



# “A view from the Edge”

## Observations of the European Folding

## Carton Market – 2020 & 2021

# OBJECTIVE

An observation of current conditions prevailing in the European folding carton market

## Aimed at:

- Understanding what has happened in the last 6 to 9 months with folding carton demand.
- Assessing the longer term impact of the last 18 months on the folding carton market.
- Investigating key trends within our sector and how they might develop over the next 5 years.
- Assessing in what ways brand owner and retailer needs might change for our sector.
- Forecasting growth trends for the next 5 years.

# KEY THEMES

## Our observations cover:

- What has happened for European folding cartons in 2020 & 2021.
- What is happening elsewhere for paper packaging, plastics and other goods.
- What are our numbers saying – a preview of European Carton Prospects 2021.
- What should be getting our attention:
  - Consolidation and future structure
  - Supply chain dynamics
  - Sustainability
  - Retailing dynamics
- Key issues affecting future prospects for folding cartons in the European carton market.

# What happened for Folding Cartons in 2020?

- Covid struck end Q1, 2020.
- Food & Drink sales leapt up; “Food on the Go”, Luxury Goods & Duty Free dropped away.
- Supermarkets experienced buoyant sales.
- Folding carton suppliers across Europe praised for their positive response & support for the supply chain (and recognised with “key worker” status).
- End of Q4 – Covid stocks needed replacing, Brexit stocks needed replacing and a boost in demand for FC in selected End Use Markets = Overall leap in demand for FCs.
- Supply chain issues starting to develop –
  - waste paper collection issues.
  - subsequent shortages in recycled fibre.
  - staff shortages due to Covid sicknesses.
  - shortages of some basic goods (Pallets, Wood, Nails, etc.).
- Shortages of packaging containers, food and non-food goods start to emerge.

# What happened for Folding Cartons in 2021?

## Supply

- Price of containers leaps from \$3k to \$18k halting supply of Chinese folding cartons & board.
- Q1
  - Logistics issues across Europe.
  - Brexit affects movement of goods at several ports and on-going distribution problems.
  - Waste paper sold to non-EU mills (due to better pricing as well as less “red tape”).
  - Retail and Brand owner demand for folding cartons leaps up.
- Mill lead times go out from 3 to 5 weeks to 12 to 15 weeks for new business.
- Rumours of shortages of mill stock spread (and subsequent leap in orders).
- Folding carton demand rises even further while extended lead times triggers more orders.
- Demand for recycled fibre continues (for all paper packaging formats).

# What happened for Folding Cartons in 2021?

## Demand

- Confusing picture by end August 2021.
- Output in 2021 ranges between +3% and +4% YTD.
- Note, output in 2019 was already +5% (i.e. pre-Covid).
- Purchase orders range from +10% to +30% in some months from Q1, 2021!
- Ordering for “Traditional Retail demand” as well as for “Covid level demand” for some high growth End Use Markets (e.g. Food & Drink).
- Board prices risen by between €150/tonne and €200/tonne since January 2021 (with another €50+ announced for October 2021). But very difficult passing on this uplift due to existing contracts.

*“All our customers have full warehouses”*

*“We are living from month to month just now; customers are happy to accept whatever grade of board we have available – recycled or virgin”*

# What happened for Folding Cartons in 2021?

## Costs and Numbers

- Recycled fibre has been in short supply since summer 2020; situation remains that way in 2021 due to a sustained demand for fibre from all paper packaging sectors (especially Corrugated).
- Price of mixed waste fibre risen from €55/tonne to €105/tonne throughout 2021 (source EUWID).
- Paper mills started to lose money in early 2021 due to input costs rising so dramatically.
- Price increases have had to be imposed by board mills to get back to a profitable position.
- Folding carton companies need to recover cost increases from brand owner customers (but have been prevented from doing so in many instances due to fixed price contracts).
- Folding carton sales numbers show a -1.5% to -2.0% difference vs carton output growth in 2020 – reflecting a covid mix change (i.e. more food & drink, less luxury goods & duty free).
- 2021 showing a similar difference in sales vs output growth – this time reflecting a lag in recovery of mill price increases.

# What happened for other paper packaging in 2020?

## Corrugated - 2020

- Q4 saw demand leap up by +10% to +15% for that period.
- The “Majors” shifting huge volumes of boxes around Europe to satisfy eCommerce demand.
- Amazon “ring fenced” box capacity and paper stocks to guarantee Christmas season box supplies.
- Market grew by approx +3% to +4% in 2020 overall (but by +10% in Q4). European market equates to approx. 30m tonnes.
- Lead times for boxes and sheet board begin to go out (from 5 to 7 days to 3 to 4 weeks for new orders).



# What happened for other paper packaging in 2021?

## Corrugated - 2021

- Brexit adds extra “noise” into the supply chain (lorries carrying paper stocks are delayed, ports disrupted, paperwork delays slow down movement of goods, etc.).
- 4 new recycling mills come on stream in Europe **BUT** not enough recycled fibre to feed the new demand.
- Lead times for new boxes & sheet board leap from 5 to 7 days up to 10 weeks!
- First price increases for paper and board happens in January 2021; 4 more PIs since then and further announced for October 2021.
- Demand running at +5% overall (i.e. even higher than for 2020).
- Recycled papers in short supply Q1 & Q2, virgin papers in short supply in Q3, 2021.

# What happened for other paper packaging in 2021?

## Other Paper Packaging

- Honeycomb
  - Niche market growing at +15% YOY (uses both recycled and virgin fibre).
  - Demand equates to 1 mid-sized paper mill's capacity to keep up.
  - EU Legislation for EPS driving paper packaging demand upwards.
  - New uses of paper for “lightweighting” are boosting demand even more (e.g. Automobile interiors).
- Paper bag market booming in wake of the “green wave” for fibre.
- Same trend for other paper packaging niche markets too.

*N.B. The plastics industry has been very busy during Covid due to an increase in demand, mainly for restaurant takeaway orders plus food & drink in general.*

# European Folding Carton Market – Volume & Value

Summary Estimates & Forecasts of European Carton Production – 2015, 2020 & 2025 – 000 Tonnes & € Million					
	2015	2020	2025	15 to 20	20 to 25
				% p.a.	% p.a.
Cartonboard Purchases: 000 Tonnes	5593	6455	7916	2.9	4.2
Carton Output: 000 Tonnes	5292	<b>6102</b>	7348	2.9	3.8
Sales by European Carton Converters: €m	10722	<b>11762</b>	14211	1.9	3.9

- The European folding carton market is **6.102m tonnes** by volume and **€11762m** by sales value.
- Grew over last 5 years at +2.9% YOY by volume and +1.9% by sales value.
- Due to grow over next 5 years at +3.8% by volume and +3.9% by sales value.

# European Folding Carton Market – Volume & Value

Estimates & Forecasts of Cartonboard Purchases, Folding Carton Output & Sales Turnover - Total Europe  
– 2015 to 2025 - 000 Tonnes & € Million

Year	Cartonboard Purchases			Carton Output			Compo site Index	Carton Sales		
	000 Tonnes	% p.a.	Index 15=100	000 Tonnes	% p.a.	Index 15=100	Index 15=100	€M	% p.a.	Index 15=100
2015	5593	2.2	100.0	5292	2.7	100.0	100.0	10722	4.2	100.0
2016	5616	0.4	100.4	5321	0.5	100.5	102.1	10545	-1.7	98.3
2017	5846	4.1	104.5	5518	3.7	104.3	105.1	10877	3.2	101.4
2018	5934	1.5	106.1	5583	1.2	105.5	107.1	10944	0.6	102.1
2019	6225	4.9	111.3	5860	5.0	110.7	108.7	11484	4.9	107.1
2020	6455	3.7	115.4	6102	4.1	115.3	103.1	11763	2.4	109.7
2021	7069	9.5	126.4	6307	3.4	119.2	108.0	12056	2.5	112.4
2022	7212	2.0	128.9	6624	5.0	125.2	112.0	12836	6.5	119.7
2023	7465	3.5	133.5	6921	4.5	130.8	114.5	13417	4.5	125.1
2024	7692	3.0	137.5	7136	3.1	134.8	116.8	13816	3.0	128.9
2025	7916	2.9	141.5	7348	3.0	138.9	118.9	14211	2.9	132.5
Average % p.a. 15 to 20	2.9			2.9			0.6	1.9		
Average % p.a. 20 to 25	4.2			3.8			2.9	3.9		

- European folding carton output grew by **+5%** in 2019 (the Pre-Covid year).
- Notable growth during 2019 is partly due to the impact of the GREEN wave.
- Growth was sustained at **+4.1%** overall during the Covid year, despite significant changes within many End Use Markets.

# European Folding Carton Market – Volume & Value

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- European folding carton sales value grew by **+4.9%** in 2019 (the Pre-Covid year).

- Sales value growth during the Covid year was **+2.4%**, significantly affected due to “mix change” (i.e. more food & drink, less luxury goods).

- Sales value growth in 2021 anticipated to be **+2.5%** due to a lag in recovery of cost increases.

# European Folding Carton Market – Volume & Value

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Comparison of Downside, Likely Outcome & Upside Folding Carton Output Forecasts - Total Europe - 2020 & 2021 - 000 Tonnes, % pa.

	2020	2021	2021
	000 Tonnes	000 Tonnes	% p.a.
Forecast			
Downside	6102	6185	1.4
Likely Outcome	6102	6307	3.4
Upside	6102	6399	4.9

- Our forecast for 2021 must come with a small caveat due to several factors!

# A view from the Edge...of a precipice?

## Supply Chain Issues for 2021 and into 2022

- Demand for folding cartons is high (even higher than in 2021).
- Orders for cartonboard is VERY high with the Mills (most are “full” already).
- All packaging is in strong demand (both plastics as well as paper).
- Shortages of many other FMCG goods (e.g. most packaging containers including cans, microchips, chicken pieces, etc.).
- Lack of raw material may mean that demand cannot be satisfied (e.g. reduced frozen food production due to shortage of chicken).
- Our forecasts come with a small caveat as a result.

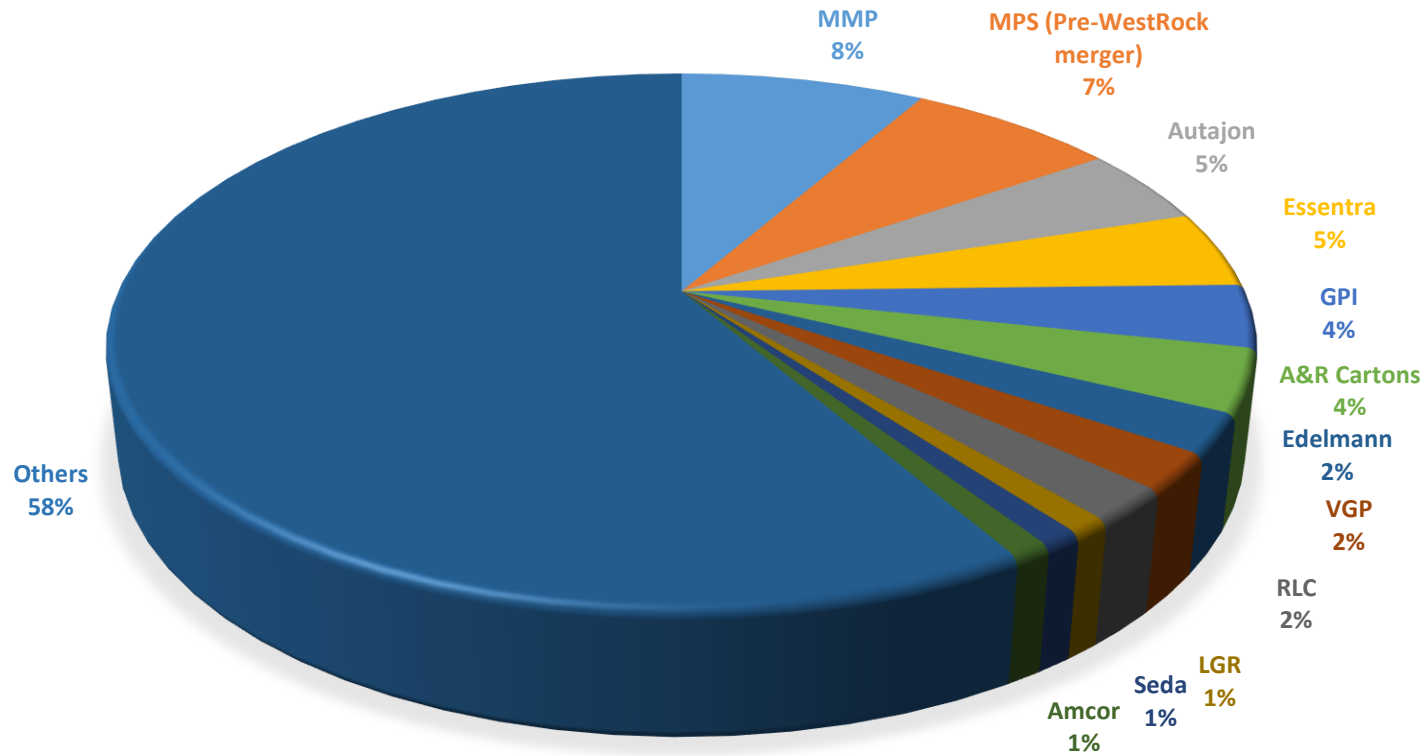
# Key topics affecting Folding Cartons

- Consolidation and future structure
- Supply chain dynamics
- Sustainability
- Retailing dynamics



# European Folding Carton Structure - 2016

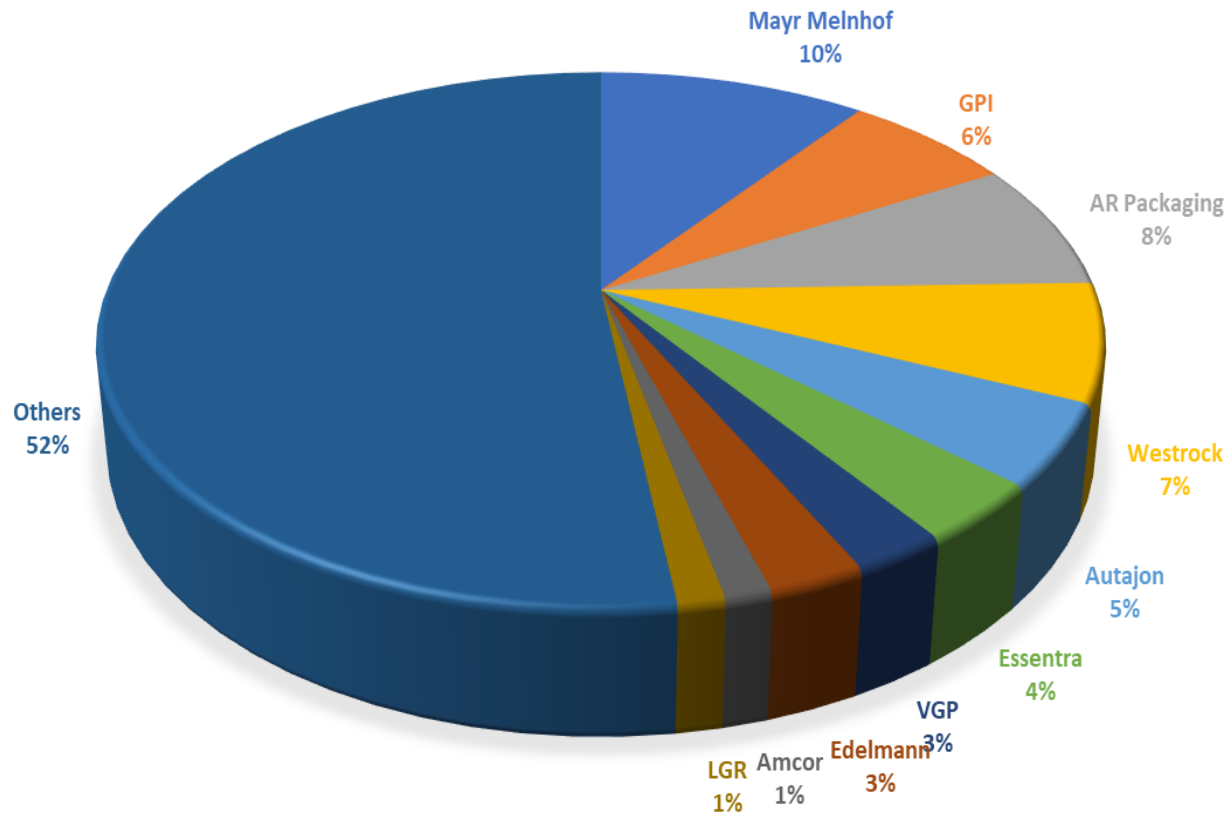
EUROPEAN FOLDING CARTON - STRUCTURE (2016)



- European Folding Carton converter structure is highly fragmented (especially when compared to corrugated).
- At least 1,000 converter companies were active throughout Europe in 2016.
- Likely to be subject to more consolidation (in addition to recent acquisitions made by MPS, AR Packaging and GPI).
- Industry structure for Plastics is more consolidated than either Folding Cartons or Corrugated.

# European Folding Carton Structure - 2021

EUROPEAN FOLDING CARTON - STRUCTURE (2021)



- The Top 10 folding carton converters represent less than 50% of the market.
- Recent takeover talks between GPI and AR Packaging will make this group the largest FC converter in Europe.
- Mayr Melnhof is the only vertically integrated company within the Top 10 carton converters.
- European FC converters continue to experience a highly competitive environment - squeezed between Brand Owners on the one hand and Paper Mills on the other.

# Supply Chain Dynamics

- During Covid there has been major shifts in the purchase of products (i.e. more food & drink, less luxury & duty free goods).
- 2020 saw a major shift in folding carton demand by end use market sector, favouring food and drink EUMs.
- FC companies continue to be squeezed through demands by international brand owners (especially on pricing) and pressures on input costs from the big paper mill groups.
- Brand owners are experiencing shortages in other raw materials (including food raw materials, other packaging materials and containers).
- Fibre will continue to be in short supply as the GREEN wave gathers a pace.
- The pressure on FC companies to achieve profitable sales is high when being so busy.

# Sustainability

- Pre-Covid saw significant activity for new designs to replace plastic specifications.
- Some of these designs have already become commercially available.
- Covid saw major changes in the way goods were purchased, often going back to favouring plastic products.
- Demand for folding cartons remains buoyant.
- Announced legislation from the EU for single use plastic (and single use packaging) is adding confusion, complexity & delays into the making of changes.
- Significant substitution of plastics by fibre is predicted over the next 5 years.

# Trends within European Retailing

## Economic and Social trends:

- Changed consumer behaviour due to Covid (esp. “Silver Surfers”).
- Significant lifestyle changes by being forced to stay & work from home.
- Shopping habits changed – increase in home cooking PLUS increased demand for home deliveries.
- Devastating impact on entertainment, leisure and luxury goods markets.

## Trends in overall Retail market:

- Supermarkets buoyant (serving customer’s food, drink and consumables needs during Covid).
- Significant shift to online ordering by many consumers (both for food shopping as well as non-food items).
- Supermarkets change their supply chain to adapt to customers Covid needs (e.g. more home shopping delivery slots) .
- Impact of Covid leading to major shift in our shopping habits.

## Trends with Convenience:

- Reduction in demand for “Food-on-the-Go”.
- Increase in demand for take home, take away and home delivery (e.g. Uber Eats, Deliveroo, JustEat, etc.).
- Rise of the home cooking subscription boxes (e.g. Frichti, Marley Spoon, Gousto, HelloFresh, etc.).

# Key trends affecting carton growth



- European Folding Carton companies are experiencing unprecedented demand throughout the supply chain.
- Retail sales are recovering but internet sales are motoring.
- Luxury & duty free goods may come back but not for some years and not as strongly as before.
- Convenience has shifted from “Food-On-The-Go” towards “Take Away” and “Home delivery”; growth in “Working From Home” means this change will stick (though may ease back seeing “FOTG” recover a little over the next 18 months).

# Conclusions

- Covid has delivered major changes to the way that we purchase products.
- In turn this has delivered major output & workmix changes for the folding carton market (shifted EUM demand and major supply chain disruption).
- FC companies remain squeezed between demands from International Brand Owners and pressure from the major Paper Mill groups.
- The demand for FCs will remain high due to the GREEN wave (1 tonne of plastic out means approx. 4 tonnes of fibre to replace).
- Mills say they could struggle to meet this GREEN demand.
- While the supply chain remains unclear, forecasting demand remains an uncertain science.
- Profitability, whilst being so busy, will be a key focus for folding carton converters.
- More consolidation is likely over the coming years (or next few months even!).

“A view from the Edge”

We live in interesting times!