and our work with Nathalie Yserd, the Vice-president of our Supervisory board, has further strengthened our commitment to offer high level services. PRONEXA embodies a key tool for a smoother-running, efficient and truly European EPR scheme.

Providing support to marketers all over Europe

Electrical and electronic equipment producers have an obligation to annually report the quantities of products placed onto the market in each European country in which they are present. To facilitate this work, in 2019 ecosystem became a member of weee Europe which was renamed "PRONEXA" in 2024.

This network, covering the main producer reparability organisations, provides a central contact point and an information channel for all questions related to EPR in Europe as well as a single platform for all reporting declarations: PRONEXA Customer Data Management.



At a European level, PRONEXA manages all the producer responsibility organisation contracts in every country where products are placed on the market. At a national level, ecosystem is responsible for managing the operational organisation of collection, the extension of service life and support in eco-design, recycling and relations with national authorities.

In 2024, PRONEXA's activity also covered packaging to offer producers with ever more turnkey services.

PRONEXA covers:

19

European producer responsibility organisations

3

sectors:

- Electric and electronic equipment
- Batteries
- Packaging (since 2024)

30

countries

WEEE FORUM

On 14 and 15 November 2024 the producer responsibility organisations including ecosystem hosted the WEEE Forum, the international association that brings together 51 producer responsibility organisations from the electrical and electronic equipment EPR sector.

On the agenda for exchanges: the new industrial process dedicated to the removal of pollutants in hot water tanks, the issue of rare earth metals, the profiling of equipment collected and repair and reuse.

Batteries and accumulators: Corepile, an active Eucobat member

Corepile has been actively involved in the European Association for producer responsibility organisations in the battery sector, Eucobat, since its creation.

Several working groups have been organised in order to share best practices and address the challenges posed by the new European Regulation on batteries. These exchanges are essential for improving the management of waste batteries and understanding the issues.

Eucobat has 19 members, whose objectives are:

- To promote an efficient collection, recycling and treatment system;
- To share information and feedback with all stakeholders: institutions, industrials, consumer associations through working groups, congresses, conferences, meetings, etc.;
- To provide support and regulatory information to its members, in particular concerning the implementation of European Regulations.

Cybersecurity and digital transformation

To meet the rising needs of internal and external users of digital tools, the Digital Transformation Department, changed its organisation in 2024 with the aim of developing agile working practices and reinforcing the security of information systems.

This change is based on two main levers:

- The creation of a project governance body to ensure better support in business-related initiatives, integrating technical and cybersecurity aspects;
- The optimisation of development cycles, thanks to the integration of agile methods, fostering responsiveness and quality deliverables.

In the wake of the cyber-attack in January 2024, ecosystem undertook a cybersecurity reinforcement plan built around three complementary areas:

- Raising awareness and continual employee training on cyber issues;
- Regulatory compliance, based on recommendations by the ANSSI;
- Boosting of infrastructure techniques and security measures.



Rudy Kolodziejek,
Cybersecurity Manager

Our approach is based on a continual improvement strategy in three areas: the cultural integration of workers, compliance and technical aspects. It aims at anticipating risks and achieving the ambitious cybersecurity objectives set by ecosystem. Today, security is integrated at the design stage of all digital projects. This is a key success factor for performance, for both internal and external uses.

RAISING AWARENESS AND TRAINING: AN ONBOARDING ESSENTIAL

As soon as they arrive, all new employees undergo cybersecurity awareness training as part of their onboarding. This continues throughout their onboarding process at ecosystem thanks to interactive training deployed via Teams with a specialised partner. Short and dynamic modules are regularly sent to employees to help them identify risks and adopt best practices. Onboarding process finishes with phishing testing campaigns aimed at boosting vigilance and the detection of fraud attempts via email.

Developing our Human Capital

Disabilities: fighting against stereotypes

For the second year running, ecosystem took part in the European Disability Employment Week (EDEW) organised from the 18 to 24 November 2024. Designed by the Human Resources Department, the programme raised employee awareness on disability issues and good practices in social inclusion management.



Gender equality Index
98/100

Executive committee gender balance
50-50

Employee equality of women
57.5%

42.5% of men

179 employees
92.7% with permanent contract

1.7% with fixed-term contract

5.6% work-study students

96.1% full-time

110 different professions

41 years, average age

6 years of service, on average

Investment in training
2.96% of the payroll

A conference given by Christian Grapin, Director of the association TREMPLIN Handicap, an ecosystem partner, emphasised the importance of professional inclusion for young disabled people. Ecosystem's managers were able to act out recruitment scenarios during training workshops. Lastly, a competition game rewarded employees for their knowledge about disability.

During that same week ecosystem Participated in the "DuoDay", by welcoming a disabled intern in the Human Resources and Internal Communications Department. An experience that enabled the intern to fine-tune their career conversion project in human resources.



Christian Grapin,
Director, TREMPLIN
Handicap Association

TREMPLIN Handicap, an association of general public interest founded 33 years ago, assists young disabled people in their education and in finding work.

An ecosystem partner since 2021, we appreciate the commitment made by a people-oriented organisation. For example, in the framework of the "Han'route vers mon avenir" operation, disabled secondary school students were received by the ecosystem teams thereby raising their awareness on recycling and recycling professions.

During the 2024 European Disability Employment Week, TREMPLIN Handicap organised practical workshops for ecosystem recruiters and managers. These focused on the professional practices and the challenges of inclusion and disability.

KLARO PLATFORM

To boost their spending power, ecosystem has given its employees access to the Klaro platform. In all confidentiality they can use a simulation tool to evaluate their eligibility to more than 2,000 local and national benefit schemes which can provide funding for things such as home improvements, removals or holidays.



In 2024:

4

welcome
breakfasts

2

induction days

3

field visits

Quality of working life: ecosystem commits

In 2024, ecosystem reaffirmed its commitment to the quality of working life of its employees.

Throughout the year, routine events, informal moments such as the "Family Afternoon", sporting events and awareness-raising campaigns were organised to boost well-being in the workplace and team spirit. In addition to our disabled persons policy, prevention and awareness-



raising campaigns on disabling illnesses are organised in conjunction with the "Octobre Rose" and "November" health campaigns. These actions demonstrate ecosystem's commitment to create a fulfilling and inclusive working environment.

Onboarding: a fundamental in fostering discovery, understanding and exchange

Our induction course plays a key role in welcoming and onboarding new employees. Structured in several stages, its purpose is to embrace company culture, its business and its values.

In the first instance, new employees participate in a welcome breakfast, an informal moment which lends itself to introductions and the initial exchanges. The induction day itself is the second key event and focuses on three areas:

- **Discovering the company:** presentation by employees from different departments of the company's missions, the issues and challenges, the business and job roles;
- **Practical information:** focusing on internal tools and key topics such as cybersecurity, etc.;
- **Meetings and discussions:** throughout the day, time is set aside for new employees to interact with existing teams to help forge working relationships and encourage teamwork.

The course continues with hands-on training through operational site visits (treatment centres, SSE centres, etc.) for a hands-on discovery of ecosystem's activities.

CSR



In 2024 we formalised the foundations of our CSR (Corporate Social Responsibility) strategy with our external and internal stakeholders.

In 2024, our CSR strategy was structured

Our activities related to the reuse, repair and recycling of electrical equipment and batteries positions our company at the heart of various environmental and social issues. As a producer responsibility organisation and company eligible under CSRD (Corporate Sustainability Reporting Directive) we wanted to strengthen our commitments, to go beyond our regulatory obligations.

This is why we launched the "Sustainability Project". Sponsored by General Management its purpose is to structure a CSR strategy integrated into the company's business model and to coordinate the implementation of the resulting action plan. The overall goal is to extensively integrate social, societal and environmental aspects in decision-making and operational practices.

With this in mind, 2024 was the opportunity to assess sustainability, to calculate our scope 3 carbon footprint and to establish our double materiality assessment. These first stages have enabled us to determine what our CSR key topics are and to map their impacts, risks and opportunities. Our internal and external

stakeholders were part of this exercise through interviews and workshops.

This thought process led to the structuring of a CSR strategy based on three pillars: circular economy, environment and social aspects. Four commitments have been rolled out for each of these pillars that link the actions already in place with new voluntary CSR actions.

To facilitate the fulfilment of this CSR strategy, a dedicated governance system was set up. It is based on a Steering Committee comprised of Executive Committee members and an Operational Committee in which colleagues from all departments take part.

OUR CSR STRATEGY: 3 PILLARS AND 12 COMMITMENTS



CIRCULAR ECONOMY

Support the development of the circular economy

- 1 Assist our producer members in achieving circularity of their products
- 2 Support the development of repair
- 3 Increase the number of appliances reused
- 4 Assist in changing consumer behaviour



ENVIRONMENT

Protect the environment and adapt to tomorrow's climate

- 5 Extend and optimise the collection of appliances and batteries
- 6 Innovate in terms of treatment, pollutant removal and the integration of recycled materials
- 7 Reduce our environmental footprint
- 8 Adapt to climate change



SOCIAL

Cooperate to increase our social impact

- 9 Cultivate our human capital
- 10 Engage our partners and subcontractors in more sustainable practices
- 11 Contribute to the development of skills
- 12 Dialogue with our stakeholders and speak in support of the circular economy

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