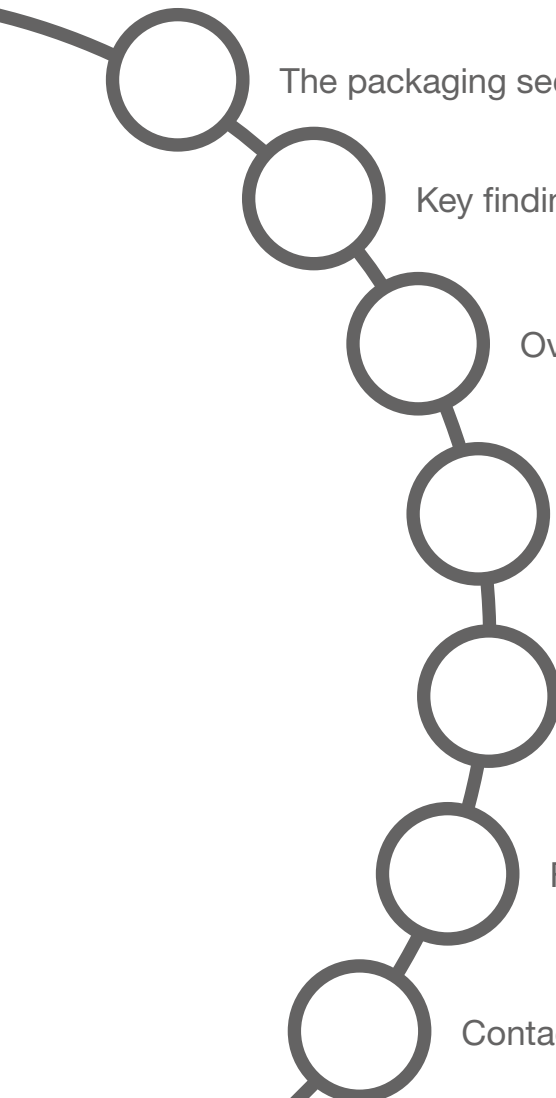


Packaging – going green

How Covid-19 and the quest for sustainability will transform the packaging sector



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The packaging sector in Europe: background and status quo

Defining the packaging sector

Common **materials** in the packaging sector include **plastic, paper and cardboard**, along with other materials such as **glass, metal and wood**. Many companies produce packaging using a diverse set of materials rather than focusing on a single material.

Packaging can be divided into **primary** and **secondary packaging**. **Primary packaging** is in **direct contact** with the product and is designed to protect and contain the product. Primary packaging is also used for **branding** and to **inform** the consumer about the contents. **Secondary packaging** is used to hold several units of a product together. It is primarily used for **transport** and **logistics purposes**.

The packaging sector can also be segmented by **end-user industry**. These include the consumer, pharmaceutical and healthcare, and industrial sectors, among others. Most companies operate in more than one end-user industry.

Sustained interest in the sector among financial sponsors

Financial sponsors continued to show interest in assets in the packaging sector in 2021, **despite the Covid-19 crisis**. The packaging sector is generally **fairly resilient in economic downturns**, and has benefitted from the Covid-19 crisis. This was because closure of restaurants and mandatory working from home increased the **demand for packaged food** and **takeaway packaging**.

Increased demand, supply chain disruption, and increased energy and transport prices have led to raw material shortages and cost increases in some segments in recent months. This may have an impact on issues such as postponed M&A plans in the coming months.

Sustainability is having a major impact on the market

In recent years, **innovation and technological advancements** in the packaging sector have increasingly been addressing the growing demand for more **sustainable packaging**, a demand resulting from increased awareness of **waste**. This trend towards sustainability is having a **major impact** throughout the **packaging value chain** – from sourcing more **sustainable products** and adapting **process solutions** to improving **product recyclability**.

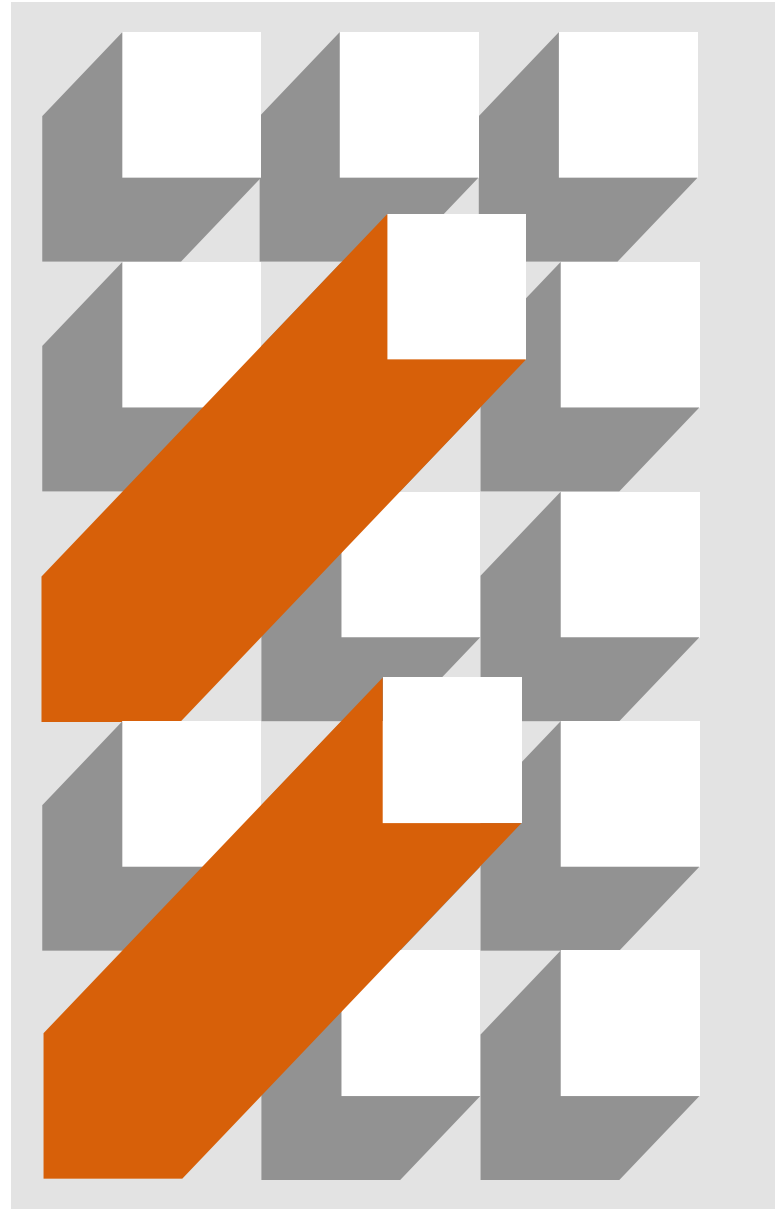
In line with this trend, **regulations are being tightened**, with the aim of increasing recycling and reducing the use of **single-use plastic packaging**.

Scope of analysis

We analysed **725 M&A transactions** in the packaging sector in **Europe** from **January 2015 to September 2021**. Assets were classified by their **main packaging material**. The number and value of the deals stated in this study are approximate and may differ from the exact values.

A **survey of >500 consumers** was also carried out and evaluated to explore **end consumers' understanding of sustainability** and whether or not purchasing habits have changed.

Lastly, we also conducted **interviews** with market participants across different end-user industries and materials.



Key findings

Trends in the packaging sector include convenience, sustainability, premiumisation, personalisation and tech-enabled packaging.

Key trends in the packaging sector include increasing **convenience** (e.g. resealable food containers, multipack packaging) and a growing need for **sustainable packaging** (e.g. less material, less waste, biodegradable materials). To succeed in the packaging sector, it is important for companies to develop solutions that address both trends.

End consumers also increasingly expect a **premium product appearance**, with eye-catching designs and special labels.

Other trends include a focus on **personalisation** and creating interactive user experiences. **Smart packaging** can be used to further develop the user experience.

Sustainable raw materials and recyclability are no longer enough; companies need end-to-end solutions across the entire value chain.

Instead of only looking at materials, companies need to focus on **end-to-end solutions for the entire value chain**.

Environmentally-friendly packaging starts with **sourcing the right materials** – e.g. biodegradable or recyclable materials – but also includes **developing lean operations and manufacturing** to meet targets such as reducing emissions, along with **sustainable distribution** of goods. This can be used as a **selling point** to help **environmentally conscious buyers differentiate** a company from its competitors.

Consumers are changing their purchasing habits to favour sustainably packaged products.

Price remains the number one influence on consumer purchasing decisions, but sustainability of the product or packaging is **becoming increasingly important**. Consumers associate sustainable packaging with **refillable containers, no plastic, regionally sourced ingredients and recyclability**.

A majority of consumers (58%) try to use **sustainably packaged products on a regular basis**, with 28% exclusively buying sustainably packaged products. Consumers **prefer alternatives to plastic**, such as paper/cardboard or glass, and are sensitive to **unnecessary packaging**.



Purchasing habits are changing, and 57% of consumers are willing to **pay more for sustainable packaging**. On average, consumers are willing to pay a **5.8% premium**.

European M&A activity and private equity investment in the packaging sector remains high.

European **M&A activity in the packaging sector** has been **high**, with more than 100 deals p.a. in most years between January 2015 and September 2021, and there are no signs of this slowing down. The sector's **resilience** to economic downturns and its **large markets** have attracted financial sponsors. Large quantities of dry powder will **continue to drive** acquisitions in the packaging sector.

Additionally, the impact of **Covid-19** on overall deal volume in Europe was **minimal**; **M&A in plastics** even experienced **positive development** (YoY growth 2019–2020: 2.4%).

France was the most important country for M&A transactions in the European packaging sector, accounting for more than 14.3% of transactions, closely followed by Italy (14.1%), the UK (14.1%) and Germany (12.3%).

Regarding packaging materials, our analysis shows that European M&A activity is **increasingly centring around plastics** (CAGR 2015–2020: 9.8%). Despite the trend towards increased sustainability, the **use of plastic** as a packaging material is **growing**, as it offers **benefits** in terms of **weight, usage and recyclability**.

Innovation, high quality and lean operations are key success factors for packaging companies.

Going forward, assets in the packaging sector should focus on **sustainable end-to-end solutions** with the right raw materials and lean operations, along with producing **top-quality products**.

Digitalisation is important factor, to remain **agile, flexible and responsive** to market trends. Companies hold focus on **innovating to improve customer experience**, facilitated by **big data and analytics**.


The **push towards green packaging** comes from **multiple stakeholders**, including brand owners, retailers and consumers. This drives innovation and market growth, and offers differentiation potential for packaging manufacturers.

In short: there is no way around going green!



Our analysis of the packaging sector focuses on European M&A activity from January 2015 to September 2021

Scope of analysis

Field of analysis	 Transactions			
Region	Europe			
Timeline	January 2015–September 2021			
End-user industry	Consumer goods	Pharma & Healthcare	Industrial	Other ¹
Type	Primary packaging (Packaging in direct contact with the product)		Secondary packaging (Packaging that holds together individual units of a product, for logistical purposes)	
Material	Paper and cardboard	Plastic	Diverse	Other ²

Focus of our analysis

¹ Includes e.g. the automotive sector.

² Includes materials such as glass, metal and wood.

Source: Mergermarket (2021)

Consumer packaging manufacturers must find ways to satisfy expensive trends despite price pressure

Expert interviews – key trends and challenges in consumer packaging

“**Sustainability** means different things to different stakeholders, which is why it is difficult to find a universal understanding of the topic. It might involve **bio-based or compostable materials, recyclable materials, responsibly sourced materials, a lower lifecycle carbon footprint** etc.”

“The **biggest current trend** is **mono-materials**. The retail sector wants a packaging solution that consists of a **uniform material**, that has generated as **little CO₂** as possible, and that has **good recyclability** to increase **sustainability**. Recyclability is very important, especially in the German market, and there is high demand for recyclability from end consumers especially in Germany.”

“For **products like shampoos** in FMCG, a lot of emphasis is placed on printing and **premiumisation**, such as **embossing**. But **labelling of information** is also important, since these products come into direct contact with humans.”

“**Manufacturers** must find clever ways to **increase prices** and **fight the price pressure**. This could happen in various different ways – for example, by offering additional **product add-ons**, such as special **premiumisation** or **beautification**.”



Sustainability, premiumisation and convenience are key trends in consumer packaging ...

Key trends and challenges of consumer packaging



Sustainability

- **Brand owners** are increasingly introducing **sustainable products** with **recyclable packaging** in response to **rising environmental awareness among consumers**.
- Packaging manufacturers need to **develop sustainable solutions** – e.g. using **sustainable raw materials** and more efficient production processes – while also offering competitive prices.
- **Packaging-free/zero-waste stores** are becoming increasingly popular, due to growing awareness of the **environmental consequences** of waste and pollution.



Premiumisation

- To make their **products stand out** on the shelves, brand owners incorporate **eye-catching designs** into their packaging, with **costly embellishments**. These include **metallic effects** or **embossing** on labels and **innovatively shaped** packaging.
- **Packaging manufacturers** need to **create packaging with a high-end appearance** to meet consumer expectations of an **increasingly premium look**.



Convenience

- **Consumers** place **high demands** on packaging in terms of **convenience**. This includes packaging for **easy product transportation**, or packaging that is **easy to open** and **reseal** to guarantee product freshness.
- Consumer demand for convenient packaging therefore requires manufacturers to **adapt the packaging** depending on how the product is **consumed**.

... while security, food safety and cost pressure are the major challenges for packaging manufacturers



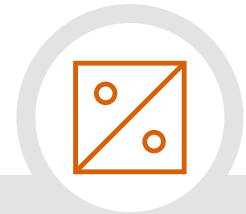
Security and functionality

- Due to rising concerns around counterfeit products and growing information disclosure requirements, brand owners need secure and functional packaging, with features such as near-field communication (NFC) chips or holograms.
- Increased security and functionality significantly increases prices of packaging.



Food safety and hygiene

- Packaging needs to meet food safety and hygiene requirements – e.g. puncture resistance, safe inks and glues.
- In light of the Covid-19 pandemic, consumers increasingly want packaging which enables products to be handled hygienically.



Cost pressure

- Despite key trends increasing the price of packaging (e.g. sustainability, premiumisation, security), consumers want competitive prices.
- Packaging manufacturers therefore need to offer premium products despite cost pressure to stay competitive.

Innovation is key for differentiation and can happen anywhere in the product value chain – not just at product level

Innovative packaging – examples



Sustainability



Paper-based packaging – e.g. paper bottles, tubes, pouches

Biodegradable or compostable materials – e.g. based on sugar cane, grain or maize

Refillable packaging – a development being driven by packaging-free stores



Premiumisation



Attractive designs for a **premium look** are becoming increasingly important.

Premium **functionality** provides extra value for consumers – e.g. greater ease of use.

Rise in **digital printing** allows mass customisation and visually attractive products.



Convenience



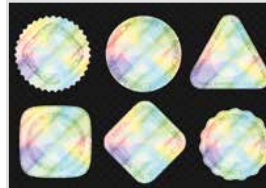
Lightweight and portable packaging for consumption on the go.

Portion control packaging, as consumers are increasingly **health-conscious** and **convenience-driven**.

Food waste prevention with simple **resealable packaging**



Security and functionality



Smart labels and IoT – e.g. to prevent spoilage of products

NFC chips and holograms for **authentication** and to prevent **counterfeiting**

RFID labels for **monitoring inventory** to ensure **security and quality** of stock



Food safety and hygiene



More information and greater security needed on labels for food or other products

Modified atmosphere packaging to improve shelf life of fresh food products

New protective materials to avoid use of **hazardous substances**

Manufacturers need to focus on end-to-end solutions to reflect sustainability throughout the value chain, not just in the raw materials

Deep dive: sustainability

Aspect of sustainability	Raw materials	Production	Logistics	Recycling
Description	<ul style="list-style-type: none">To increase sustainability, materials should be recyclable, reusable, and/or biodegradable/compostable.Eliminating unnecessary packaging or using thinner material also reduces the amount of material used.	<ul style="list-style-type: none">Sustainable production should be as efficient as possible, using clean production technologies to reduce waste and minimise consumption of energy, water and raw materials.	<ul style="list-style-type: none">Logistics processes should be as efficient as possible to reduce the product's carbon footprint.Locating plants close to customer sites can help: this increases flexibility and reduces logistics costs.	<ul style="list-style-type: none">Recyclability of packaging materials is a key sustainability issue. Generally, mono-materials are easier to recycle than composite materials, which may be hard to separate from each other.
Interview quotes	<p>“Sustainability means avoiding, reducing and changing. Unnecessary material such as plastic lids on coffee cups or yoghurt pots can be avoided. Using thinner packaging reduces the amount of material required, and changing materials could mean using PP¹ instead of aluminium for lids.”</p>	<p>“The cost of inventory and waste can be minimised with good inventory management and just-in-time delivery. End-to-end solutions reduce energy consumption and waste, resulting in more sustainable production.”</p>	<p>“Geographical proximity to the customer is becoming more important due to sustainability issues.”</p> <p>“Global customers usually prefer a global packaging manufacturer with a local presence in each region.”</p>	<p>“We define a product’s sustainability in terms of its recyclability. Looking at the big picture, it is very important that products meet a high standard of recyclability, which is best achieved with mono-packaging.”</p>

Sustainability is a multi-faceted concept, encompassing the entire value chain from raw materials to production, logistics and recycling.

¹ PP = polypropylene

End consumers and retailers want sustainable consumer packaging from brand owners, but their willingness to pay is still low



Expert interviews – willingness to pay

“Consumers’ willingness to pay for sustainable solutions is fairly limited. If consumers are confronted with two identical products – one traditional and one sustainable – they tend to make an emotional decision and choose the cheaper one, as they focus on the content which is essentially the same. For brand owners, it is quite a challenge to successfully convey the added value of sustainable packaging to the consumer.”

“The dairy sector is a very competitive market where price is the key factor. Consumers, especially in Germany, are extremely price sensitive. Even if studies repeatedly show that consumers are willing to pay more for sustainability, the reality is different. Consumers usually cannot tell which type of packaging is more eco-friendly, even if they are willing to spend more money on it. Many companies put ecological slogans on their products or use eco-labels, which is very confusing for consumers, as they cannot tell that the slightly higher price is due to eco-friendly packaging.”

“Regarding consumers and especially retailers, there is very limited willingness to pay for sustainable solutions. Retailers usually expect their suppliers to bear the underlying costs for efforts to make flexible packaging more sustainable.”

“Of course, the willingness of end consumers to pay for sustainability is a huge issue. We would have to pass the higher costs on to consumers, but I think that most of them would not be willing to pay a higher price for sustainable packaging.”

While price remains the most important criterion, sustainability is increasingly important to consumers

Product features and attitudes to sustainability

How important are the following product features for consumers?

Importance (1 = not important, 5 = very important)



Changing attitudes to sustainability

Which packaging features are important to you when selecting a product?



What do you understand by “sustainable” packaging?

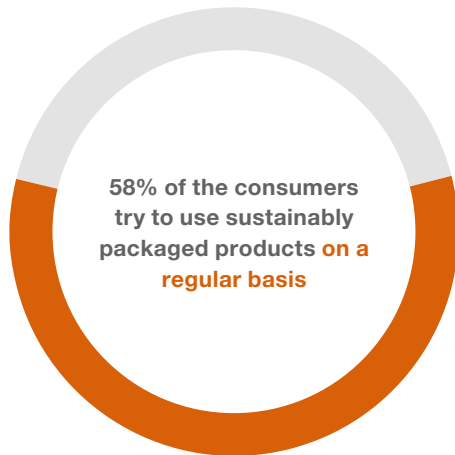


How has your attitude towards sustainable packaging changed in the last 12 months?



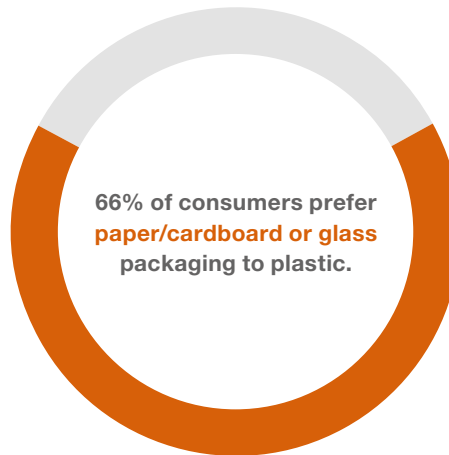
Consumers are making a conscious effort to buy sustainably packaged goods ...

Importance of sustainable packaging and alternative materials/buying habits



58%

Many consumers either regularly (58%) or sometimes (49%) take the sustainability of the packaging into account when buying a product. A further 28% said that they **only buy sustainably packaged products**.



66%

Consumers are trying to buy **more consciously** by choosing more **sustainable alternative materials** (66%), buying products with **reusable packaging** to reduce waste (64%) and by purchasing products in **larger packs** (53%).



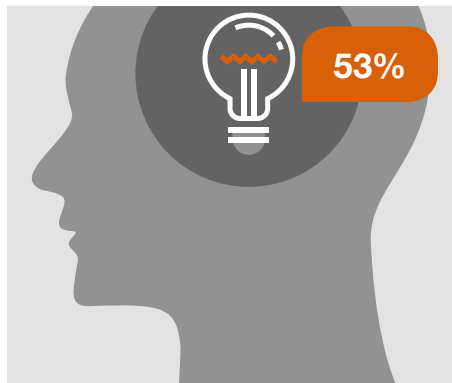
88%

When choosing products, consumers pay particular attention to avoiding **unnecessary packaging** (88%) and **plastics** (75%). The vast majority of consumers (84%) also try to choose products with **recyclable packaging**.

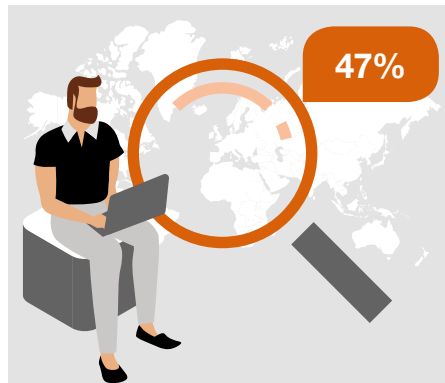
... reflected in their choice of reusable materials, avoidance of excess packaging and increasing willingness to pay

Purchasing habits are moving towards a greater willingness to pay for sustainable packaging

Consumer buying habits are changing



My awareness of sustainable packaging has **increased slightly/a lot** in the past 24 months.



I am paying more attention to sustainable packaging **because of the pandemic**.



I am currently willing to pay **higher prices** for sustainable packaging.



In the next twelve months, I will spend **more** on sustainable packaging.

Greater willingness to pay for sustainable packaging

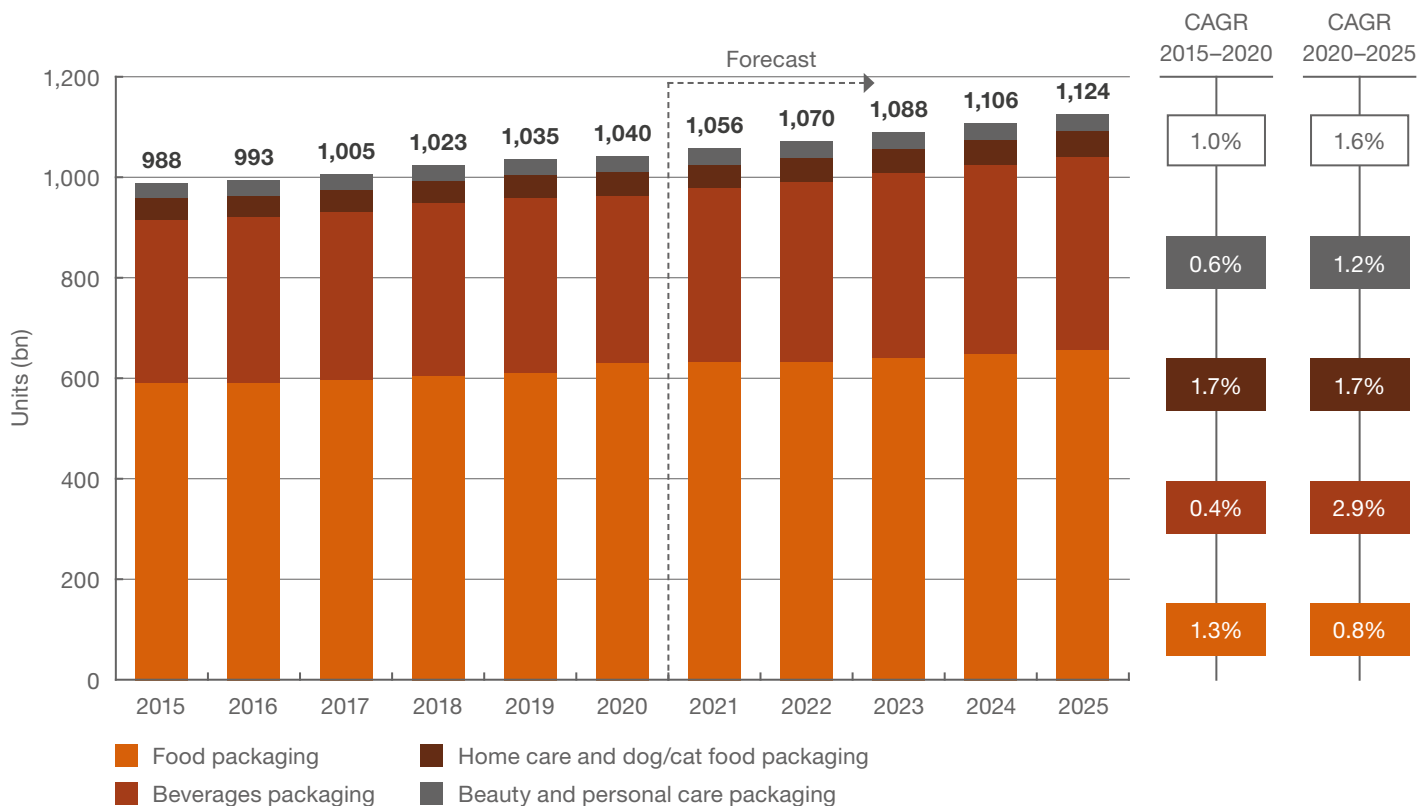


On average, consumers are willing to pay a **5.8% premium** for sustainable packaging.

Food and beverages are the leading industries for consumer packaging, accounting for circa 92% of total market volume

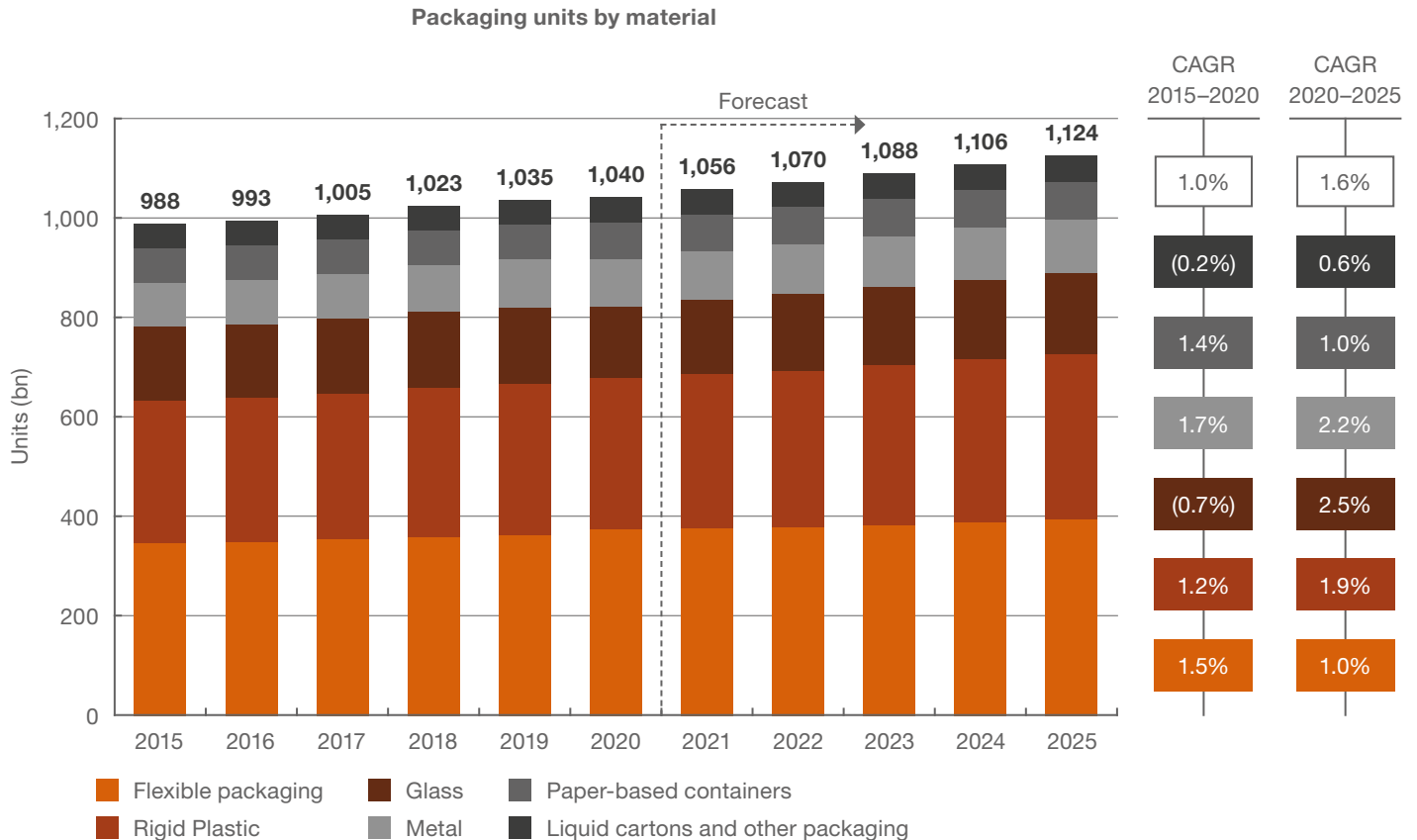
Packaging sector in Europe – Packaging units, 2015–2025

Packaging units by end-user industry



Source: Euromonitor

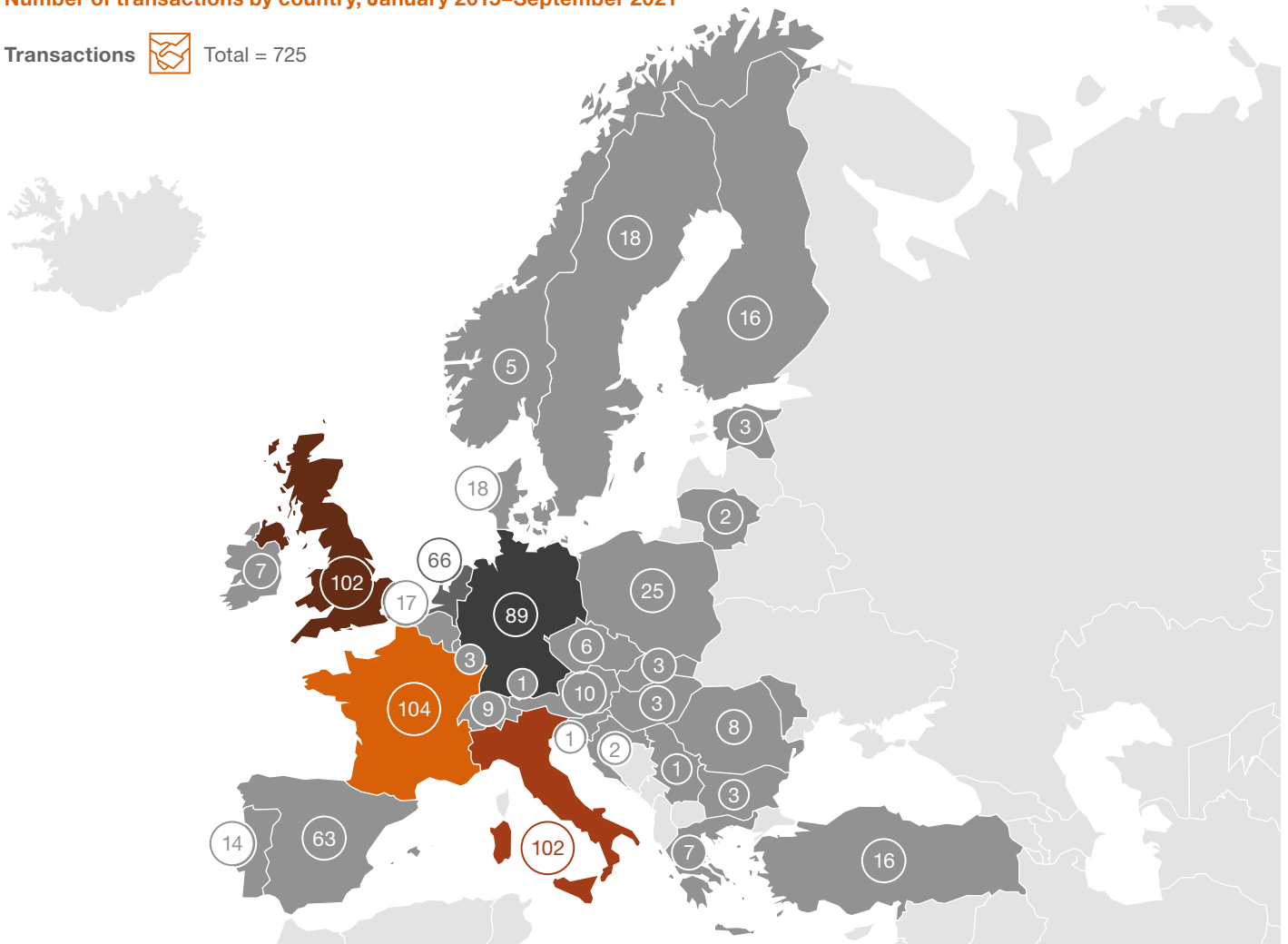
In terms of materials, flexible packaging and rigid plastics are the most widely used materials; metal packaging has experienced strong growth historically



France, Italy, the UK and Germany have been the frontrunners in European packaging sector M&A activity in recent years

Number of transactions by country, January 2015–September 2021

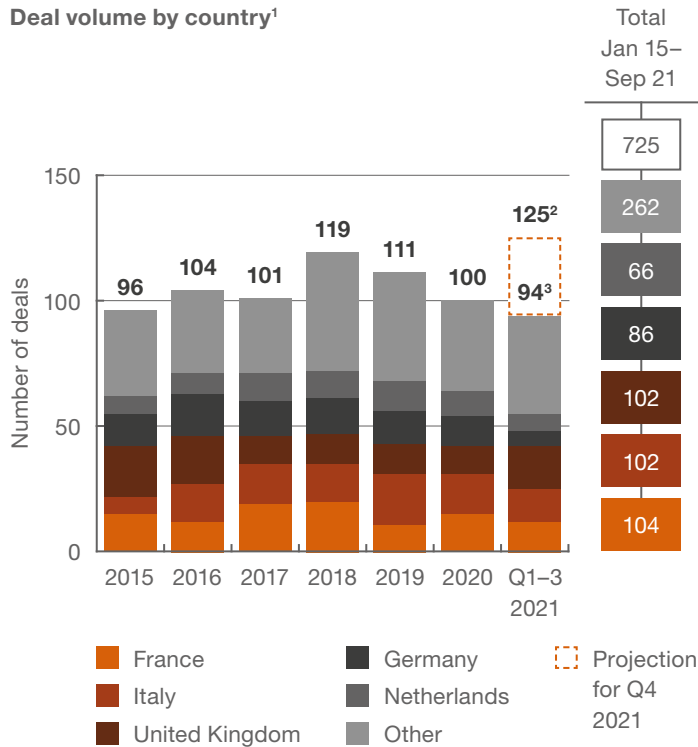
Transactions  Total = 725



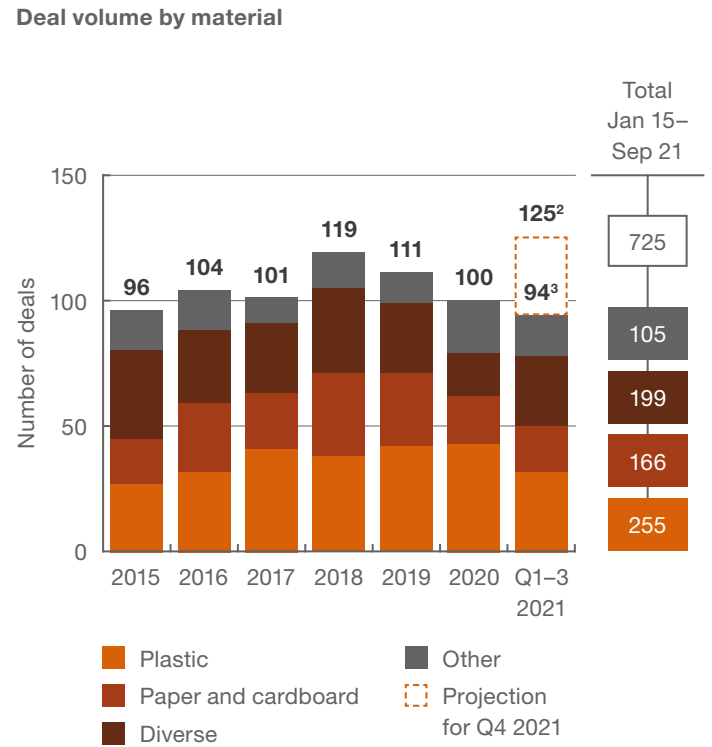
Deal volume was mainly driven by plastic and by paper and cardboard; deal value peaks are mostly due to a few large transactions

Packaging sector in Europe – M&A activity, January 2015–September 2021

Deal volume by country¹



Deal volume by material



¹ Top five countries based on total number of deals from 1 January 2015 to 30 September 2021.

² Projection based on Q1–3 2021 deals.

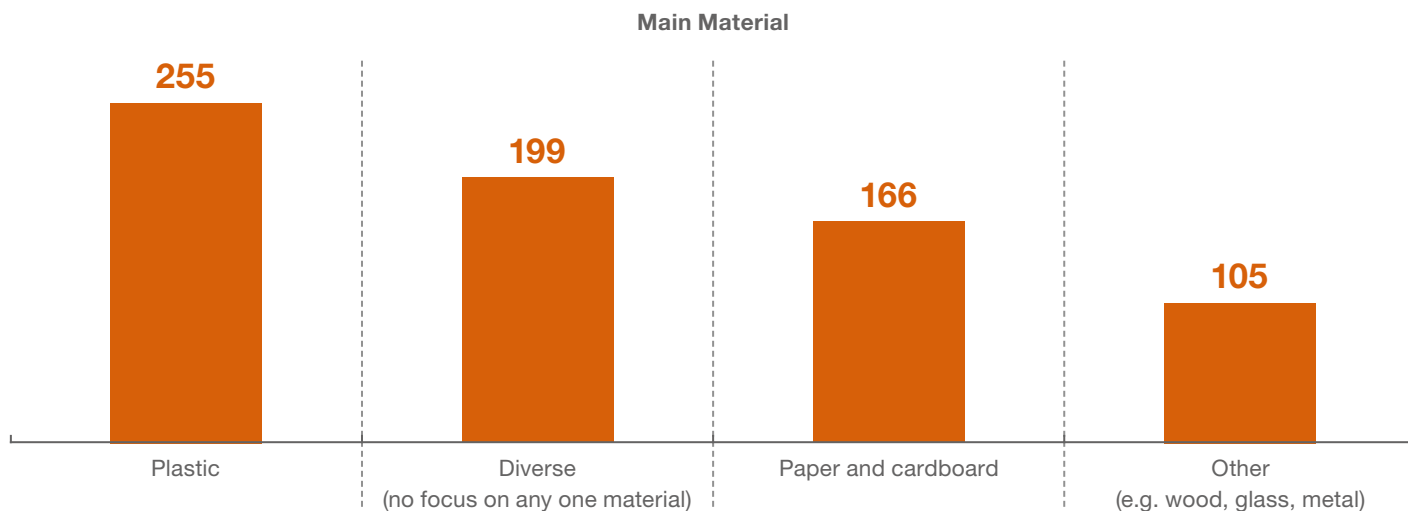
³ Data available up to end of September.

Source: Mergermarket.

Of the 725 transactions in Europe since 2015, most assets focused on plastic due to its light weight and good durability

Number of transactions by material, January 2015–September 2021

Number of transactions  Total = 725



Target examples

Albea Services, All4Labels, Amcor Flexibles UK, Faerch Plast, Kalle, Pure Trade, Rexam, RPC, Scandiflex, Schur Flexibles, Sterimed

Albea Services, AFP, Constantia Labels, Coveris Rigid, Duo Plast, IFCO System, Nutripack Ecocup, Pibiplast, PLIC Group

Baden Board, CDL, Emballagegruppen, Papeles y Cartones de Europa, Papeteries & Cartonneries Lacaux Freres, Solidus Solutions

Ardagh Metal Packaging, Bruni Glass, Encirc, Guala Closures, HVH, Mega Plast, Saverglass, SGD, Trivium Packaging, Verallia

Source: Mergermarket

Key success factors for assets in the packaging sector include sustainability, innovation and digitalisation

Key success factors for investments in the packaging sector

Key success factors



Position the company as an all-round packaging solution provider

Manufacturers should position themselves as **solution providers** and **partners** for product owners. It's important to be more than just a materials supplier: leveraging product excellence, innovative production technologies and services **throughout the value chain** is key, as is **cooperating with customers**.



Use sustainable end-to-end solutions as a differentiation strategy

Offer sustainable solutions throughout the value chain, from **raw materials** to **production**, **logistics** and **recycling**. Innovative manufacturing processes (e.g. focusing on digital printing to reduce waste) are key if **sustainability** is to become a **holistic component of the business model**. "Clean" raw materials and recycling are no longer enough.



Focus on fast-growing markets and materials

Companies should target their operations at markets and materials with **good potential for long-term growth** and **sustainable high margins** – e.g. the **beverage industry** and **plastic** packaging.



Innovate and go digital to improve the customer journey

Agility is key for **responding to changing demands**, such as mass customisation and premiumisation. Digital offerings should focus on three aspects:

- **Product** – e.g. intelligent labels to enable customer interaction and protect the brand
- **Production** – smart manufacturing, automation, IoT (including machine interaction)
- **Customer experience** – omnichannel tracking, improved customer journeys using data analytics, custom digital capabilities for real-time customer communication and shorter innovation cycles



Price-performance ratio and lean operations are vital

End consumers want high-quality products but are also price conscious. A **lean organisation** is vital to cope with cost pressures. The following can help create **added value**:

- **Good inventory management** to minimise inventory and waste costs, with just-in-time/just-in-sequence delivery and near-site production facilities
- Integrating R&D and production to improve **responsiveness to market trends**
- **Sustainable production** by reducing waste and energy usage

All these measures both reduce costs and differentiate a company from its competitors – a **win-win situation**.

A number of questions need to be considered when undertaking transactions in the packaging sector

Examples of key questions raised during the transaction process

What's the business model like? What's the company's unique selling proposition (USP) and how sustainable is it? What are the internal success factors feeding into the USP?

What effects will Covid-19 have on the business model, market and trends (e.g. regarding food safety and hygiene) – both in the short term and the longer term? What impact will this have on sourcing raw materials? Where could supply chain disruption occur?

How do end customers interact with packaging? What influences their decision to buy? Who are the end customers and how does the company approach them? How do customers select packaging suppliers and what are the important purchasing criteria? What could prevent customers from switching to other suppliers?

There are many trends and drivers in the packaging market, such as technological advancement, sustainability, digitalisation, security, increased functionality, beautification, premiumisation and mass customisation. What impact will these have on prices and future market development? What are the main market challenges and threats? How can companies satisfy customer demand for innovations while retaining competitive prices? What impact will changing raw material prices have and how can the changes be passed on to customers?

How does the company stand relative to its competitors – e.g. in terms of positioning, sales and margins? What sets the company apart from its competitors? How is the company perceived by relevant market players?

What impact will changes to the competitive landscape have on the company's business model? And based on this impact, what does a realistic business plan need to include?

Five key reasons to use PwC's transaction advisory services in the packaging sector



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Short profile

Ralph is a PwC Partner and PwC Germany's Deals Strategy Leader. Based in Munich, he joined the PwC Transaction Services team in 2006 and has over 20 years' experience in consulting and private equity with Simon-Kucher & Partners, Capiton and PwC.

He provides support to a wide range of international private equity funds in their commercial due diligence processes.

In the past two years alone, Ralph has led more than 100 commercial due diligence projects on both the buy-side and the sell-side.

Acknowledgement

Last but not least, our thanks are due to our colleagues Lukas Lovón Marcondes and Johannes Schlicksbier.



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Dirk is a Senior Manager in the Deals Strategy team based in Munich. He is part of the PwC Europe Consumer Market practice, and has over 15 years' industry experience in strategy consulting and commercial due diligence.

He has led over 70 buy-side and sell-side commercial due diligence projects, with a focus on consumer market projects. Dirk has in-depth knowledge and experience of growth strategy, market and competitive positioning, and assessing the attractiveness of target companies.

Dirk's main industries are packaging, consumer and retail, e-commerce and travel.

About us

Our clients face diverse challenges, strive to put new ideas into practice and seek expert advice. They turn to us for comprehensive support and practical solutions that deliver maximum value. Whether for a global player, a family business or a public institution, we leverage all of our assets: experience, industry knowledge, high standards of quality, commitment to innovation and the resources of our expert network in 155 countries. Building a trusting and cooperative relationship with our clients is particularly important to us – the better we know and understand our clients' needs, the more effectively we can support them.

PwC Germany. More than 12,000 dedicated people at 21 locations. €2.3 billion in turnover. The leading auditing and consulting firm in Germany.

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