

*El-Kretsen* 

# Sustainability report 2023



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# About El-Kretsen

## Sustainable Leadership

We are still living at a time of unrest, where war and climate crises affect us all, either directly or indirectly. In the face of this, we are setting out to be an opposing and positive force in the service of both short-term and long-term betterment, which gives us a feeling of contributing in a meaningful and important way. To make sure that we do this wisely, we have to view our alternatives from all angles and formulate a strategy. It's slightly ironic, isn't it, that the terminology we use to plan our sustainability journey so often includes military concepts coined hundreds, or even thousands, of years ago that are still used today in the context of annexing territory and seizing power? Words like "tactics", "strategy", "operation" and "reconnaissance" all indicate a desire to become good at what you're doing. This is also something the EU has taken on board as it is gradually introducing stricter rules for sustainability reporting. Companies and organisations are now expected to have a clear strategy showing their future goals as well as how they are planning on achieving them. At El-Kretsen, our board and co-workers have already been engaged in this work for years. Merely considering operational performance has never been enough for our organisation. We have always strived to be a leading light, focusing the beam on the circular society we wish to co-create. There are many important ways of getting there, for example product choice, usage, sorting waste, reuse and material recovery, and we all have a very important role to play in realising this vision. From my position as leader and CEO, I am convinced that

El-Kretsen can and will shed a light on all the possibilities we see ahead of us.

We believe in long-term relationships with our subcontractors. There has to be space for innovation and for refining transport solutions, collection systems, reuse solutions and recycling. This is something from which we all stand to benefit. However, the playing field will change over time and contracts will run out. In 2023, we welcomed a few new subcontractors following a procurement of transport and battery handling services. During the second half of last year, we focused a lot of effort on getting the new collaborations up and running smoothly and efficiently. We have, for example, held workshops for staff at recycling centres and transport companies.

El-Kretsen's information work – or better still "motivational work" – is largely carried out together with other participants, for example the Swedish municipalities, the website Sopor.nu and the school project Natur & Miljöboken. We have also started a project to boost our own Sustainability Library website, a resource intended for the broader general public which is available on El-Kretsen's homepage. At the time of writing, it is still early in the year and I'm looking forward to an exciting 2024. Part of this will involve developing El-Kretsen's strategy even further. I am sure we will continue to use some military terminology, but luckily, our vision contains no enemies – only co-winners!

### A MESSAGE FROM THE CEO

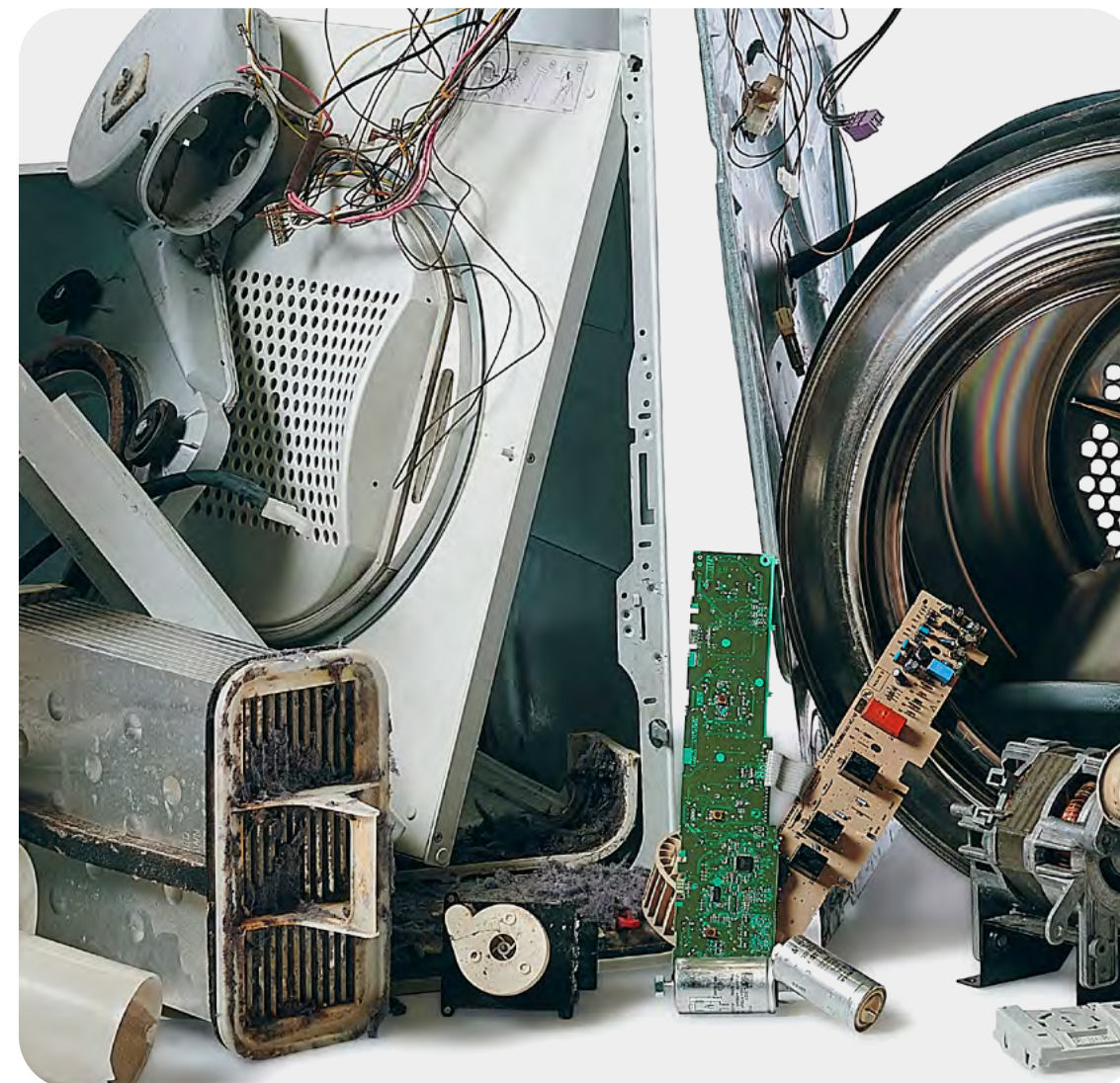
"The tightening up of sustainability reporting will force not only us, but all large companies to really consider and analyse the areas where we face our greatest challenges and possibilities in the field of sustainability. This is also a prerequisite in order to successfully introduce measures where they will have the greatest impact!"

Fredrik Benson, CEO



## 2023 In Brief

We want to strengthen the ties between El-Kretsen and the rest of the world. The more we know about our customers, suppliers and the general public, the better our position for making wise, long-term decisions. Naturally, the same is true in reverse: the more the world around us knows about us and our activities, the better motivated they will be in making wise choices. It doesn't matter how clever and efficient our systems are if people can't or don't want to use them correctly. We are working on this and we have come a long way – we now actually see it making a difference. Our ongoing dialogue with our stakeholders takes different shapes where surveys, studies, daily contact and organised meetings are some examples. Next, you'll find an account of some of the contacts and events we have had in the past year.



### Workshops

At the beginning of 2023, El-Kretsen held a workshop for our collection sub-contractors. A similar workshop was also held in 2022. Being able to meet all those who affect one another through their work at the same time gave rise both to positive experiences and new ideas. This strengthened us in our resolve to arrange other workshops of this kind.

### Elreturrådet – A strategic collaboration forum about collection

In addition to our dialogue with individual municipalities, we are also able to further our cooperation and discussions in the forum Elreturrådet. This is made up of El-Kretsen, the umbrella organisation Avfall Sverige, SALAR (The Swedish Association of Local Authorities and Regions) and a handful of municipal representatives.

### Study visits

In 2023, El-Kretsen also undertook several study visits together with the members of various trade organisations. This offered valuable insights into the different stages of the recycling procedure.

### New Collaborations

In the past year, we have signed up some new transport and treatment subcontractors. We have paid personal visits to all new suppliers to establish our relationship and help them get the digital reporting tools we use up and running.

### Producer event

In the autumn of 2023, El-Kretsen's customers – the producers – were invited to a seminar to go through the legislative changes in the Ordinance on Producer Responsibility for WEEE which came into force in 2024. We also invited GS1 Sweden to provide a picture of the increased requirements on product information that will come into force later on, as well as the possibilities offered in relation to this by developments like product passports.

## Our Operations

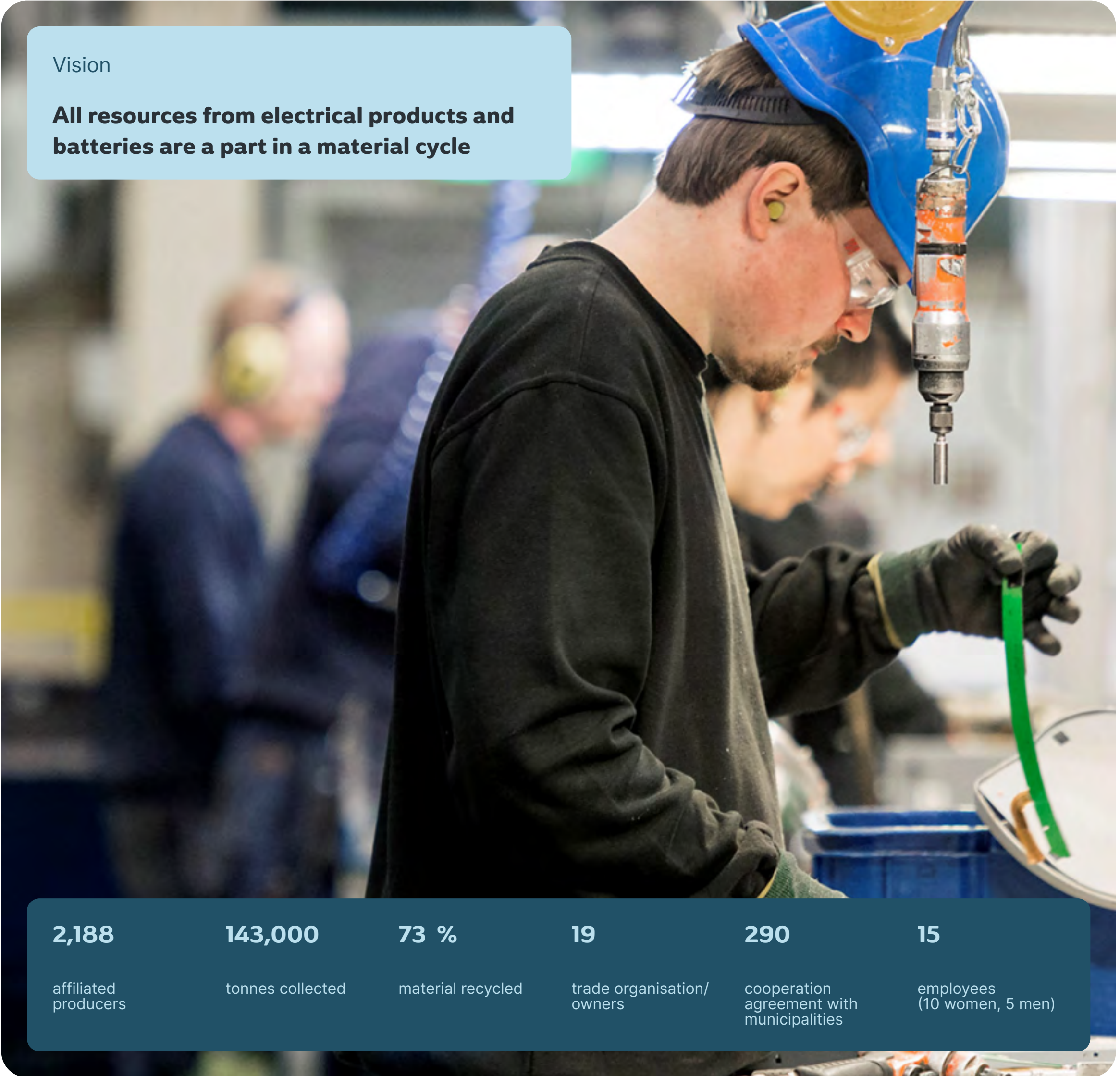
El-Kretsen has been around since 2001. This was the year the ordinance on producer responsibility for electrical and electronic products came into effect. The company was set up by a number of different trade organisations, and our owners have largely remained the same. Like them, we are a non-profit organisation, which means that any profit we may make does not go back to our owners. In 2009, the ordinance was expanded to include producer responsibility for batteries, and overnight, El-Kretsen found itself responsible for all battery bins in the entire country. We have 15 employees in-house, and also enjoy close cooperation with a great many subcontractors and other stakeholders.

The basis for producer responsibility was that producers would take responsibility for their products throughout their entire life, not just until they hit the store shelves. For more than 20 years, El-Kretsen has developed this into something greater than just the basics. Remove environmentally hazardous substances has been one part, returning resources to manufacturing industries is another. Even if the word producer responsibility points towards the producer, we all have a role and an opportunity to influence. Big and small decisions count. El-Kretsen is a resource and source for fact-based decisions and an enabler to reach a circular society.

In earlier legislation, our role was defined as a “approved national collection system”. That definition is now changed to a “Producer Responsibility Organisation” (PRO). But our business is the same, we are there for:

- Producers.
- Produces customers and end-users.
- Spreading knowledge about electrical products and batteries and how to make active choices for a more circular society.

On El-Kretsen’s [home page](#) → there is a list of the subcontractors involved in the pre-treatment process. This is the first step of the recycling process. Most of the consumer EEE is collected in cooperation with the municipalities in Sweden via their many collection points. The municipal recycling centres can be seen as the central hub for this collection. Our collaboration with the Swedish municipalities is administered through Elreturrådet, a forum set up for this purpose. In addition to El-Kretsen, Elreturrådet includes representatives from Swedish Waste Management (Avfall Sverige), SALAR (The Swedish Association of Local Authorities and Regions) and a handful of municipalities.



Vision

**All resources from electrical products and batteries are a part in a material cycle**

<b>2,188</b>	<b>143,000</b>	<b>73 %</b>	<b>19</b>	<b>290</b>	<b>15</b>
affiliated producers	tonnes collected	material recycled	trade organisation/ owners	cooperation agreement with municipalities	employees (10 women, 5 men)

## Our Operations

### El-Kretsen's customers – the producers

A producer is, principally, any company that produces or places electrical products and batteries on the Swedish market. This means that also a non-Swedish producer can become an El-Kretsen affiliated partner, particularly if such a producer sells products directly to Swedish end users. A list of all our affiliated producers can be found on our [website](#) → At the end of 2023, the list comprised 2,188 companies.

### Additional services

In the last few years, El-Kretsen has rolled out a number of additional services, like collection of WEEE and batteries straight from business locations. Since 2019, there is a requirement that operations that dispose of hazardous substances have to report this to the Swedish Environmental Protection Agency (EPA) within 48 hours. El-Kretsen has designed an app that helps companies comply with this requirement. Moreover, the information recorded in this app can be used by the collection point to make their own reports to the Swedish EPA of when hazardous substances have been received, what they were and who made the deposit.

### El-Kretsen's Analytical Plant

To be able to continuously calculate the content, volume, age, etc. of the WEEE we collect, we forward 1.5-2 per cent of the collected items to our analytical plant in Arboga. Here, we perform in-depth analyses of individual products or product groups. This plant enables us to produce evidence-based statistics and data, for example detailing how many mobile phones have been collected in one year as well as their make, age, condition, etc.



### Cooperation across Europe

The legislation that forms the basis of the producer responsibility comes from the EU in the shape of different directives and regulations. However, different member countries have interpreted the policy of producer responsibility in different ways, sometimes making various additions. This means that producers that operate in several countries need to relate to different legal frameworks and organisations. Ten years ago, El-Kretsen was one of the founders of [WEEE Europe](#), an organisation that assists producers with legislative matters and reporting in different countries.

[WEEE Forum](#), and [EUCOBAT](#), are two European organisations involved with producer responsibility for WEEE and batteries. Through these organisations, El-Kretsen's voice can be heard more clearly in Brussels in terms of forthcoming legislation. Moreover, they enable us to take part in various partner fora and in the exchange of information between countries.

# Rules and Regulations

The number of electronic gadgets and batteries is increasing along with their importance in our lives, and this means new and updated rules and regulations. Needless to say it is important that we are updated, not least because the changes in the legislation means even greater responsibility for us who work with these things. And this is good news!

These rules help producers, suppliers, collectors and consumers to push for further developments and to contribute further to our transition towards a circular society. Besides, the rules have been created to maintain a sustainable development in a world that has become so very dependent upon electronics. They also serve to make the relationship between operations and participants more efficient.

However, rules, directives and regulations are often complicated and extensive. This is why we are dedicating this part of our sustainability report to listing the most significant developments within these provisions, and also point to some changes in the near future. Let's call it a little aide-mémoire.

## The Obligation to Note and Report and the Commercial Waste App

Everyone who deposits and receives hazardous waste is required to report this in the Waste Registry at the Swedish EPA. You can use our Verksamhetsavfallsapp (Commercial Waste Reporting App) to register, show and report waste. The app can be found in both Google Play and the Appstore.

[The Verksamhetsavfallsapp →](#)

## El-Kretsen – News in Brief

- El-Kretsen is no longer known as a collection system, but as a PRO (Producer Responsibility Organisation).
- The obligation to provide information to end users has increased and how El-Kretsen as a PRO handle it must be reported to the Swedish EPA.
- The environmental charges for electronic and electrical equipment are now differentiated and products that contain substances included in the REACH Regulation are subjected to higher charges.

## Sustainability Reporting according to the CSRD (Corporate Sustainability Reporting Directive)

The CSRD is an EU directive which places the same requirements on sustainability reporting as on financial reporting. It also states that the sustainability report must offer information on a company's ESG factors (Environmental, Social and Governance) – in other words how the company is run, how the company and its value chain affect various aspects of sustainability, how these in turn affect the company and what the company does to lessen its negative footprint.

Among other things, CSRD aims to increase the number of sustainable investments, simplify risk management and provide companies with a better and deeper understanding of sustainability. As of 2025, CSRD will only apply to large companies, but it is meant to be gradually extended until by 2028 all companies active in the EU are to report in accordance with CSRD standards.

El-Kretsen is not included in the initial group of companies, but we have started to adapt to the guidelines to be ready in good time. We recommend that our customers start thinking along these lines now as well, as CSRD will involve a number of new requirements, such as reporting the origin of the raw materials used.

[More about CSRD →](#)

## Additions to the producer responsibility for WEEE

The producer responsibility for electrical and electronic equipment has come about to ensure that products are designed and manufactured in a way that avoids waste insofar as is possible, and that the waste they nevertheless give rise to is handled in the best way possible. This information has now been updated, and as of January 1, 2023, producers must:

- Promote the possibility to reuse products.
- Inform end users of the importance of sorting and recycling their waste.
- Inform users when there are batteries present in a product and how to safely remove them.
- Inform users about the process of erasing personal data from smart products.

[More about producer responsibility →](#)



## The Battery Ordinance

As a result of our transition into an electrified society, our use of batteries will become even more extensive. For this reason, the EU regulations concerning batteries have been extended with the intention of boosting recycling, the proportion of recycled materials in new batteries and battery traceability.

On the right we have listed the main features of the ordinance which came into force in August 2023 and which will be amended in stages over the next few years. You can find the text in its entirety at the Swedish EPA, where you can also list as a producer.

[Read More](#) →

### Who is considered a producer

A natural or legal person who professionally places a battery on the Swedish market for the first time.

### Five categories of batteries

On August 18, 2025, a new battery ordinance will come into force, with a new battery categorisation system:

- Portable batteries (sealed batteries small enough to be carried that are neither industrial nor car batteries).
- LMT batteries – Light Means of Transport batteries, for electric bikes, etc.
- Starter batteries (car batteries).
- Industrial batteries.
- Electric vehicle batteries.

### Updated collection and recycling targets

The collection targets for batteries are gradually increasing for the coming years. For example, member states must reach the following collection targets for portable batteries:

- 45 % within 2023.
- 63 % within 2027.
- 73 % within 2030.

### General obligations for battery producers

- Through a collection scheme, collect and treat the batteries they have placed on the market once these are spent.
- Inform end users about collection schemes, their duty to sort and recycle their batteries and how they can contribute to recycling.
- Register with and report annually to the Swedish EPA.
- Label their batteries according to the guidelines provided by the Swedish EPA.
- Inform about the potential impacts on human health and the environment associated with some of the substances contained in batteries.
- The most recent version of the ordinance also includes a requirement to provide information about the content of the batteries.

**WEEE**

The Swedish Ordinance on electrical equipment is based on the EU's WEEE Directive which is expected to be revised at earliest in 2026. Together with our umbrella organisations, El-Kretsen is working to promote a harmonised regulatory framework for batteries and electrical equipment.

[More about the WEEE Directive](#) →

**Circular Electronics Initiative**

This is part of the EU's effort to promote the transition to a circular economy and it includes, among other things, increasing the life span of electronic products. Some ways in which this can be achieved is by making sure more products are repaired, promoting new standards, improving the collection and the handling of WEEE and by an overhaul of the regulations concerning hazardous substances in electronic and electrical equipment.

[More about Circular Electronics Initiative](#) →

**USB-C becomes the standard**

Towards the end of 2024, USB-C will become the common standard for chargers in the EU. This means that all small electronic devices – such as mobile phones, tablets and cameras – sold within the EU will use the same kind of charger. The aim is to reduce the volume of WEEE. Today, chargers account for 11,000 tonnes of WEEE in Europe alone.

[More about the USB C-standard](#) →

**Event: October 16, 2024**

Are you a producer and want to know more about coming changes to rules and regulations? At our autumn event, we will delve into this in greater depth and also discuss the concept of reuse and critical raw materials. Welcome to Posthuset, Vasagatan 28 in Stockholm on October 16, 2024!

Please note that speaking language will be Swedish.

**Digital product passports**

This is one of the ESPR requirements and means that data relating to sustainability and traceability should be made available on the products themselves, for example in the shape of a QR code that can be scanned. The requirement includes the EU's intention to introduce a special product passport for batteries to increase their traceability.

[More about Digital product passports \(PDF in Swedish\)](#) →

**Ecodesign for Sustainable Products Regulation**

ESPR is a proposal for a new EU initiative which is likely to be adopted in 2024. It is aimed at reducing the waste of resources. This places more requirements on products, targeting aspects such as energy efficiency, recycling and repairs, emissions, contents and information.

[More about ESPR](#) →

**European Critical Raw Material Act**

CRMA aims to strengthen all links in the value chain for critical raw materials, including material recycling. The goal is for the Union's material recycling capacity to be able to produce at least 15 percent of the Union's annual consumption of strategic raw materials by 2030. In December 2023, the EU Parliament voted for the introduction of CRMA. The regulation comes into effect in 2024.

[More about European Critical Raw Material Act](#) →

**What Happens Next?**

As you will have noticed, electronic products are surrounded by an ever-growing number of requirements – and this trend is expected to continue. For this reason, having a grip of what factors affect developments in this area is quite useful.

## Educating for Circularity

**Climate challenges, pollution challenges and scarce resources mean we have to upgrade our thinking as well as our technological solutions. This is something a circular economy can help us with. But what is El-Kretsen’s role in creating positive changes within the circular economy framework?**

Even a major turnaround starts with a minor wonderment: “I wonder if...?” This initial thought is the seed from which something much bigger can gradually grow. El-Kretsen’s habit of boldly trying out new technology and investing in joint venture projects with a focus on circularity shows two ways of promoting change within the company. One such example is our collaboration with Remondis Recycling. Last year, the company opened a new facility specially designed for recycling glass. During 2023, the facility was tested with batches of crushed light bulbs, but some time this year it is expected to be up and running at full capacity. The new process is the result of extensive development work, but the rewards are considerable. We expect to shift the proportion of recycled glass from the current 20 per cent to as much as 80 per cent in the coming year.

However, we are not only concerned with the material we collect and handle ourselves. The knowledge that we are doing it and of how we are doing it can also be used by others. The UN report The Global E-waste Monitor 2024 estimates that 62 million tonnes of WEEE

was produced in 2023. Against that background, Sweden and El-Kretsen account for a minute proportion: some 0.2-0.3 per cent. If we are able to share some of the processes we have honed along with the results we have achieved because of this work, there is a possibility that the volumes that are processed in a circular way will rise quite considerably.

Communication is something we need to see more of throughout the supply chain – all the way from the producers to the recyclers. To be able to recycle products in a simple and efficient way, we need to know what these products contain. This is where we see our main challenge in the future: developing both the knowledge and the technology to select and handle products, components and substances so that we can sort them into even more specific fractions than we can at the moment. The seed for this has been sown in the shape of a product passport. In order for it to bear fruit, we need to wait for the idea to be developed and implemented. But this is not where the story starts. We have been on the journey towards circularity for a few decades already.

### The emergence of methodical sustainability approaches

In the 1980s, the phrase “sustainable development” was coined to give equal weight to socio-economic and environmental concerns. A lot was initially based on agreements, however, and over the next few decades, the development was not really as sustainable as planned. Not that there was a total absence of positive forces. “Producer responsibility” is one such concept and it has shown how the collaboration between legislators, the industrial sector and various collection

schemes has served to create the transition from waste management to improved resource efficiency. Another popular expression was “urban mining”, which covered both reuse and recycling.

The next step was a circular economy; a concept where traditional business ideas are challenged to follow a sustainable business model. The basic notion is that profitable and viable companies would also be companies that can see the risks associated with different sustainability aspects, at the same time as they can see the possibilities and competitive advantages of adopting a sustainable business strategy.

“The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.”

Ellen MacArthur

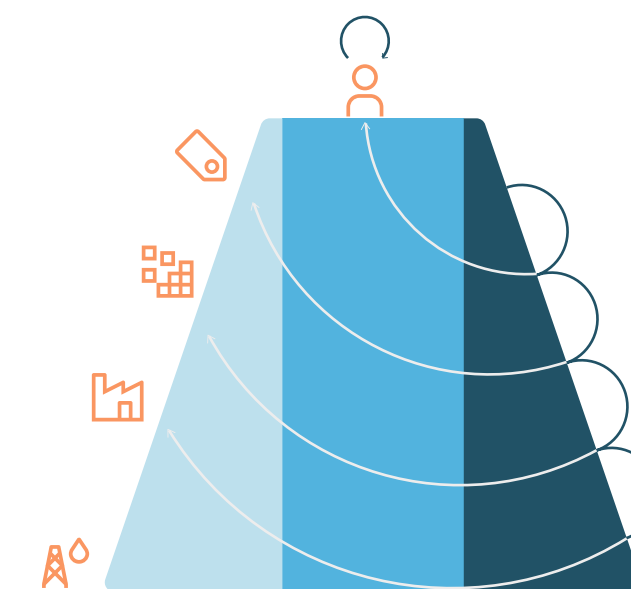
[Read more →](#)

### EU as an electric engine for progress

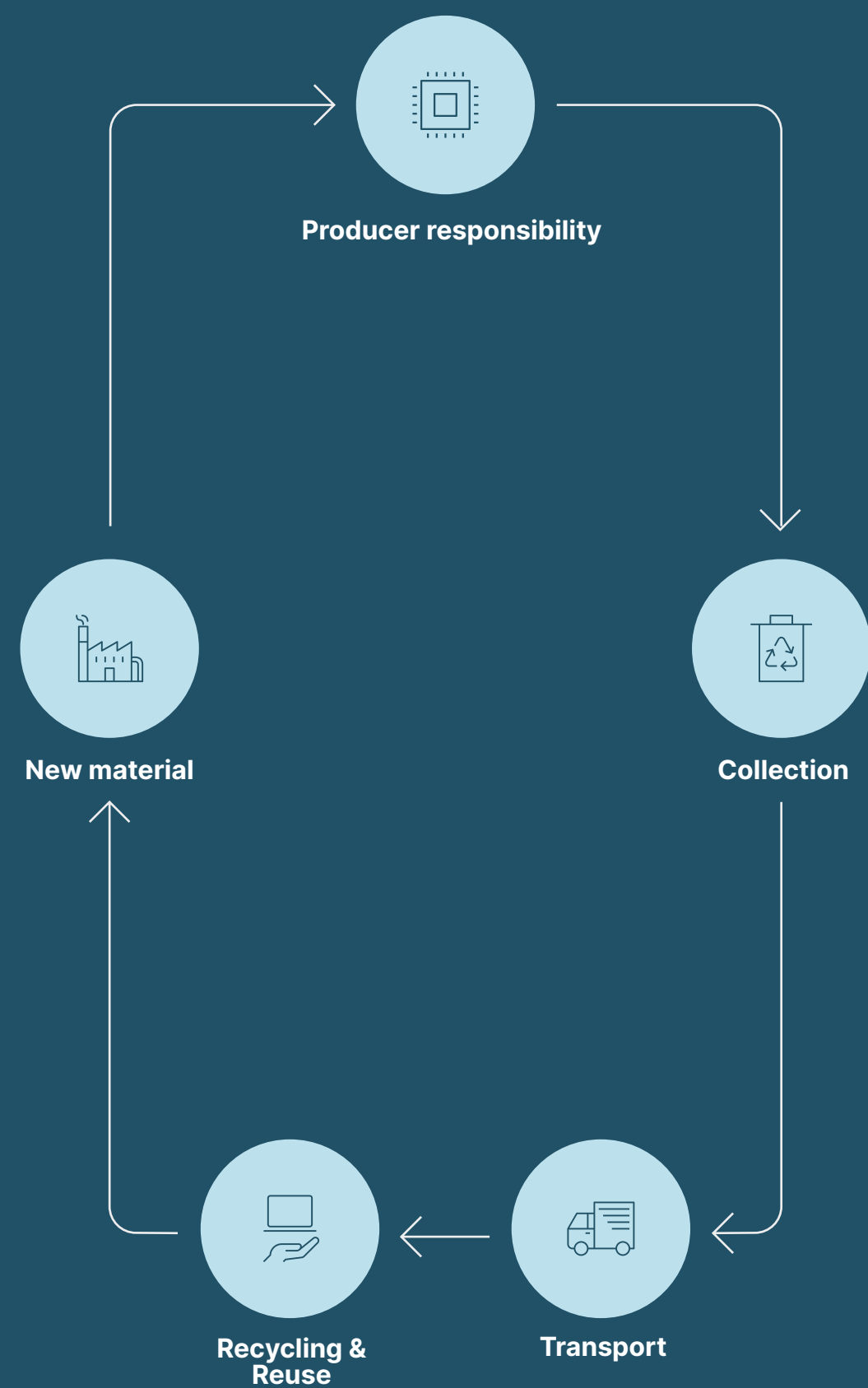
For the last few years, the EU has been planning a number of directives and regulations under the joint umbrella concept “The Green Deal”. Here, the EU combines the idea of a circular economy with a strong legislative environment. The aim is to ensure the EU’s competitiveness as a union and trading partner in a more sustainable future scenario. There are many examples of tools and methods we can use on our transformation journey. “The Value Hill Model” is one such tool that was developed in the EU to challenge the

way we traditionally regard the life cycle of a product and to demonstrate how a circular business strategy could combine greater financial value and lower resource utilisation. The challenge – and the goal – is to keep a product alive for as long as possible at the top of the pyramid, which is where it generates the greatest value to both traders and users.

How could El-Kretsen employ models and tools like the Value Hill Model? One crucial difference between us and, for example, a traditional manufacturing company is that El-Kretsen’s business idea is actually based on sustainability and circularity. But even if our organisation already fits the picture of a sustainable business model without having to change its basic *raison d’être*, we can still benefit from inspirational new ideas and technology. One such issue would be how we could retain the value of a product or part of a product without having to recycle it to recover the materials. Another would be how to harvest a greater number of elements from the materials we do recycle. By doing so, we strive to minimise our “down-cycling”. Innovation is a prominent part of our strategy. We want to be one of the leaders of the transition to circularity, and as such we want to be a strong long-term partner to all our producers, our subcontractors and to society.



## A Product's Journey at El-Kretsen



### The Journey of a Product: from collection to new material

We collect WEEE in different fractions, and the reason for this is that different kinds of WEEE are transported to different treatment facilities. Lamps, batteries and refrigeration units are transported to specific facilities designed to deal with these products. White goods and miscellaneous electronics, which is El-Kretsen's main collection fraction in kilos and includes anything from toys to toasters and television sets, are handled at a number of facilities all over Sweden. Some products are fit for reuse as they come, but the majority of the WEEE is dismantled, sorted and examined to make sure batteries and other environmentally hazardous components are removed. After this, the material is crushed and sorted into different qualities of metals and plastics as well as other materials like wood, glass, porcelain, etc.

Wood, fabric and certain plastics, once sorted according to type, are ready to be transported to the energy recovery plant. Glass, plastics free from brominated flame retardants, circuit boards and metals can be forwarded for recycling. Some facilities offer both these services, while others sell the material on to smelting plants. In order to achieve a more homogenous quality, recycled materials are often mixed with virgin materials. The end product may be different kinds of plastic pellets, metals in different forms and glass sand for making new glass.

### Could you say that it is more important to recycle certain kinds of WEEE than others?

From a climate perspective, the most important products to get to a recycling centre are those containing coolants. Old refrigeration units that never reach a recycling plant are at risk of breaking and leaking gases. The older the unit, the likelier it is that it contains coolants like freon which have very high GWP values (Global Warming Potential). In El-Kretsen's recycling facilities coolants are processed in sealed chambers to be neutralised. The heavy metals and chemical additives that can be found in plastics among other things can be very toxic and also non-biodegradable. This means that they can transit through the ecosystem, for example from plankton via fish to us humans. None of these three organic beings have any capacity to deal with the consequences of excessive concentrations, and some possible results are poisoning, brain damage, physical deformities and infertility. Ways of steering clear of the most toxic substances include legislative measures and product development. Cadmium, mercury and bromine are three well-known examples of substances that may still be found in society despite our efforts to phase them out completely. In El-Kretsen's systems, plastics containing harmful substances are incinerated, and heavy metals such as mercury are stored for disposal.

A third perspective is that of resources. The best way to manage finite resources like metals is to use them over and over again. This also comes with major climate benefits compared with having to mine virgin metals from the earth. Metals such as aluminium, copper and iron are already recovered and recycled, we also recycle the small amounts of zinc, gold, silver and palladium that hide in circuit boards, for example.

### From product-to resource thinking

There are countless products present on our earth – and the number keeps going up. We could also regard them as resources currently in the shape of one product, but ready to take on a different guise in its next life. If we adopt this way of thinking, we will automatically see the possibilities offered by looking after both products and materials in a smart way. It doesn't take much thinking to see that the more products we reuse and recycle, the less new metals we need to mine from the earth, which means greater environmental gains. In our capacity as a producer responsibility organisation, we are working at improving our own level of reuse and recycling. Product producers are working to develop both their business models and their choice of materials to become more efficient. And as consumers, can make conscious choices both when shopping and when we use our products – and then finally when we want to get rid of them. In the end, all the decisions we make along the way, be they major or minor ones, count when we strive to reach our goal of a circular and climate-neutral society.

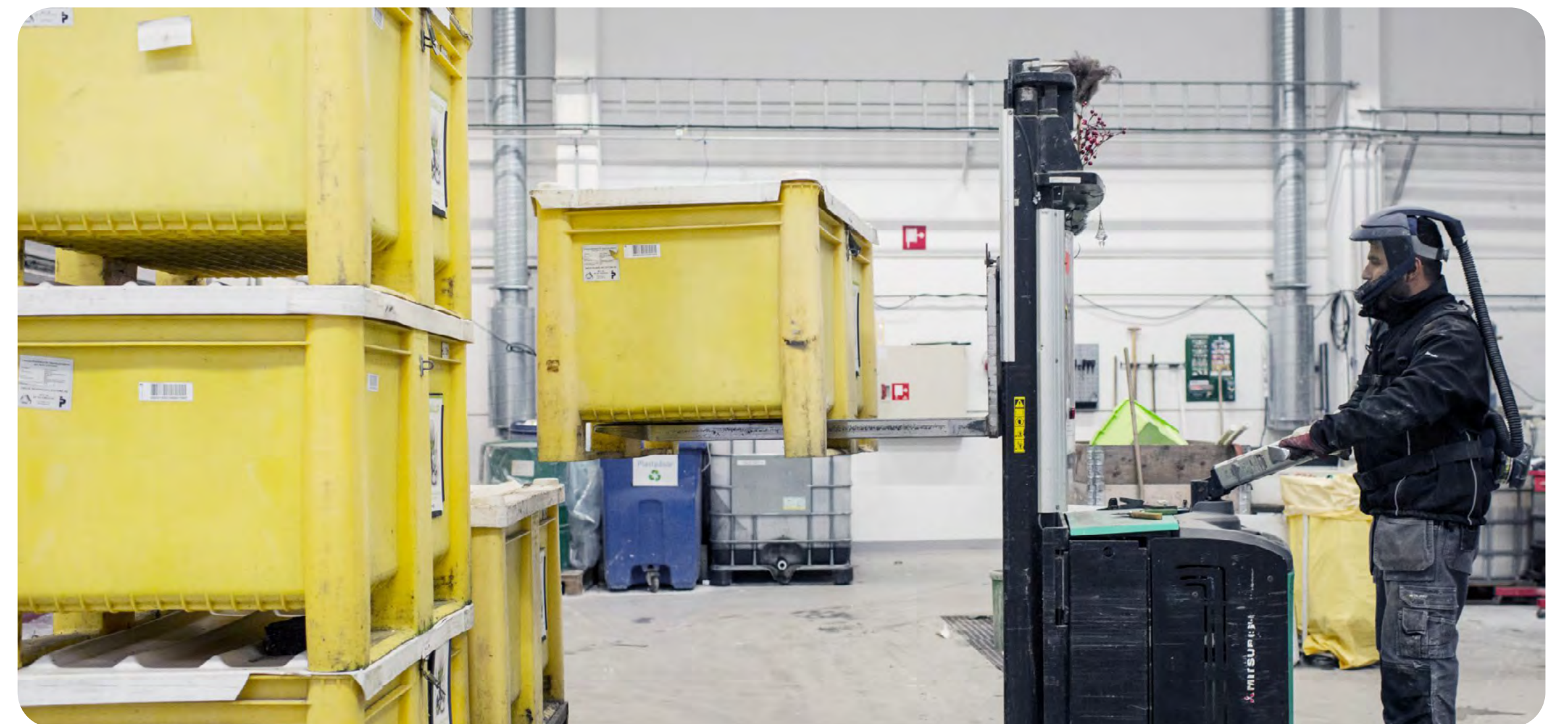
# Focus and results

## Sustainability Reporting in Accordance with European standards

ESRS is short for “European Sustainability Reporting Standards”. These standards were developed by EFRAG (the European Financial Reporting Group), an independent organisation co-funded by the European Union and EEA and EFTA countries. The standards are intended as a tool for companies to report on how they comply with the requirements according to the CSRD (Corporate Sustainability Reporting Directive). ESRS is based on the traditional model of financial reporting. Founded on principles of equality, transparency and a high level of detail, the standards are meant to enhance the quality of sustainability reports at the same time as they allow for easier comparisons between different companies and their sustainability achievements. The CSRD does not yet apply to EI-Kretsen, but our sustainability report for 2023 has nevertheless been based on ESRS as an initial step to comply with coming requirements.

### General information on EI-Kretsen’s vision and sustainability strategy

In stating our vision that all resources from electrical products and batteries are a part in a material cycle, EI-Kretsen has adopted a strategy and outlined the plans for its goal-oriented sustainability work for a number of years ahead. The strategy focuses on operative efficiency and quality assurance, but also on EI-Kretsen’s ability to provide knowledge and being recognised as a leading force in the pursuit of a circular economy. We have designed our business and set our goals in accordance with our strategy, and we make sure it is followed up and assessed regularly. Special focus areas are circularity, climate impact and pollution. The former as an obvious part of our basic mission, to collect, manage and return as many resources as possible in the material cycles. In that work there are risks of leakage of climate gases and pollution. The operation also produces negative emissions through transport and treatment of collected material. How we work with these areas is given a clearer explanation on the following pages.



## Climate Change

### Risks

Even though the handling and recycling of WEEE and batteries also requires energy, this energy consumption is very small in comparison to the energy it would take to source the same volumes of virgin raw materials to make new products.

So for El-Kretsen, a more useful thing to focus on is the risk presented by products that contain refrigerants, as these in turn incorporate greenhouse gases. The inherent danger of irresponsible treatment – or no treatment at all – of such products is the risk of high concentrations of greenhouse gases dispersing into the atmosphere. This is particularly true for older refrigeration units. El-Kretsen addresses this issue using information in two ways:

- Motivational information and targeted information. Firstly, knowing how important it is that products are recycled in the correct way motivates people, which increases the likelihood of products ending up at the correct facility instead of being left on a shelf.
- Secondly, we provide suppliers who handle refrigerated products with targeted information and specific requirements. Leakages are most likely to happen when products are being loaded and unloaded, so quality-assuring these processes offers the best chances of reducing the risk of greenhouse gas emissions.

### Possibilities

Today, all refrigerating units are treated in the same way, regardless of their age and the components they contain. This is in order to neutralise the refrigerants. One possibility in the future could be to weed out products that do not contain greenhouse gases and put them through a less complicated process that consumes less energy. But with the current setup, we judge the risks that waste is wrongly sorted to be too high. However, the forthcoming legislation on product passports opens the doors to quality-assured sorting methods. And when that is a reality, we see a possibility to separate different kinds of refrigeration units to be able to handle them in different processes.

When people have plans to replace an old product with a new one, the general truth is that the longer they wait, the smaller the carbon footprint will be. In such situations, El-Kretsen may be able to enable a longer product lifespan. Today, we cooperate with [Begagnadevitvaror.se](http://Begagnadevitvaror.se) and Stena Recycling. At certain collection points, suitable products are taken aside to be reconditioned and sold on the second-hand market. This can be entire units or individual parts that are still working. This project is still being followed up and assessed to see if it could be scaled up and if so how to do this.



# Climate Change

## Management and monitoring

El-Kretsen’s climate action focuses on two specific goals and each goal comes with several associated activities. Some of these are the same as in previous years, while some have been revised or are entirely new.

The availability of biofuel has been limited. Like all companies that use a lot of transport, El-Kretsen has therefore had challenges in reaching previous goals to drastically reduce the use of fossil fuel. The goals have been revised and we are now following the national goal that emissions from transport should be 70 per cent lower in 2030 compared to 2010. One method to achieve this is to work through structured improvement work, which is certified by a third party. Fair Transport are specialists in this area, and El-Kretsen is working with a partial goal that all transport companies that we collaborate with must be connected to Fair Transport by 2024.

High degree of filling cages and boxes also has an impact on emissions from transport. A challenge is to fill them as much as possible while not allowing them to overflow. In such a case, loading and stacking in the

truck will be more difficult. El-Kretsen works with both revisions and information to highlight the importance of this. The overall goal is to drive as few tonne kilometers as possible, something that is measured and evaluated continuously over time.

We have closed processes that take care of refrigerants from, for example, refrigerators and freezers. The challenge for us is to get all the products there undamaged, without any refrigerant leaking out. Loading and unloading are the critical moments when punctured cooling coils or torn insulation material risk leaking. El-Kretsen works continuously with measuring the number of products with broken circuits both at the collection point and at the treatment facility. In this way, data is created for the entire country and efforts for audits and extra information efforts can be directed to where they have the greatest effect.

### FOCUS AREA 1

#### Transports

70 % lower emissions in 2030 compared to 2010.

Milestones to get there:

- All transport companies must be connected to Fair Transport by 2024.
- All transport companies must use a climate calculator, made available through the Swedish Association of Road Transport Companies.
- Increase the degree of filling in boxes and cages.

### FOCUS AREA 2

#### A zero vision of leakage of refrigerants

Quality-assured loading and unloading of freezers, refrigerators and other products containing refrigeration circuits or materials.

Milestones to get there:

- Ensure correct data with the number of damaged products during collection and at the treatment facility.
- Design audit and information programs with special regard to the handling of products containing refrigerants.



# Pollution

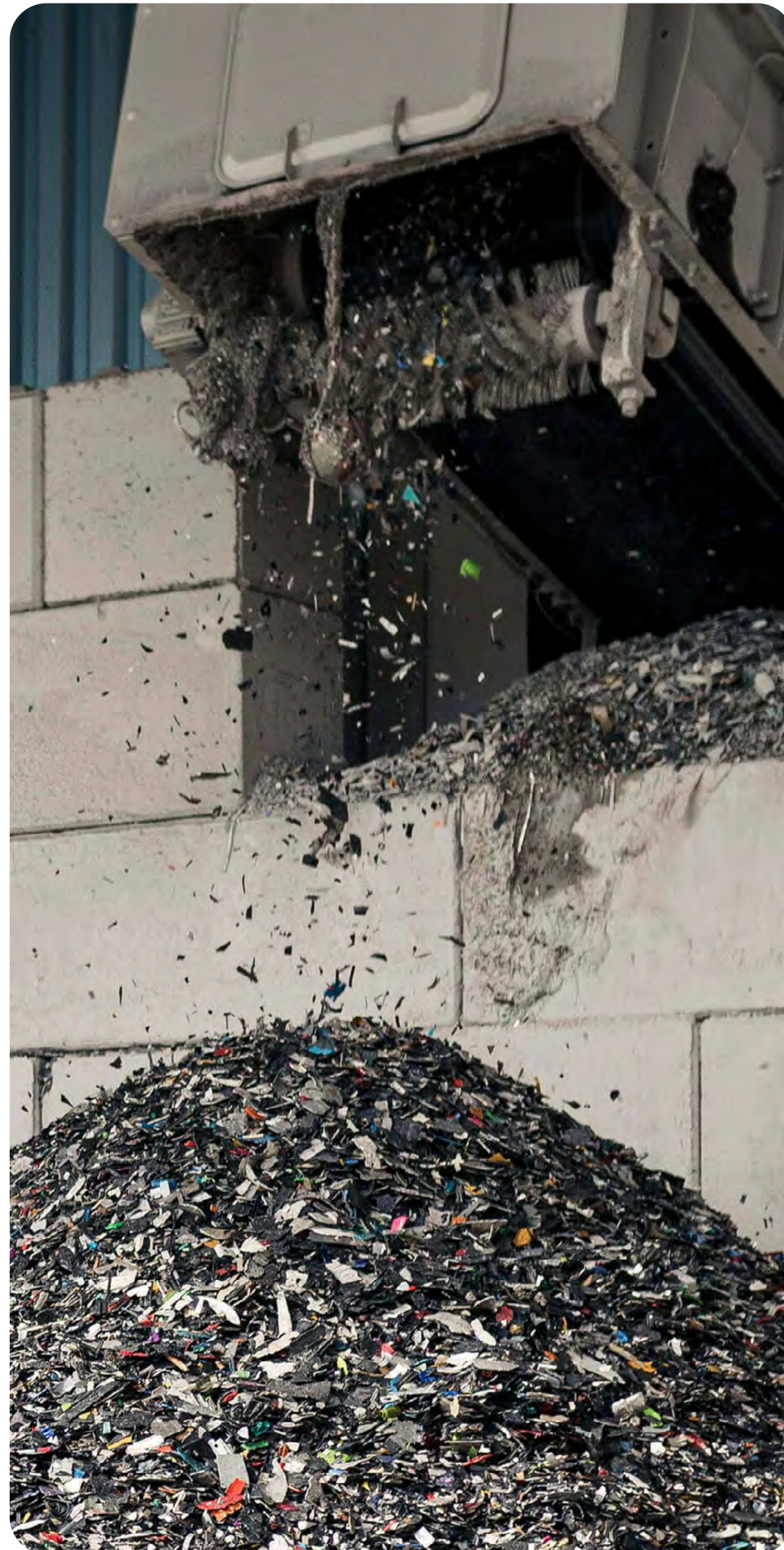
## GOAL

### A zero-vision of leakage of waste

EI-Kretsen's goals includes a zero vision: no waste should disappear in our process loop. This starts with the pick-up at a collection point and goes via a sorting or pre-treatment facility to the final recycling plant. This work is based on continuous identification and follow-up measures, for example by using the reporting tool Reptool. Reptool is used by all recyclers.

Milestones to get there:

- All contractual requirements between EI-Kretsen and suppliers in the collection chain must have a follow-up process with a specified time frequency.
- A special policy will be drawn up for handling hazardous waste.



## How to reduce the risks of pollution

“Pollution” is a broad term that can be interpreted in different ways depending both on the substances in question and on the environment at risk of being polluted. At EI-Kretsen, we identify pollution on the basis of the direct and indirect associated risks. A direct risk is when something happens locally, caused by an accident or faulty handling, for example. Any kind of pollutant released locally – from oil and heavy metals to broken glass and bits of plastic – can be harmful to animals and the surrounding landscape. Environmental toxins released in this way can also be picked up by the air, water or animals and spread over a wider area. To people, direct risks involve exposure to hazardous substances like corrosive acids which cause immediate harm, or fumes from mercury, asbestos and other non-biodegradable and harmful substances, whose damaging effects take longer to show up.

An example of an indirect risk is when pollutants are leaked during the recycling process, or when the recycled material used for making new products contains pollutants that these new products will end up gradually releasing. Another indirect risk is presented by products that never get into our recycling system, as they run the risk of not being handled properly. An example of this could be plastic that is burnt without the harmful gases in the smoke being filtered out. The more WEEE that is handled in EI-Kretsen's processes, the lower the risk of such pollutants.

All suppliers in the collection chain are required to use the deviation management systems that EI-Kretsen uses. A deviation can apply to anything from leakage of oil during loading or broken collection vessels to

missing receipts. What is considered a deviation is in many cases subjective. Some note many and small events as deviations, while others are very restrictive. For that reason, it is a challenge for EI-Kretsen to draw too large conclusions based on the number of deviations. On the other hand, they form an excellent basis for improvement measures.

## Knowledge and governance – key factors to avoid pollution

We think that people's motivation to handle different kinds of waste correctly will grow with increased knowledge. At EI-Kretsen, we provide information for the general public on our own information channel The Sustainability Library, at [www.Kunskapsrummet.com](http://www.Kunskapsrummet.com). However, our collaboration partners (Sweden's 290 municipalities in particular) help us reach an even larger audience. We also help augment the teaching materials in Swedish schools so that they can keep providing knowledge around the issues we deal with. This we regard as a small but important contribution to public education on a national level.

The nature of EI-Kretsen's relationship with its suppliers rests on the agreements we have signed, which means that there are possibilities for gradually strengthening the quality work. According to experience, the risk of accidents and leakages is reduced through providing clear instructions in combination with follow-up measures and an ongoing dialogue. Recycling facilities are also required to report their processes and the results they achieve in accordance with EU-harmonised guidelines.

## Resources and a Circular Economy



The main part of all WEEE is collected through Sweden's many recycling centres. The municipalities also run additional collection schemes such as on-site and mobile collection points, etc. Some consumer waste created by businesses is collected by private companies. The recyclers we collaborate with, who collect consumer waste from offices, hotels, hospitals and industrial enterprises, supply us with the statistics

relating to their collections. This means that the statistics presented by El-Kretsen include most of the kilos of consumer WEEE and batteries collected in Sweden.

WEEE is collected in fractions. The table below shows the number of tonnes collected per fraction for 2022 and 2023.

### Volumes collected in 2023

#### Collected (Tonnes)

Fractions for collection	2023	2022
Small appliances	71,363	74,356
Fridges & freezers	26,681	28,495
White goods	37,518	45,057
Batteries	3,867	3,411
Light tubes	730	830
Lamps	1,300	1,307
Other/professional electronics	1,297	1,304
<b>Total</b>	<b>142,756</b>	<b>154,759</b>

RESOURCES AND A CIRCULAR ECONOMY

# Reporting to the Swedish EPA, Naturvårdsverket

The fractions shown in the table above reflect how the collection is managed. When reporting to the Swedish EPA, however, the statistics should be reported according to the categories in the WEEE Directive. The tables show the material recycling rate according to the six WEEE categories as well as for batteries.

### Batteries

Material recovery	51 %
Energy recovery* and other treatment**	49 %

### Temperature exchange equipment

Reused	1 %
Material recovery	84 %
Other recycling*	13 %
Other kinds of treatment**	2 %

### Screens and monitors

Reused	5 %
Material recovery	69 %
Other recycling*	24 %
Other kinds of treatment**	3 %

### Lamps

Reused	0 %
Material recovery	22 %
Other recycling*	58 %
Other kinds of treatment**	20 %

### Large equipment

Reused	1 %
Material recovery	70 %
Other recycling*	23 %
Other kinds of treatment**	6 %

### Small equipment

Reused	0 %
Material recovery	69 %
Other recycling*	28 %
Other kinds of treatment**	3 %

### Small IT and telecommunication equipment

Reused	0 %
Material recovery	69 %
Other recycling*	28 %
Other kinds of treatment**	3 %

\*Energy recovery and materials that replace virgin materials, for example fillers or construction material.

\*\*Concrete, porcelain and similar materials that are not recycled, as well as environmentally hazardous materials that undergo thermal combustion.

## RESOURCES AND A CIRCULAR ECONOMY

## What do the different treatment types mean?



### Reuse

We have no idea of how many owners a product has had before it reaches our collection points. We can, however, see that they are often old and broken, bearing witness to the fact that their best-before date was passed long ago. To find data on the volumes of reused products, we have to turn to the second-hand markets, both in and outside Sweden. Nevertheless, some of the products handed in to EI-Kretsen can be repaired, polished up and reused. Together with Begagnade vitvaror and Stena Recycling, EI-Kretsen runs a project where white goods are singled out and prepared for reuse. When such products are not reusable in their entirety, they are stripped of the components that are still functioning and these are then resold. Component reuse does not noticeably affect the statistics insofar as the number of tonnes collected, but it still has an important environmental impact as making new components from scratch requires a lot of resources.

Something that hardly affects the weight collected at all, but which has a very positive effect on the environment, is the oil we empty and collect from compressors. This oil is inspected and purified, after which it can be reused as a new product. Compressors are found in fridges and freezers, for example. Fridges and freezers also contain refrigerants which would have a massive negative impact if they were released into the environment. These agents are treated separately in sealed chambers. Through gas separation we are able to extract and reuse hydrochloric acid and hydrofluoric acid, for example.

### Possibilities for increased reuse

Reuse should be the obvious option when it provides environmental benefits and when there is a demand for the product or component. Examples of pointless reuse would be removing the concrete weights used in white goods for transport back to the countries where they were made. While this would improve our statistics, it would impact the environment negatively. In the same way, repairing and reconditioning old products for which there is no demand (like old television sets) would be pointless unless we forced people not only to buy them, but buy them at a price that covered the repair costs. One area where we see possibilities for increased reuse, however, is the market for components and products which still have market value and where the environmental gains exceed the negative aspects that treatment and transport often give rise to.

In its agreements with Swedish municipalities, EI-Kretsen has included the option of increasing reuse possibilities at recycling centres. The products people leave in these containers never reach EI-Kretsen and consequently they are not included in our statistics.

Of the products that do end up in our containers, a few can actually be reused in their current state or contain components that can be reused as spare parts.

## RESOURCES AND A CIRCULAR ECONOMY

## What do the different treatment types mean?

### Material recovery

73 per cent of the WEEE collected is forwarded for material recovery. Different metals are harvested, iron being by far the most common (in weight). But also copper, aluminium and minor amounts of precious metals are recovered. Other materials like plastics and glass are also recycled and returned to manufacturers as resources for making new products.

There is a shortage in Europe of treatment and recycling facilities for batteries. We look forward to a development where the capacity expands, and larger quantities of batteries can be handled.

### Possibilities for increased recycling and material recovery

As part of our cooperation with the company Remondis, we have now introduced a new technology for purifying and recycling glass. This has resulted in a substantial rise in the recovery rate for glass. Previously, glass was used as a substitute for other kinds of material, for example as a covering product at landfills.

This past winter, El-Kretsen commissioned a major survey into which critical materials we could and should focus on to improve recycling. In 2024, we will be evaluating the conclusions drawn to see how we could

implement the ideas in reality. At our conference on October 16, Tillsammans för kretsloppet ("Closing the Loop Together"), we will present this study.

### Other recycling

Additional recycling includes the waste we turn into heating, such as unrecoverable plastics, wood, fabric and other combustible materials. Since 2020, materials that are reused for construction purposes are also classed as "additional recycling".

### Other kinds of treatment

Finally, there is waste that cannot be recovered, recycled or reused as energy. The bulk of this category is made up of the weights used in white goods such as washing machines. In the past, these weights were made of metal, but these days they are made from concrete or some similar stone-based material.

"Other kinds of treatment" also covers hazardous waste that goes into storage, like mercury or radioactive units found in smoke alarms. Other examples of hazardous waste may be materials or liquids with particularly dangerous properties. These have to be burnt in special incinerators.



## Workforce

Even though EI-Kretsen is represented all over Sweden through its battery bins and other collection vessels, we only employ a small workforce. There are 15 employees in all; 10 women and 5 men.

### EI-Kretsen's organisation:

- Marketing/Communications – Responsible for EI-Kretsen's website, the production of information and publicity materials for customers, and customer support for affiliated producers.
- Operations Management – Responsible for collection and logistics as well as for customer support for municipalities, collection points, transportation companies and pre-treatment companies.
- Finance – Responsible for budget work, invoices and external questions on financial matters.
- Purchasing – Responsible for the procurement of services and purchasing of materials.
- Business Development/IT – Responsible for EI-Kretsen's IT system, its analytical plant and for external research projects.
- Quality – Responsible for environmental and quality management system.

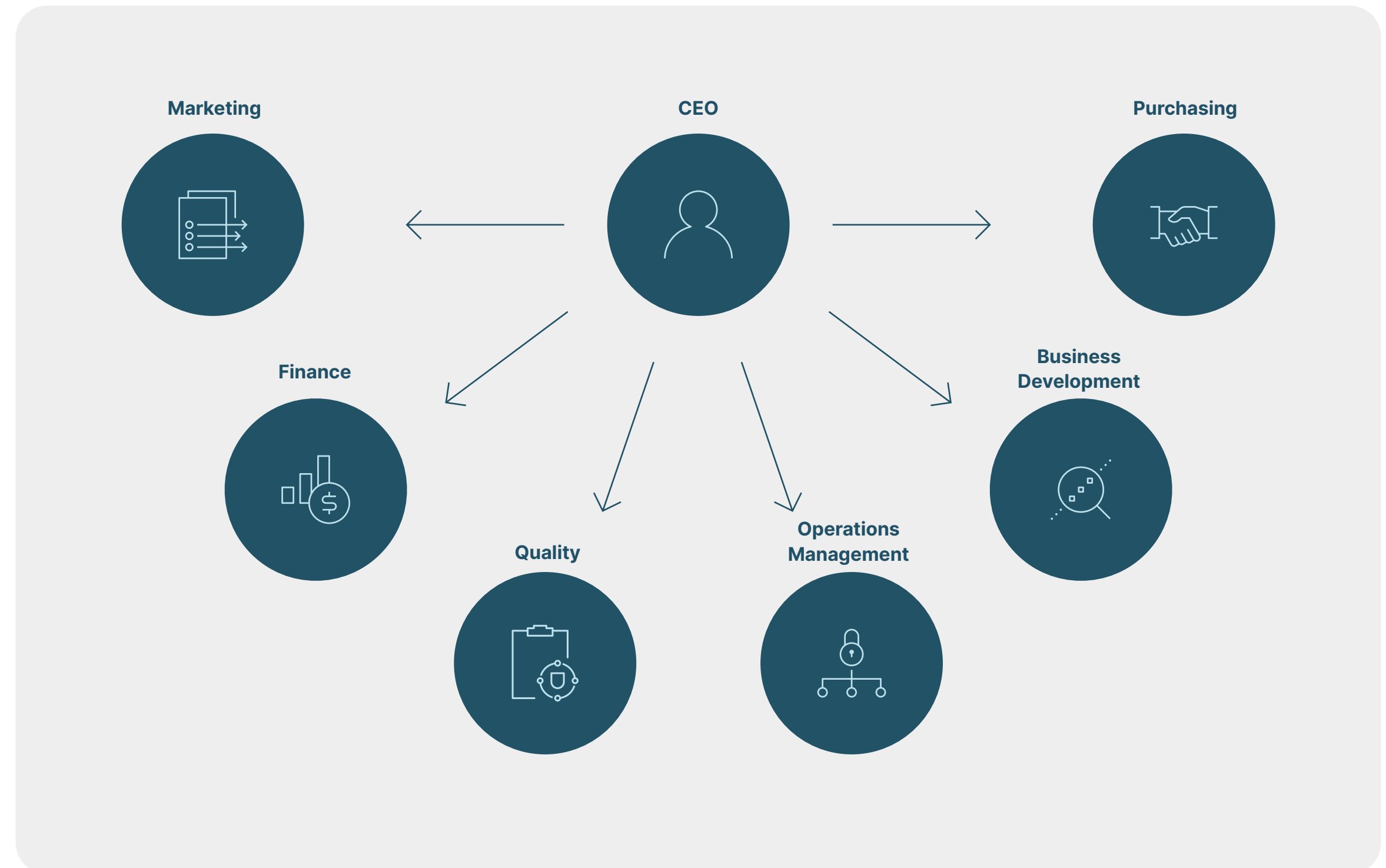
We are living in changing times, both with respect to the legislation and to the needs and requirements placed by

our stakeholders. Being aware of this and maintaining an ability to adapt and develop strategies as well as operative systems is essential for every member of our staff – and, in other words, the company – in our efforts to achieve success.

EI-Kretsen has an employee handbook which provides practical information on EI-Kretsen as a workplace. This is also a useful introduction to new employees. It contains several policies concerning issues like:

- Equality.
- Complaints procedures.
- Work environment.
- Drugs and alcohol, etc.

There are also job descriptions, follow-up on career development talks and a training plan, all within the framework of the ISO 9001 Quality Management System. These issues are also regularly monitored and assessed by the management: What needs exist within the company and how can these needs be met? How the employees rate EI-Kretsen as a place to work is something that is measured and followed up every year using an external HR resource.



"EI-Kretsen is often associated with stability and longtermism. This credit is something we have worked hard for and care deeply about. However, it doesn't mean that we cannot also be curious and open to trying new approaches. This is how I try to live my own life and an attitude I want to encourage both my co-workers and EI-Kretsen's partners to adopt!"

Fredrik Benson, CEO

## El-Kretsen's Stakeholders

To make sure our practical work can be carried out, El-Kretsen cooperates with a long line of partners. Some projects are short-term and/or temporary, but the great majority of our partners are close collaborators and in it for the long term. Two examples of this are our analytical plant, which provides us with continuous statistics and reports, and the providers of IT support for our own business systems as well as for the portals and apps we use and offer our customers and suppliers. This list could grow very long. The municipal collection points – Sweden's many recycling centres – employ staff to guide those who take their waste there, and then, the items are disassembled and sorted, reconditioned and recycled. The common denominator for these relationships is that they are of a contractual nature.

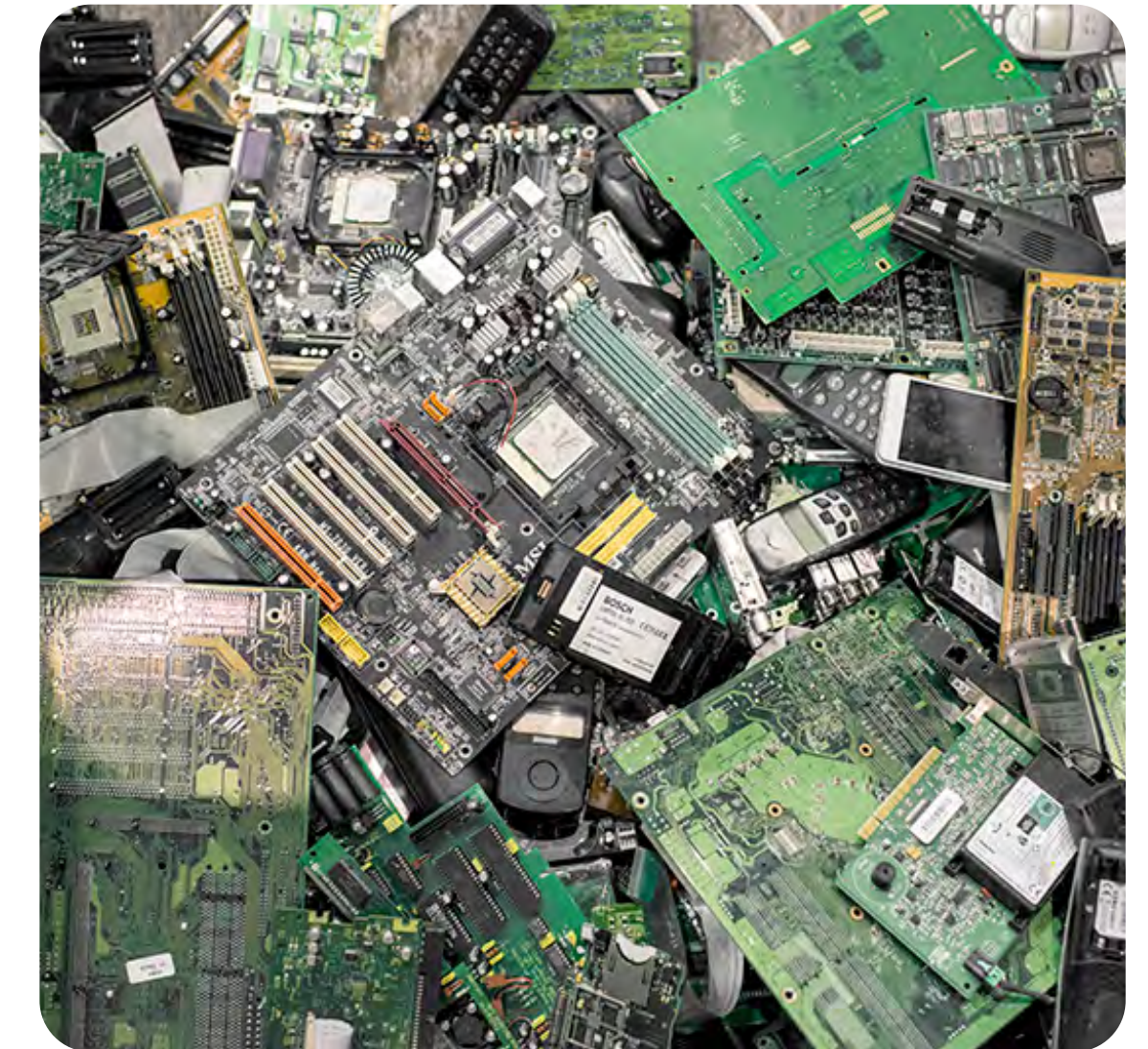
In 2023, El-Kretsen has developed a code of conduct as a supplement to the general supplier terms and conditions. The purpose is to point specifically to important aspects within ESG, aspects that El-Kretsen has as conditions for a collaboration. Briefly and in an overview, El-Kretsen's sustainability policy describes how we view the extent of sustainability work, quality assurance and progress. The policy can be read [here](#) →

Through El-Kretsen's management system, ISO 14001 and 9001, continuous work is carried out to capture the views of various stakeholders on us and our operations.

In our digital tools, it should be easy to get in touch with us and to be able to give positive and negative feedback.

To strengthen the bond between El-Kretsen and our different stakeholders, and also to explain how and why we work the way we do, we organise stake holder dialogues. These can take on different forms depending on the theme and the target groups invited. Below are some examples from 2023:

- Producers were invited to a seminar on differentiated pricing.
- Suppliers were invited to workshops on collection and reporting.
- Municipal cooperation has been discussed in the forum Elreturrådet.
- Personal visits have been paid to all new suppliers to establish our relationship and help them get their new digital reporting tools up and running.
- Study visits have been made to recycling centres together with our trade organisation owners and their members.
- Some of our target groups have been invited to take part in surveys through some of our portals and apps.



**All stakeholders:**

<b>NGO's</b>	<b>Society</b>
<b>Owner</b>	<b>The politics</b>
<b>Branch organizations</b>	<b>Carriers</b>
<b>Recycler</b>	<b>Producers</b>
<b>Agencies</b>	<b>Research Institute</b>
<b>Municipalities</b>	<b>Schools</b>
	<b>Media</b>

## Consumers and the Public

To pull off a circular transition, introducing stricter regulations or smarter recycling systems is not enough. Consumers and the general public also need to show that they have taken this on board and are willing to contribute. This is the most important target group for achieving wider success. For this, consumers and the public need:

- The knowledge that products containing hazardous substances need to be handled separately, which will motivate them to do so.
- The ability to see products as future resources and look after them as such.
- To become well-informed consumers who make a point of favouring reused, recycled and recyclable products.

EI-Kretsen has a model for dissemination of information which primarily makes use of its partners, above all the many Swedish municipalities. The collection practice can differ slightly between municipalities, but all municipalities provide information on the kinds of products and waste they can handle. This makes the municipalities' websites an obvious place for residents to source information regarding other kinds of products as well, not only WEEE and batteries.

### Information dissemination collaboration

Sopor.nu is a website aimed at the general public, environmental educators, teachers and youngsters. The site is run by the umbrella organisation Swedish Waste Management (Avfall Sverige) in cooperation with EI-Kretsen and a few other trade partners with the aim to inspire, offer information and practical guidance on all kinds of products and waste.

Natur & Miljöboken is a series of education materials published digitally and in printed form for school children between the ages of 10 and 12. EI-Kretsen views this cooperation as an effective way of reaching the next generation. Moreover, our cooperation with the media company Egmont led to a highly appreciated and long-running campaign featuring the much-loved character Bamse. This special edition comic is distributed to schools for children from kindergarten age up to age 9.

On EI-Kretsen's website you can find the Sustainability Library at [kunskapsrummet.com](https://kunskapsrummet.com), an information channel aimed at students who wants to know more about us and the sustainability work we do. During this past winter, we updated the information on this site in an attempt to attract more visitors to read more articles. We will keep updating it throughout this year.



The name Sopor.nu (which reads as “Garbage. now”) may well be regarded as hopelessly out-dated, but every attempt at changing it has been followed by a decline in the number of visitors. Either the brand name is so established and well-known that people type it into their search engines automatically, or we will simply have to accept that the word “sopor” (“garbage”) will live on in the Swedish language. Words can change their meaning over time, and hopefully the meaning of this word will eventually shift towards “resources” rather than “landfill” – although we’re not quite there yet.

## Governance

El-Kretsen's board has been actively engaged in developing a company vision and strategy. As the end of the current five-year strategy period approaches, the board turns its focus on evaluating the work we have done and revises the strategy so that it reflects the aspects and issues we now need to focus on. The board has El-Kretsen's management group to assist them in this task, as well as external resources.

For years, El-Kretsen has been certified according to ISO 14001 (with respect to the environment) and ISO 9001 (with respect to quality). In February 2024, we were re-certified for the coming three-year period. The management system serves as a tool which brings together the work that is based on the strategy with that which is the result of our everyday operations.

A new approach on the horizon is merging management systems with the expanded requirements that are gradually being developed as the EU's scheme "The Green Deal" becomes a reality. A first step in this direction is structuring this year's sustainability report according to the ESRS template.

Since the practical work such as collection, transport and reuse is carried out by external contractors, the requirements for how this work is to be carried out are stated in the contracts. These contracts are followed up through revisions and stakeholder dialogues. There is also a structure for dealing with collection inconsistencies so that we can pinpoint anything that needs to be addressed.



