

The Home Appliance Industry in Europe 2021-2022

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Foreword



Hakan Bulgurlu
— APPLiA President

In addition to the humanitarian and geopolitical challenges that Europe faces, the climate crisis stands out as one of the most critical emergencies confronting humanity. The home appliance industry plays a pivotal role in the decarbonization of the economy and serves as a catalyst for the adoption of a circular model.

This report highlights the significant progress achieved by the sector in driving a sustainable transformation across the entire business ecosystem. It examines various aspects, including production, consumption, repair, recycling, market trends, and research and development. By striving to reconcile environmental prosperity with industrial competitiveness, the industry's efforts aim to benefit not only the present generation but also future generations, both in Europe and around the world.



Paolo Falcioni
— APPLiA Director General

As one of Europe's largest manufacturing sectors for turnover and employment, the home appliance industry has enormous scale and impact on the daily lives of millions of Europeans. Advancing sustainable lifestyles and accelerating Europe's growth are the leading pillars of our sector, setting bold goals to achieve climate neutrality and a clear vision for a better tomorrow.

The 7th edition of the report provides an update on the trends and progress made by the sector across the full lifecycle of products as well as an overview of the past and upcoming regulatory opportunities and challenges for the industry.

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.

Arçelik

ARISTON
GROUP

B/S/H/

DAIKIN

DeLonghi
Better Everyday

dyson

Electrolux

gorenje

GROUPE ATLANTIC

Haier Europe

iRobot

LG

LIEBHERR

Midea

Miele

Panasonic

PHILIPS

P&G

SAMSUNG

SEB
GROUPE

smeg

VESTEL

VORWERK

Versuni

Whirlpool
CORPORATION

National Associations



APPLiA Secretariat

APPLiA's Secretariat counts 15 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



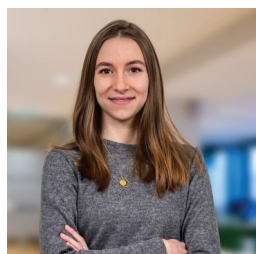
Federica Lavoro
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Officer



Korrina Hegarty
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Policy Manager,
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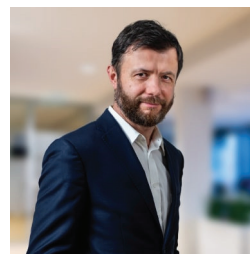
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& Competitiveness



Yannick Lenaerts
Data Officer

The home appliance industry in Europe in 2022



3.214

Number
of enterprises



44.115
million €

Total purchases of
goods and services



223.567

Persons employed



79.718
million €

Direct & indirect value
added to GDP

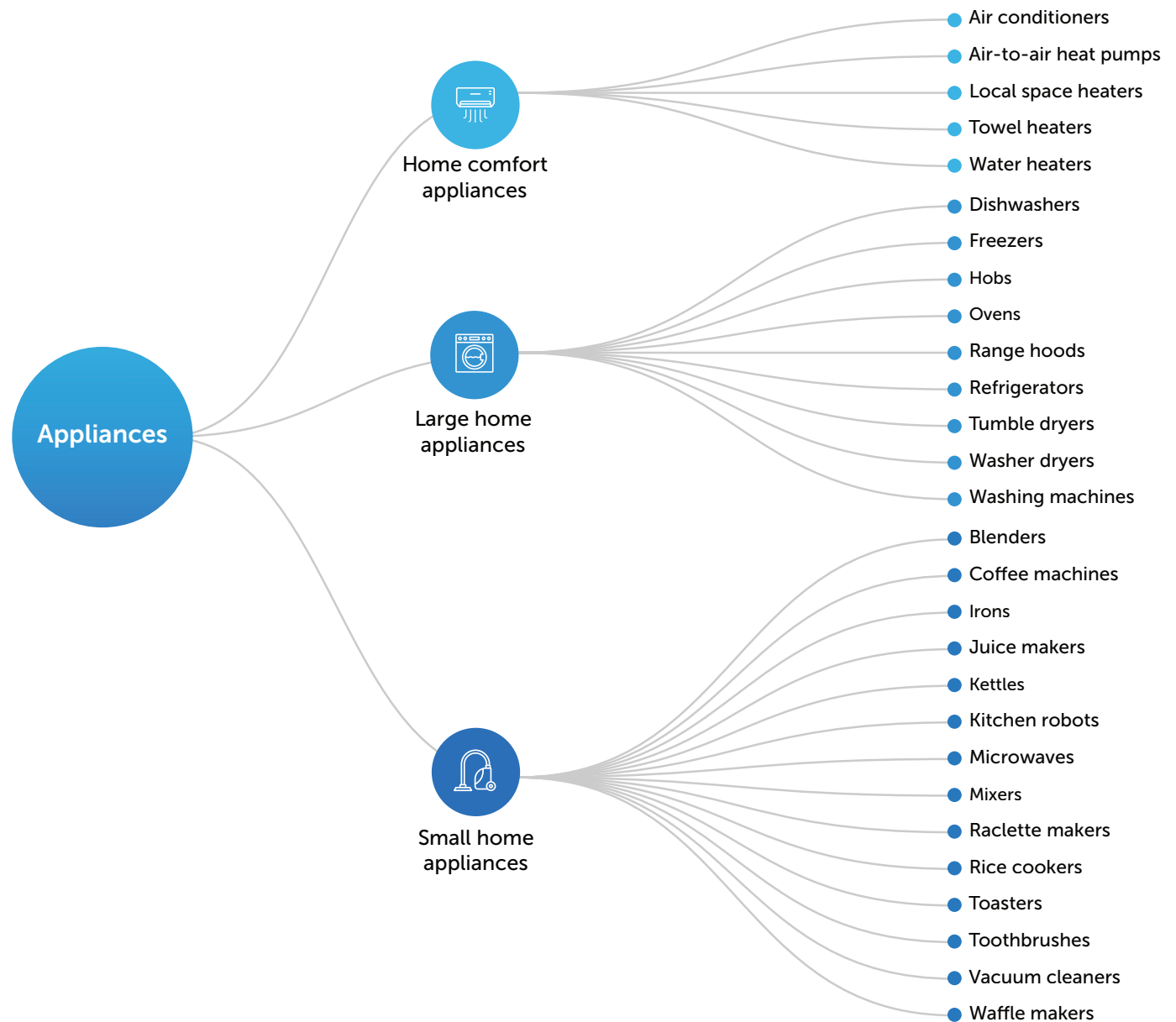


983.695

Indirect & direct
employees

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.



Policy developments in 2022

As Europe moved beyond the upheaval of the Covid-19 pandemic and subsequent economic recovery, the industry was called to face the cross-cutting effects of the impending geopolitical challenges, affecting millions of lives and sectors across Europe and the wider world. In the wake of a surge in energy prices, natural gas demand in the European Union fell by 13% in 2022, a decline equivalent to the amount of gas needed to supply over 40 million homes. The improved energy performance of buildings and uptake of energy efficient appliances is estimated to have contributed to reduce natural gas demand. The savings potential of energy efficient solutions also triggered a remarkable increase in public interest in acquiring appliances, overall marking a positive trend for the industry and playing a key role to outpace higher ownership patterns and avoid increased consumption after the crisis.



Sustainability

Ecodesign for Sustainable Products Regulation (ESPR)

One of the main policy files of this year is surely the EU's proposed **Ecodesign for Sustainable Products Regulation (ESPR)** setting legal requirements to increase the sustainability of products. In addition to focusing on durability, reusability, and repairability, ESPR also establishes rules on transparency as a key element enabling circularity. 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. Novelty to the proposal is the Digital Product Passport, gathering product information across the entire value chain. 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 new product framework is expected to enter into force from 2025.



Batteries Regulation

In the context of the European Green Deal, the European Commission published a proposal for a **new EU Batteries Regulation** providing a clear roadmap for the home appliance sector toward increased battery sustainability. With the goal of upholding the industry's comprehensive safety proposition, APPLiA called upon European policymakers to steer legislation toward the professional repair of appliances with an eye to prioritising user safety. Home appliances that are used in constant proximity to water, are designed to avoid any possible seepage on batteries, in line with the strict requirements set by EU legislation. The safe removability and replaceability of batteries in home appliances are key to enhancing the durability of products and subsequently the potential for proper recycling of batteries. APPLiA has successfully engaged with stakeholders to obtain an exemption covering wet-use appliances for

which batteries would only be removable and replaceable by independent operators. The plenary vote is foreseen in Q2 2023.

Packaging and Packaging Waste Regulation (PPWR)

2022 was also the year of the EU's proposed **Packaging and Packaging Waste Regulation (PPWR)**, a landmark legislation to combat the over-packaging of products and growing amounts of waste. 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 certain while using the equipment. Moving from a Directive to a Regulation will help to harmonise obligations across EU Member States and promote the functioning of the Single Market, an effort that APPLiA strongly supports in its advocacy. The new rules also aim to promote reusable transport packaging. However, APPLiA has raised concerns about the technical feasibility and the environmental impact of this approach. Any targets should be



based on comprehensive analyses that take into account the full packaging life cycle. The proposal is currently under review by the European Parliament and the Council through their ordinary legislative process.

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). This initiative would evaluate the progress made under the Directive. It would aim to assess whether the objectives are met and to what extent the Directive supports a circular economy and environmentally sound management of WEEE. Since the last revision of the WEEE Directive in 2012, levels of WEEE have increased significantly both inside and outside the EU. This phenomenon, according to the Commission, poses questions as to whether the WEEE Directive is still fit for purpose. The Commission has therefore acknowledged that the WEEE Directive would be evaluated through the key objectives of the European Green Deal and Circular Economy Action Plan.

With home appliances making up a large proportion of the WEEE volume over the last 20 years, we have much experience of WEEE legislation to share as the Commission launches its fit for purpose evaluation. The volumes 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. APPLiA is ready to work with the Commission and the consultants conducting the evaluation study to investigate the challenges and the potential solutions to further improve the level of WEEE collected and properly treated and recycled across the EU. Better measures to properly report and recycle WEEE and closing the gaps in raw materials' data information and collection is the first and fundamental step to improve knowledge on the quality and quantity of recovered secondary raw materials from WEEE.

Corporate

Consumer policy

The two recent Commission proposals to empower consumers in the green transition and to promote repair of goods aim to make increased consumer protection converge with Europe's sustainability and circular economy goals.

Putting repair first in the hierarchy of remedies in case of a faulty good has been an APPLiA long standing position and we were happy to see the Commission proposal going in this direction. Promoting professional repair to ensure the integrity of the appliance and protect consumers from any damage or misconduct is also dear to our sector.

APPLiA equally supports that information on the product is better communicated at the point of



sale as a means to empower consumers. We nevertheless stressed the importance of keeping company freedom in determining terms of commercial guarantees of durability and that the concept of durability is consistent throughout all legislation.

The proposals are still under negotiations with a possible entry into force in 2025.

European Product Registry for Energy Labelling (EPREL)

Following the introduction of a new energy label in 2021, the European Commission launched a new EU-wide public database enabling consumers to compare information among different home appliances. Gathering over 1 million products with an energy label, the **European Product Registry for Energy Labelling (EPREL)** provides unprecedented market transparency, guides consumers to make informed purchasing decisions and boosts market surveillance. To support manufacturers in meeting their legal requirements, APPLiA worked on a set of templates that can be used

for uploading the compliance data into the database.

EU Taxonomy

The EU Taxonomy is created to serve as a transparency tool for companies and investors and establishes a list of environmentally sustainable economic activities, giving eligible companies easier access to financing. As part of the Taxonomy Regulation (2020), this year saw the entry into force of a **first delegated act on sustainable activities for climate change adaptation and mitigation objectives** within which appliances falling under top-2 energy classes are eligible. Criteria to elect sustainable activities promoting Taxonomy's circular economy objective are now under consultation. When it comes to the impact on the sector, very ambitious criteria are set for manufacturers including a strict ban on F-gas and the use of most chemicals.

Directive on corporate sustainability due diligence

With an eye to foster sustainable and responsible corporate behaviour throughout global value chains, the European Commission put forward a proposal for a **Directive on corporate sustainability due diligence**. Companies will be required to identify and, where necessary, prevent, end or mitigate adverse impacts of their activities on human rights and on the environment through their own operations, but also subsidiaries, and value chain. While sharing the purpose of the legislation, APPLiA has been engaging with

policymakers to package rules that would differentiate the level of liability and restrict it to direct established relationships.

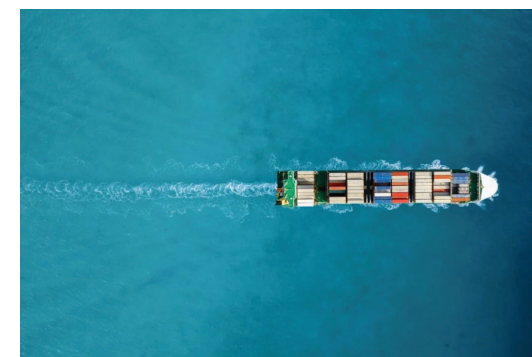
Energy

REPowerEU Plan

In response to the hardships and global energy market disruptions, the European Commission presented the **REPowerEU Plan** with an eye to increasing Europe's energy independence by diversifying, saving and accelerating clean energy. APPLiA was one of the advisors to the EU-US Energy Security Task Force hosted by the European Commission and the White House to gather intelligence on how to tackle the energy crisis. The rollout of energy efficient appliances into households via financial incentives was identified by APPLiA as a possible effective solution.

F-gas Regulation Review

Heat pumps are at the core of the REPowerEU communication mandating the deployment of 60 million new units in Europe, by 2030. Around



2.8 million heat pumps were installed over the course of 2022, accounting for around 1.4 billion cubic metres of savings. Alongside, the European Commission put forward a proposal to **update the F-gas Regulation** with an eye at further reducing greenhouse gas emissions, as part of the set climate ambitions. As an active player in the debate, APPLiA has been advocating that the quick phaseout of F-gas refrigerants for some applications will significantly limit the number of heat pumps available in certain market segments, pushing consumers back to fossil fuels and clashing with the flagship REPowerEU. The vote in plenary is foreseen for Q2 2023.

(Recast) Directive on Energy Efficiency

To meet the EU's 2030 climate target, energy efficiency needs to be prioritised. To step up its efforts, the Commission had put forward in July 2021 a proposal for a recast **Directive on Energy Efficiency** requiring EU countries to collectively ensure an additional reduction of energy consumption of 9% by 2030 compared to the 2020 reference scenario projections. Co-legislators eventually agreed to set the 2030 EU energy efficiency target at an 11.7% reduction for both final and primary energy consumption. For the first time, the target for final energy will be binding.

The publication of the recast EED in the EU's Official Journal is expected in the summer of 2023.

APPLiA advised relevant policy makers on putting the efficiency first principle at equal



footing with emissions reduction and renewable energy and is working to push for the rollout of the most energy efficient appliances into households via financial incentives. The publication of the recast EED in the EU's Official Journal is expected in the summer of 2023.

Renewable Energy Directive

The recent deal on the review of the **Renewable Energy Directive** will raise the overarching European target of energy produced by renewable sources to 42.5% with an indicative top up to 45%. It also sets an indicative target of at least a 49% renewable energy share in buildings in 2030.

The modernisation of heating and cooling appliances is essential to decarbonise the EU building stock, to deploy local renewable energy potential and to reduce the EU's dependence on imported fossil fuels. APPLiA has been strongly advocating for an annual replacement rate of old heating systems of at least 6% to match the EU's new 55% emissions reduction target for 2030.

Digitalisation & Trade

Carbon Border Adjustment Mechanism (CBAM)

As part of the Fit for 55 package, the EU put forward the world-first plan to introduce a levy on imports of high-carbon goods from 2026 that will progressively replace free ETS allowances, targeting imports of steel, cement, aluminium, fertilisers, electricity and hydrogen. The **Carbon Border Adjustment Mechanism (CBAM)** seeks to help fight climate change by putting a tax on raw materials based on their CO2 emissions. The home appliance sector in Europe is an important downstream user of CBAM-covered materials. Which makes it highly vulnerable to carbon leakage due to its degree of openness to international trade and the estimated cost impacts. The phasing-in of CBAM and the phasing-out of free ETS allowances will lead to a carbon cost increase of 580 million € for EU home appliance manufacturers, without considering additional costs generated on electricity. Given the significant impact on the sector, APPLiA has carried out extensive outreach to raise awareness about the implications of the measure on several European industries. Trilogues are expected in Q2 2023.

EU Data Act

The **EU Data Act** is the centrepiece of the Von der Leyen Commission's Data strategy. It aims to unlock data sharing at EU level to create a single market for data and make Europe a global leader in the data-agile economy by imposing data

sharing obligations on companies. With appliances producing an unprecedented amount of information as we perform daily tasks, APPLiA has been a key actor in the discussion in portraying the pitfalls of data-sharing for the industry. Each operated by a different technology, home appliances deliver a great range of services to users. Ensuring intellectual property is protected at all times is a key prerogative of all brands when marketing their products. Trilogue negotiations are expected in Q1 2023.

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, including the vast majority of home appliances. APPLiA has been advocating for a clear distinction between critical and non-critical cybersecurity products, to be reflected in standards. The Act is in the process of being discussed and negotiated by the European Parliament and the Council of the European Union.

Artificial Intelligence (AI) Act

The **Artificial Intelligence (AI) Act** is at the heart of the European AI Strategy toward making the EU a world-class hub for AI. For a long time, European consumers have had their grasp of AI influenced by sci-fi novels and movies which do not reflect the reality for most European manufacturers. For this reason, a common definition of AI is needed to provide legal certainty to manufacturers and regulators, alike.

Flexibility should be the master ingredient of a successful AI recipe, that is functional for the needs of EU industries. 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.

EU Chips Act

Amid the global shortage of semiconductors, the European Commission proposed the **EU Chips Act**. The measure mobilises more than € 43 billion of public and private investments and sets measures to prepare, anticipate and swiftly respond to any future supply chain disruptions, together with Member States and international partners. As an industry strongly relying on the use of microprocessor technology, APPLiA supported the initiative stressing the need to accelerate the production of chips for all uses - from latest semiconductor technologies to less developed chip designs, establishing a level-playing field for all sectors relying on their use. Trilogue negotiations are set to take place in Q1 2023.

What to expect in 2023

The year 2023 will be a crucial one in the run-up to the 2024 European elections. As the energy crisis continues to affect Europe, energy efficient appliances are set to play a key role in the response to the current emergency and recovery. With over half of European consumers buying with sustainability in mind, looking at the full lifecycle of products remains of critical importance. New legislative proposals are in the pipeline that will tackle reparability, recyclability and transparency of information to consumers. Working toward an increased cybersecurity of products as well as restricting the use of chemicals in appliances are also among the top priorities of the year.

New initiatives in 2023

2023 marks the 30th anniversary of the EU Single Market - the bedrock of the European economy and one of the greatest achievements of European integration. For the occasion, the European Commission is expected to table the



long-term competitiveness strategy and 30 years of the Single Market communications, as a compass of Europe's state-of-the-art economy, toward establishing a level playing field and achieving cohesion objectives. Representing one of Europe's latest manufacturing industries, APPLiA will highlight the need to counter the rise of regulatory barriers and obstacles to cross-border trade that make its potential still far from being exhausted.

In the first quarter of 2023, the European Commission is set to launch the so-called **Green Deal Industrial Plan** complementing the ongoing efforts under the European Green Deal to combine the need to enhance Europe's industrial competitiveness and support the fast transition to climate neutrality. An opportunity to consistently bring together the funding pillars of the European economy.

According to the Commission work programme, the release of an **Electricity Market Design** reform is foreseen around the same time of the year, aiming to push for renewables and make consumer bills less dependent on volatile fossil fuel prices for a more competitive EU industry. For APPLiA and the sector at broad, the initiative will present a great potential to address the ongoing energy crisis, by stimulating the development of a market for demand-side management with opportunities for consumers to participate in it and freely manage daily consumption patterns.



The long-awaited **Right to Repair** initiative is also expected to land in the first quarter of 2023. A cornerstone legislation to the sector, APPLiA will advocate to privilege repair over replacement in the hierarchy of remedies toward generating savings for consumers and supporting the objectives of the European Green Deal by reducing waste, among others. Also, the Association has been for long emphasising the importance to Repair it Right. At a time when claims for self-repair are on the rise, preserving the safety of the home and the people who live in it, remains a key priority for the industry. Not all repairs can be carried out safely and successfully by consumers themselves, as they could compromise a device's integrity or functionality.

As part of its trade strategy, the Commission is also set to launch a **Critical Raw Materials Act** to ensure the EU's access to a secure, diversified, affordable and sustainable supply of critical raw

materials. From basic to more elaborate components, products today rely on a number of different and essential parts. Which states a clear need to guarantee the supply of critical raw materials within the EU and with strategic partnerships, incorporating both a domestic and international dimension. Efforts to increase access to raw materials for EU manufacturers should leverage Europe's responsible cooperation model by investing in sustainable projects exporting this mindset within and across borders.

To address greenwashing and make sense of existing environmental labels, the European Commission is also expected to put forward a **Green Claims Directive**. With over half of European consumers shopping with sustainability in mind, the home appliance industry fully supports the ' objective. APPLiA



will be working to ensure the ultimate aim can be achieved while not halting the efforts toward greater innovation.

In 2022, Denmark, Germany, the Netherlands, Norway and Sweden expressed their interest to the European Chemical Agency (ECHA) to reduce **PFAS** emissions into the environment. A call for evidence was launched by the Agency, and a proposal is expected in the first quarter of 2023.

According to the Commission Work Programme for 2023, the revision proposal of **REACH** is expected to be presented in the fourth quarter of 2023. The revision should provide modifications to the Regulation touching the restriction and authorisation processes, introduction of European Audit Capacity and introduction of registration requirements for certain polymers, amongst others.

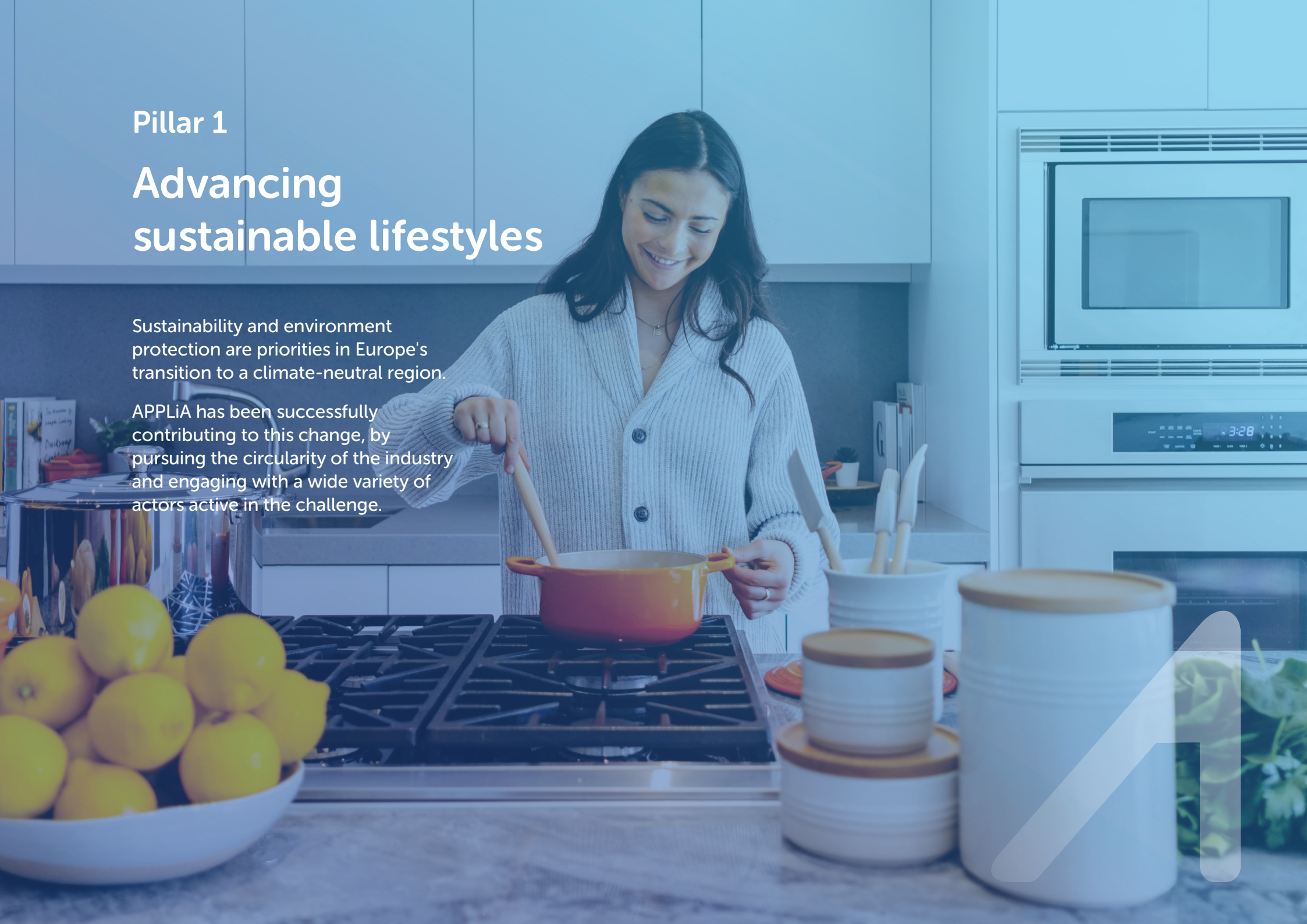
The above-mentioned are a selection of highlights of the proposals in the pipeline for the upcoming year. Additional legislation is expected that will involve the home appliance industry. The APPLiA Secretariat will be continuously monitoring the work at the Institutional level and work alongside the membership to preserve the competitiveness of the sector in Europe and advance sustainable lifestyles of millions of Europeans.

Pillar 1

Advancing sustainable lifestyles

Sustainability and environment protection are priorities in Europe's transition to a climate-neutral region.

APPLiA has been successfully contributing to this change, by pursuing the circularity of the industry and engaging with a wide variety of actors active in the challenge.



Sustainability starts at home. Home appliances improve lifestyles with innovative and resource-saving functions and promote sustainable growth.

The home appliance industry provides European households with appliances that make our lives easier **by saving time, energy and water, and securing a clean and healthy home environment.**

Circularity in fact is enhanced throughout all the life stages of a device: it starts with raw materials followed by the design of the product, then it goes through production, use and consumption, repair, recycling and recovery. At this latter stage, recycled waste is injected back into the economy as a secondary raw material and the cycle begins again.

In a circular economy, products serve their purpose for as long as possible and then are turned into other home appliances or different tools including benches or bicycles, continuing to offer a service to users. This approach entails reducing material usage during production, optimising an appliance's efficiency during usage, incorporating sustainable materials, designing products for durability, repair, and eventual recovery. There are a variety of ways to drive resource efficiency and manufacture sustainable products that advance the circular economy and a whole new range of sustainable alternatives such as product-as-service models and digital solutions are underway and can contribute to a better quality of life, innovative jobs and upgraded knowledge and skills. These new sustainable goods, services and businesses,

together with traditional sales models, can contribute to foster more sustainable consumption patterns.

To advance sustainable lifestyles we must tackle the issue of Europe's largest growing waste stream: e-waste. **By properly recycling e-waste, it is possible to reintroduce precious raw materials found in discarded items back into the economy.** This reduces the need for mining, minimises greenhouse gas emissions, and conserves our planet's natural resources. When household appliances reach the end of their lifespan, they can be recycled to retrieve minerals and materials before being sent back to manufacturers as secondary raw materials. This significantly decreases reliance on primary resources while stimulating a circular economy.

Repair is an integral part of a circular economy. Repair can stimulate a circular economy by extending the lifespan of products, reducing waste, and preserving natural resources. By repairing and reusing products instead of discarding them, it reduces the need for new appliances to be manufactured, which helps to reduce the environmental impact involved with production and consumption. The scarcity of repair workers throughout Europe is increasingly becoming a significant concern. As seasoned and qualified repair professionals are retiring, younger generations are pursuing different career paths. This is compounded by rapid technological advancements, which pose a significant risk of creating a considerable market gap that needs to be filled.



APPLiA's national associations across Europe have already taken several steps to inspire the next generation to professionally take up the craft of repair. In Hungary, a partnership with local vocational schools has trained 60 young experts, who are now employed full-time in the sector across the country, generating new jobs in Europe and injecting skilled professionals into the market. Slovakia, Poland and Czech are following suit with their very own training programs at national level, equipping schools with household appliances and distributing educational books for teaching and learning purposes.

Material use during the production process

The home appliance sector works continuously to reduce our carbon footprint, along the entire production process.

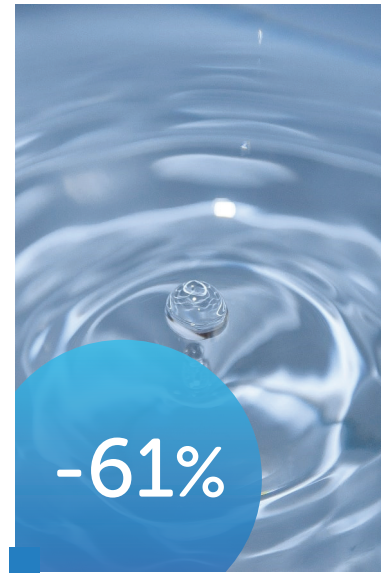
Over the last decade the sector made great strides in the reduction of waste, water and energy used to manufacture home appliances.

The following reductions were achieved between 2011 and 2018.

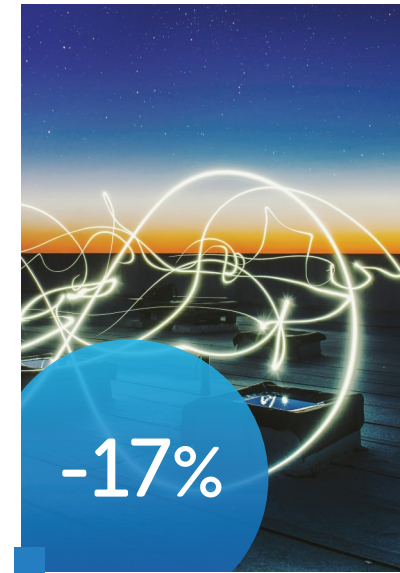
Source: dss+ (formerly Sofies)



Reduction in waste generation during production



Reduction in water consumption during production



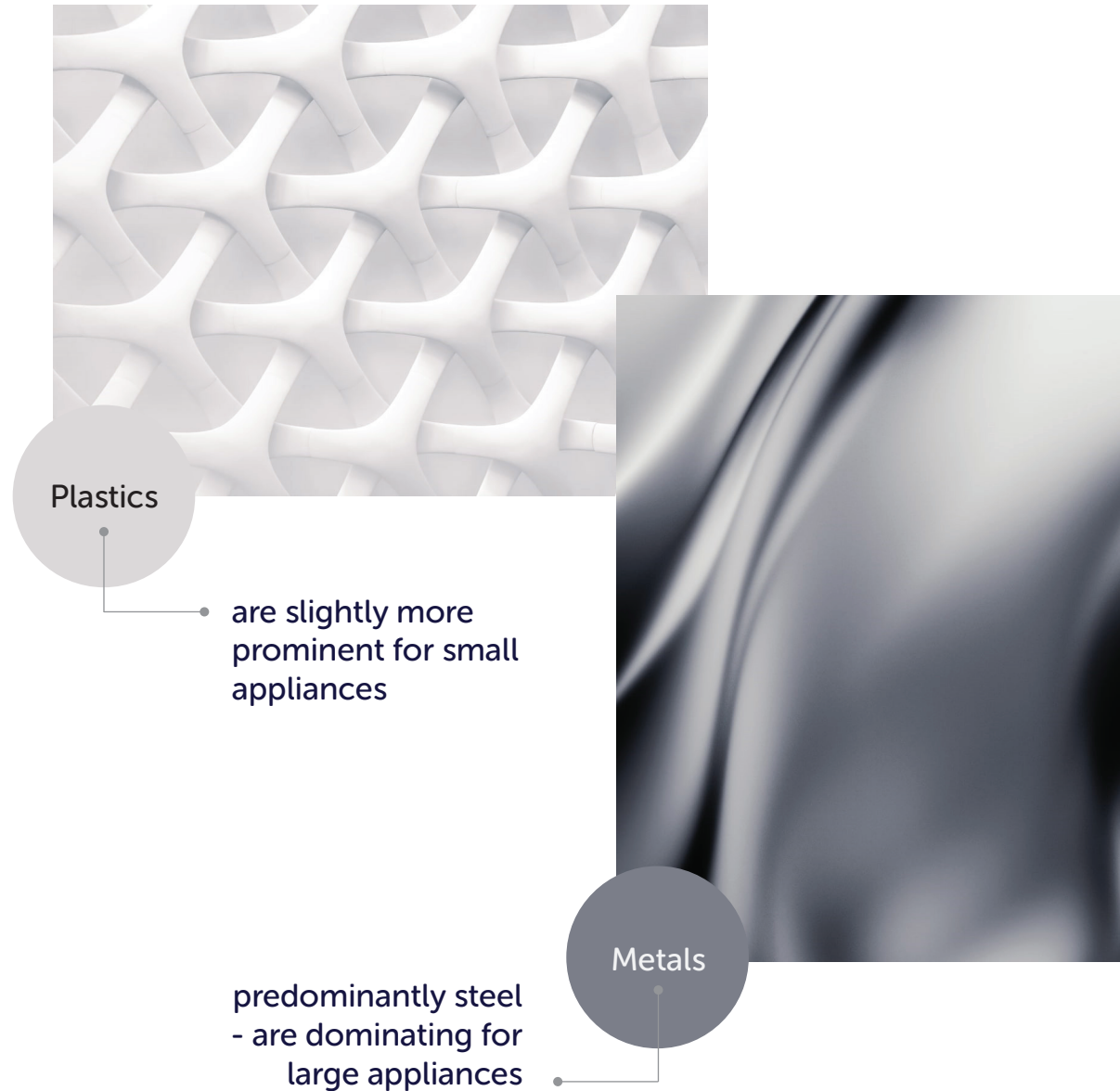
Reduction in energy consumption during production

Average material composition of home appliances

To produce and supply appliances, the home appliance industry uses various materials, metal and plastics in particular. These materials come mainly from virgin sources but also increasingly from recycled sources.

The average material composition of large home appliances is dominated by steel and stainless-steel metals, while plastics are becoming more prominent for small appliances.

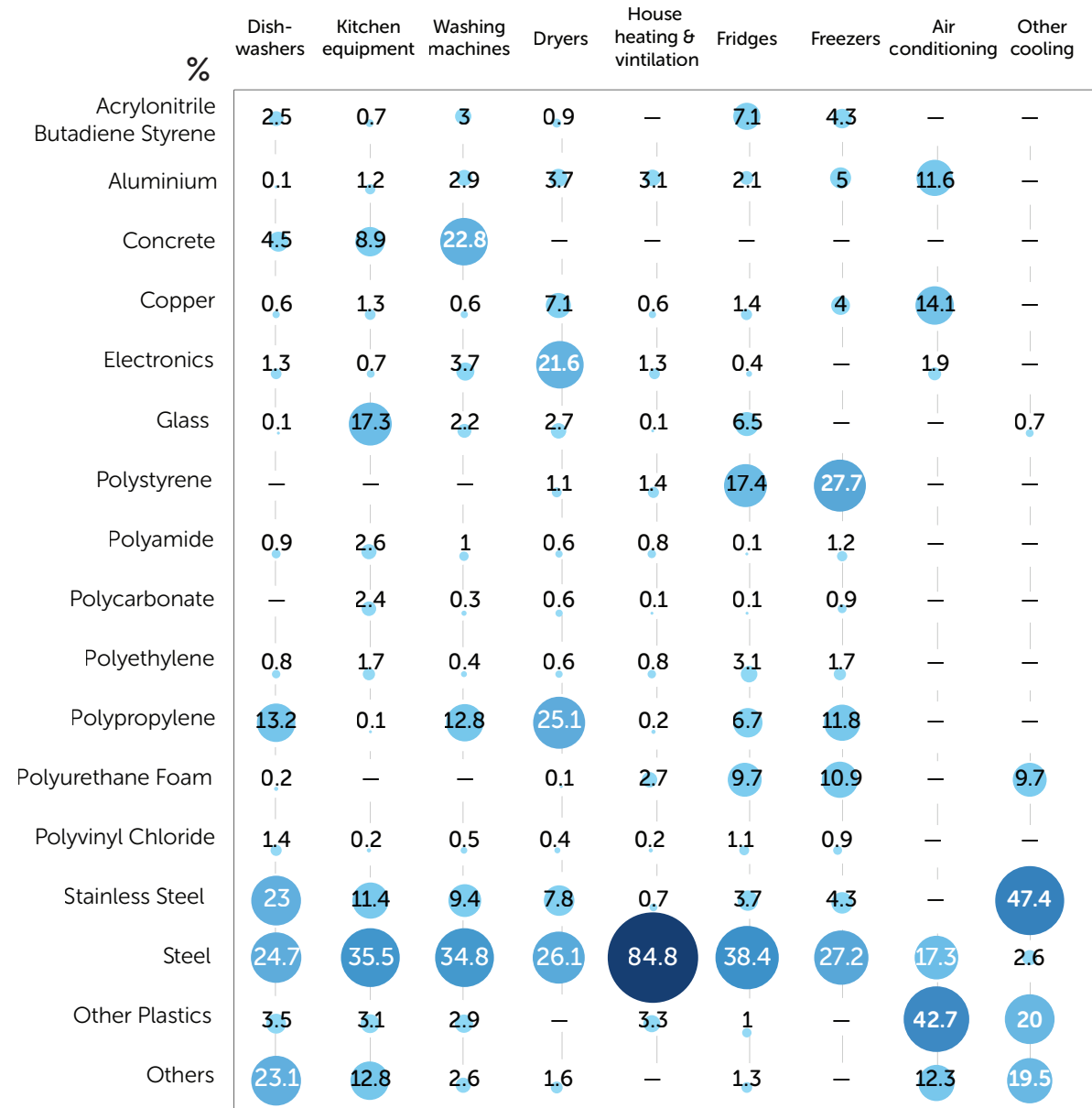
Source: dss+ (formerly Sofies)



Average material composition of large home appliances

The average material composition of large appliances is dominated by steel and stainless steel metals.

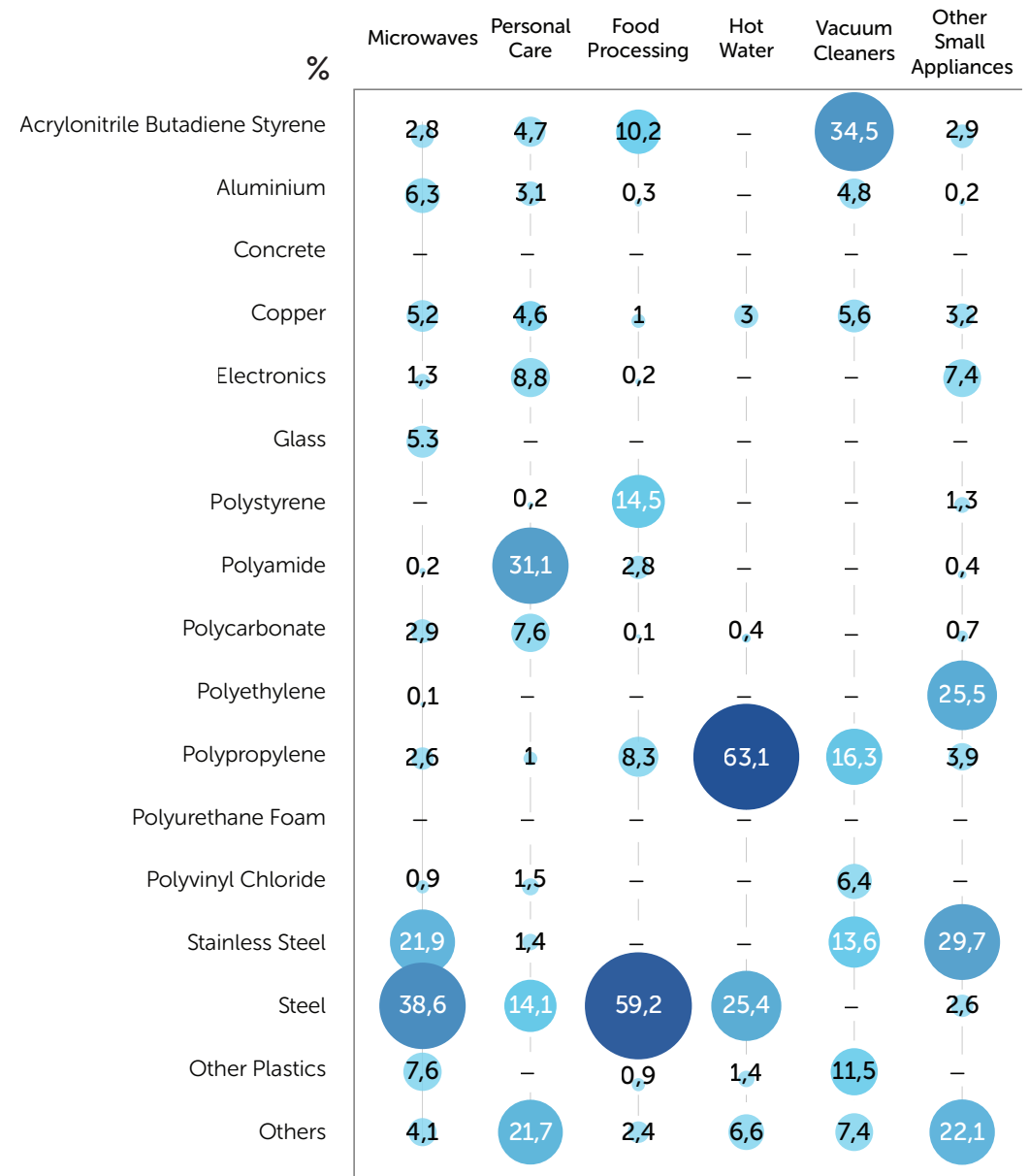
Source: dss+ (formerly Sofies)



Average material composition of small home appliances

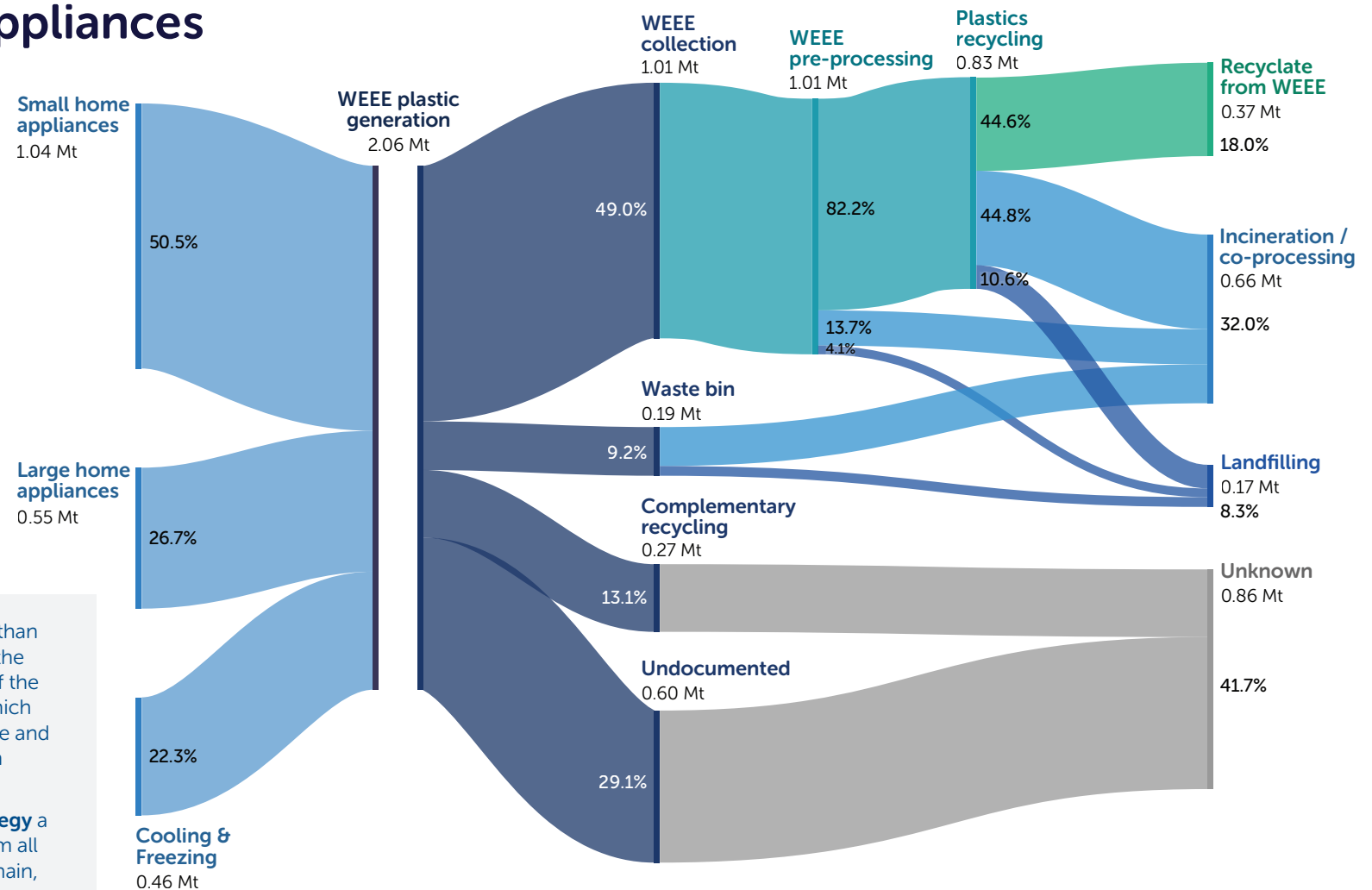
Plastics are slightly more prominent in the material composition for small appliances.

Source: dss+ (formerly Sofies)



Plastic flows from home appliances

Source: dss+ (formerly Sofies)

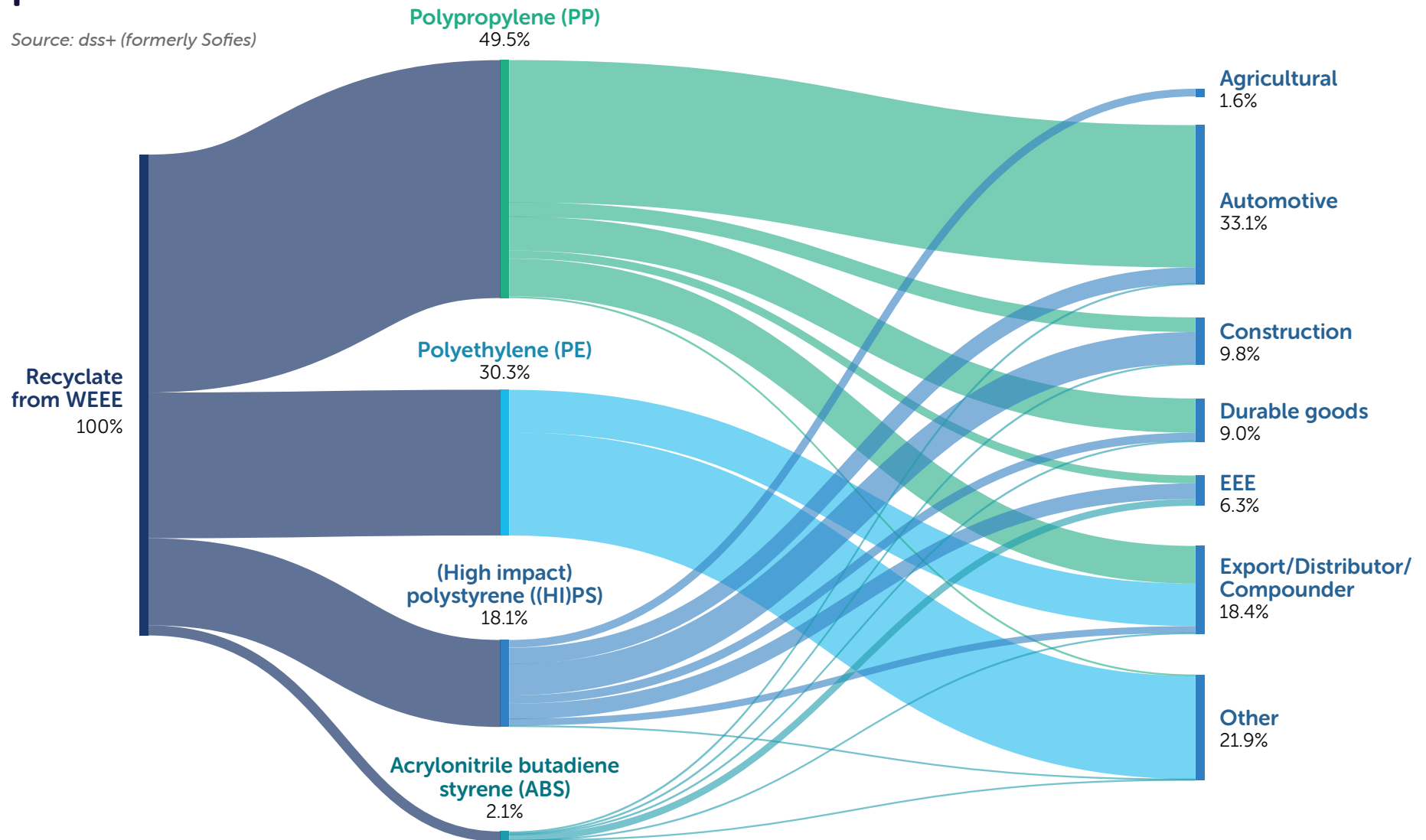


APPLiA, together with more than 100 other signatories along the plastics value chain, is part of the **Circular Plastics Alliance** which works to reduce plastic waste and promote recycling plastics in Europe.

Making the **EU Plastics Strategy** a reality will require action from all players in the plastic value chain, from plastic producers and designers, through brands and retailers, to recyclers.

Routes of recycled plastics from WEEE

Source: dss+ (formerly Sofies)




Space
cooling
0,5%


Other
end use
1,1%


Lighting and electrical
appliances
13,6%


Cooking
6,0%


Water heating
14,5%


Space heating
64,4%

**Energy consumption
in the home in 2021**

Source: Eurostat

Repair of home appliances

Training the next generation of professional repairers



205 M

units placed on the market in 2018



€1,9 bn

industry turnover for repair & service



91%

of the requests actually repaired



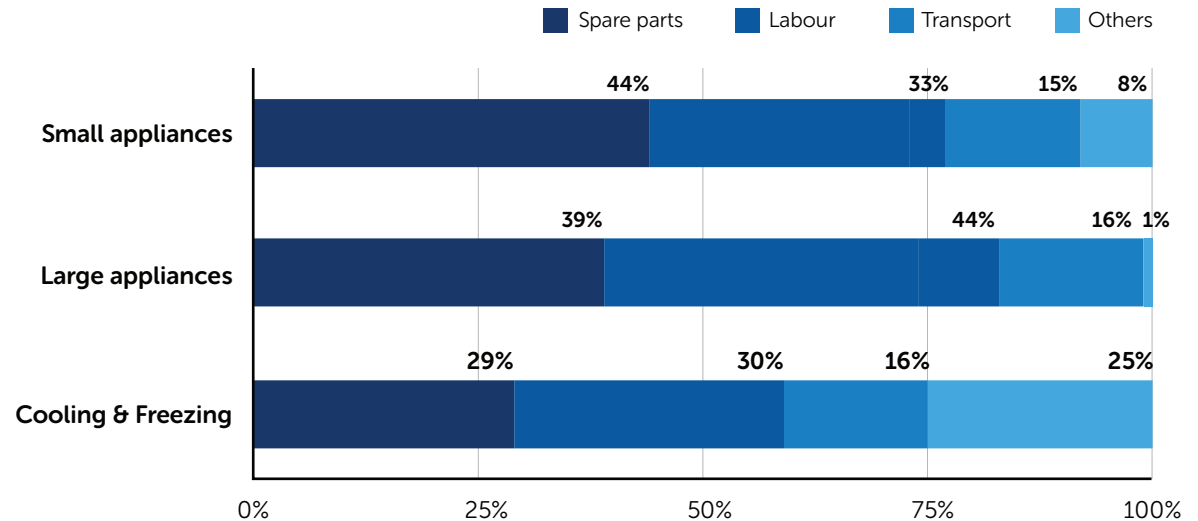
29.000

business partners in repair and after-sale services

In collaboration with APPLiA Hungary, APPLiA launched the **educational book on repair of home appliances** with an eye to train the next generation of professional repairers.

The digital version of the book, which can also be purchased in hard copy, is currently available in English.

For more, visit www.repair-it-right.eu



WEEE flows in Europe

The channels through which Waste of Electrical and Electronic Equipment (WEEE) is collected are very diverse and it is difficult to determine how much actually arises, especially the quantities that are captured, but not recorded.

While producers and producer schemes are asked to report the WEEE flows collected and treated, other actors handling WEEE can easily by-pass such reporting obligations, even if the waste they handle is properly collected and treated. This means much of the precious resources from WEEE remains undocumented, which means it is not known if they actually come back to material loops as secondary raw materials.

Source: dss+ (formerly Sofies)

Waste of Electrical and Electronic Equipment



Collected and recycled



Mixed with metal scraps



End up in waste bin



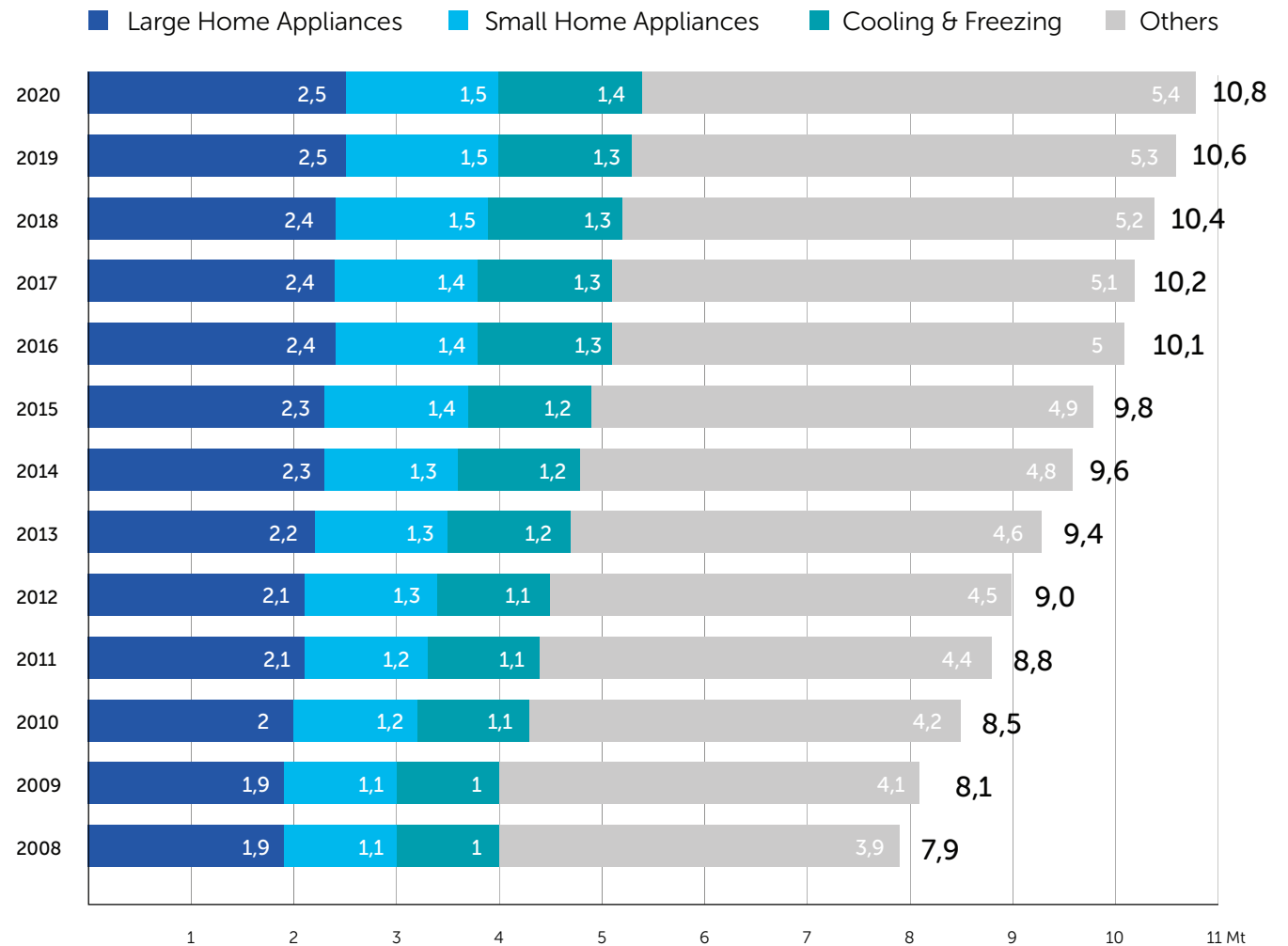
Gap



WEEE generated in Europe

E-waste is one of the fastest growing waste streams globally and there are many actors who can influence that e-waste is collected, recovered and properly recycled.

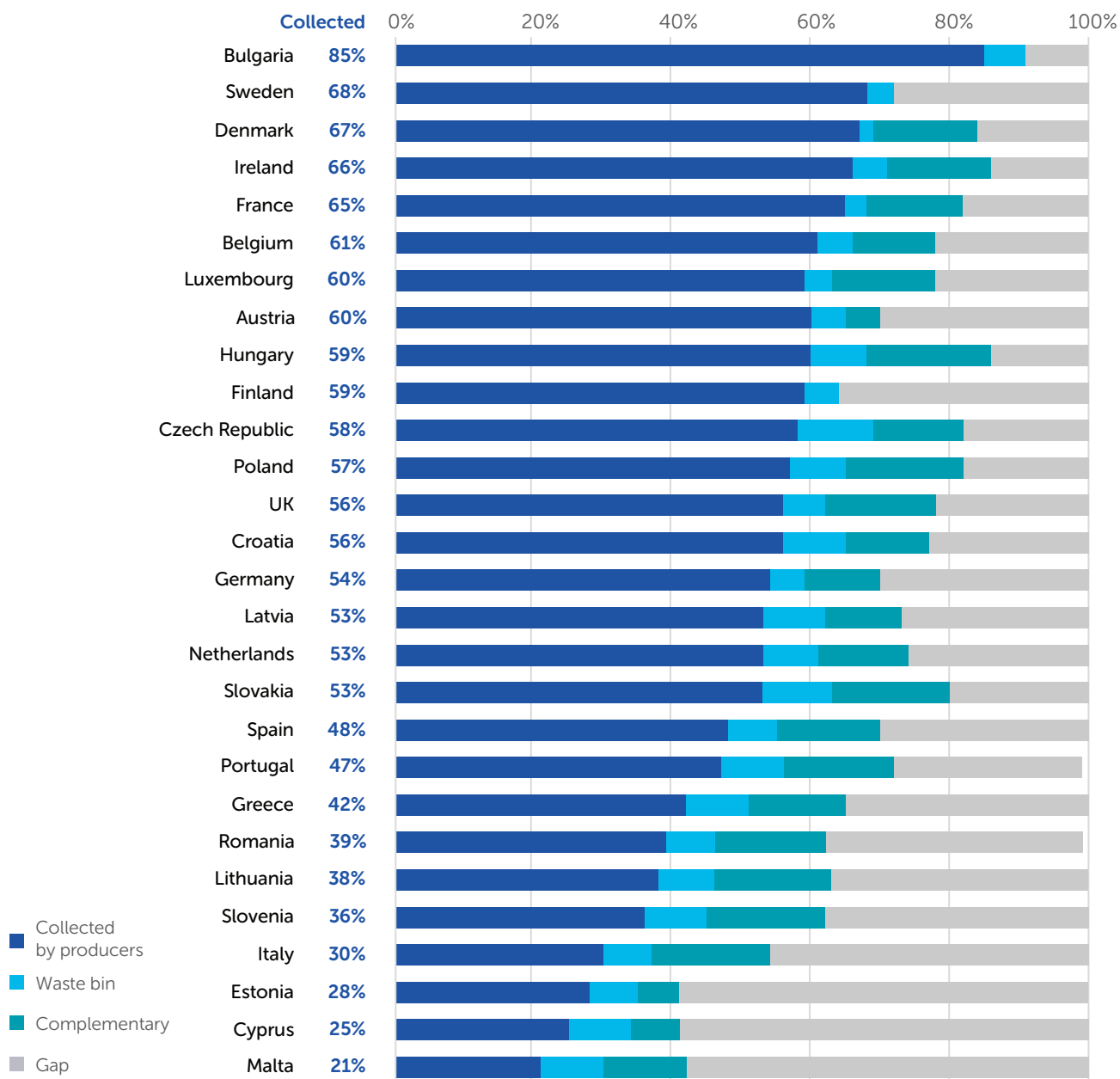
Source: dss+ (formerly Sofies)



WEEE generated by EU Member States

Difficulties experienced by almost all Member States in reaching the set collection targets opens up the debate about how realistic and fit for purpose the collection targets as defined in the Directive, actually are.

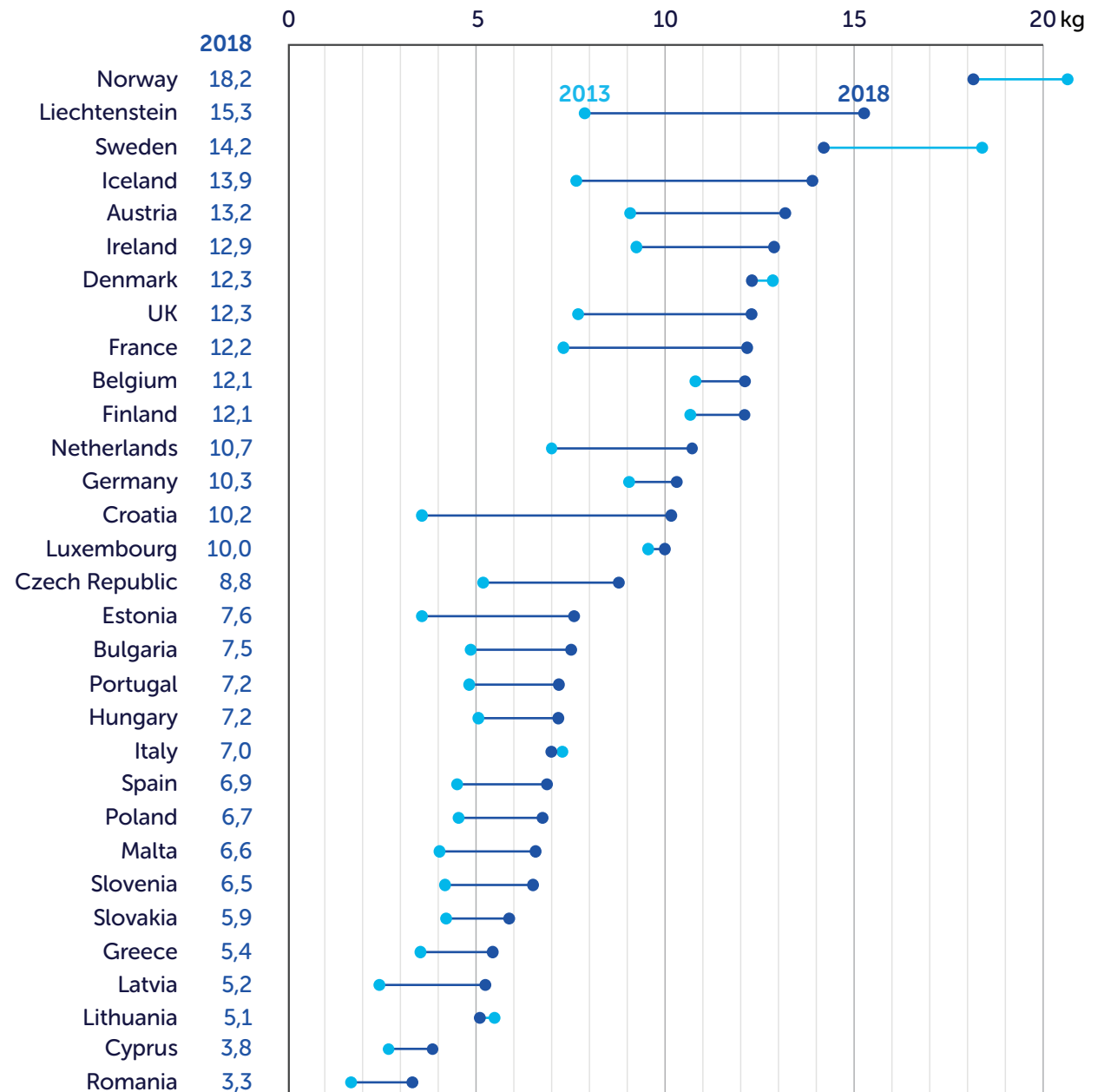
Source: dss+ (formerly Sofies)



WEEE generated by inhabitants

Source: Eurostat

WEEE forum figures show that e-waste generated rose from 8,3 Mt in 2010 to 10,4 Mt in 2021, the equivalent of 19,6 kg produced per inhabitant.

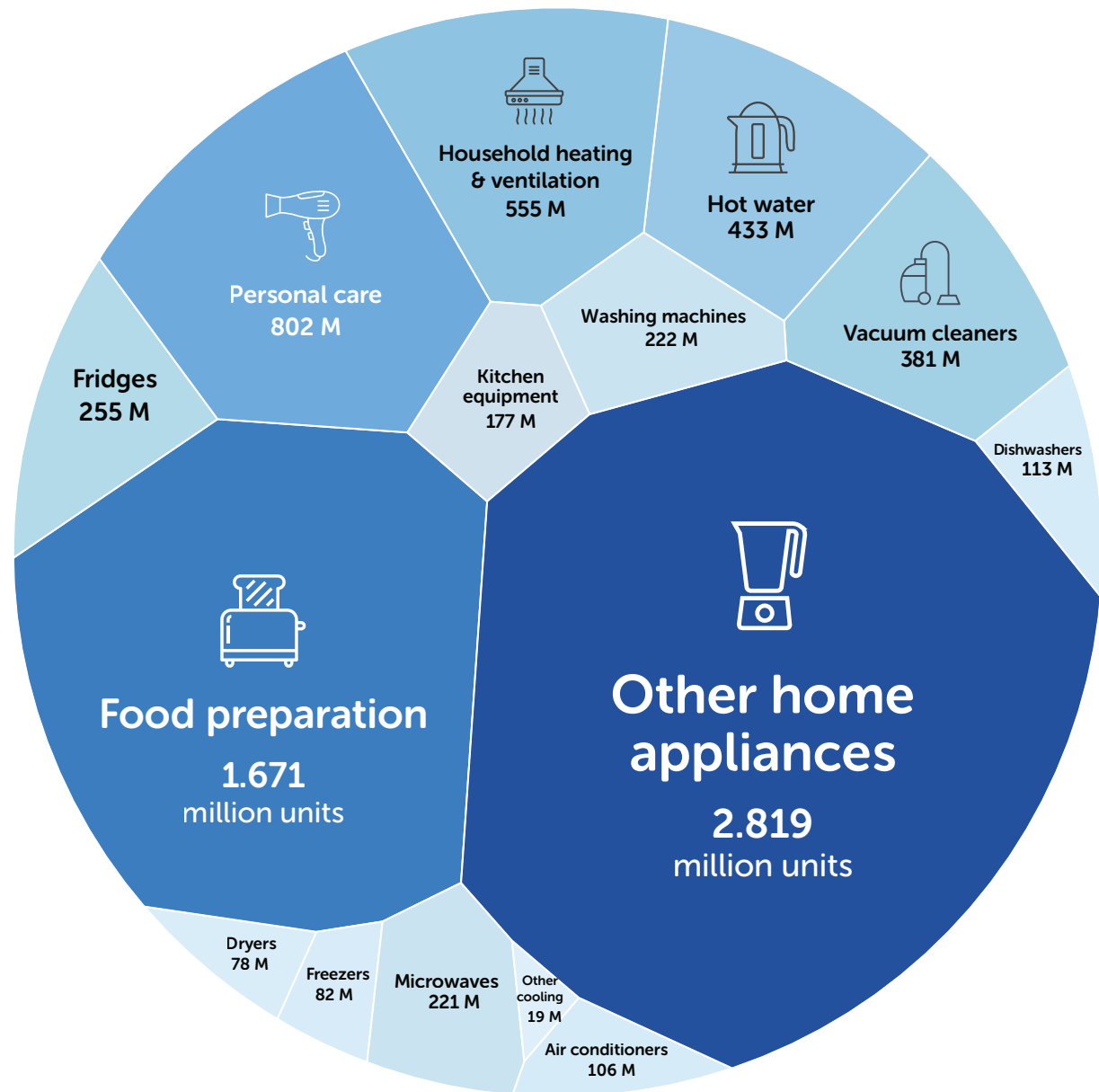


Hoarding of WEEE

Novel statistics on hoarding of used EEE and WEEE stored in households show that households own an average of 74 EEE 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.

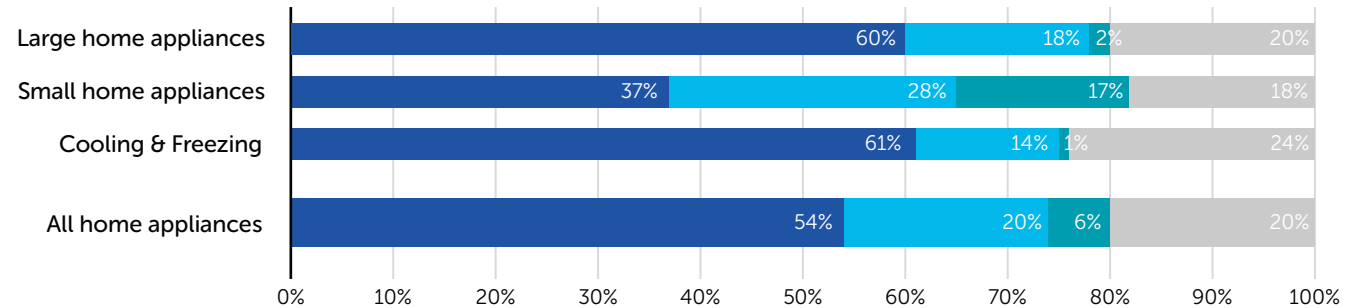
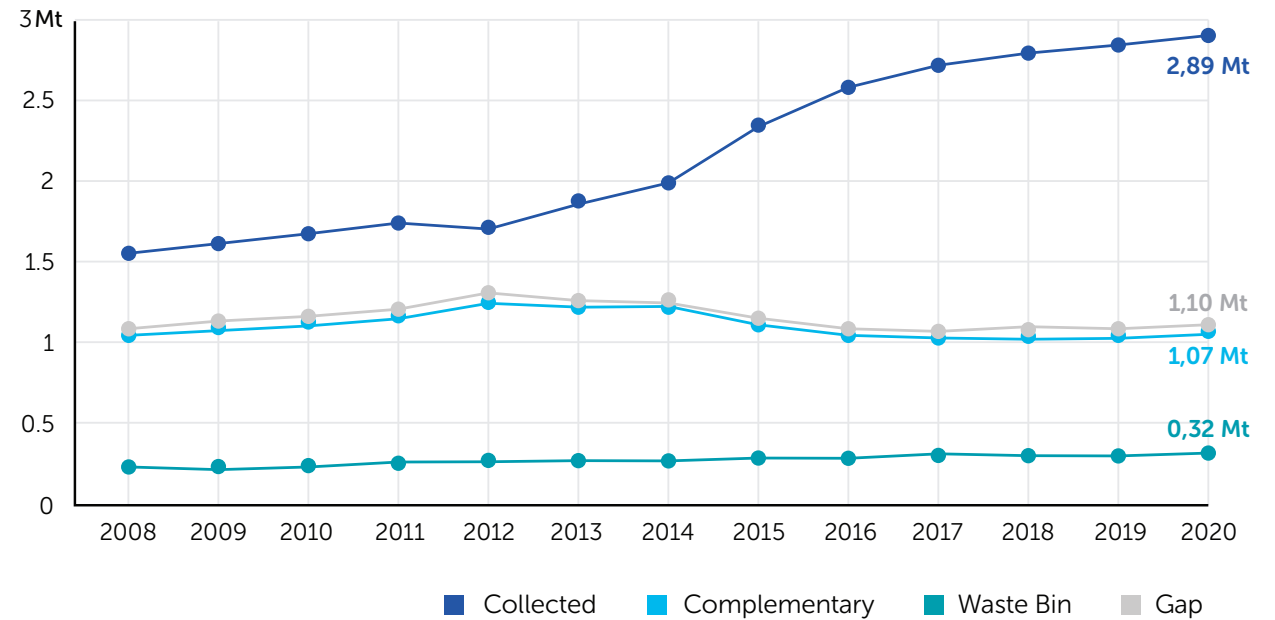
Source: WEEE forum data and dss+ (formerly Sofies)



WEEE flows in the home appliance sector

Once properly recycled, e-waste would help reintroduce precious raw materials contained in discarded products back into the economy, helping to reduce the sector's carbon footprint, while conserving our planet's precious natural resources.

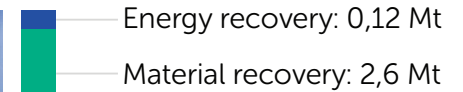
Source: dss+ (formerly Sofies)



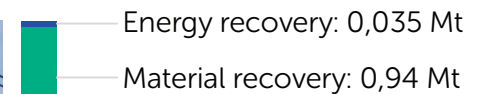
Materials recovered from waste

Source: dss+ (formerly Sofies)

Recovered from industry flows

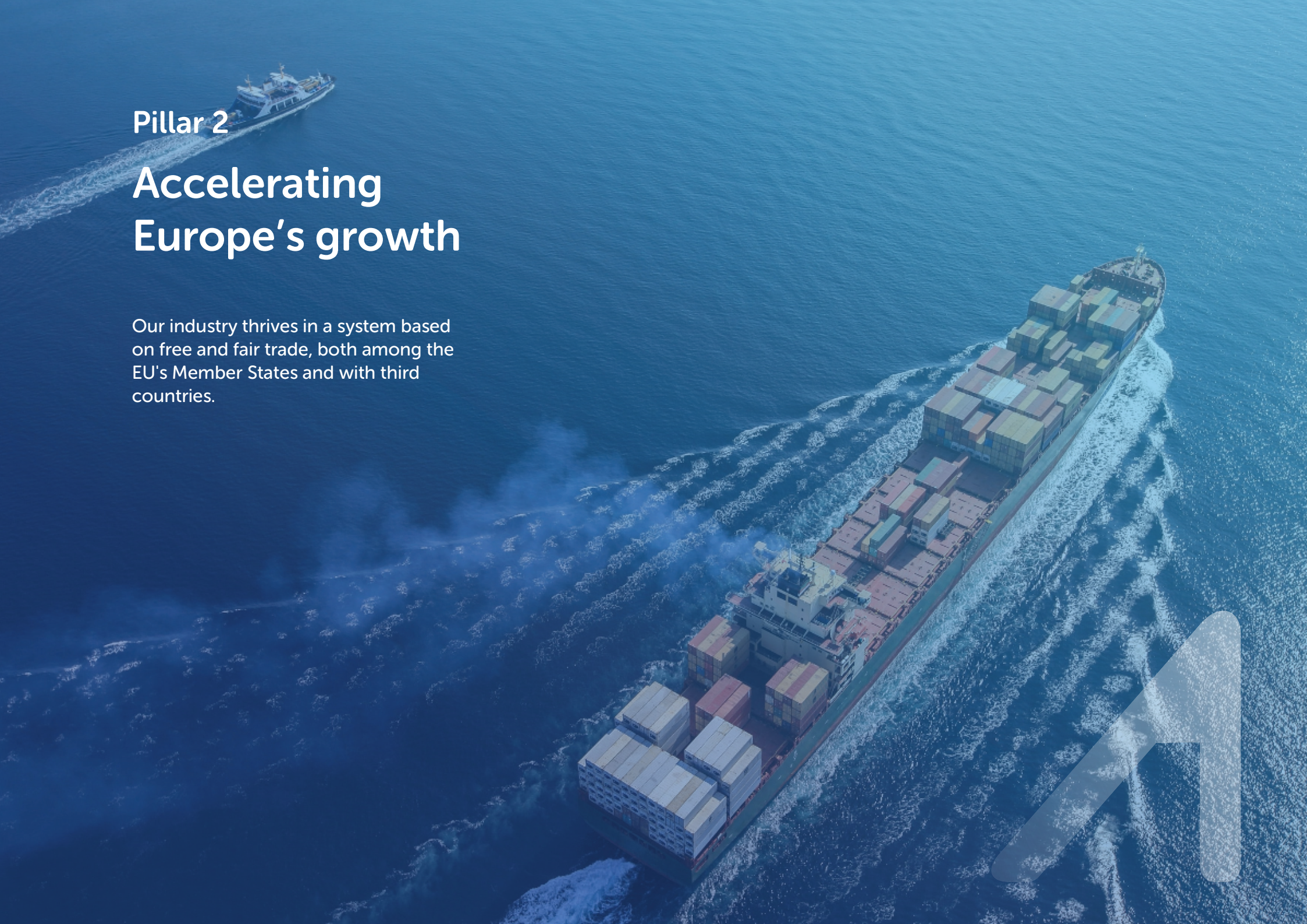


Recovered from complementary flows



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



Pillar 2

Accelerating Europe's growth

Our industry thrives in a system based on free and fair trade, both among the EU's Member States and with third countries.



Europe's economic growth is inextricably linked to its ability to engage in trade, at both national and international level. This is especially true for the home appliance sector, which is highly dependent on exports and imports. The ability to trade freely and efficiently with other countries is critical for the industry's success, as it allows for access to new markets, increased competition, and the potential for greater innovation.

With its 30th anniversary approaching in 2023, the EU Single Market is as important as ever to Europe's economic success. As the sector pushes to advance sustainable lifestyles through increasingly energy-efficient and smart home appliances, obstacles to cross-border trade must be overcome when it comes to varying national requirements. A recent update of 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. A fractured Single Market not only creates a financial burden for companies but also adds to the cost that consumers have to bear. These challenges can hinder the free and cost-effective movement of goods in Europe, in turn, creating fragmentation and uncoordinated responses which negatively impact Europe's competitiveness and its influence on a globalised economy.

As one of Europe's largest manufacturing sectors, the home appliance industry is a leader in innovation and digitalisation. With smart homes set to rise by 400% compared to 2018 levels, smart homes are increasingly becoming the norm in Europe. By embracing flexible demand-side management practices, households can reduce their carbon footprint, save money on energy bills, and contribute to a more sustainable future for Europe. Today's smart homes are equipped with features providing consumers with complete control of their homes energy usage. Once home owners can control and optimise their energy usage, the many advantages of demand-side management can be reached. This involves using appliances during off-peak hours when energy costs are lower, adjusting temperature and lighting settings to reduce energy consumption, and using appliances only when necessary. According to a study run by SmartEN, flexible consumption from energy demand sectors alone could slash consumer bills by 71 billion a year. This approach would empower consumers to make informed and voluntary decisions, encouraging them to use their appliances when it makes most sense, both in terms of cost and energy efficiency.

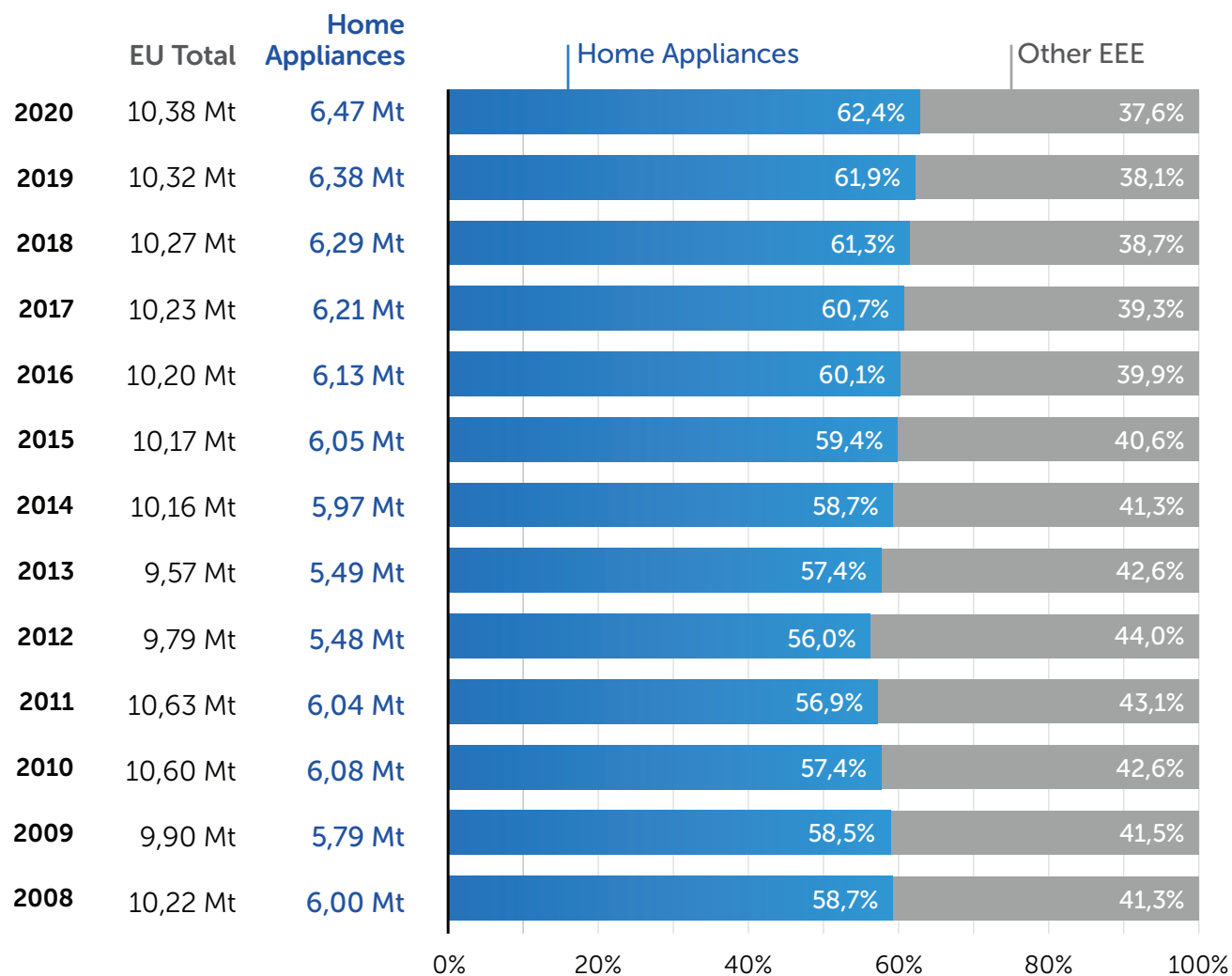
With the number of patents granted for home appliances having doubled in the past decade, new products and innovation have brought new possibilities for energy efficiency. Over the past 20 years, the energy consumption of home appliances has dropped by 50%, with a fridge today consuming $\frac{1}{4}$ of previous energy levels. Imagine what is possible in the next 20 years?



Efficient use of energy has the potential to be a crucial element in the response and recovery efforts found in today's political climate. Governments can strategically plan and incorporate incentives for energy efficiency within their economic stimulus packages. This approach is significant not only for addressing the long-term issue of climate change, but also because energy efficiency can substantially aid in the economic recovery. A surge in demand for more efficient appliances can stimulate the manufacturing industry by generating employment opportunities and lowering overall costs. As a result, the adoption of energy-efficient appliances by households worldwide may increase significantly.

Electrical and electronic equipment placed on the EU market

Source: UNU-VIE SCYCLE



Large appliances sold globally in 2022

Large appliances such as fridges, washing machines and dishwashers are pivotal to the sector generating millions of sales globally each year.

Source: IRHMA



China
112,0
million units



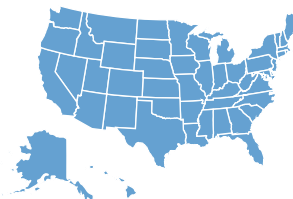
Japan
13,8
million units



Europe
89,1
million units



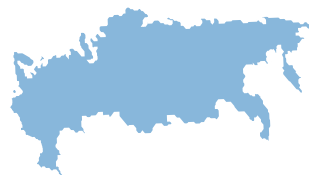
South Korea
7,9
million units



United States
67,6
million units



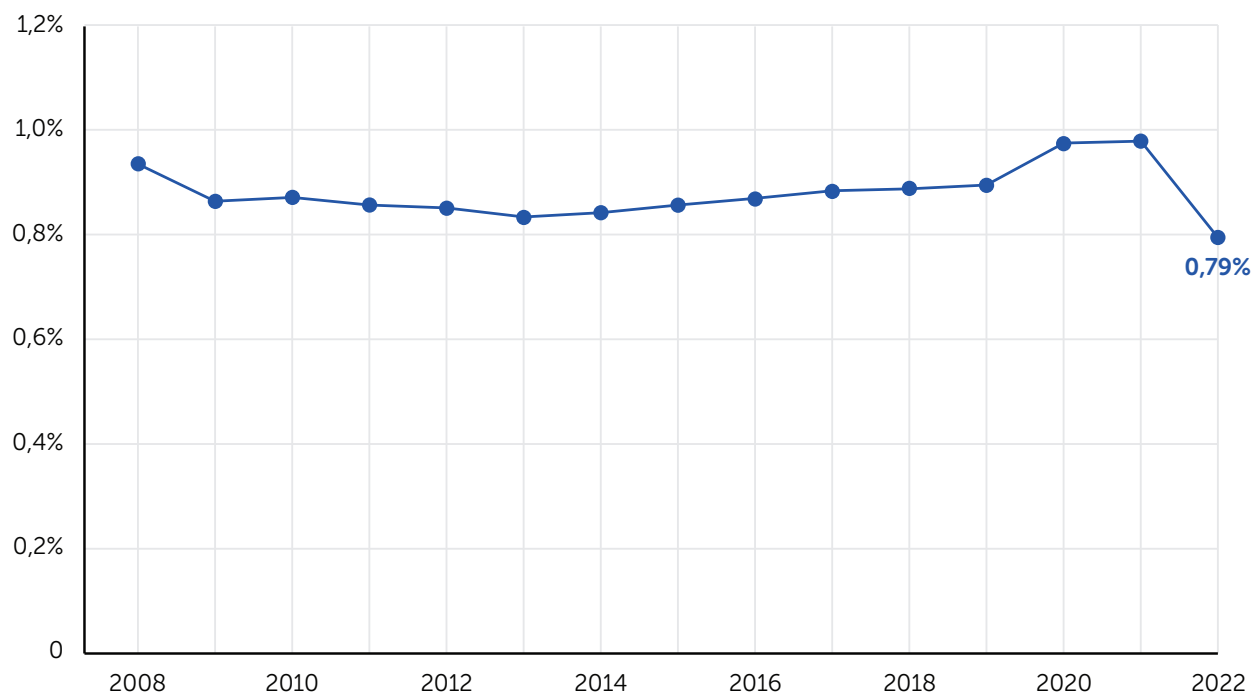
South Africa
2,7
million units



Russia
15,3
million units

Average expenditure of households

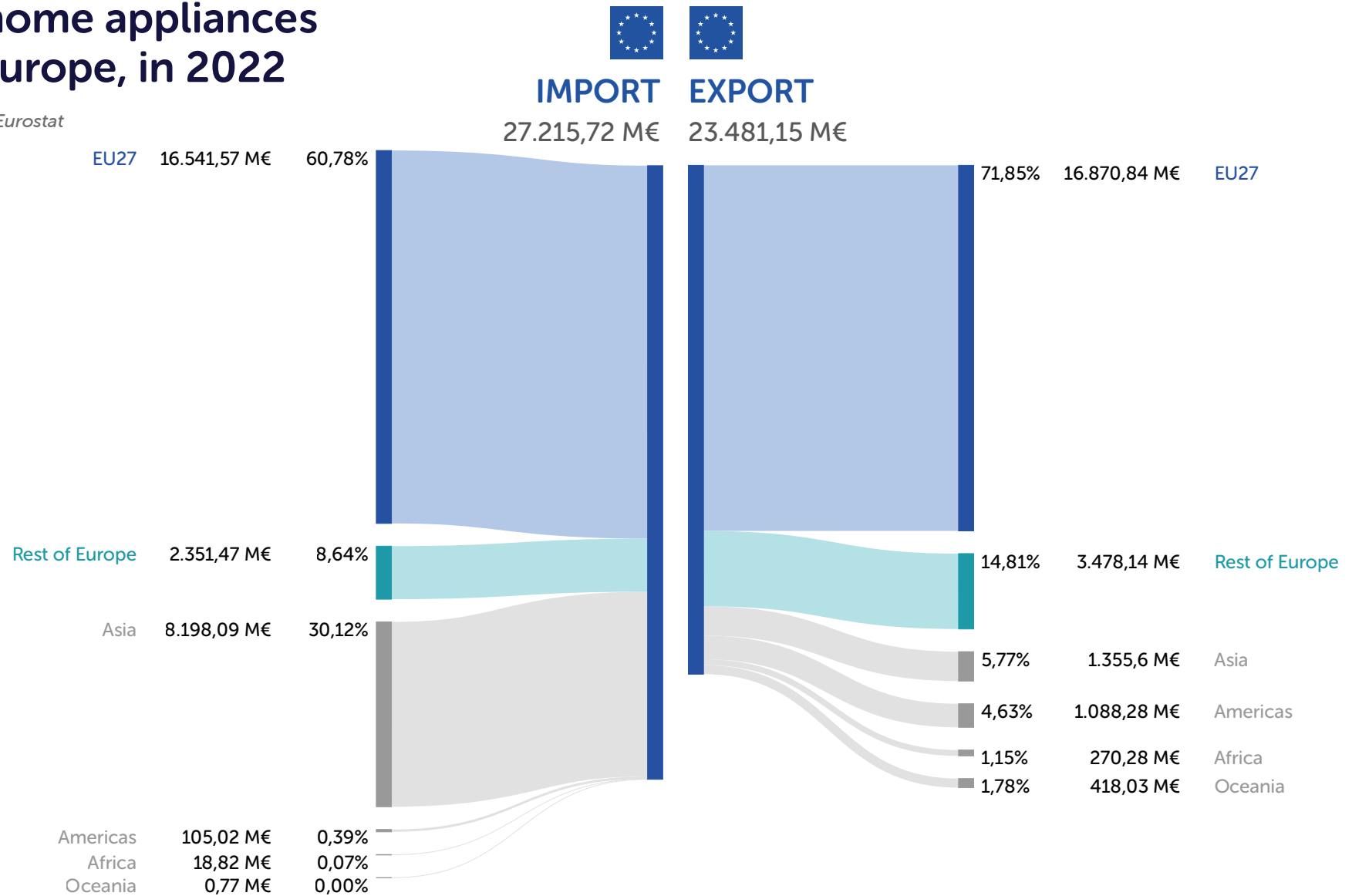
Source: OECD data



APPLiA is a member of the **Coalition for Energy Savings** striving to make energy efficiency and energy savings the first consideration of energy policies. The Coalition advocates energy efficiency as the driving force towards a secure, competitive, sustainable and climate neutral European Union.

Import and export of home appliances in Europe, in 2022

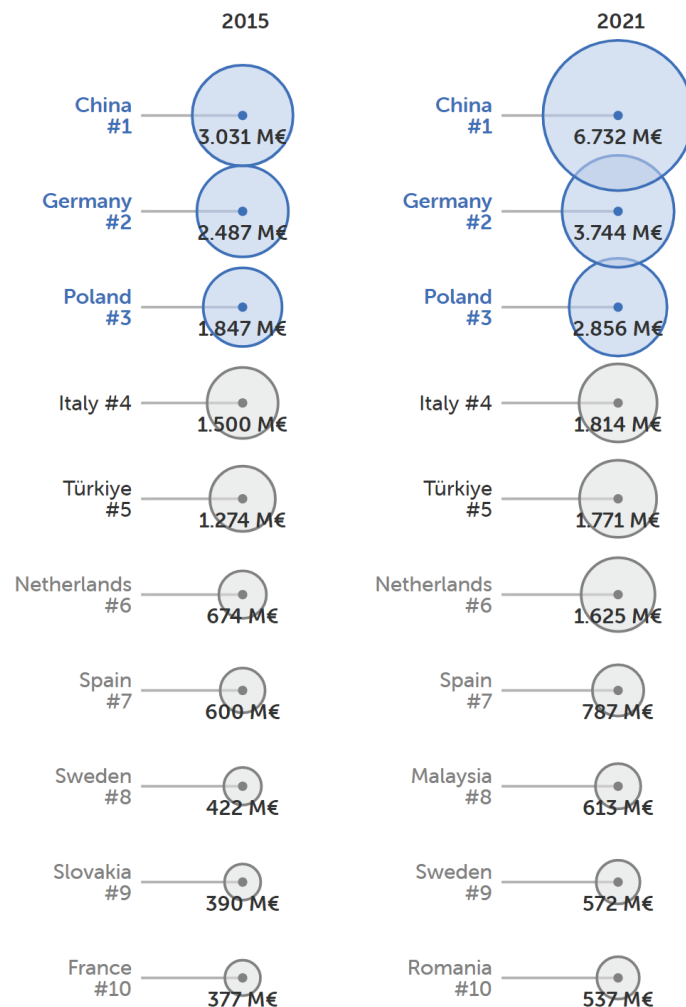
Source: Eurostat



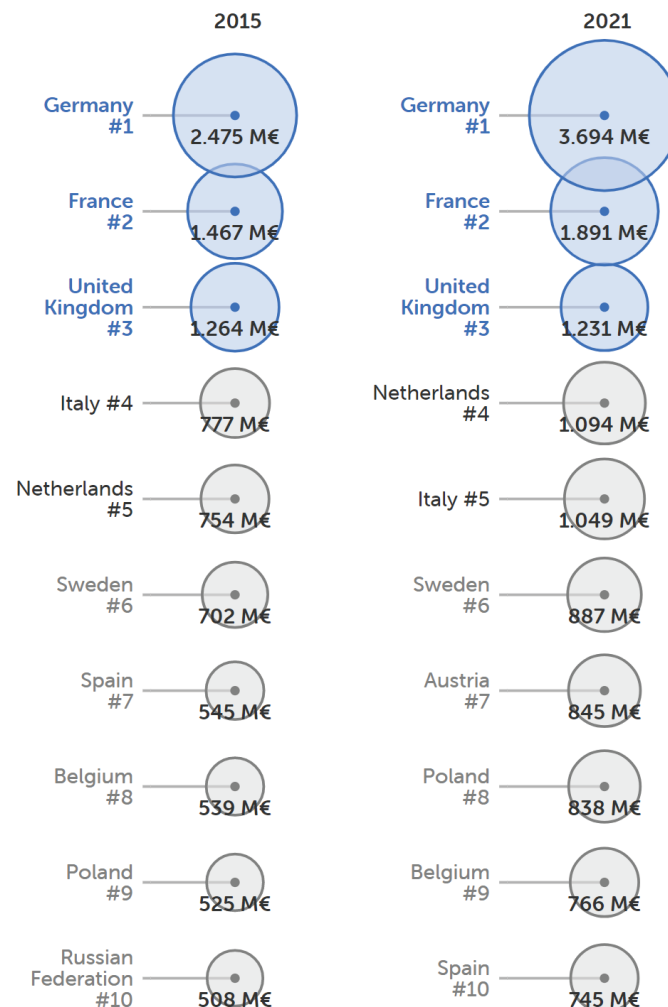
Top 10 import and export countries

Source: Eurostat

Top 10 IMPORT ORIGINS



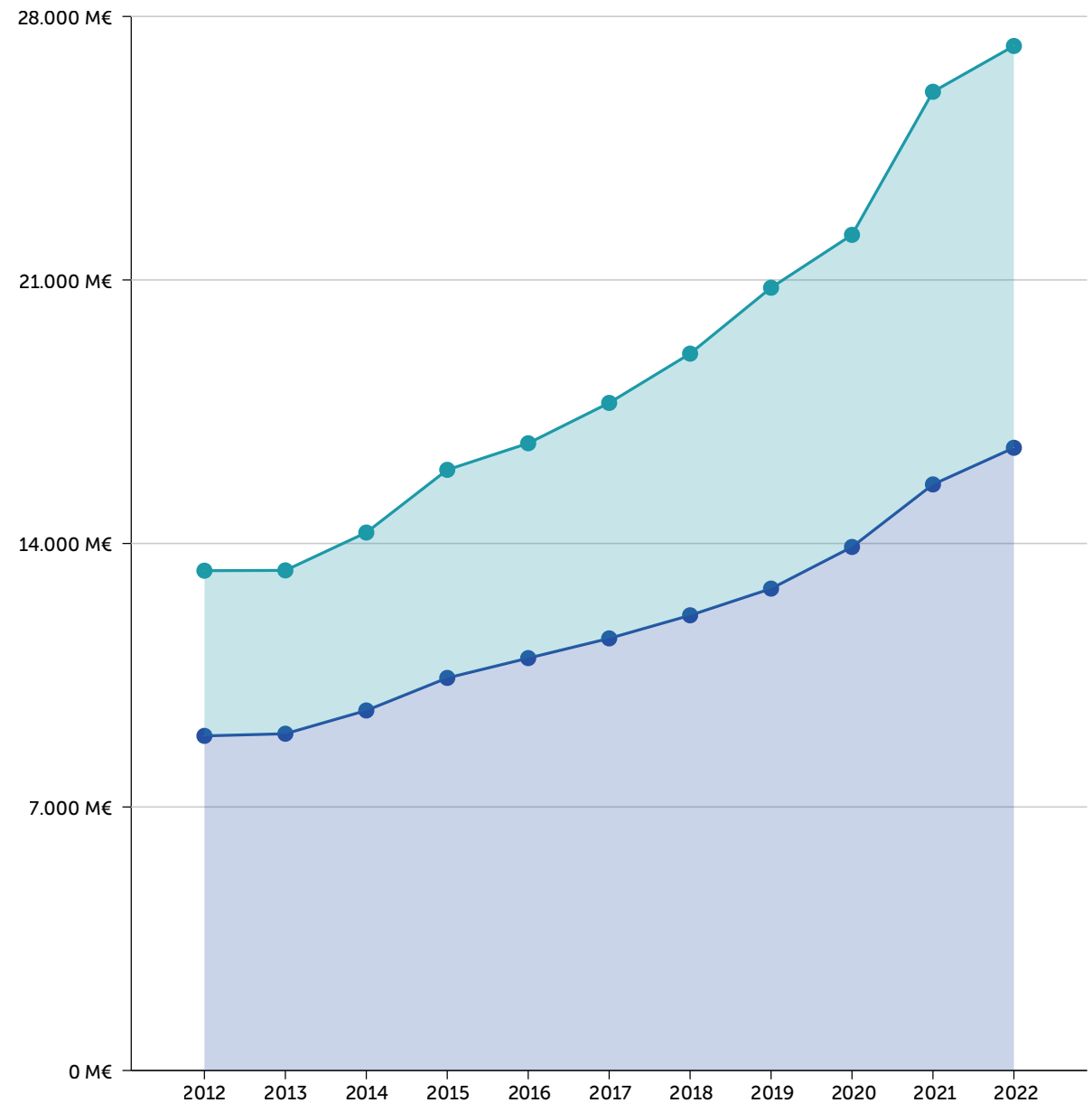
Top 10 EXPORT DESTINATIONS



Evolution of import of home appliances in Europe

Source: Eurostat

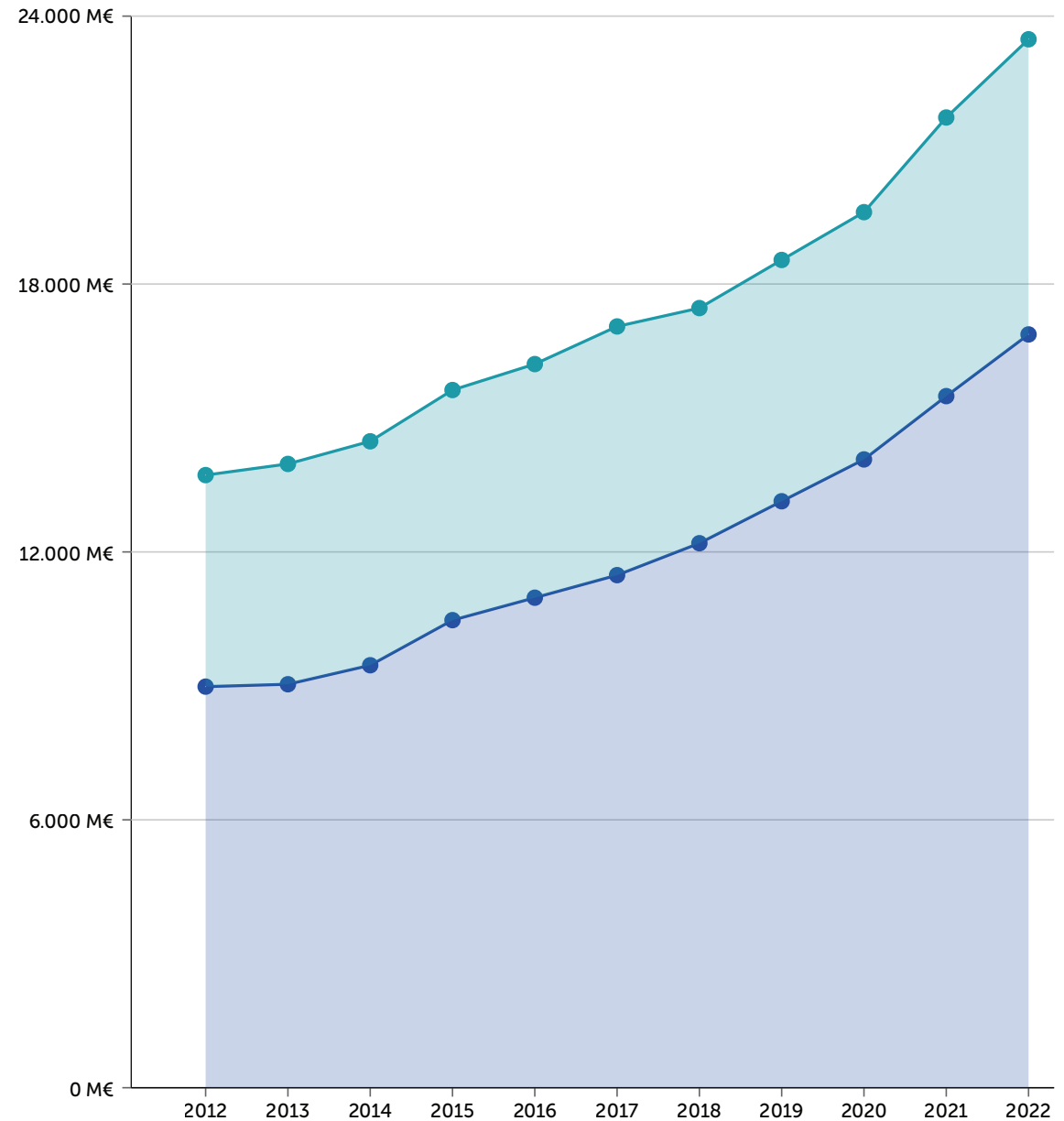
2022	27.216 M€	100%
● European Union	16.542 M€	60,78%
● Rest of the world	10.675 M€	39,23%
Africa	19 M€	0,07%
Americas	106 M€	0,39%
Asia	8.199 M€	30,13%
Oceania	1 M€	0,01%
Rest of Europe	2.352 M€	8,65%



Evolution of export of home appliances in Europe

Source: Eurostat

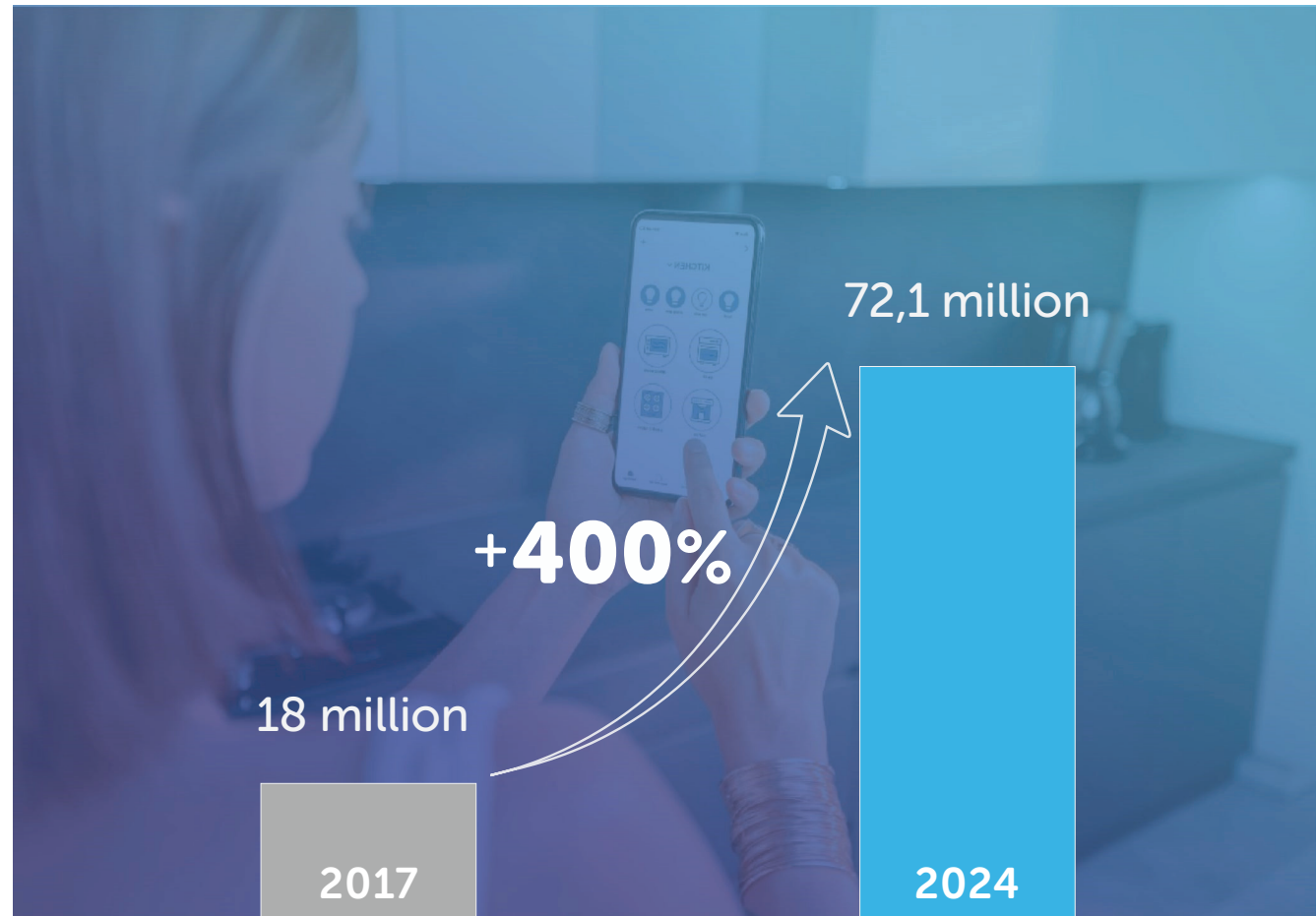
2022	23.482 M€	100%
● European Union	16.871 M€	71,85%
● Rest of the world	6.611 M€	28,16%
Africa	271 M€	1,16%
Americas	1.089 M€	4,64%
Asia	1.356 M€	5,78%
Oceania	419 M€	1,79%
Rest of Europe	3.479 M€	14,82%



Smart homes in Europe

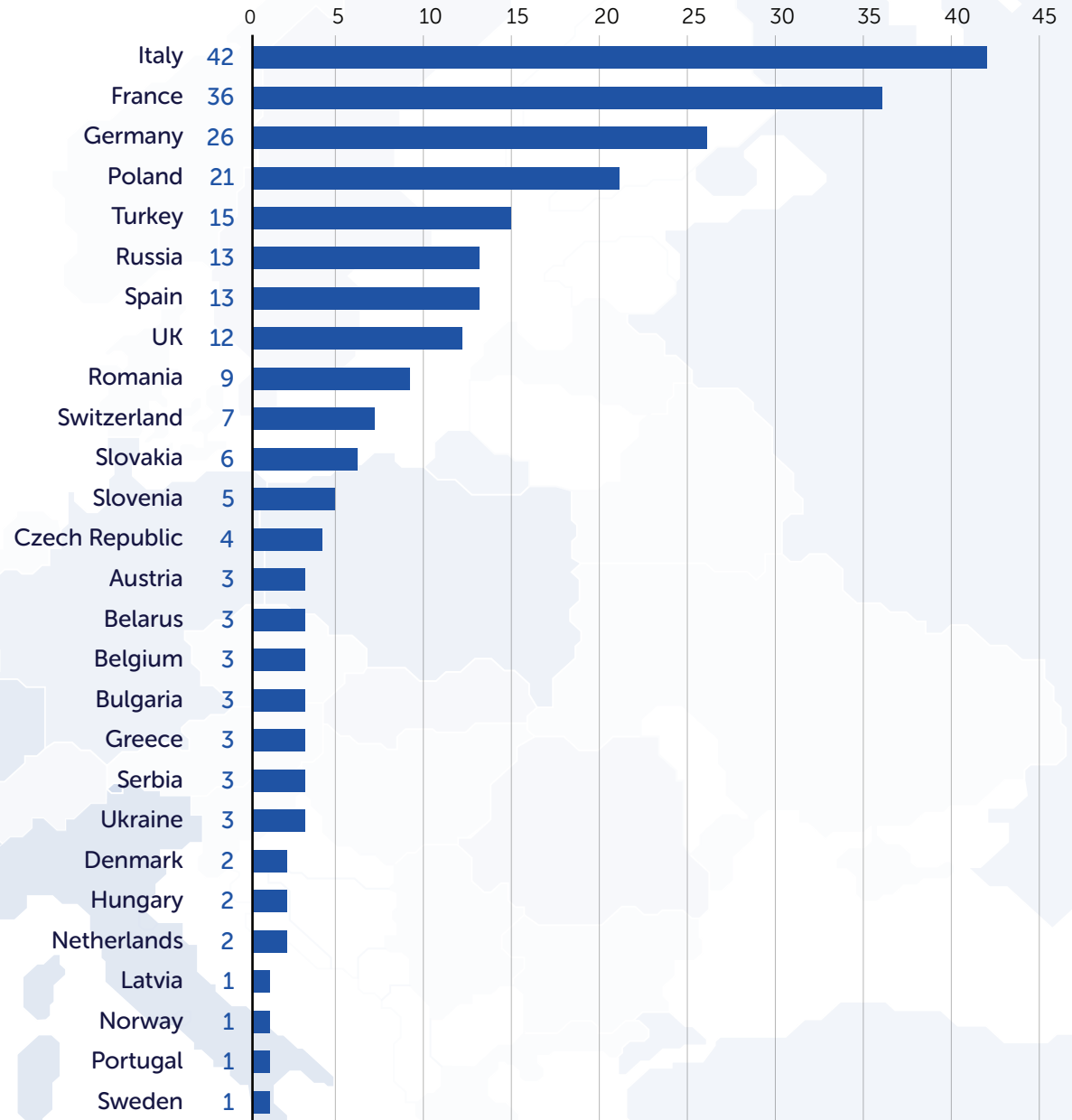
The use of connected appliances in smart homes is gaining popularity among European consumers, with a 400% increase in the number of smart homes expected by 2024.

Source: Statista



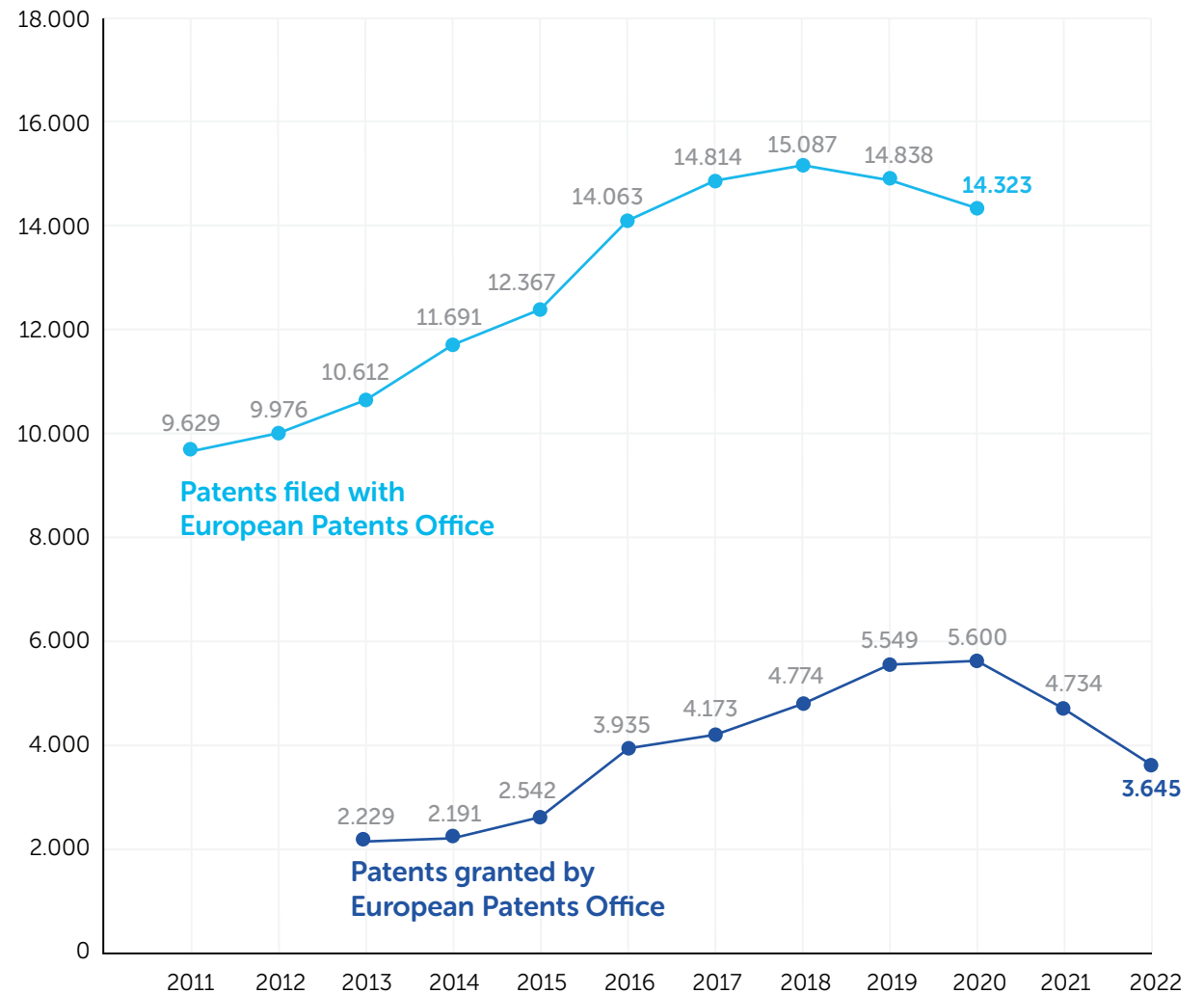
APPLiA Direct Members Manufacturing Sites in Europe, in 2022

As APPLiA membership continues to grow, so does the number of manufacturing sites owned by our members in Europe, helping to stimulate the economy by creating new jobs each year.



Patents filed and granted for home appliances

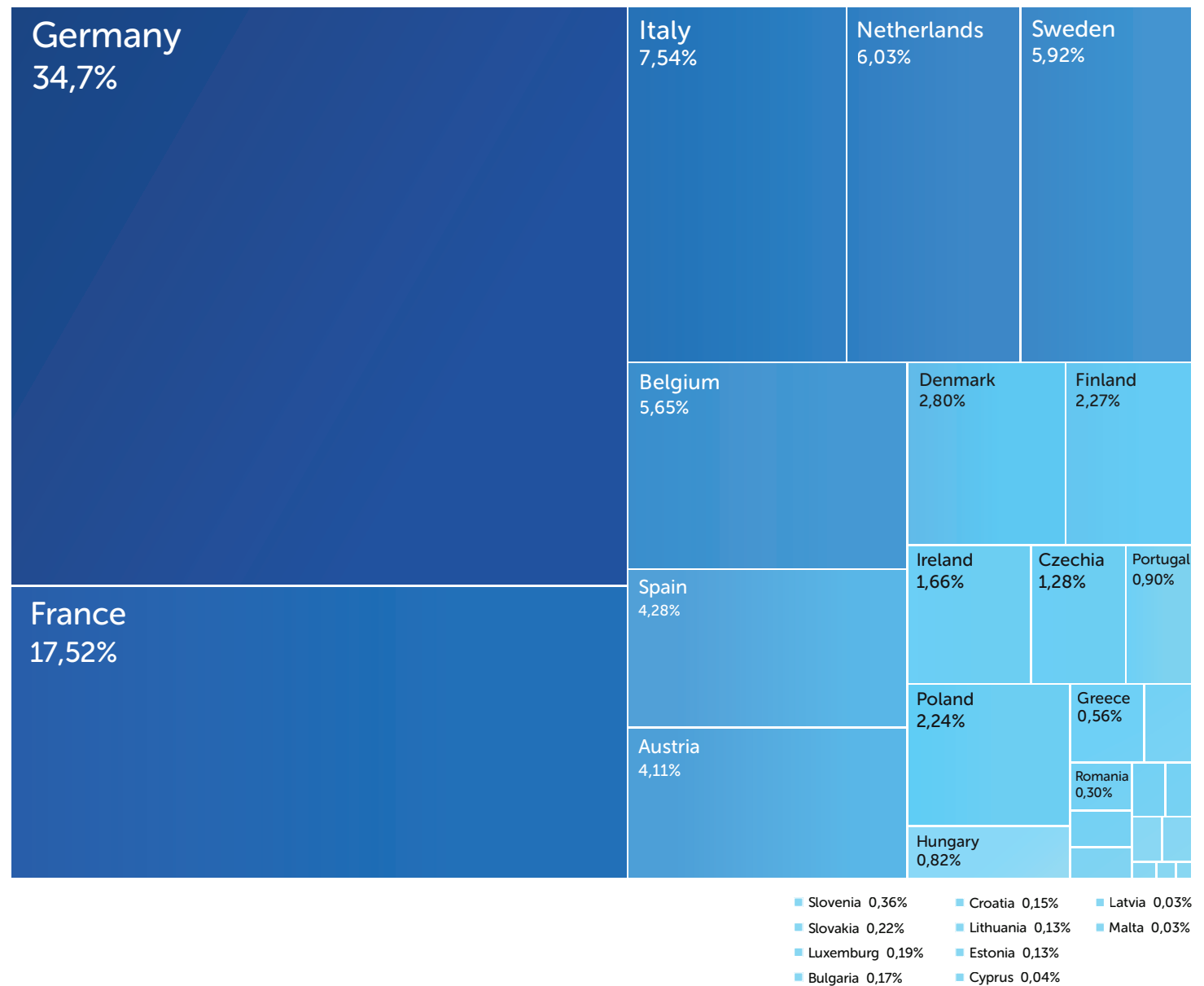
Source: Clarivate Analytics Derwent Innovation



Investment in R&D by EU Member States

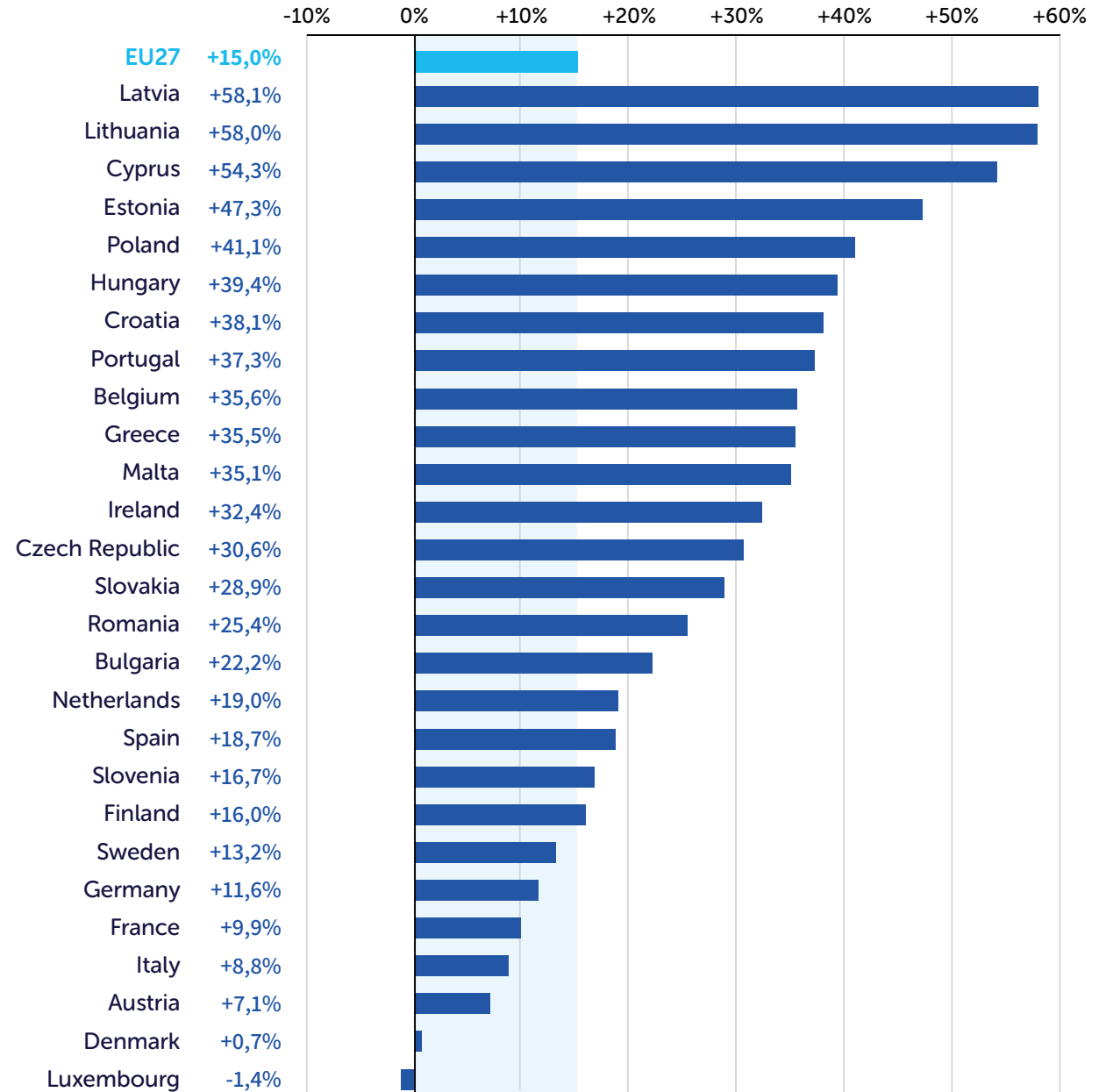
The graph highlights investment in Research and Development (R&D) by EU Member States. Investment in R&D is vital for driving innovation, competitiveness, and economic growth in Europe.

Source: Eurostat



Investment trends in R&D by EU Member States, 2016 - 2020

Source: Eurostat



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