The Home Appliance Industry in Europe 2023-2024

APPLiA
Home Appliance Europe

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About APPLiA

APPLiA - Home Appliance Europe is the leading trade association representing home appliance manufacturers in Europe.

We cover a wide range of products within our scope including fridges, dishwashers, washing machines, ovens, vacuum cleaners, heating, ventilation and air conditioning equipment, among others, and for residential use only.

We advocate for a regulatory environment that encourages innovation, sustainability, and energy efficiency, enabling manufacturers to develop cutting-edge products for all European consumers.

Together with our members and national associations, we develop industry policy positions on key legislative issues and help shape relevant EU policies.

APPLiA
Home Appliance Europe

Brussels
Council of the EU
European Commission
European Council
European Parliament

Frankfurt
European Central Bank

Luxembourg
Council of the EU
Court of Justice of the EU
European Court of Auditors
European Parliament

Strasbourg
European Parliament

Foreword

Hakan Bulgurlu
— APPLiA President

Global economic instability, geopolitical tensions, and the growing urgency of climate action continue to reshape industries worldwide. Europe stands at a critical crossroads: maintaining industrial leadership while driving a clean and fair transition.

Manufacturing is vital to Europe's economic strength, and the home appliance sector plays a central role in building a circular, decarbonised economy. Investment in innovation and energy efficiency aren't optional — they're essential to delivering real progress. With the right policies in place, our industry can lead the way to a low-carbon future.

This report offers a clear view of where we stand in terms of the strides we've made and the hurdles we must overcome. From shifting consumer demand for sustainable choices to the growing focus on repair, recycling, and economic pressures, these insights are crucial as we forge what comes next.

Paolo Falcioni
— APPLiA Director General

The home appliance sector stands at the intersection of Europe's sustainability, economic, and social objectives. As a key enabler of energy efficiency and emissions reduction, the industry continues to invest in innovation to support the EU's transition to a low-carbon economy while ensuring high standards of performance and affordability for consumers.

In an increasingly complex regulatory and economic landscape, maintaining a strong and harmonised Single Market remains crucial. A consistent policy framework will allow the industry to drive forward technological advancements, reinforce supply chain resilience, and contribute to Europe's long-term competitiveness.

The 9th edition of the APPLiA Statistical Report provides a comprehensive analysis of the sector's trajectory. It offers an update on the industry's achievements, the evolving regulatory environment, its impact on the sector, and the priorities for the year ahead. At a time of transformation, this report reflects the sector's continued commitment to remain a strategic asset of Europe's economy.

APPLiA Direct Members

APPLiA has 25 Direct Members, which have at least one manufacturing facility in Europe and a direct presence in at least four European countries.

All Direct Members are also a member of the relevant APPLiA National Associations in more than 50% of the countries in which the company has direct operations.

APPLiA Direct Members subscribe to APPLiA's statutes, by-laws, all industry-established agreements, and are signatories of the APPLiA Code of Conduct on Corporate Social Responsibility to promote fair and sustainable standards for working conditions, social compliance and environmental performance.

Are you an home appliance manufacturer?

Join APPLiA and stay ahead of the latest EU policy developments while ensuring your voice is heard in EU Institutions.

With almost 70 years of experience, APPLiA is the **leading trade association** dedicated to supporting and growing the home appliance industry in Europe.

Why join?

- Policy influence
- Market intelligence
- Networking & business opportunities
- Events & brand exposure

Get in touch to join
hello@applia-europe.eu

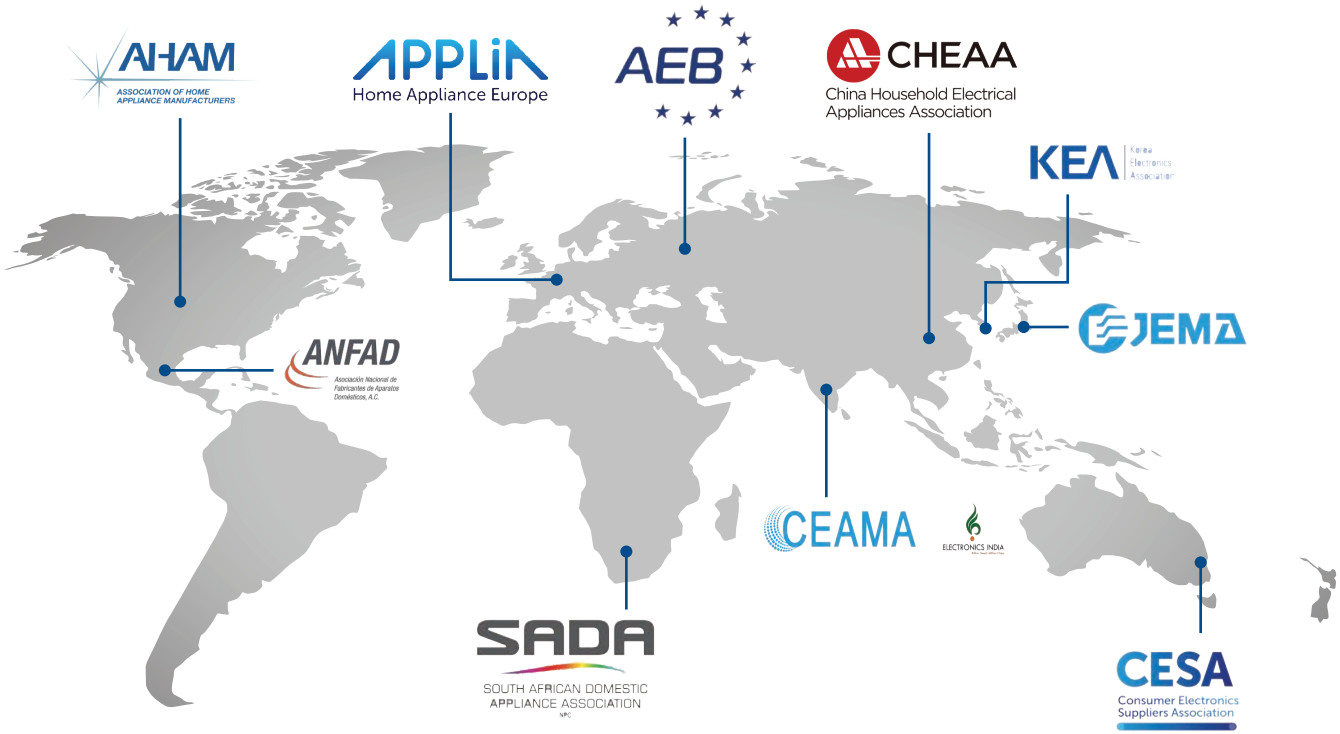
National Associations

IRHMA

The **International Roundtable of Household Appliance Manufacturer Associations (IRHMA)** was founded in 2014. The roundtable gathers experts from the EU, Russia, US & Canada, Korea, China, Japan, India, Mexico, South Africa & Australia, ensuring nearly global coverage of the household appliance sector.

Members convene annually to discuss the most pressing issues facing the industry and to exchange valuable knowledge and insights. This informal forum allows stakeholders to collaboratively address global challenges and strengthen the sector.

For more information or to join, visit:
www.irhma.org



IRHMA
International Roundtable of Household Appliance Manufacturer Associations

APPLiA Secretariat

APPLiA's Secretariat counts 17 staff members from different nationalities, working on communication, corporate, energy, environment and digital and competitiveness policy areas.

Paolo Falcioni
Director General

Candice Franck
Office Manager

Federica Lavoro
Communication Director

Maria Vittoria Sbrescia
Audiovisual Officer

Mikela Mema
Junior Communication Officer

Candice Richaud
Policy Director, Corporate

Martin Orešić
EU Institutions Liaison Officer

Korrina Hegarty
Senior Policy Director, Environment

Franziska Decker
Policy Manager, Environment

Clémence Razzano
Junior Policy Officer, Environment

Matteo Rambaldi
Senior Policy Director, Energy

Giulia Zilla
Policy Director, Energy & Environment

Anton Arabadjiev
Policy Officer, Energy

Maj Pegelow
Energy & Environment Policy Intern

Michał Zakrzewski
Senior Policy Director, Digital & Competitiveness

Alexandra Maxheleau
Digital & Competitiveness Policy Intern

Iulia Maria Florea
Digital & Competitiveness Policy Intern

The home appliance industry in Europe

PEOPLE EMPLOYED
1 million
Source: Eurostat

FACTORIES IN EUROPE
130
Source: APPLiA members data

CONTRIBUTION TO EU GDP
€ 79 billion
Source: Eurostat

OVER 75% OF LARGE HOME APPLIANCES SOLD IN EUROPE ARE **MADE IN EUROPE**

Source: Eurostat Comext Database

ENERGY

30%
increase in energy efficiency since 2000

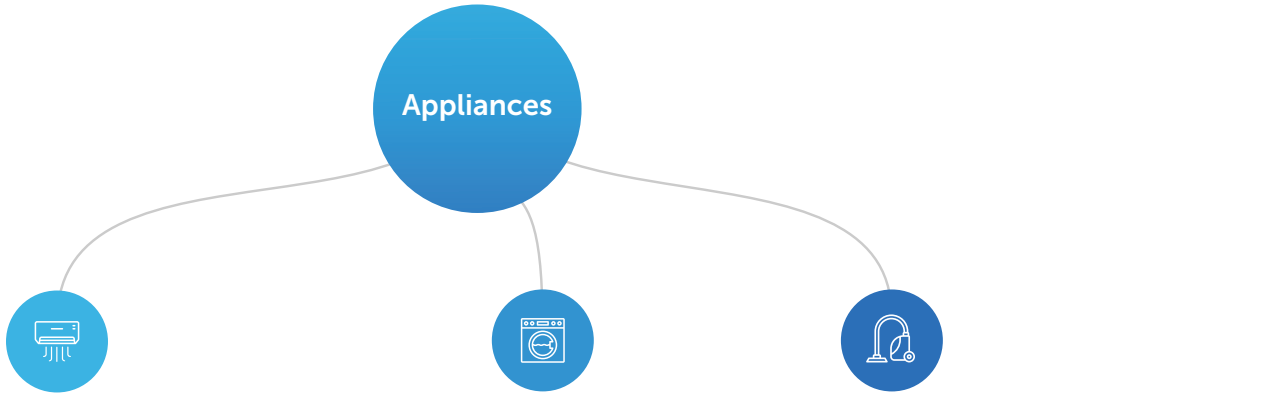
12 Mtoe
decrease in energy consumption since 2019

92 Mtoe
of energy savings for households between 2020 and 2023

Source: B Lapillonne and Zineb Raji, Enerdata, Energy Efficiency Trends for Households in the EU, Odyssee MURE webinar, November 2024. www.odyssee-mure.eu/events/webinar

Products

APPLiA represents the home appliance sector in Europe. Our members manufacture a wide variety of home appliances which can be categorised into three main groups: small home appliances, large home appliances, and home comfort appliances.



Home comfort appliances

- Air-to-air heat pumps
- Double duct air-to-air heat pumps
- Air conditioners
- Mobile air conditioners
- Electric storage tanks
- Electric storage water heaters
- Electric instantaneous water heaters
- Heat pump water heaters
- Portable local space heaters
- Fixed local space heaters
- Comfort fans

Large home appliances

- Refrigerators
- Freezers
- Wine storage appliances
- Washing machines
- Washer-dryers
- Tumble dryers
- Dishwashers
- Hobs
- Ovens
- Cookers
- Microwave ovens
- Hoods

Small home appliances

- Vacuum cleaners
- Irons
- Kitchen robots
- Blenders
- Hand-mixers
- Juicers
- Extractors
- Grinders

Food preparation appliances

- Mini ovens
- Steamers
- Slow cookers
- Air fryers

Small cooking appliances

- Other kitchen non-cooking appliances
- Toasters
- Hair dryers
- Hand dryers
- Kettles
- Coffee machines
- Hygiene products

Projects

The **Circular Plastics Alliance** works on innovative and sustainable solutions that reduce packaging waste and increase recycling to make a difference for the environment. And that together with carefully selected companies who, like APPLiA, want to reduce their carbon footprint.

circular-plastics-alliance.com/en

ECOSWEEE is financed by the LIFE Programme 2021-2027 of the European Union and is aimed at improving the small WEEE collection rate. APPLiA is a member of the Advisory Board of the project.

www.ecosweee-life.eu

The **I4R platform** offers WEEE recycling information aligned with Directive 2012/19/EU, supporting treatment, recycling, and re-use operators. Initially developed by APPLiA and DIGITALEUROPE, it is now managed by the WEEE Forum, the International Association of Electronic Waste Producer Responsibility Organisations.

i4r-platform.eu

INCREACE is a EU-funded project aimed at increasing the uptake of recycled plastics in products through innovative and inter-disciplinary solutions. APPLiA is a member of the Advisory Board of the project.

increace-project.eu

PRIMUS is a EU-funded project aimed at reforming secondary plastics to become the primary raw material choice for added value products. APPLiA is a member of the Advisory Board of the project.

www.primus-project.eu

FutuRaM is a EU-funded project looking to enable fact-based decision making for the recovery and use of secondary raw materials within and outside the EU. APPLiA is a member of the Advisory Board of the project.

futuram.eu

Policy developments in 2024

2024 was a pivotal year for EU policy, especially in the lead-up to the European elections, which saw President Ursula von der Leyen confirmed for a second five-year term at the helm of the European Commission. The focus on sustainability, coupled with a renewed emphasis on industrial competitiveness, defined the Commission's agenda for its 2024-2029 mandate.

Particularly, industrial competitiveness gained significant attention in Brussels, with several new initiatives linking it more closely to the European Green Deal. This continued to be a driving force in shaping the legislative landscape, exemplified by the Net-Zero Industry Act, the Green Deal Industrial Plan, and the Critical Raw Materials Act. Other notable initiatives included the Packaging and Packaging Waste Regulation (PPWR), the Right to Repair initiative, the Green Claims Directive, as well as the Artificial Intelligence Act and Data Act.

Source: EC - Audiovisual Service

A key milestone in 2024 was the release of the Draghi and Letta reports, in which APPLiA played a significant role. These reports were instrumental in shaping Europe's new industrial policy strategy. They highlighted the need for a more integrated and resilient EU, capable of navigating global challenges. The reports also outlined a roadmap for deeper cooperation among Member States and sectors, laying the groundwork for policies that promote both sustainable growth and strategic autonomy in the years ahead. Particularly, the Draghi Report stressed that preserving Europe's industrial base, especially in sectors like home appliances, was crucial to maintaining competitiveness, while advancing environmental sustainability and technological innovation.

2024 also saw the Belgian and Hungarian Presidencies of the Council of the EU. The Belgian Presidency worked to bring a number of key files across the finish line, including the Corporate Sustainability Due Diligence Directive, the Right to Repair Directive, the Cyber Resilience Act, and the Artificial Intelligence Act. Meanwhile, the Hungarian Presidency focused on aligning industrial competitiveness with the environmental goals of the Green Deal. A major achievement was the Budapest Competitiveness Declaration, which set clear targets for restoring Europe's competitiveness. Among its initiatives were a "simplification revolution" to reduce administrative burdens for businesses and a comprehensive industrial strategy to foster growth in key technologies while supporting traditional industries in transition, home appliances being a prime example.

Sustainability

Ecodesign for Sustainable Products Regulation (ESPR)

The Ecodesign for Sustainable Products Regulation (ESPR) was published in June 2024. The new legislation applies on all products placed on the EU market, including home appliances, with an eye to foster performance and sustainability throughout their lifecycle. Concretely, the law would extend the existing Ecodesign framework setting criteria not only for energy efficiency, but also for circularity with an overall reduction of the environmental and climate footprint of products. In its advocacy, APPLiA highlighted the importance of taking into account interdependencies and trade-offs between different products' aspects, defining product sustainability through an aggregated evaluation instead of setting individual requirements. From energy efficiency and use of recycled materials to durability and repairability, the roads to sustainability are many and they should all be equally valued. Regulated goods will also have a Digital Product Passport, a set of product-specific information accessible electronically by all consumers. APPLiA alongside other pivotal industries to the European economy found common agreement on the importance of building on already existing databases such as SCIP and EPREL to avoid unnecessary and burdensome

replications. The Ecodesign Workplan is going to be published in 2025.

Fit for Purpose Evaluation of the WEEE Directive

In Autumn 2022, the European Commission launched its call for evidence on the evaluation of EU rules on waste from electrical and electronic equipment (WEEE) to assess if the legislation is still fit for purpose according to the key objectives of the European Green Deal and Circular Economy Action Plan. A targeted amendment to the WEEE Directive approved in March 2024 introduced a review clause by which the Commission must assess the need for a revision of the Directive by the end of 2026. In view of such revision and leveraging its 20+ years experience with WEEE requirements, the home appliance sector values the current evaluation of the WEEE legislation and looks forward to collaborating with the Commission to investigate the challenges and the potential future solutions to further improve the level of WEEE collected and properly treated and recycled across the EU.

Home appliances make up a large proportion of the WEEE volume. Amounts of WEEE collected and properly recycled have steadily increased through the investments made by industry, in line with the WEEE Directive. Better recycling techniques have been developed through cooperation between producers and recyclers and the introduction of European standards with respect to collection, handling, storage, recycling, preparation for reuse and treatment of WEEE. However, APPLiA has been advocating for future WEEE legislation to close the existing gaps. In this regard, APPLiA proposes a two-pronged approach to improve WEEE collection and treatment. Firstly, a revised collection methodology that establishes a more realistic link between new electronic equipment placed on the market and the actual amount of WEEE collected. This new methodology should incorporate factors like product lifespan, technological advancements, market trends, consumer behavior, and the value of secondary raw materials, while also strictly enforcing separate collection requirements. Secondly, stronger enforcement of legal obligations for all parties involved in the WEEE management chain, from collection and transportation to sorting and treatment. This includes clearly defined roles and responsibilities in future legislation, with enforcement targets for Member States and audits conducted by an EU enforcement agency to ensure proper WEEE accounting and treatment.

F-Gas Regulation

The new F-Gas Regulation 2024/573 was adopted on 7 February 2024 and started to apply on 11 March 2024. It established new requirements on the management and use of fluorinated greenhouse gases (f-gases), including containment, recycling and certification, while imposing conditions on their production and placing on the market. Specifically, it set bans on products and equipment whose functioning relies on f-gases.

The F-Gas Regulation furthermore introduced several Implementing Acts whose development has been monitored by APPLiA, commenting as relevant for the sector and understanding how they will be implemented at national level. In particular, Implementing Regulations regarding training and certification, the F-Gas Portal registration rules, the reporting format of data and the labelling format of certain products and equipment were published in 2024.

Green Deal Industrial Plan

In March 2023, the European Commission presented its Green Deal Industrial Plan to make the industry fit for 2050. The Plan would provide a framework to support the transition of European industry toward climate neutrality and to develop the net-zero technologies necessary to achieve the EU's climate targets. Under its scope and with an eye to enhancing industry competitiveness, the Commission tabled the Net-Zero Industry Act and the Critical Raw Materials Act.

The EU's **Critical Raw Materials Act (CRMA)** entered into force in May 2024, following its adoption by

the Council of the EU and the European Parliament. It is meant to diversify the bloc's supply of raw materials needed for green transition technologies, by setting a number of targets for domestic extraction, processing and recycling of so-called strategic raw materials. Recycling of household appliances is a valuable means to ensure a steady supply of raw materials, avoiding further extraction and keeping resources in the loop. According to the legislation, products including washing machines, tumble dryers, microwaves, vacuum cleaners or dishwashers would have to affix a label stating whether they contain permanent magnets or not as an information for recyclers. In its advocacy, APPLiA has been asking for the implementation of a data carrier such as a QR-code engraved into the product to ensure a smoother handling of resources across the value chain. The engraved QR-code would permanently remain on the product and not risk being ripped off.

The **Net-Zero Industry Act** entered into force in June 2024. The primary aim of the Act is to ensure that the EU has access to secure and sustainable net-zero technologies by scaling up their manufacturing capacity within the EU. While the legislation is essential in defining Europe's path to 2030, most home appliances - with the sole exception of heat pumps - were left out of the Commission's list of solutions whose deployment would be instrumental to ramp up European production capacities for renewable energy technologies. By 2030, more than 1,5 billion home appliances will be placed on the European market, offering immediate savings. Decarbonisation tools would already be available today and should all be equally accelerated and enabled. A defined scope

that takes technology neutrality as a starting point and identifies products critical for meeting the EU's climate neutrality target must be assessed, that builds on the EU's existing strengths and setting in place a stable and long-term regulatory framework.

Green Claims Directive

In March 2023, the European Commission put forward a proposal for a Directive on Green Claims. The proposed directive would aim to fight so-called greenwashing practices by preventing companies from making unclear or unsubstantiated environmental claims on products at the point of sale. Particularly, the Commission proposed to prohibit all voluntary environmental claims unless they have been certified by a third-party verifier. As an active player in the discussion, APPLiA supported the overall goal of empowering consumers with clear information for informed purchasing decisions. Voluntary green claims are essential for promoting sustainability. They help companies highlight environmental benefits, drive innovation, and differentiate products, creating a competitive market for sustainable goods. This benefits both the environment and consumers, who get access to better, more sustainable products. However, the proposed procedures may be impractical, costly, and time-consuming for businesses, complicating product launches without offering clear value to consumers. The goal should be to encourage innovation and transparency in sustainability, with a balanced approach that ensures verification without hindering progress or discouraging legitimate claims. Interinstitutional negotiations started in January 2025.

Packaging and Packaging Waste Regulation (PPWR)

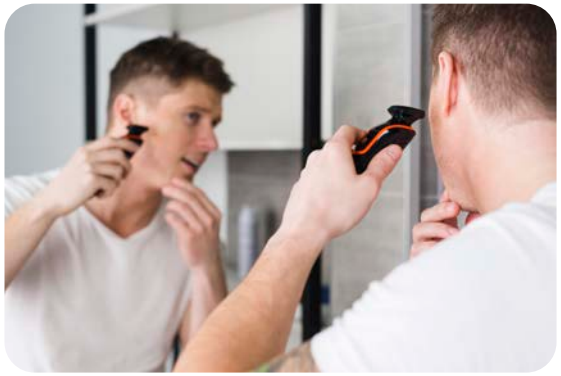
The Packaging and Packaging Waste Regulation (PPWR), a cornerstone of the EU's Circular Economy Action Plan, aims to combat the over-packaging of products and growing amounts of waste in Europe. Packaging is necessary to protect home appliances in the factory warehouses and during shipping, ensuring that the product is in good working order when it arrives at consumers homes, and the consumer's safety is preserved while using the equipment. The Regulation introduces new measures to address packaging recyclability: establish labeling standards, set mandatory reuse targets, and impose limitations on certain single-use packaging. Economic operators are urged to minimise packaging usage to reduce environmental impact further. APPLiA recognises the importance of promoting the environmental sustainability of packaging through regulatory measures but highlights the need for a level playing field and harmonisation of the single market. In the last quarter of 2024, the incoming European Parliament as well as the Council provided its final

confirmation. The regulation was published in the EU Official Journal in January 2025. Twenty days after its publication in the EU OJ, the PPWR would enter into force and start applying 18 months following the date of entry into force.

Batteries Regulation

On 28 July 2023, the European Commission published the new EU battery regulation in the EU's Official Journal, which repeals the former battery regulation 2006/66/EC of 06.09.2006 and which definitively entered into force on 17 August 2023. After a six-month period, the Regulation started to apply in all EU Member States on 18 February 2024. The new EU rules on batteries aim to make batteries sustainable throughout their entire life cycle – from the sourcing of materials to their collection, recycling and repurposing. The Commission is in the process of adopting delegated and implementing acts under the new Batteries Regulation from 2024 onwards.

The Battery Regulation will also have an influence on product regulations, transport regulations, environmental law, and regulations concerning waste, recycling and reuse/refurbishment. Of key importance to APPLiA is that by 18 August 2027, portable batteries must be designed in such a way that consumers are able to remove and replace them easily without assistance. There is a partial exemption to allow a product to be designed so that battery replacement is performed by an independent professional (and not by the end-user) for products designed to operate in an environment subject to splashes, streams of water, or immersion in water, and those that are intended to be washable and rinseable (when necessary to ensure safety), as well as for a limited category of medical devices. There is a full exception when continuity of power supply and a permanent connection between the product and the battery is required to ensure safety, or for products that, for data integrity reasons, collect and deliver data as their main function.



The European Commission has developed guidance on the removability and replaceability requirements of portable batteries, clarifying the application of Article 11 of the Battery Regulation. This guidance, published in early 2025, is essential for manufacturers to support their compliance with the requirements of the Regulation.

Corporate Policy

Directive on Corporate Sustainability Due Diligence

The Commission's Directive on Corporate Sustainability Due Diligence will set obligations for large companies regarding actual and potential adverse impacts on human rights and the environment, with respect to their own operations, those of their subsidiaries, and those carried out by their business partners. While sharing the intent of the legislation, APPLiA had engaged with policymakers to consider a "supply chain" instead of a "value chain" scope to suggest that companies must be responsible when there is an established, direct relationship and more accountable to their supply chain identifying any potential risk.

Empowering consumers for the green transition

The Directive (EU) 2024/825 on empowering consumers for the green transition through better protection against unfair practices and through better information entered into force on 26 March 2024. It amends the Unfair Commercial Practices Directive (UCPD) and the Consumer Rights Directive (CRD) by adapting them for the green transition and the circular economy.

The Association has been supportive that information on the product is better communicated at the point of sale as a means to empower

consumers while keeping company freedom in determining terms of commercial guarantees of durability. It also called for consistency in setting requirements in this Directive and both the Green Claims Directive and the Ecodesign for Sustainable Products Regulation that were negotiated in the same period.

APPLiA is involved in sharing its members' experience in the making of the harmonised label and notice that the European Commission is tasked to develop. The harmonised label will aim to inform consumers about the existence of a commercial guarantee of durability by the producer while the harmonised notice will act as a their rights under the legal guarantee of conformity.

Right to Repair

On 1 February 2024, EU Institutions reached an agreement on the European Commission's proposal to promote the repair of goods. The legislation is expected to significantly benefit both consumers and the environment by promoting the repair of appliances, especially as the range of products subject to repair obligations expands in the coming years.

While repair of home appliances has been common for years, this new law sets out clearer obligations for manufacturers to provide consumers repair options for products that are technically repairable under the Ecodesign rules. The legislation also envisions a European registry of repairers, offering consumers a reliable directory of qualified professionals in the event that repairs are needed.

Besides, to further promote repair, the legal guarantee will be extended by 12 months when choosing repair over replacement. However, the law's flexibility on the 12-month extension allows Member States to go beyond, likely leading to further fragmentation of the EU's single market. This will complicate the already diverse landscape of consumer protection laws across Europe. The European Commission's proposal was shaped by the advocacy of organisations like APPLiA, which had pushed for linking repair and spare parts access to Ecodesign rules, ensuring legal certainty for manufacturers, repairers, and consumers alike.

This combination of legal clarity and consumer empowerment is a significant step toward promoting a circular economy and fostering sustainable consumption practices across Europe.

Energy Policy

Drinking Water Directive

The recast Drinking Water Directive on water intended for human consumption introduces minimum quality standards and establishes a risk-based approach to water safety, which encompasses the entire supply chain, from the source until tap. Furthermore, Article 11 of the Directive sets up a framework for minimum hygiene requirements for materials in contact with drinking water, which the Commission has implemented through three Implementing and three Delegated Acts, published on 24 April 2024. These legal Acts affect the design of appliances connected to the distribution systems of drinking water in buildings and especially thermal energy storage. Heat pumps are indirectly affected too. Despite the unclear

transition foreseen in the Acts and the omission of one essential substance for manufacturing, the home appliance industry remains committed in addressing these challenges.

Energy Performance of Buildings Directive

To boost the energy performance of buildings, the EU has established a legislative framework that includes the revision of the Energy Performance of Buildings Directive. Buildings represent 40% of the EU's energy consumption, with space heating and domestic hot water accounting for about 80% of the total energy use in European households. Two thirds of this energy is currently produced with old and inefficient systems based on fossil fuels, which is why APPLiA has been advocating to accelerate and support the modernisation of the installed heating stock. Replacing obsolete systems with highly efficient and renewable-based appliances is pivotal to achieve Europe's decarbonisation goals. Furthermore, securing sufficient funding for these replacements and adequate incentives to appliance owners would also support the competitiveness

of EU industries in the renewables and energy efficiency fields. The Directive was adopted in April 2024.

Digital and Competitiveness Policy

Artificial Intelligence Act

The Artificial Intelligence Act was published in August 2024 and it aims to ensure that AI systems placed on the European market and used in the EU are safe and respect fundamental rights and EU values. This landmark legislation also aims to stimulate investment and innovation in AI in Europe. The AI Act includes a list of banned applications that are deemed to pose an unacceptable risk. Concretely, the law considers as high-risk products in which AI poses potential risks to individuals, society or environment. In its advocacy on the subject, APPLiA has been remarking how striking a fair balance between safety and innovation is crucial to strengthening Europe's ability to compete globally. Unfortunately, home appliances risk falling into the "high-risk" product category because of a bureaucratic loophole. More specifically, according to some draft interpretations, home appliances would automatically be categorised as high-risk, when using AI systems as a safety component, even if harmonised standards are available, listed and used. The issue is being addressed with the European Commission, and there is reasonable expectation that respective guidance and interpretation documents would clarify the situation. In 2025, the focus will be on developing respective implementation guidelines and standards under the AI Act.

Carbon Border Adjustment Mechanism (CBAM)

Europe's carbon tax officially entered its trial phase on October 1, 2023. From this date, companies are required to report the amount of materials such as cement, iron and steel, aluminium, fertilisers, electricity and hydrogen, that they have imported into the EU and relative CO_2 emissions generated. In 2024, new reporting obligations were introduced for companies importing CBAM-covered goods. Starting from January 1 2024, importers are required to report the carbon emissions embedded in their products, including detailed data on the carbon content and emissions from production processes. These obligations are part of the transition phase (2023–2025), during which companies must submit emissions data without making payments until 2026, when financial adjustments are enforced.

The home appliance sector in Europe, a significant downstream user of materials covered by CBAM, faces substantial challenges due to its exposure to international trade and the anticipated cost

implications. This financial burden raises concerns about the sector's competitiveness and the potential for production shifts outside Europe. Given the significant impact on the sector, APPLiA has carried out extensive outreach to raise awareness about the implications of CBAM, emphasising the risks of carbon leakage and competitive disadvantages for EU manufacturers. The Association is pushing for a balanced approach that supports sustainability while ensuring industry viability. Furthermore, the phasing out of free ETS allowances between 2026 and 2034, alongside CBAM's full implementation, is expected to further drive up carbon costs for manufacturers, particularly in sectors like home appliances.

Cyber Resilience Act (CRA)

The Cyber Resilience Act (CRA) introduces mandatory cybersecurity requirements for products with digital elements. Around 10% of applications are classed as 'critical' or 'most critical' in the Act, possibly including some home appliances. APPLiA has been advocating for a clear distinction between critical and non-critical cybersecurity products, to be reflected in standards. Concerning the support period for security updates, a reasonably good outcome of at least five years has been agreed. In 2024, APPLiA was invited to join the European Commission's Expert Group on the Cyber Resilience Act. This was an important achievement toward preparing proper implementing guidelines, addressing, among others, the issue of interplay between the Radio Equipment Directive Delegated Act and the Cyber Resilience Act.

Data Act

The Data Act remains the centrepiece of the Von der Leyen Commission's Data strategy. It aims to unlock data sharing at EU level and to establish a single market for data. The Act seeks to position Europe as a global leader in the data-agile economy by enforcing data-sharing obligations on companies. With connected appliances generating a vast amount of information, APPLiA has been a key actor in the public debate, emphasising the challenges and risks of mandatory data-sharing for the industry. Additional guidance will be needed to help companies implement the Act and navigate the different definitions of data, clarify data accessibility obligations and protect sensitive business information while complying with design requirements. Guidance will be crucial to prepare for the Act's entry into force and throughout the implementation phase, to ensure legal certainty and effective compliance. The Act will become applicable mid-2025.

Product Liability Directive

Since 1985, the Product Liability Directive provides consumers who have suffered damage caused by defective products with the legal basis to seek compensation. As products have become more complex in the digital age, the European Commission published a proposal for a new directive on liability of defective products in September 2022. Under the new rules, consumers will be able to claim any loss or corruption of data for their products including home appliances. Concretely, this means manufacturers would be asked to quantify the data loss in economic terms. While it is vital that consumers can seek compensation for harm caused by defective products, APPLiA has been highlighting in its public advocacy the difficulty of quantifying a data loss when it comes to a washing machine or a dishwasher and the challenges of introducing new concepts, such as the reversal of the burden of proof, into all the national civil legislations. The Directive would apply to all products placed on the EU market starting from 9 December 2026.

For more, follow APPLiA on our social media accounts:

LinkedIn
@applia-europe

X
@APPLiA_Europe

YouTube
@appliaeurope7210

Roadmap to a fair, sustainable and prosperous European society

Tomorrow's industry calls for stepping up today. European manufacturing needs a strong and unfragmented industrial policy strategy preserving jobs, minimising costs on society and setting a competitive benchmark for sustainable investments.

This is our call to action for Europe 2024-2029.

Read our full manifesto at
www.manifesto.applia-europe.eu

Recommendation 1
A Decarbonisation Plan for Europe

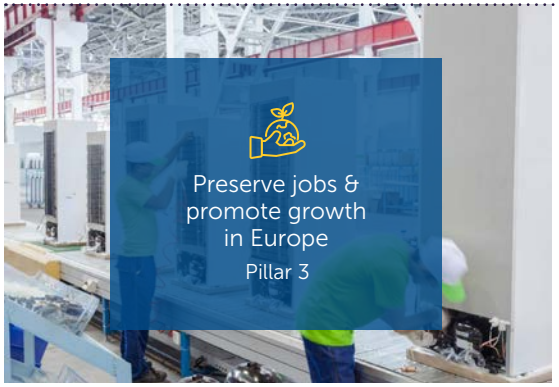
Recommendation 2
Enable and reward transition investments for decarbonisation

Recommendation 3
Modernise our energy system to reduce CO_2 emissions and bills

Recommendation 4
Reward and empower consumers with meaningful incentives

Recommendation 5
A European strategy to replace old energy-intensive appliances

Recommendation 6
Support for low-income households to install energy efficient appliances



Recommendation 7
Make Europe a worldwide leader of clean tech innovation

Recommendation 8
Build a crisis-proof European circular economy

Recommendation 9
A clear European voice on industry policy and decarbonisation

What to watch in 2025

2025 marks a pivotal year for Europe's home appliance industry, with significant regulatory changes driven by the new European Commission's focus on simplification, competitiveness, and sustainability. Several key legislative measures are set to be introduced impacting the home appliance sector and driving innovation, efficiency, and resilience.

Polish and Danish EU Council Presidencies

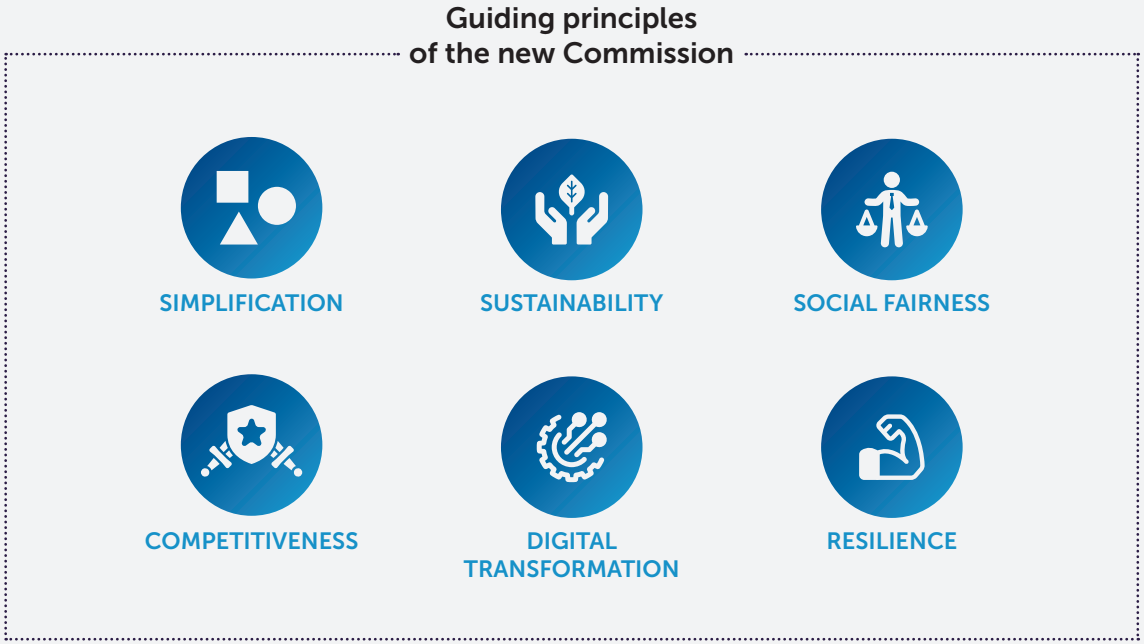
The Polish and Danish EU Council Presidencies in 2025 provide a unique opening for APPLiA to influence the policy landscape. Poland's focus on security, energy, and competitiveness in the first half of the year, followed by Denmark's emphasis on clean solutions in the second, presents a key opportunity to advocate for policies promoting energy-efficient appliances and a robust European manufacturing sector.

Old legislation: Ecodesign, Packaging, AI and Data Act

Early in the year, the European Commission released guidance on portable battery removability and replaceability requirements, aimed at making it easier for consumers to remove and replace batteries in portable electronic devices. Additionally, the EU's executive body began interinstitutional negotiations on the Green Claims Directive, which targets greenwashing, and the Packaging and Packaging Waste Regulation (PPWR) officially came into force. **Throughout the year**, we can expect the publication of the Ecodesign Work Plan, which will outline actions to make products more sustainable by expanding the focus beyond energy efficiency to include factors such as durability, recyclability, and overall environmental impact. **Mid-year**, the Data Act, which regulates data sharing, will become applicable. Meanwhile, the focus of the Artificial Intelligence Act will shift towards developing implementation guidelines and standards. These legislative actions will shape the policy landscape across various industries, influencing product design, manufacturing processes, and data handling practices.

Many new initiatives

Under the motto of "competitiveness and simplification", the European Commission launched its **Competitiveness Compass** at the start of the new mandate. This initiative outlines a renewed approach to EU competition policy, with a focus



on enhancing the EU's global competitiveness while simplifying regulations and ensuring a more flexible, innovation-friendly environment.

To tackle the increasing amount of non-compliant products entering the EU market, the Commission proposed a set of actions in its **toolbox for safe and sustainable e-commerce**. Small appliances like coffee machines and blenders are particularly vulnerable, with over 200 deemed high-risk by the EU's Safety Gate system in 2024. These recurring issues present a significant risk to consumer safety, undermine the competitiveness of European businesses, and erode consumer trust in the European market. To combat this, APPLiA calls for online marketplaces to be held accountable by being recognised as economic operators under EU law. Additionally, online sellers should be legally required to fulfill producer responsibilities for e-waste management under the WEEE Directive. Finally, a level playing field for sustainable products must be established by applying sustainability requirements consistently across both online and offline markets.

The European Commission's flagship **Clean Industrial Deal**, unveiled early this year, sets the stage for significant changes across various sectors, including the home appliance industry. While the Deal's primary focus is on energy-intensive industries, APPLiA advocates for broader inclusion, ensuring that all sectors receive adequate attention and support to achieve Europe's decarbonisation and competitiveness goals. The home appliance industry, though not explicitly mentioned, plays a crucial role in this industrial transformation.

Within the framework of the Clean Industrial Deal, a **Chemicals Industry Package** is planned for late 2025. This package includes a targeted revision of the EU's REACH regulation, aiming to simplify rules for the chemical industry without compromising safety and environmental protection. This presents an opportunity for the appliance industry to advocate for clearer and more efficient regulations that support innovation and sustainability.

As part of the social dimension of the clean transition, the Commission will issue a **Guidance on social leasing of clean products** to provide guidance to Member States on the use of European and national financing to support adoption of clean technologies. This presents an opportunity for APPLiA to include energy efficient appliances in the scope.

Looking ahead to 2026, the Deal's **Circular Economy Act** will further accelerate the circular transition by focusing on electronic waste and waste management revisions. This presents significant opportunities for appliance manufacturers to develop secondary markets for

critical raw materials and enhance recycling efforts, contributing to a more sustainable and resource-efficient economy.

In addition to these initiatives, the Commission will also adopt the **European Affordable Housing Plan** in 2026. While not directly part of the Clean Industrial Deal, this plan can indirectly contribute to increased demand for energy-saving appliances by promoting energy efficiency in housing.

Besides, the European Commission introduced an **Affordable Energy Action Plan** outlining measures to reduce energy bills for both households and businesses. Notably, the EU highlights energy-efficient products, including appliances, as a key solution to boost industrial competitiveness and lower household energy costs, with a focus on improving access to these solutions. APPLiA welcomes the Plan and urges swift implementation of enabling measures to accelerate the adoption of modern, energy-efficient appliances.

Importantly, the Commission has also presented the first **Omnibus simplification package** that outlines

actions to simplify sustainability-related reporting obligations under the Corporate Sustainability Reporting Directive (CSRD), the Corporate Sustainability Due Diligence Directive (CSDDD) and the EU Taxonomy. This initiative can boost innovation and investment, enhancing the global competitiveness of European manufacturers. APPLiA advocates for simplification alongside harmonisation, reducing administrative burdens without compromising regulatory effectiveness. The Commission is also preparing the second **Omnibus simplification package** aiming at reducing paper reporting. APPLiA remains active in discussion around further simplification.

In this framework, the European Commission has also tabled a simplification proposal of the **Carbon Border Adjustment Mechanism (CBAM)**. In its current form, CBAM is shrinking European manufacturing. The focus should not be solely on simplifying the Mechanism to reduce administrative burdens. CBAM must be fully developed first by expanding its scope to include downstream goods, such as home appliances to ensure fairness and effectiveness for European manufacturers. The Commission plans on issuing a report on downstream industries by the end of the year, following a legislative proposal in 2026.

A crucial development in 2025 will also be the Commission's presentation of a **Single Market Strategy**. This strategy, informed by the recommendations of the Letta and Draghi reports - to which APPLiA contributed - seeks to dismantle barriers and enhance the Single Market's effectiveness. This is particularly crucial in the context of increasing national sustainability measures that are fragmenting the market, hindering the free flow of goods, and creating extra costs.

For more, follow APPLiA on our social media accounts:

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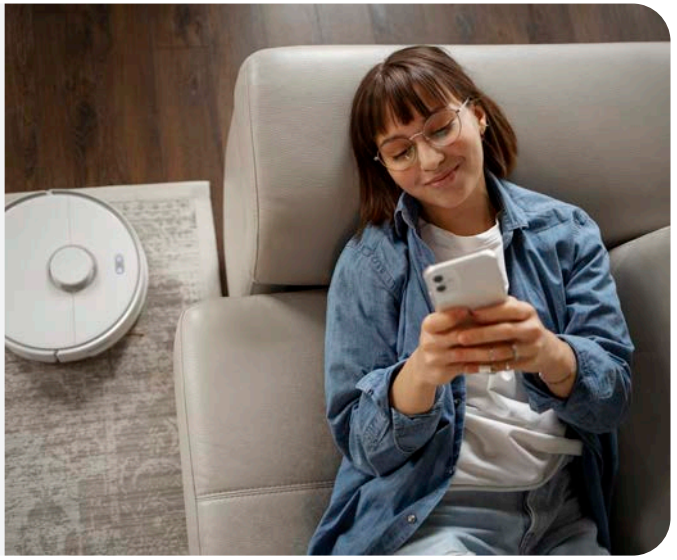
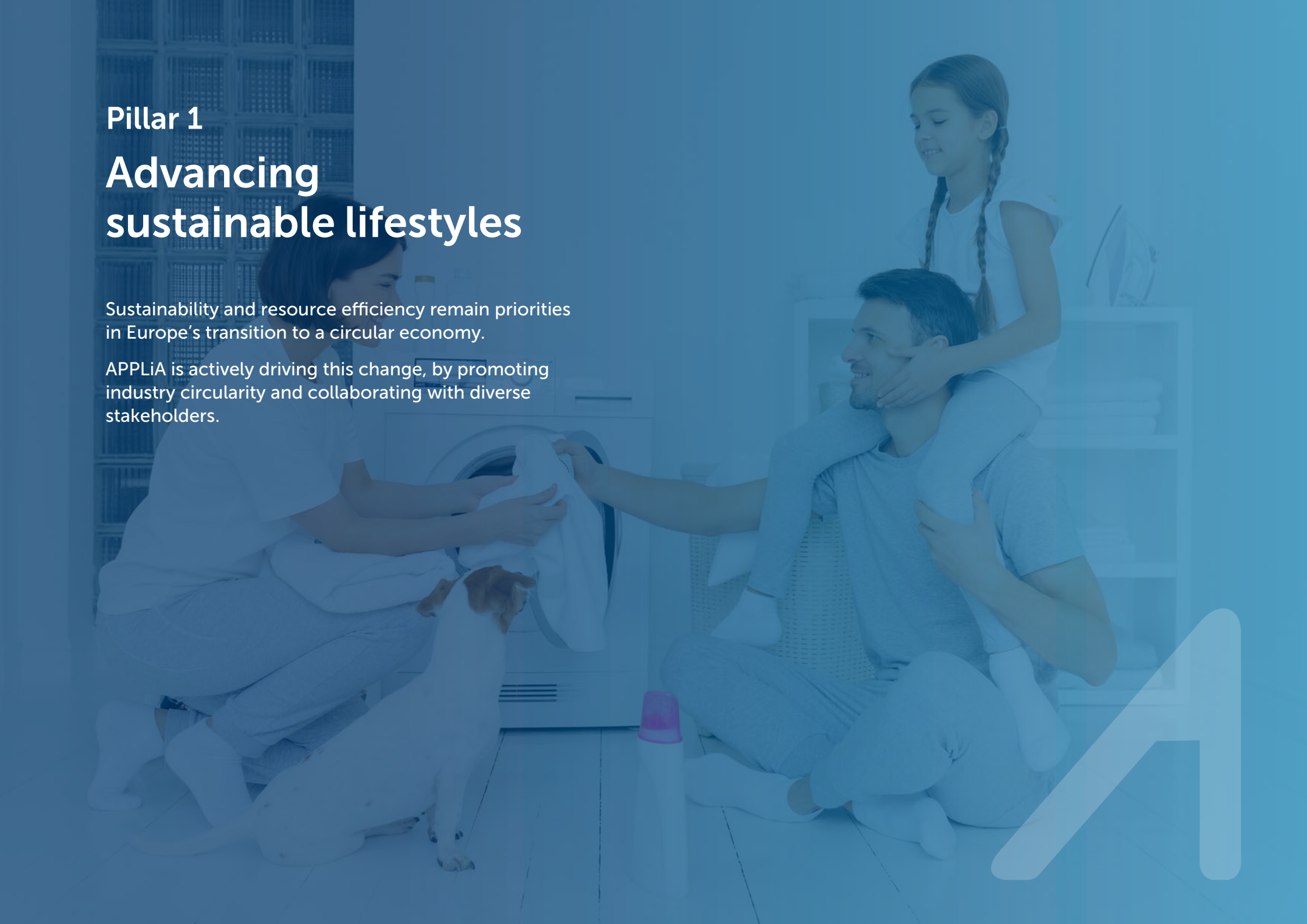


Pillar 1

Advancing sustainable lifestyles

Sustainability and resource efficiency remain priorities in Europe's transition to a circular economy.

APPLiA is actively driving this change, by promoting industry circularity and collaborating with diverse stakeholders.



Significant progress has been made in production. Waste generation is down 18%, water consumption has decreased by 14%, and energy use has been halved. This underscores that sustainability encompasses both product design and manufacturing processes.

Sustainability starts at home. Modern home appliances offer innovative, resource-saving features that promote sustainable living. The home appliance industry empowers European households to save time, energy and water, while ensuring a clean and healthy home environment. For example, washing machine water consumption has fallen from over 65 liters per cycle in the late 90s to approximately 46 liters in 2022, and dishwashers now use less than 10 liters, down from 20 (see page 27). Similarly, energy efficiency has improved dramatically (see page 28).

These advancements translate to household savings. In 2023, energy savings reached 92 Mtoe (million tonnes of oil equivalent). However, realising substantial reductions in energy bills requires a comprehensive approach, including continued adoption of energy-efficient appliances and policies that mitigate the impact of rising energy prices, as advocated by APPLiA and recognised by the European Commission.

Circularity is embedded throughout the appliance lifecycle, from raw material sourcing and product design, to production, use and consumption, repair, recycling and recovery. Recycled materials are reintegrated into the economy as secondary raw materials, closing the loop.

A circular economy prioritises product longevity and reuse. Appliances are designed for durability, repair, and recovery, minimising material usage and maximizing efficiency. At the end of their lives, appliances are often turned into other appliances or different tools including benches or bicycles, continuing to offer a service to users. This approach fosters innovation in sustainable alternatives, such as product-as-a-service models and digital solutions, contributing to a better quality of life, new jobs, and enhanced skills.

Addressing e-waste is crucial for sustainable lifestyles. EU households own an average of 74 EEE items, with 61 in use, 9 hoarded but working, and 4 hoarded and not working (see page 39). By properly recycling e-waste, it is possible to reintroduce precious raw materials found in discarded items back into the economy. Recycling end-of-life appliances allows for the retrieval of minerals and materials, reducing reliance on primary resources.

Repair is an integral part of a circular economy. In 2023, 276,5 million of home appliances were placed on the market with 95% of repair requests successfully completed (see page 34). Repair extends product lifespans, reduces waste, and conserves resources, minimising the need for new appliance production.

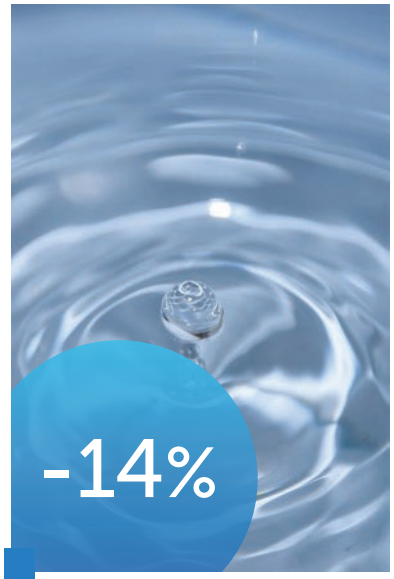
PRODUCTION

Material use during the production process

The home appliance sector works continuously to reduce its carbon footprint throughout the entire production process. Compared to the last decade, the sector has made even greater strides in reducing the resources used to manufacture home appliances. In particular, waste generation and energy consumption dropped by an additional 6% and 33%, respectively.

Source: dss+

Reduction in waste generation during production



Reduction in water consumption during production

Reduction in energy consumption during production

USE & CONSUMPTION

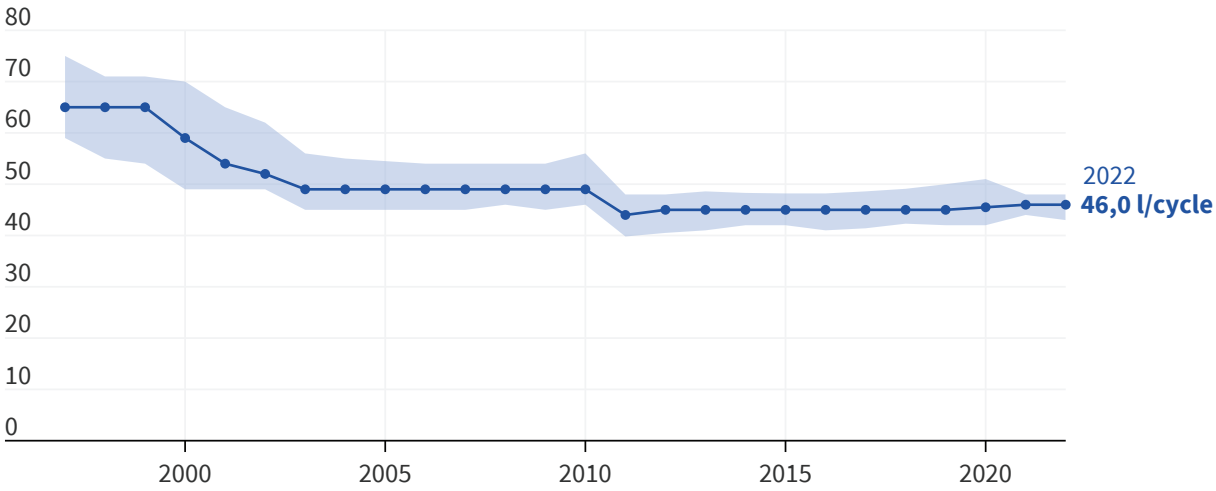
Average water consumption of washing machines and dishwashers

The water consumption of washing machines and dishwashers has significantly decreased over the past 20 years, mainly due to technological advancements.

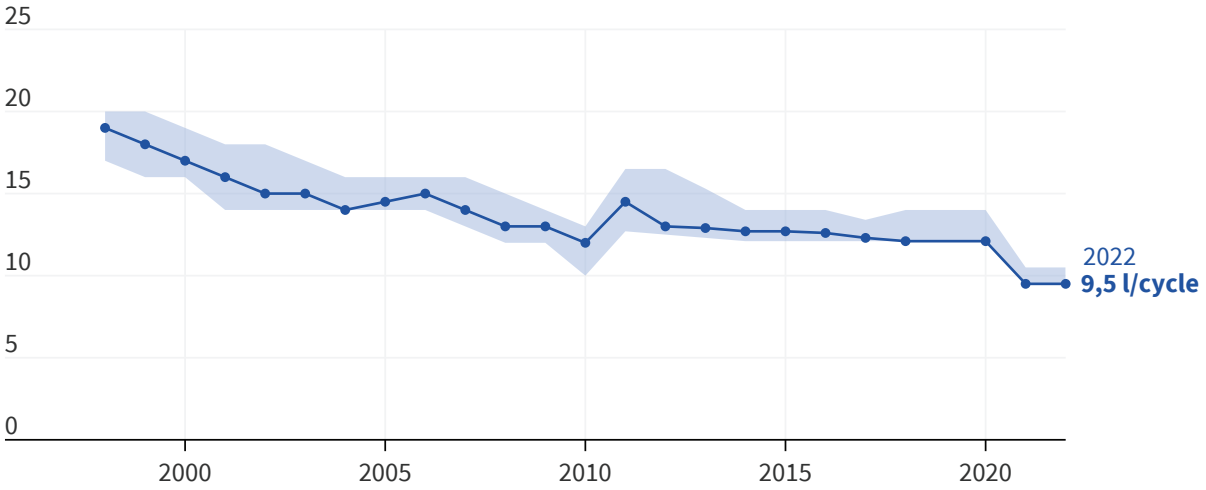
In the late 1990s, washing machines used over 65 liters of water per cycle. By 2022, this dropped to 46 liters per cycle, highlighting a notable reduction in water usage. Similarly, dishwashers, which required about 20 liters per cycle in the past, now use less than 10 liters, with a figure of 9,5 liters in 2022, marking another significant decrease in water consumption.

Source: APPLiA members data

Average water consumption of washing machines
in liters per cycle



Average water consumption of dishwashers
in liters per cycle



USE & CONSUMPTION

Average energy consumption of washing machines and dishwashers

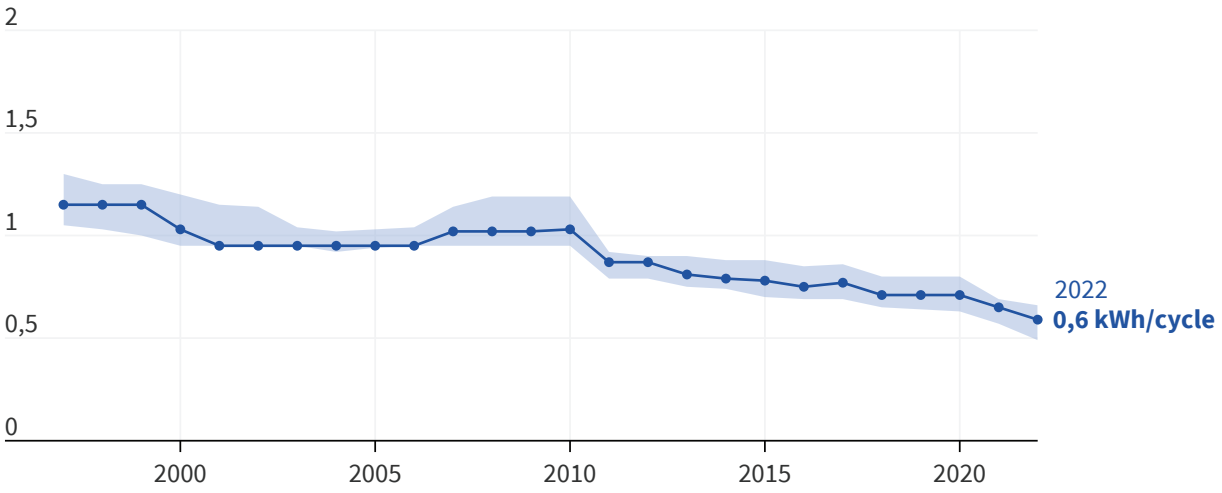
The energy consumption of washing machines and dishwashers has generally decreased over the past 20 years, thanks to advancements in technology.

In the late 1990s, each washing cycle required over 1,15 kWh of energy. By 2022, this figure had dropped to 0,59 kWh, reflecting a significant reduction in energy usage.

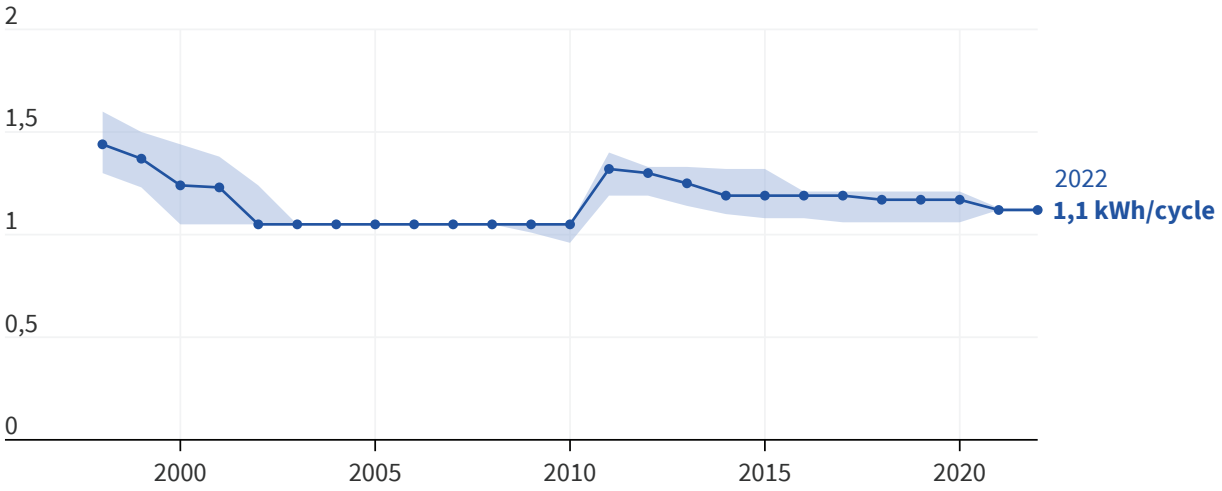
Similarly, dishwashers, which once consumed approximately 1,44 kWh per cycle, now use only 1,12 kWh by 2022, further highlighting a notable decrease in energy consumption over the years.

Source: APPLiA members data

Average energy consumption of washing machines
in kWh per cycle



Average energy consumption of dishwashers
in kWh per cycle

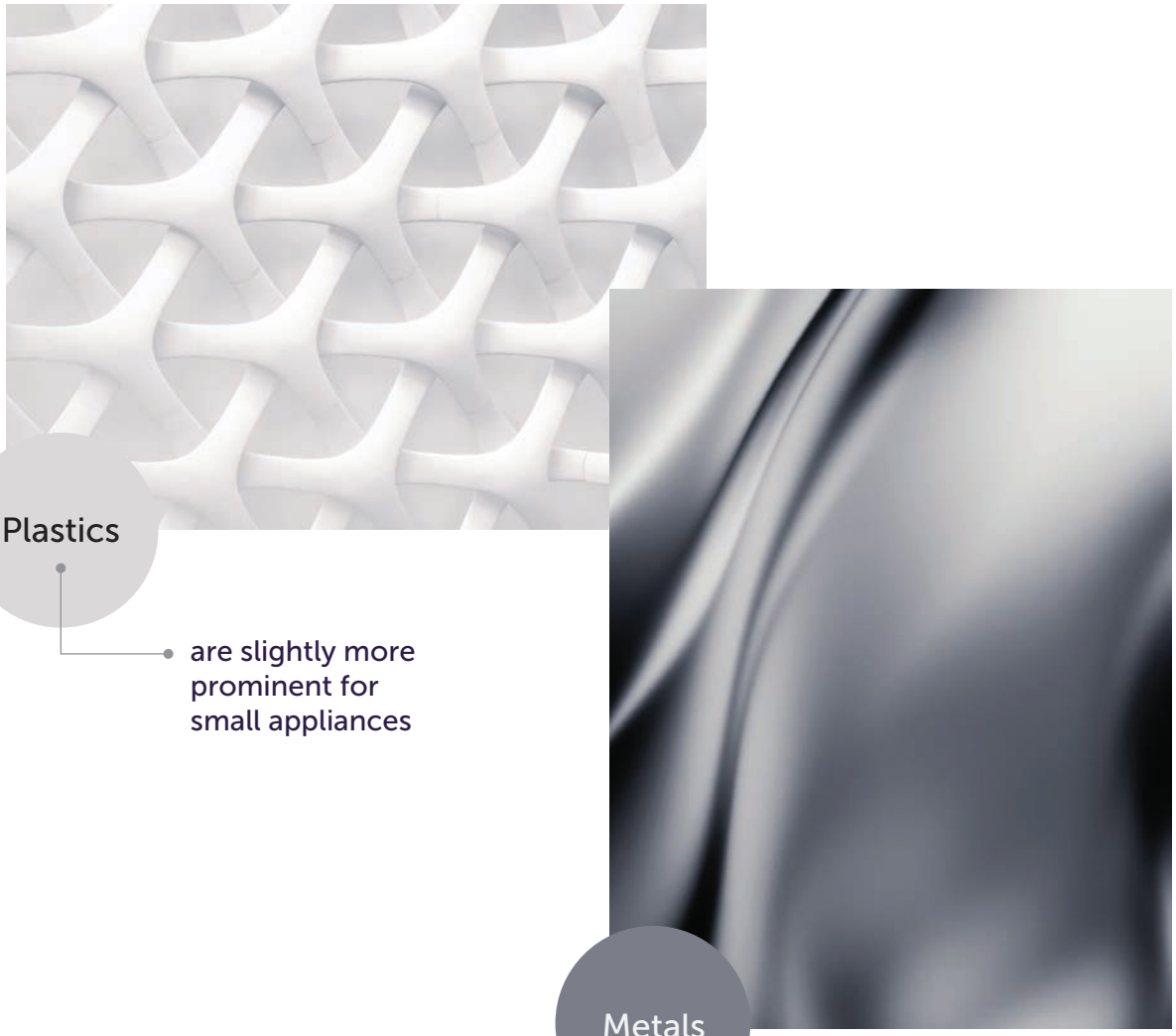


MATERIAL FLOW

Average material composition of home appliances

The home appliance industry depends on a range of materials for production and supply, with metals and plastics being key components. Steel and stainless steel form the bulk of large appliances, in contrast to smaller appliances where plastics hold a slightly greater share.

Source: dss+

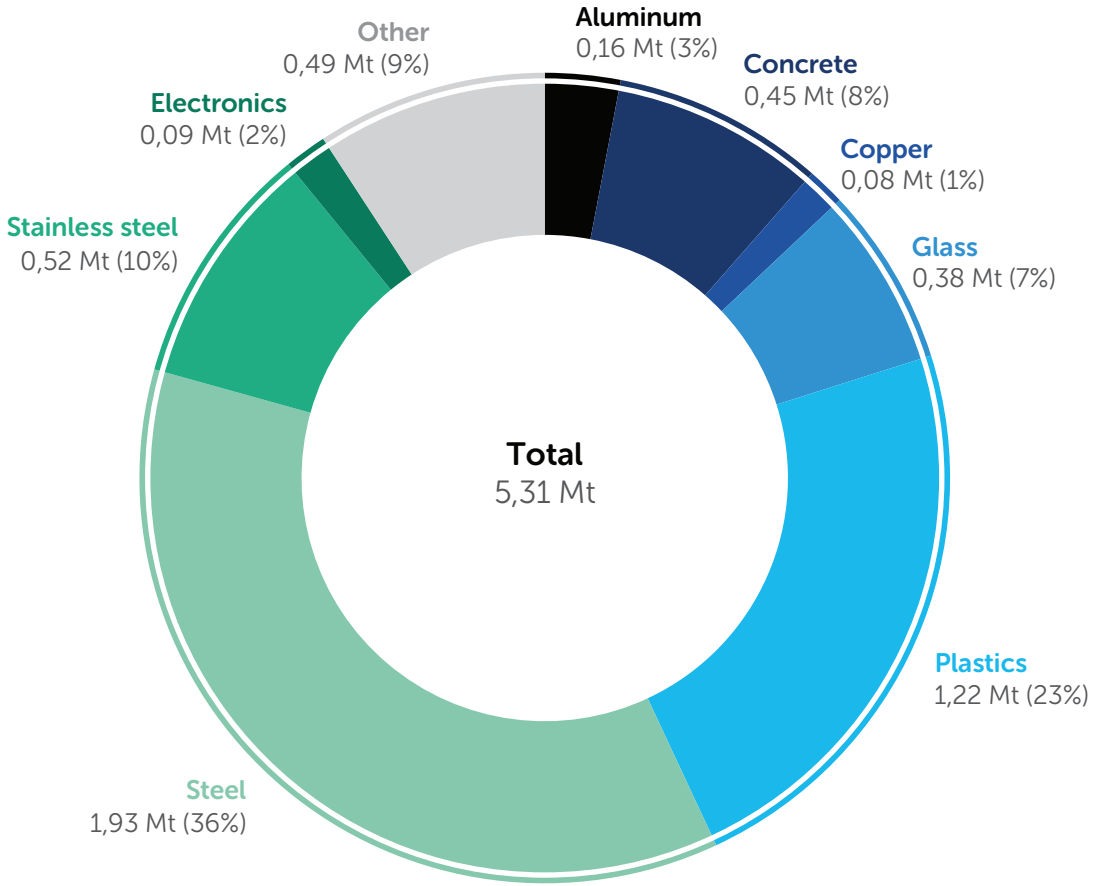


MATERIAL FLOW

Quantities of individual materials used in home appliances

The quantities of individual materials in home appliances can vary significantly depending on the type of appliance and its specific design. On average, steel is the most predominant component, followed by plastics and other materials such as stainless steel, concrete, and glass. Each material plays a crucial role in optimising the performance, durability, and energy efficiency of the products.

Source: dss+



MATERIAL FLOW

Average material composition of large home appliances

The average material composition of large home appliances can vary depending on factors such as the type of appliance, brand, model, and manufacturing processes. However, steel and stainless steel are the most prominent materials in the composition of large appliances.

Source: dss+

%	Dish-washers	Kitchen equipment	Washing machines	Dryers	House heating & ventilation	Fridges	Freezers	Air conditioning	Other cooling
Acrylonitrile butadiene styrene (ABS)	1,5	-	3,1	4,5	0,1	2,6	4,3	-	-
Aluminium	0,2	3,1	3,5	5	4,9	1,9	5	11,6	-
Concrete	5,8	2	26,6	-	-	-	-	-	-
Copper	0,6	2	0,8	1,8	2,9	1,1	4	14,1	-
Electronics	0,7	4	0,5	1,9	2,7	0,6	-	1,9	-
Ferro	38,9	48,6	30,6	35,3	70,9	33,6	27,2	17,3	2,6
Glass	-	17,5	3,5	2,3	0,1	8,6	-	-	0,7
High impact polystyrene (HIPS)	-	-	-	-	-	8,4	-	-	-
PC/ABS alloy	0,2	-	0,1	-	-	-	-	-	-
Polyamide (PA)	0,6	0,7	0,4	0,3	2,8	0,1	1,2	-	-
Polybutylene terephthalate (PBT)	-	0,6	-	-	0,3	-	-	-	-
Polycarbonates (PC)	0,1	0,5	-	0,3	0,1	0,1	0,9	-	-
Polyethylene (PE)	0,1	0,1	-	0,6	-	0,2	1,7	-	-
Polyoxymethylene (POM)	0,2	0,1	0,2	0,1	-	0,1	-	-	-
Polypropylene (PP)	9,5	0,3	13,2	19,5	9,8	5,8	11,8	-	-
Polystyrene (PS)	0,7	0,7	0,1	0,2	-	9,5	27,7	-	-
Polyurethane (PUR)	-	-	-	0,1	-	10,6	10,9	-	9,7
Polyvinyl chloride (PVC)	1	0,2	0,6	1	2,4	1,1	0,9	-	-
Stainless steel	15	7,6	9,4	7,1	0,2	5,9	4,3	-	47,4
Other plastics	4,3	0,9	1,2	4,1	0,9	3,4	-	42,7	20
Other	20,6	11,1	6,1	15,9	1,7	6,2	-	12,3	19,5

MATERIAL FLOW

Average material composition of small home appliances

The average material composition of small home appliances can vary depending on factors such as the type of appliance, brand, model, and manufacturing processes. However, plastics are slightly more predominant in the material composition of small appliances.

Source: dss+

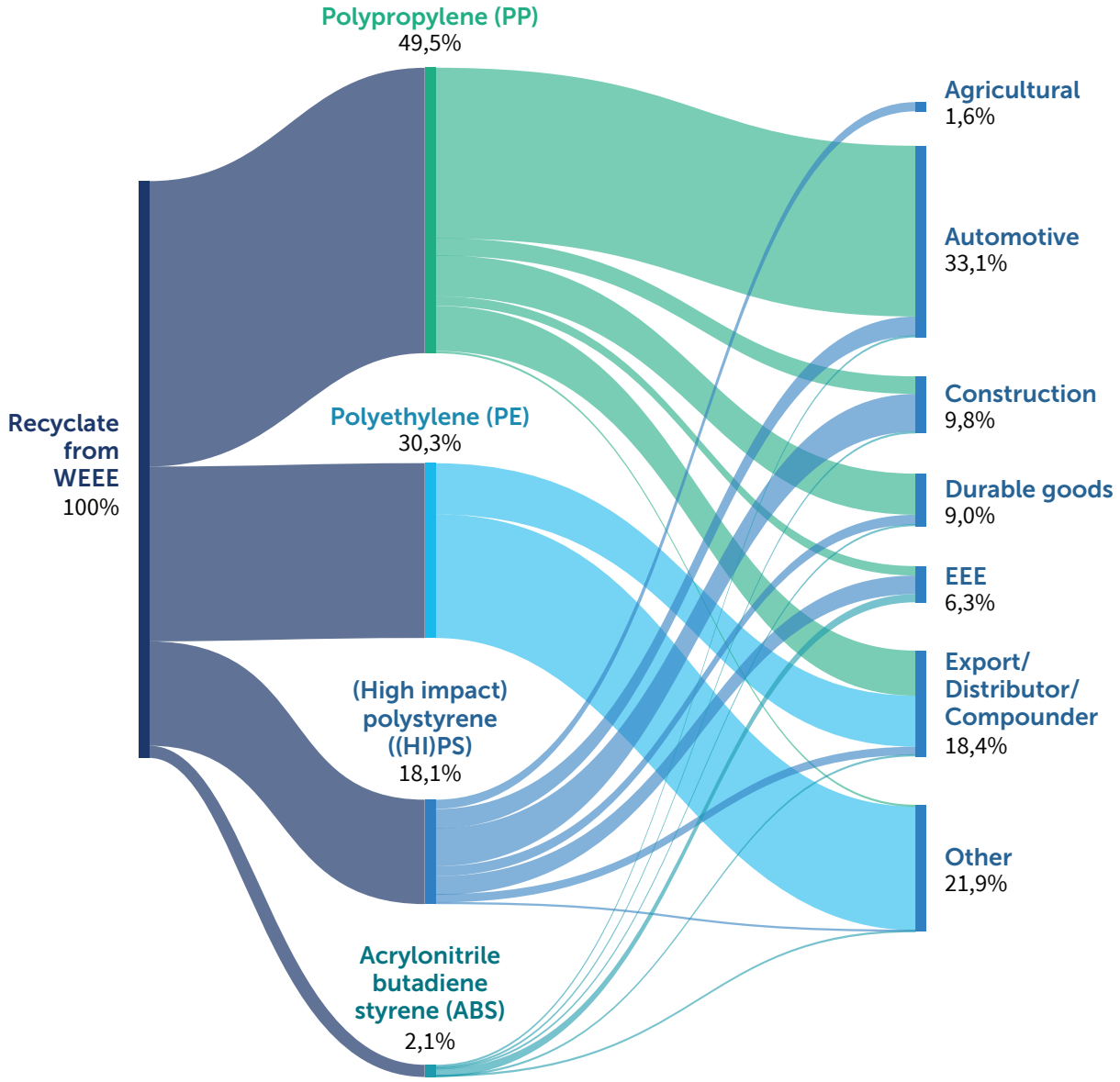
%	Microwaves	Food processing	Hot water	Vacuum cleaners	Personal care	Other small appliances
Acrylonitrile butadiene styrene (ABS)	2,8	7,3	37,5	28,9	3,7	19,5
Aluminium	6,3	8,2	0,2	5,9	5,2	16,8
Concrete	-	-	-	-	-	-
Copper	5,2	-	1,7	1,4	11	1
Electronics	1,3	-	11,4	6,1	6,8	8,2
Ferro	38,6	-	21,3	13,4	11,1	18,9
Glass	5,3	-	-	-	-	1,5
High impact polystyrene (HIPS)	-	-	-	-	-	-
PC/ABS alloy	-	2,5	1,9	0,6	-	0,1
Polyamide (PA)	0,2	5,3	4	0,9	30	2
Polybutylene terephthalate (PBT)	-	0,1	0,1	-	-	0,7
Polycarbonates (PC)	2,9	0,1	0,1	3,1	5,9	-
Polyethylene (PE)	0,1	0,3	0,2	-	-	-
Polyoxymethylene (POM)	-	2,3	1,7	0,8	-	0,3
Polypropylene (PP)	2,6	6,8	5,2	21,8	2,4	2,6
Polystyrene (PS)	-	-	-	0,1	0,2	-
Polyurethane (PUR)	-	-	-	0,1	-	-
Polyvinyl chloride (PVC)	0,9	0,2	0,2	2,8	1,3	-
Stainless steel	21,9	66	1,8	2,2	1,1	11,5
Other plastics	7,6	0,9	0,7	5,6	-	0,2
Other	4,1	-	12	5,5	21,3	16,6

MATERIAL FLOW

Routes of recycled plastics from WEEE

Recycled plastics from WEEE, particularly from home appliances, are repurposed into various sectors. Polypropylene (PP) is mainly used in the automotive and construction industries, while polyethylene (PE) finds applications in durable goods and construction. High impact polystyrene (HIPS) is directed to export and compounders, and smaller amounts of acrylonitrile butadiene styrene (ABS) are used in electrical and electronic equipment, contributing to sustainability and resource recovery within the home appliance sector.

Source: dss+



REPAIR

Repair of home appliances

The graph illustrates a significant market for home appliance repair and service, with a very high success rate (95%) in completing repairs. It also reveals that the cost structure for repairs varies depending on the type of appliance, with spare parts being a larger factor for small appliances and labour being the primary cost for larger and home comfort appliances.

Source: dss+ calculations based on APPLiA members data

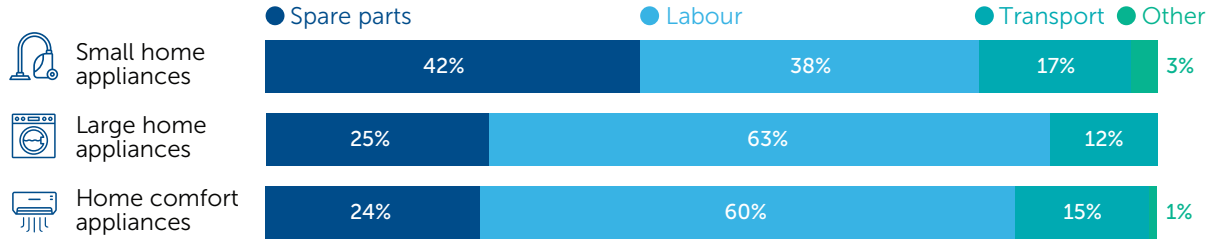
276,5 M
units placed on the market in 2023

€ 1,6 bn
industry turnover for repair & service

95%
repair requests actually repaired

24.250
business partners in repair and after-sale services

Repair costs
breakdown by category



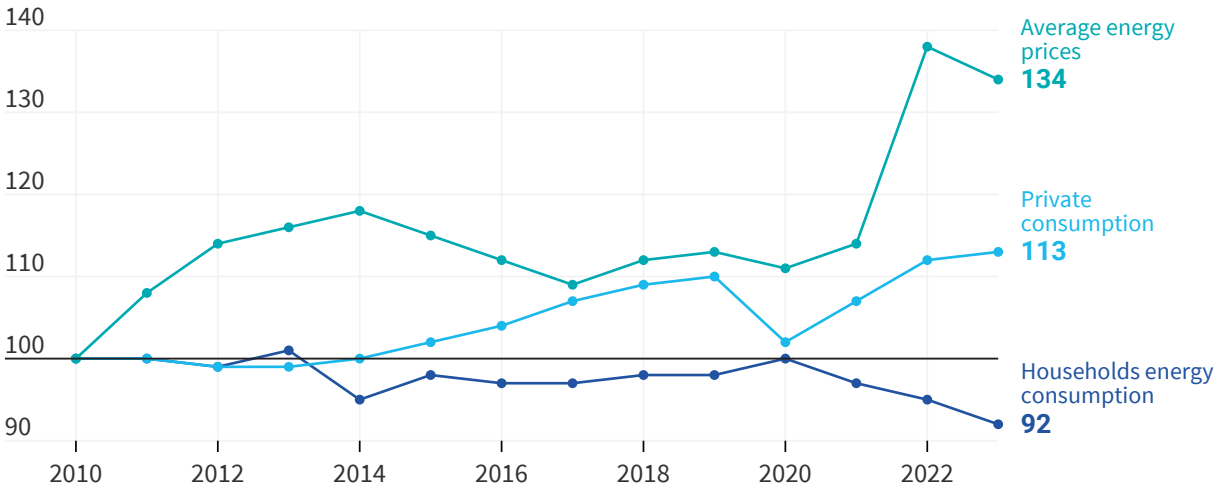
ENERGY

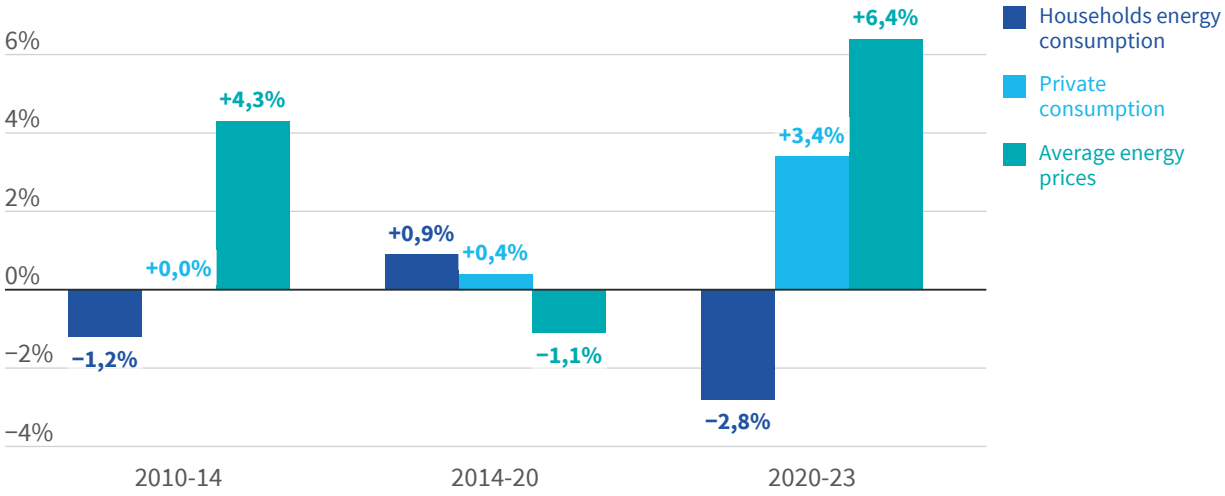
Evolution of energy consumption and energy prices

The data suggests a period of relative stability in energy consumption and prices in the EU until around 2020. The subsequent years were marked by a significant spike in energy prices, likely influencing households to reduce their energy consumption while private consumption continued to grow, albeit at a slower pace than the increase in energy costs. This analysis highlights the dynamic interplay between energy prices and consumption patterns in the European Union, particularly in response to external economic and geopolitical events in the early 2020s.

Source: B Lapillonne and Zineb Raji, Enerdata, Energy Efficiency Trends for Households in the EU, Odyssee MURE webinar, November 2024.
www.odyssee-mure.eu/events/webinar

Evolution of energy consumption and energy prices
in the European Union, indexed values (2010 = 100)



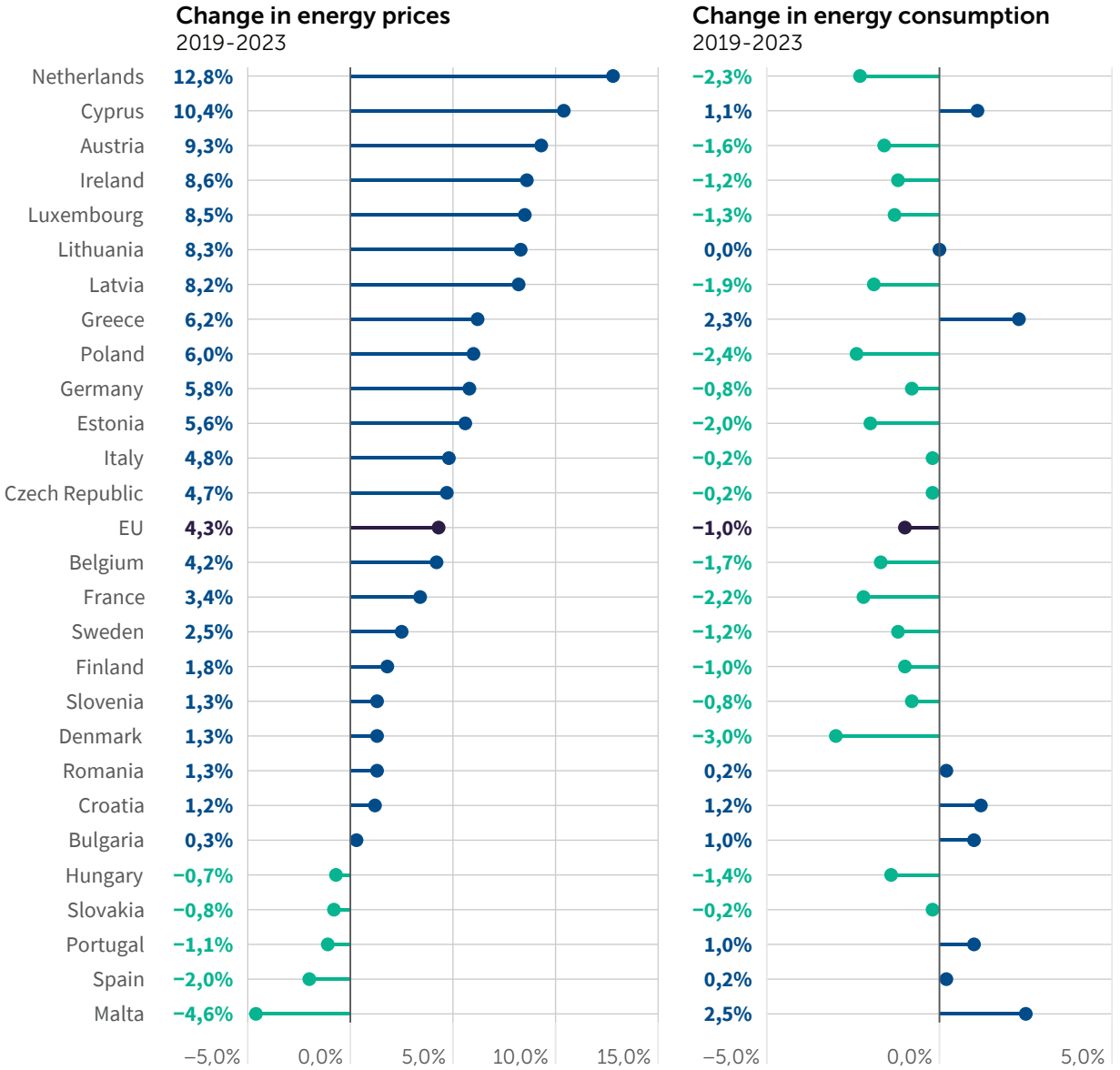


ENERGY

Energy consumption and energy prices in the EU

Energy prices in the EU increased notably from 2019 to 2023, with the Netherlands, Cyprus, and Austria seeing the highest rises. Several other countries, including Ireland, Luxembourg, and Lithuania, also experienced significant price increases. On the consumption side, most EU countries saw a reduction, with Spain, Malta, and Portugal showing the largest decreases in energy use. Greece was the only country to see an increase in energy consumption during this period.

Source: B Lapillonne and Zineb Raji, Enerdata, Energy Efficiency Trends for Households in the EU, Odyssee MURE webinar, November 2024.
www.odyssee-mure.eu/events/webinar



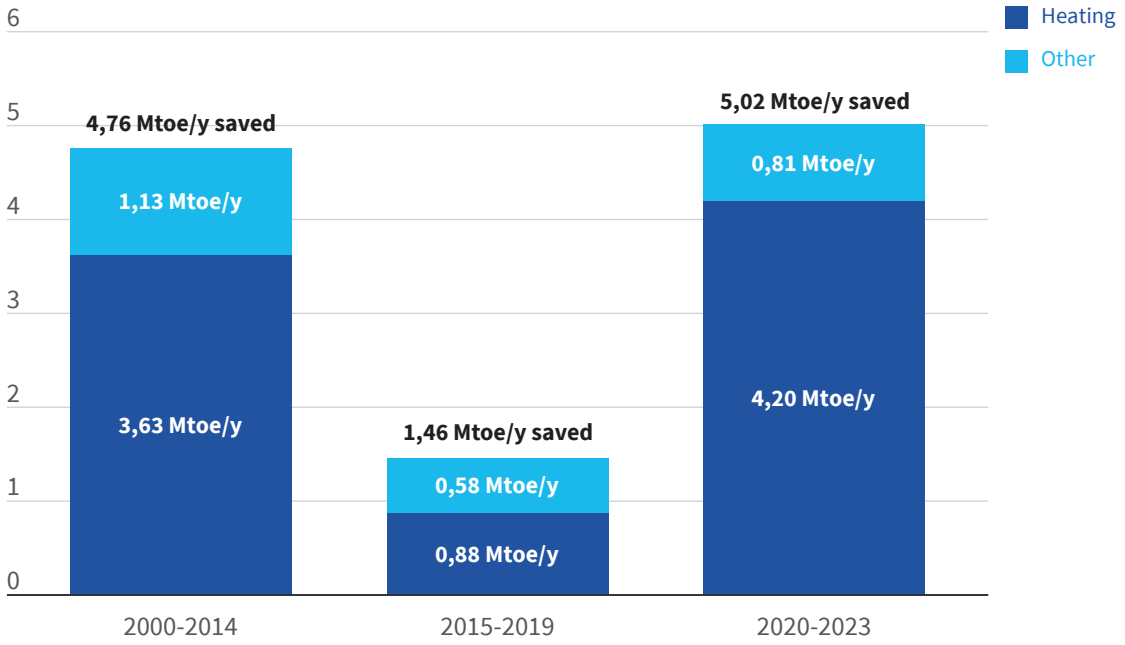
ENERGY

Average annual additional savings for EU households

The graph shows a clear trend of growing energy efficiency and savings for European households. A substantial portion of these consistently comes from heating; savings in other energy uses, which include the operation of home appliances, have also shown growth demonstrating the positive impact of more energy-efficient appliances and other household energy-saving measures.

Source: B Lapillonne and Zineb Raji, Enerdata, Energy Efficiency Trends for Households in the EU, Odyssee MURE webinar, November 2024.
www.odyssee-mure.eu/events/webinar

Average annual additional savings for households
in the European Union, in Mtoe per year



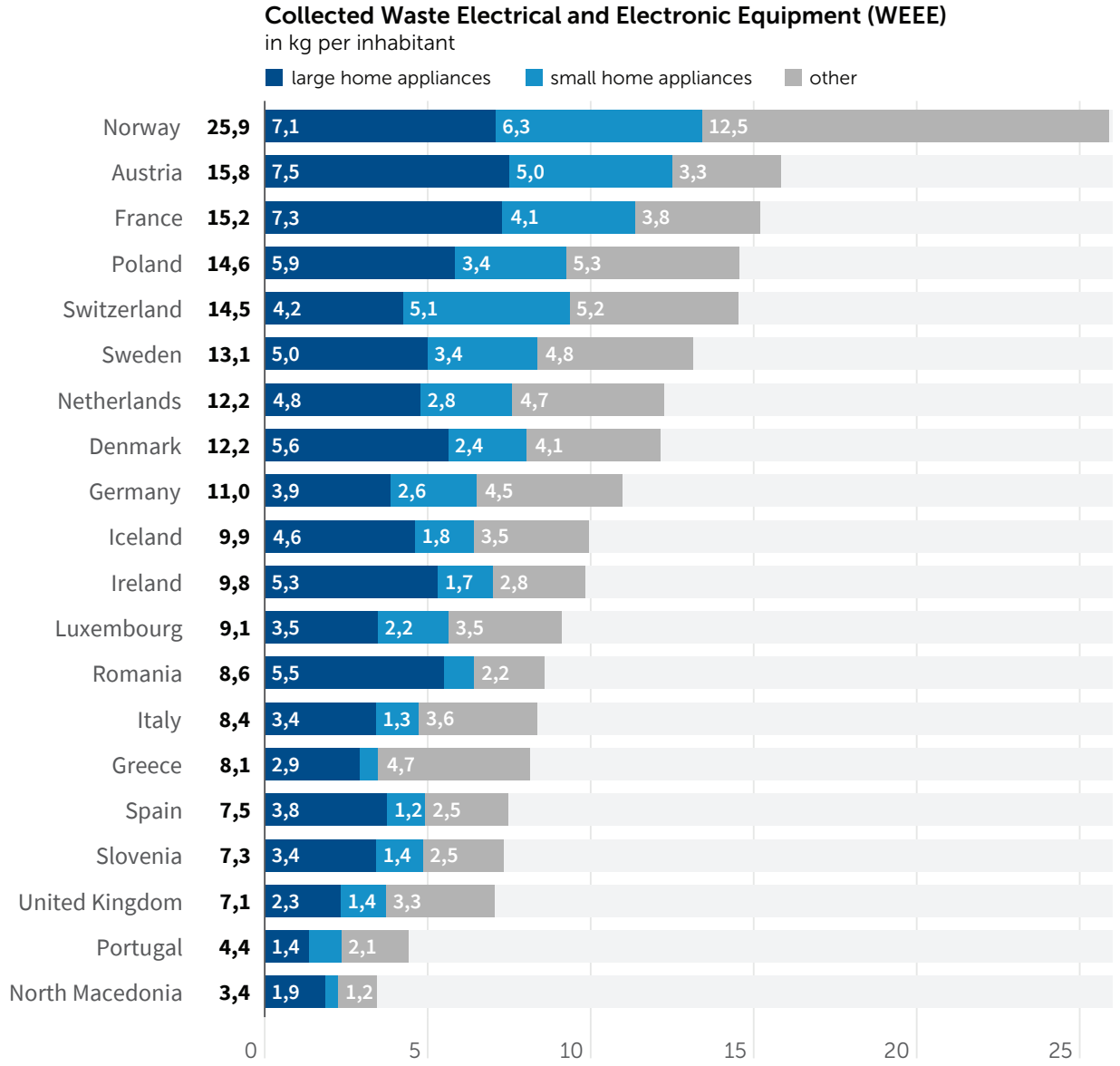
RECYCLING

Collection of WEEE by EU Member States

The collection of Waste Electrical and Electronic Equipment (WEEE) varies across EU Member States, with Norway noting the highest amount at nearly 26 kg per inhabitant. Other countries like Austria, France, and Poland also show relatively high levels of collection.

Most countries collect a mix of large and small home appliances, along with other electronic waste. While collection levels differ, the data shows a general effort across the EU to recover more electronic equipment.

Source: WEEE forum



RECYCLING

Hoarding of WEEE

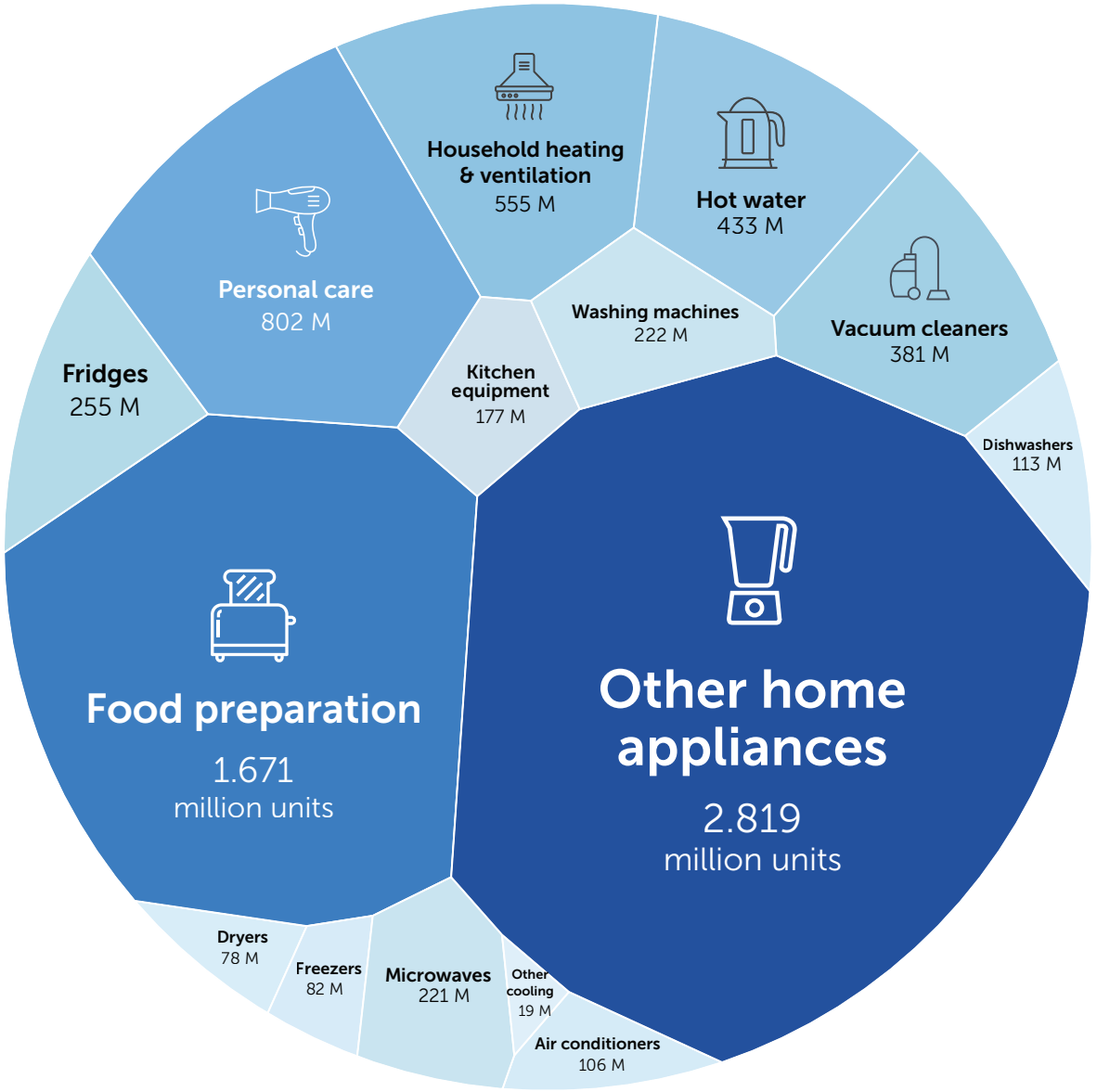
Novel statistics on hoarding of used Electrical and Electronic Equipment (UEEE) and Waste Electrical and Electronic Equipment (WEEE) stored in households show that households own an average of 74 electrical and electronic items (excluding lamps and luminaires), of which 61 items are in use, nine are hoarded but working, and four are hoarded and not working.

The total mass of items in households is 90 Mt, of which 7 Mt is hoarded and working, and 3 Mt is hoarded and broken.

Source: WEEE forum data and dss+

Large appliances including dishwashers, washing machines, and air conditioners can be taken right away by the shop delivering your brand new appliance, thanks to take-back schemes obligation financed by manufacturers.

Small appliances like coffee machines, toothbrushes, or toasters, can be brought to container parks, to the shop from which you are buying your new product, or to the nearest supermarket. From there, collection networks handle the collected e-waste before shipping it to a recycling centre.



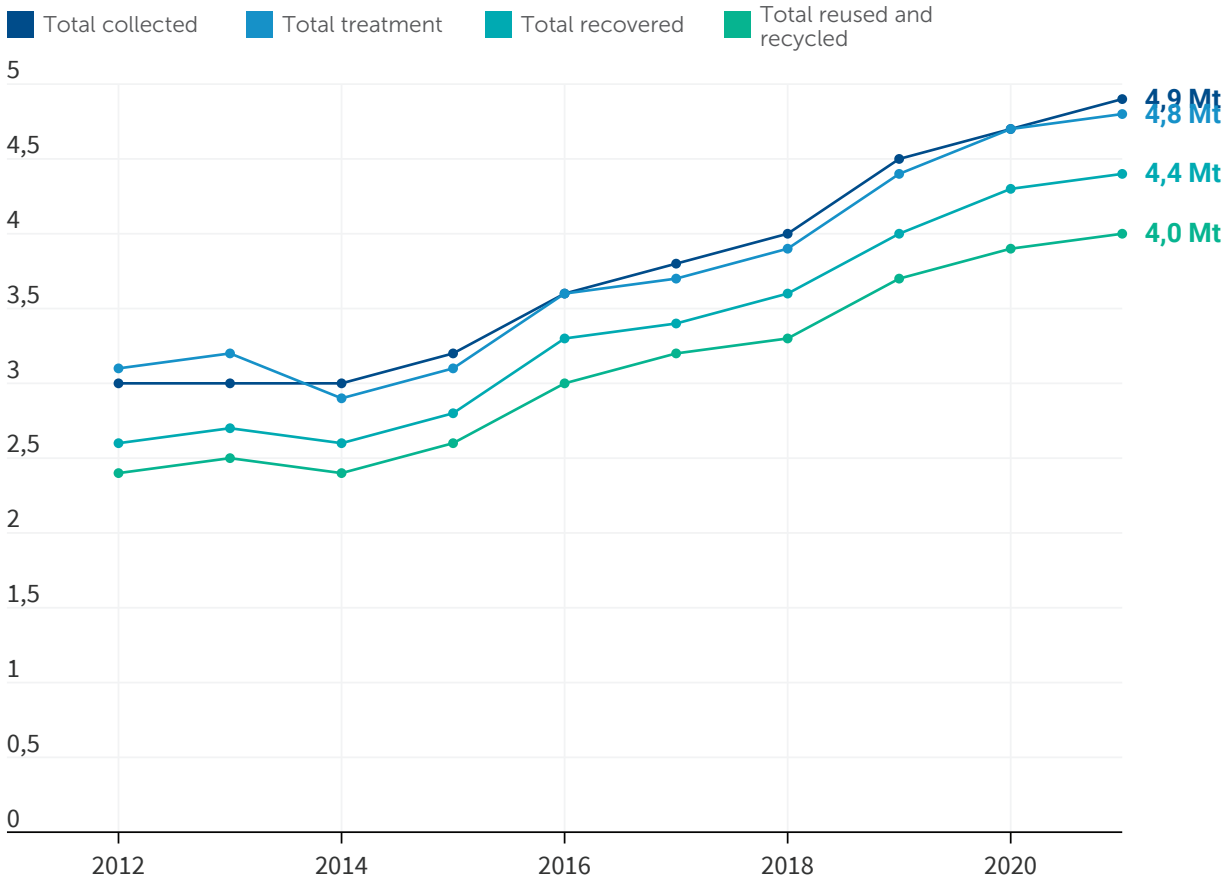
RECYCLING

WEEE flows in the home appliance sector

Waste Electrical and Electronic Equipment (WEEE) collection, treatment, and recycling have shown significant improvement over the past decade (2011-2021). The amount of WEEE collected, treated, and recycled each year has been steadily increasing.

The home appliance sector has demonstrated a strong commitment to improving the WEEE recycling rate, achieving substantial success in this sustainability effort. Once properly recycled, e-waste helps reintroduce precious raw materials contained in discarded products back into the economy. This process helps reduce the sector's carbon footprint while conserving our planet's precious natural resources.

Source: dss+



SECONDARY RAW MATERIALS

Materials recovered from waste

In industrial and complementary processes, various materials and energy can be recovered from waste flows to minimise waste, reduce resource consumption, and improve sustainability.

Examples of materials recovered include metals and plastics. In terms of energy, heat energy generated from industrial processes can be captured and converted into electricity, steam, or hot water for onsite use or distribution to external facilities.

From **industrial flows**, 2,7 million tonnes (Mt) of materials are recovered, with **2,6 Mt** being material recovery and **0,12 Mt** from energy recovery. From **complementary flows**, 1 million tonnes are recovered, with **0,94 Mt** of material recovery and **0,035 Mt** from energy recovery.

By recovering these materials and energy, businesses not only reduce waste generation but also lower resource consumption, decrease environmental impacts, and enhance their overall economic and environmental sustainability.

Source: dss+

APPLiA is one of the founders of the I4R platform. The I4R platform, which was launched in 2018, is a user-friendly communication tool that aims to enhance recycling in the electrical and electronic sector. Its purpose is to reduce the compliance costs for both EEE manufacturers and WEEE recyclers by facilitating the exchange of information between them.

*For more, visit **i4r-platform.eu***

Recovered from industry flows

Energy recovery: 0,12 Mt

Material recovery: 2,6 Mt

Recovered from complementary flows

Energy recovery: 0,035 Mt

Material recovery: 0,94 Mt

Pillar 2

Accelerating Europe's growth

The home appliance industry, a cornerstone of European manufacturing, plays a crucial role in driving the European economy and is essential for achieving Europe's ambitious decarbonisation goals.

The sector directly supports over 1 million jobs across the continent, highlighting its significant employment impact. This robust contribution to the European economy is reflected in the industry's historical market performance.

With over 75% of large appliances and 50% of small appliances manufactured within Europe, the region boasts approximately 130 home appliance production facilities. This extensive manufacturing footprint underscores the sector's importance as a major employer and contributor to Europe's industrial base.

The EU's home appliance market experienced consistent growth, reaching a peak in 2021. Between 2008 and 2020, home appliances consistently represented a substantial portion—56% to 62,4%—of all Electrical and Electronic Equipment (EEE) placed on the EU market, illustrating the sector's long-term significance and its integral role in the broader EEE landscape. However, the past three years have registered a market contraction, a shift that underscores the sector's vulnerability to evolving economic and regulatory challenges.

This downturn is attributed to a confluence of factors, including ongoing geopolitical uncertainties, such as supply chain disruptions and increased energy costs, and the increasing fragmentation of the EU's Single Market. Additionally, the regulatory landscape, particularly the Carbon Border Adjustment Mechanism (CBAM), poses significant challenges to the sector's competitiveness.

The European Single Market, a fundamental pillar of the European economy and a landmark achievement of European integration, is critical for the home appliance industry. As the sector drives the adoption of sustainable lifestyles through the development of increasingly energy-efficient and smart home appliances, it is imperative to address and eliminate barriers to cross-border trade caused by varying national regulatory requirements. The European Parliament's "Cost of non-Europe" study estimates that the benefits of removing existing barriers in the Single Market for goods and services could amount to €713 billion by the end of 2029. This underscores the importance of a unified market in fostering innovation, economies of scale, and overall competitiveness, while also reducing costs for European consumers.

Conversely, the CBAM, a key component of the EU's climate strategy, aims to prevent carbon leakage and ensure a level playing field for European industries. However, its complex implementation and the delayed integration with the EU Emissions Trading System (ETS) create operational challenges for manufacturers. Streamlining the CBAM and expanding its product scope are essential steps to ensure fair competition and effective carbon reduction.

Europe's economic prosperity is inextricably linked to its ability to engage in seamless trade at both national and international levels. This is particularly true for the export- and import-dependent home appliance sector. Unimpeded and efficient trade flows are vital for industry success, enabling access to new markets, fostering healthy competition, and driving innovation. This allows for European companies to remain competitive on the global stage, and for European consumers to have access to the best appliances at the best price.

MARKET TRENDS

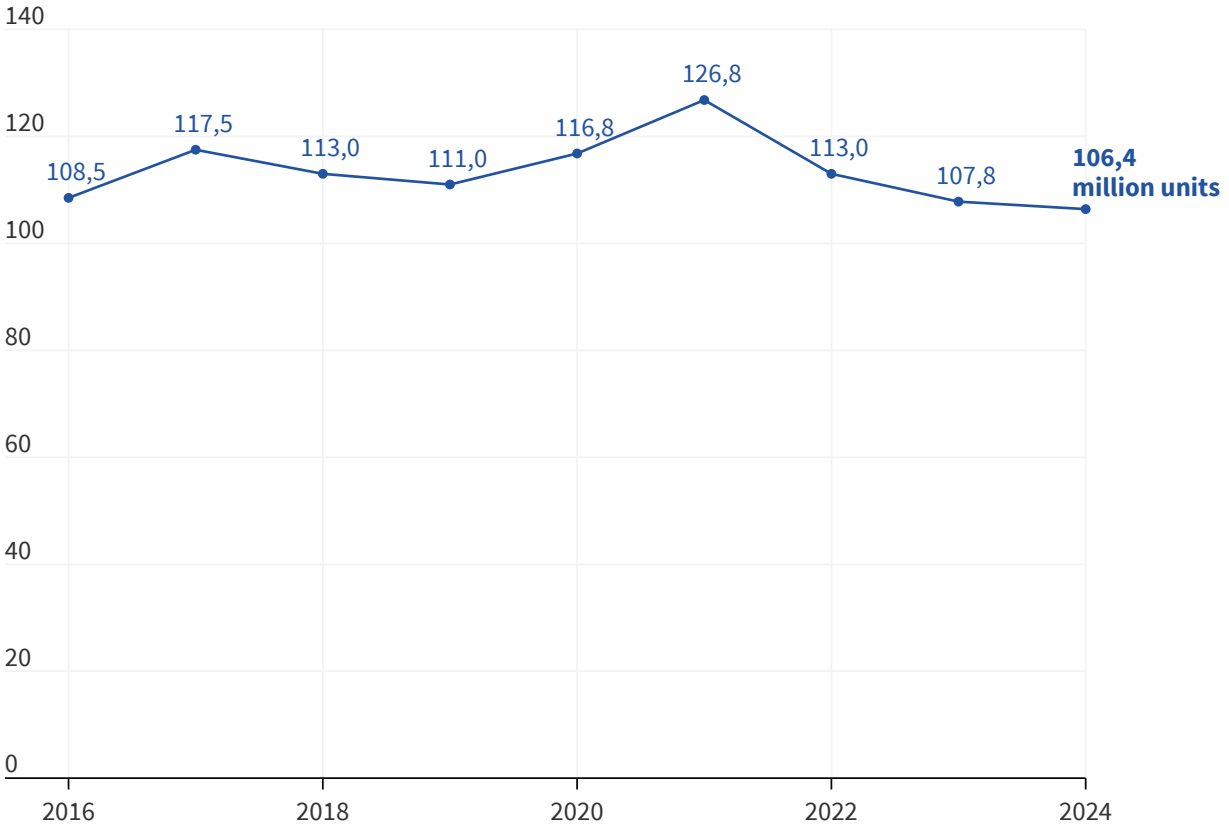
Historical evolution of the European large appliance market

The EU market for home appliance products has been growing steadily until 2021, after which it experienced a downward trend for the last two years.

These fluctuations are the result of various factors, including the economic downturn, the impact of the pandemic, shifts in consumer priorities, and regulatory changes.

Source: APPLiA members data

Home appliances sold in Europe
in million units



MARKET TRENDS

Large appliances sold globally

Between 2022 and 2024, global trade in home appliances followed mixed trends across regions. While Europe experienced a modest decline in unit sales over the period, other areas such as Russia, South Korea, and China recorded noticeable growth. On a global scale, the number of units sold continued to rise year over year, reflecting steady growth in many regions despite some fluctuations.

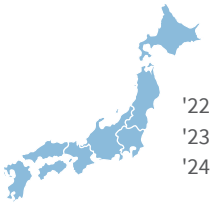
Source: International Roundtable of Household Appliance Manufacturer Associations (IRHMA)

Product groups included in the data: Refrigerators, Freezers, Dishwashers, Tumble Dryers, Hoods, and Microwave Ovens

China

'22 119,1
'23 119,2
'24

131,2
million units (+10,1%)



Japan

'22 13,3
'23 12,5
'24

12,1
million units (-3,2%)

Europe

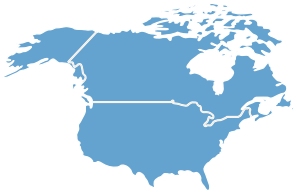
'22 86,6
'23 83,1
'24

82,4
million units (-0,8%)

South Korea

'22 7,9
'23 7,5
'24

7,3
million units (-2,7%)



North America

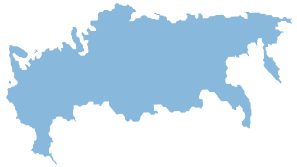
'22 64,6
'23 66,4
'24

65,2
million units (-1,8%)

South Africa

'22 2,6
'23 2,8
'24

3,6
million units (+28,6%)



Russia

'22 13,5
'23 15,6
'24

16,2
million units (+3,8%)

MARKET TRENDS

Units traded in Europe

The European market for household appliances experienced a period of adjustment between 2023 and 2024. While the volume of large appliances traded saw a slight decrease of 1,3%, the tumble dryer category bucked this trend with a notable growth of 30,2%. However, the generally lower ownership rates of tumble dryers compared to other major appliances suggest an opportunity to broaden their market reach through increased availability and affordability.

The small home appliance sector faced a more significant downturn, with an overall contraction of 19,4%. This decline was particularly evident in coffee machine sales, which dropped by 26,8%. Conversely, cooking appliances demonstrated resilience, recording a positive growth of 11,5%, indicating shifting consumer preferences within the small appliance market.

Source: APPLiA members data

General	2023	2024 (million units)	Evolution %
Large appliances	107,8	106,4	−1,3%
Small appliances	84,0	67,7	−19,4%

Large appliances	2023	2024	Evolution %
Built-in ovens	10,6	10,3	−2,6%
Dishwashers	13,3	13,3	+0,2%
Free-standing cookers	3,5	3,3	−4,3%
Freezers	3,8	3,7	−2,9%
Hobs	10,6	10,3	−2,6%
Hoods	5,5	5,4	−0,5%
Microwaves	8,1	7,8	−3,5%
Refrigerators	20,9	19,5	−6,5%
Tumbledryers	6,3	8,2	+30,2%
Washing machines	25,2	24,4	−3,4%

Small appliances	2023	2024	Evolution %
Coffee machines	28,0	20,5	−26,8%
Cooking	9,8	10,9	+11,5%
Food preparation	18,6	18,6	−0,4%
Irons	25,8	16,5	−35,9%
Juicers	1,8	1,3	−30,7%

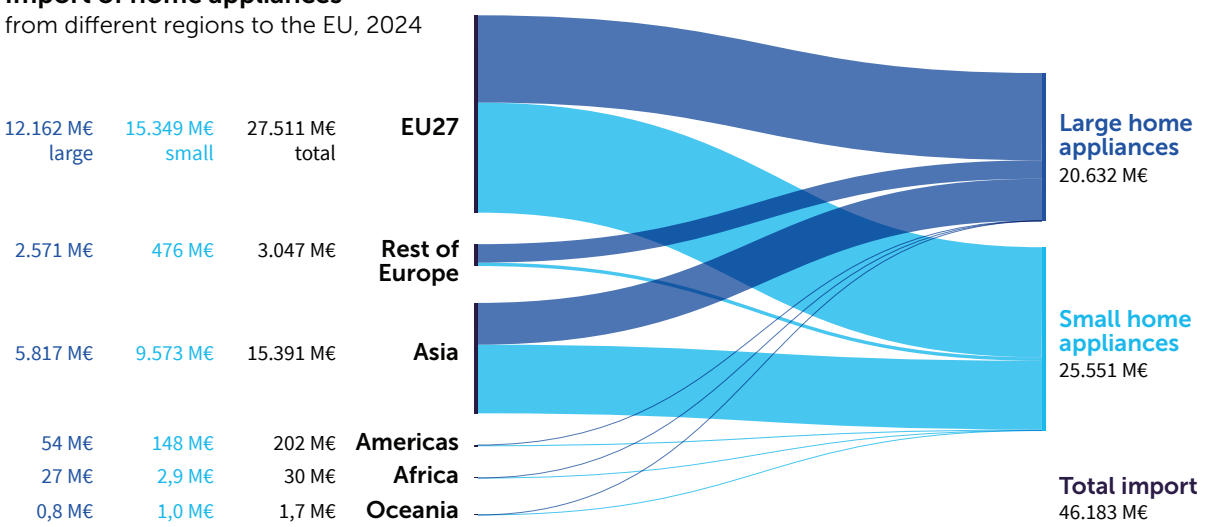
MARKET TRENDS

Import and export of home appliances in Europe, by continent

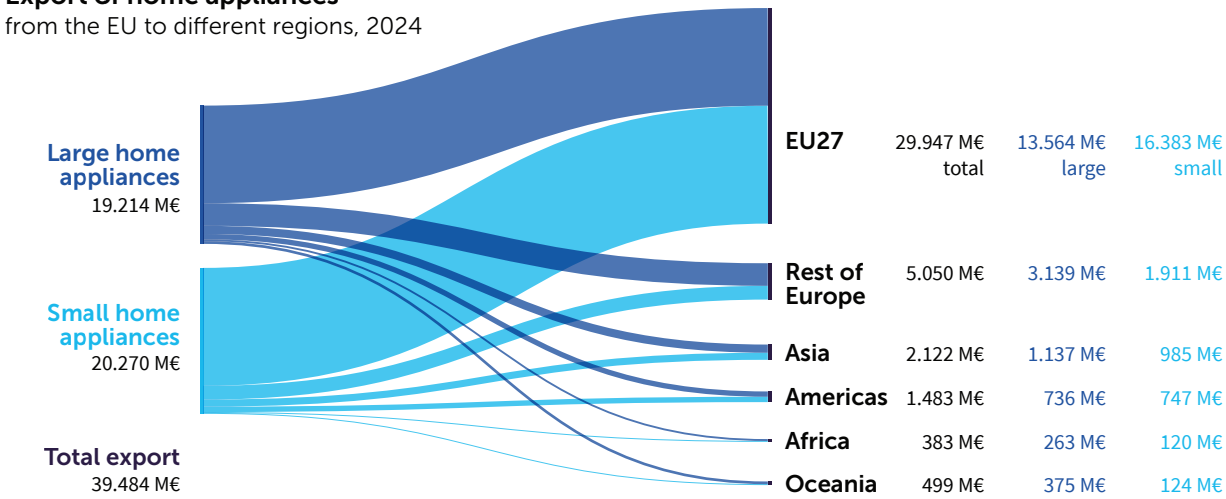
The import and export of home appliances in Europe for 2024 shows a significant trade flow, with small home appliances accounting for the majority of both imports and exports, followed by large appliances. The majority of imports come from Asia, the rest of Europe, and the Americas, while for exports the Rest of Europe represents the largest destination. Smaller amounts of appliances are traded with Oceania and Africa, highlighting the global reach of the European home appliance market.

Source: Eurostat COMEXT

Import of home appliances
from different regions to the EU, 2024



Export of home appliances
from the EU to different regions, 2024



MARKET TRENDS

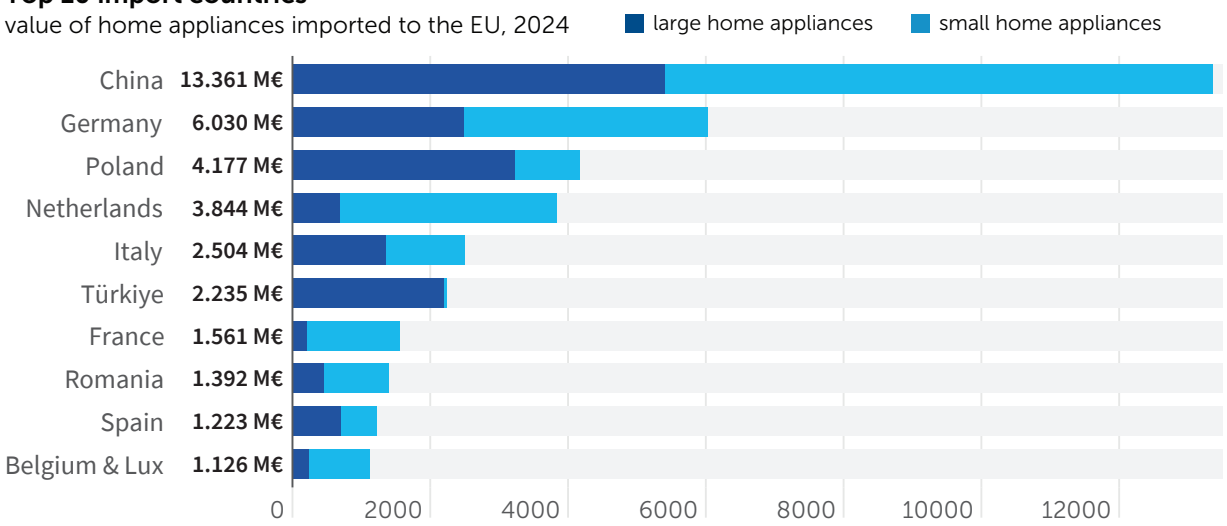
Top 10 import and export countries

In 2024, China is the leading importer of home appliances to the EU, followed by Germany, Poland and the Netherlands. Other significant importers include Italy and Türkiye, with additional contributions from France, Romania, Spain, Belgium and Luxembourg. Small home appliances make up the majority of imports.

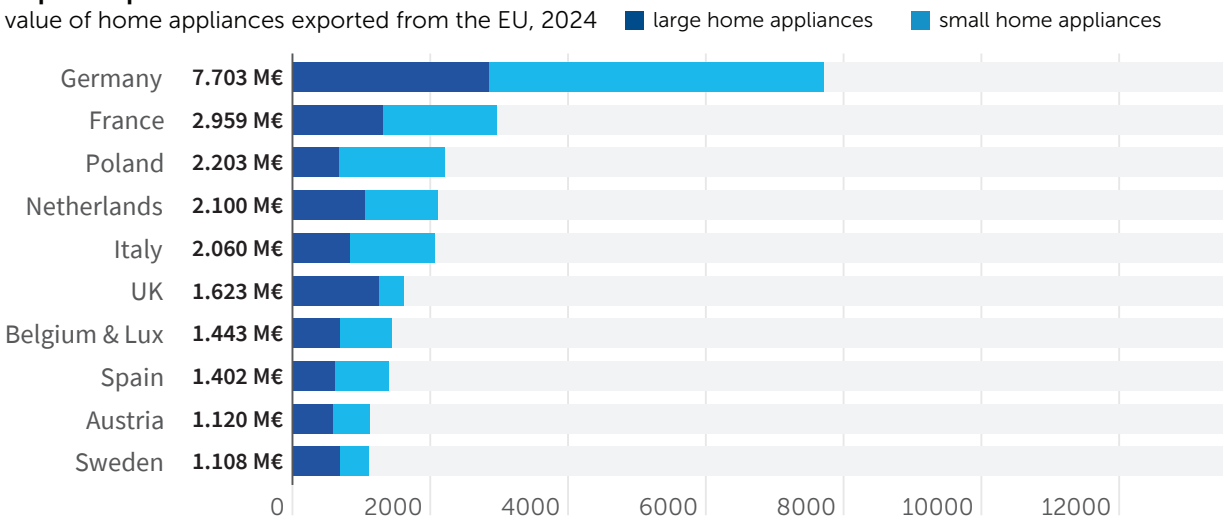
On the export side, Germany is the largest destination for EU home appliances, with France, Poland and the Netherlands also receiving significant shipments.

Source: Eurostat COMEXT

Top 10 import countries
value of home appliances imported to the EU, 2024



Top 10 export countries
value of home appliances exported from the EU, 2024



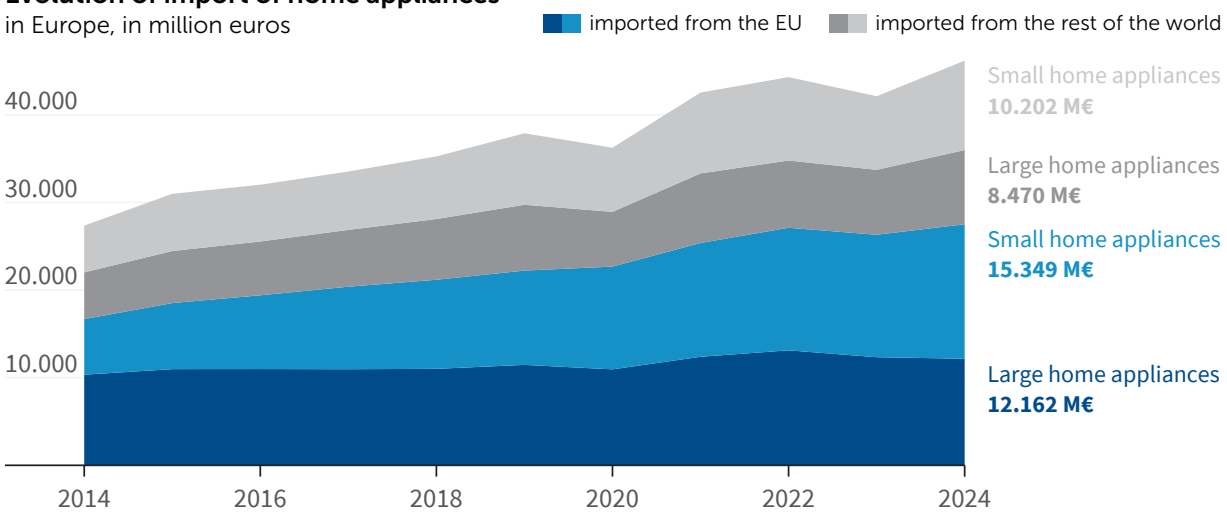
MARKET TRENDS

Evolution of import and export of home appliances

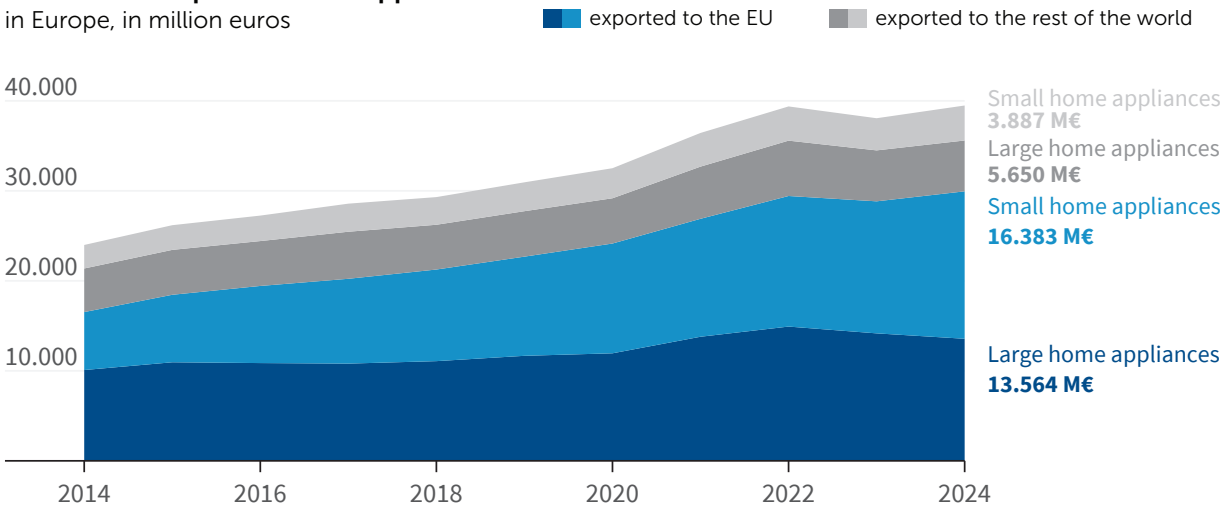
The import and export of home appliances in Europe have shown steady growth since 2014. Imports, particularly from non-EU countries, have increased, with small home appliances making up the majority in 2024. Similarly, exports to global markets have been rising, driven by large home appliances, although the EU remains a key export destination.

Source: Eurostat COMEXT

Evolution of import of home appliances
in Europe, in million euros



Evolution of export of home appliances
in Europe, in million euros

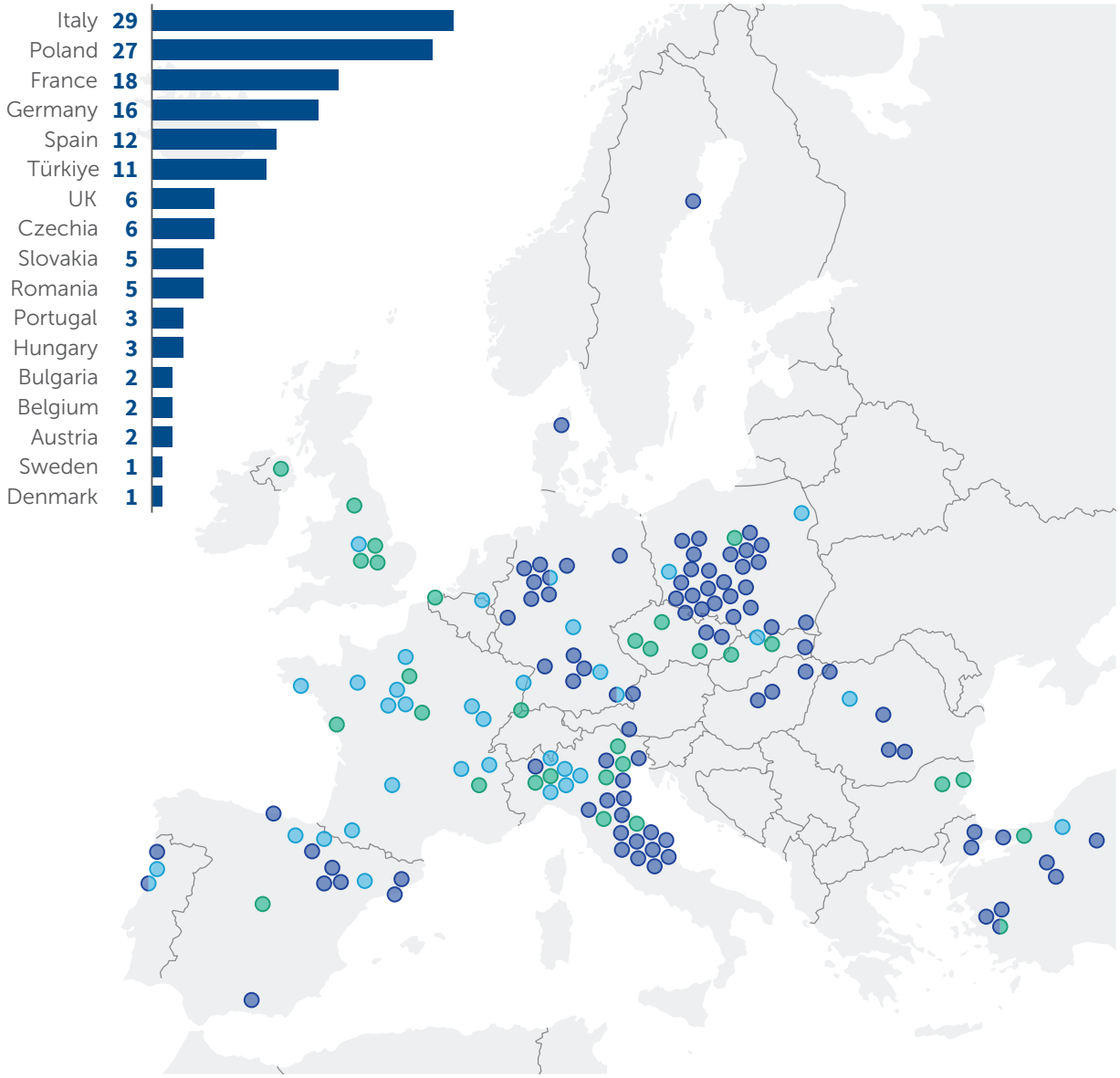


MARKET TRENDS

APPLiA Members manufacturing sites in Europe, in 2024

The graph presents an overview of the geographical footprint of APPLiA member manufacturing in Europe, showcasing the key production hubs for home appliances across the continent. The clustering of dots clearly highlights the countries with the highest number of manufacturing sites, particularly Italy, Poland, France and Germany.

Source: APPLiA members data



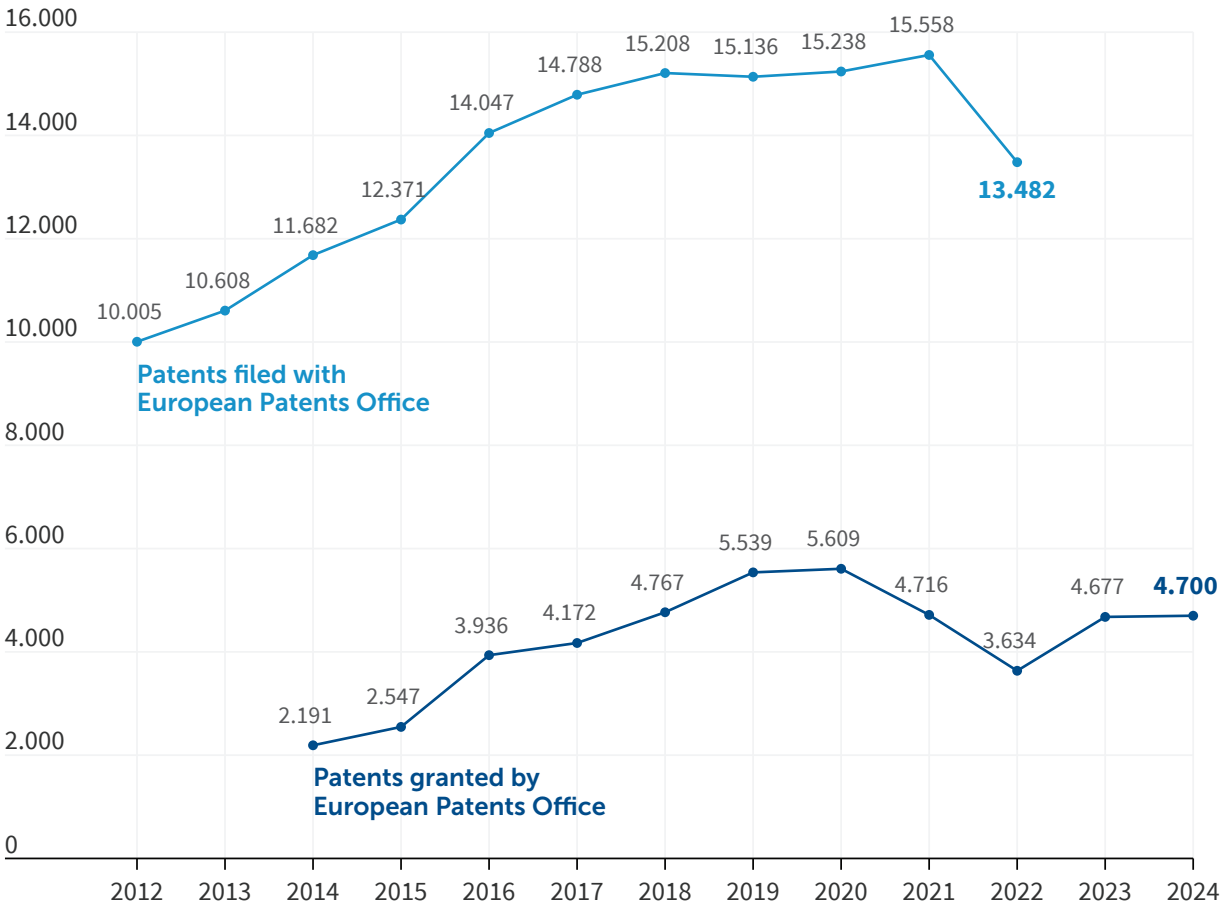
R&D

Patents filed and granted for home appliances

The graph illustrates the trends in patents filed with and granted by the European Patent Office (EPO) specifically for home appliances between 2012 and 2024. Throughout the entire period, the number of patents filed consistently exceeded the number of patents granted. This difference reflects the various stages of the patent process, including examination, potential amendments, and rejections. The overall increase in patent filings, despite the recent dip, suggests a generally growing level of innovation within the home appliance sector in Europe. The fluctuations in both filings and grants could be influenced by various economic, technological, and regulatory factors.

Source: Clarivate Analytics Derwent Innovation

Patents filed and granted for home appliances



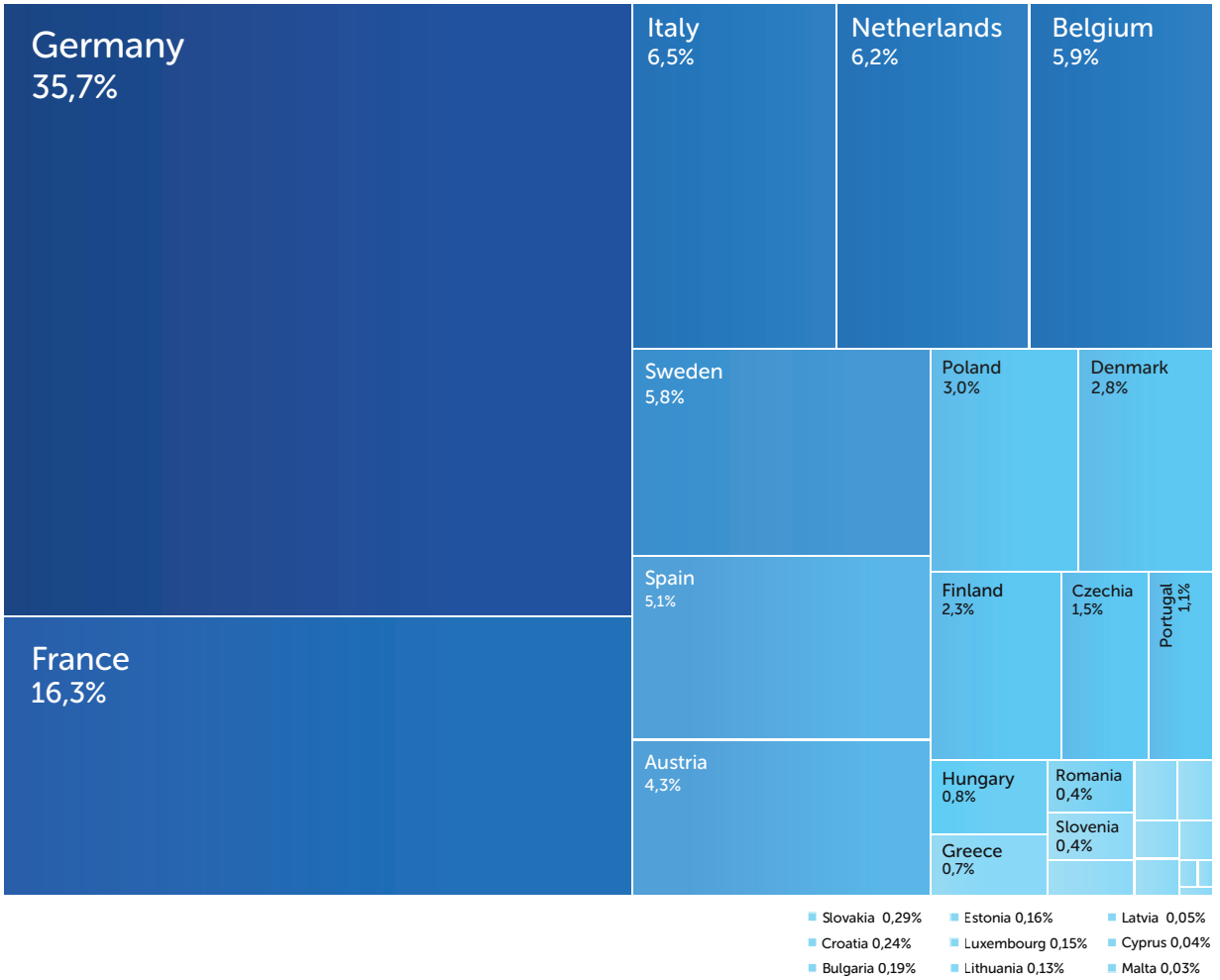
R&D

Investment in R&D by EU Member States

Investment in R&D plays a crucial role in driving innovation and competitiveness in the home appliance sector, enabling manufacturers to develop cutting-edge products that deliver superior performance, efficiency, and user experience, while addressing emerging market trends and sustainability challenges.

In Europe, Germany (35,7%), France (16,3%), and Italy (6,5%) are the countries investing the highest share in R&D.

Source: Eurostat

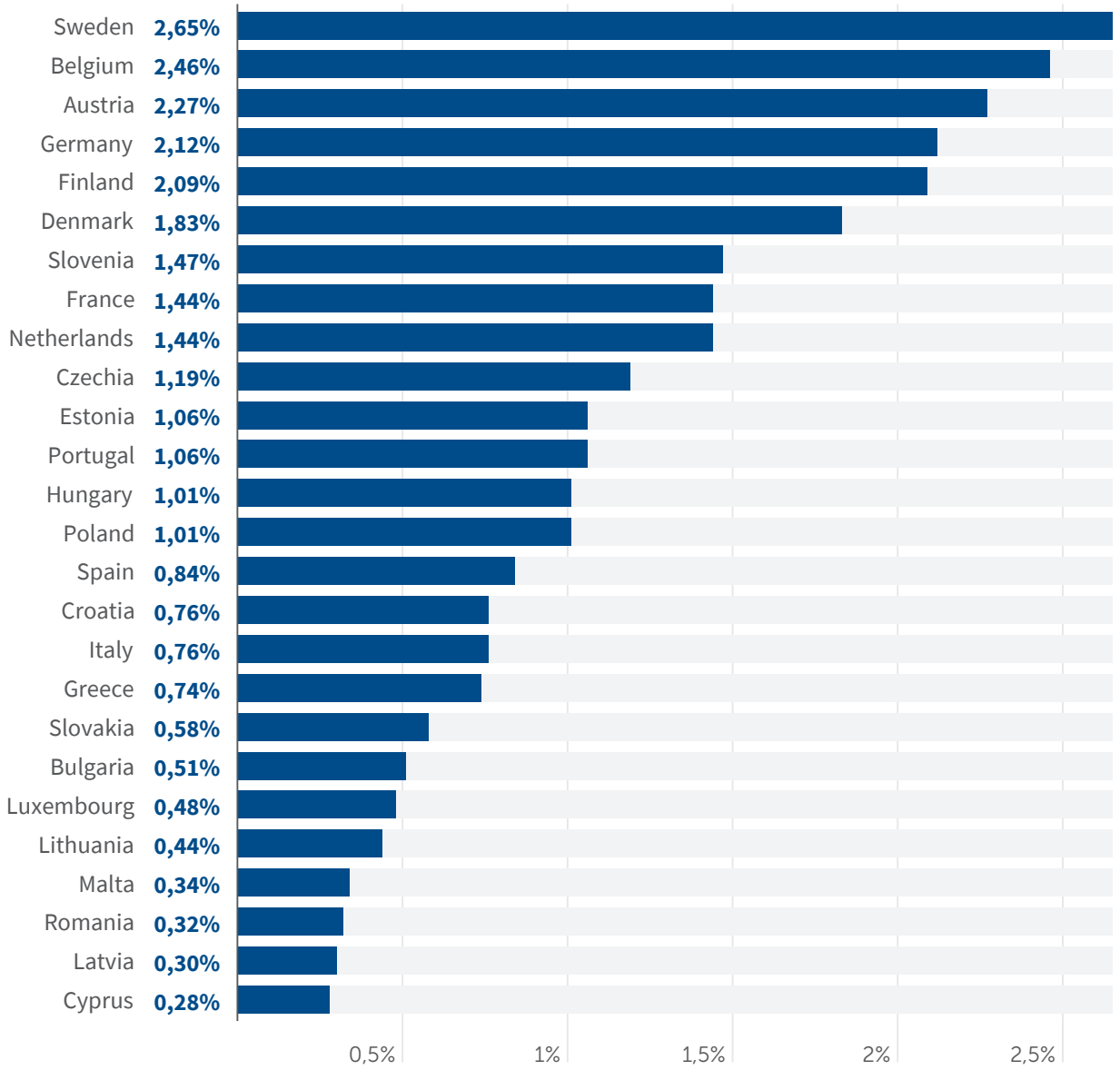


R&D

Investment in R&D by EU Member States as fraction of GDP

This bar chart illustrates the investment in Research and Development (R&D) as a fraction of GDP by EU member states. Sweden leads with 2,65%, followed by Belgium and Austria. In contrast, Cyprus has the lowest investment at 0,28%. The chart highlights a significant disparity in R&D investment levels across the EU.

Source: Eurostat



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