



Neil Osment

Significance of Paper Honeycomb products within the European packaging market

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Neil Osment

Background to NOA

- Formed in 2005 after a career working for Smurfit Kappa, SAICA, ALCOA and DS Smith
- NOA purchased the PRISM database from Simon Southern in 2013
- NOA purchased the HPC database from Henry Poole in 2023
- Contactable on www.noa.uk.net or scan here.....



Agenda

1) Strategic plans of EMPHA – “Breakthrough” stage



4) What did the survey in 2024 tell us about the HC sector in Europe?



2) Likely winners within the European paper packaging market



5) What could we do to gain “critical mass” and become more relevant?

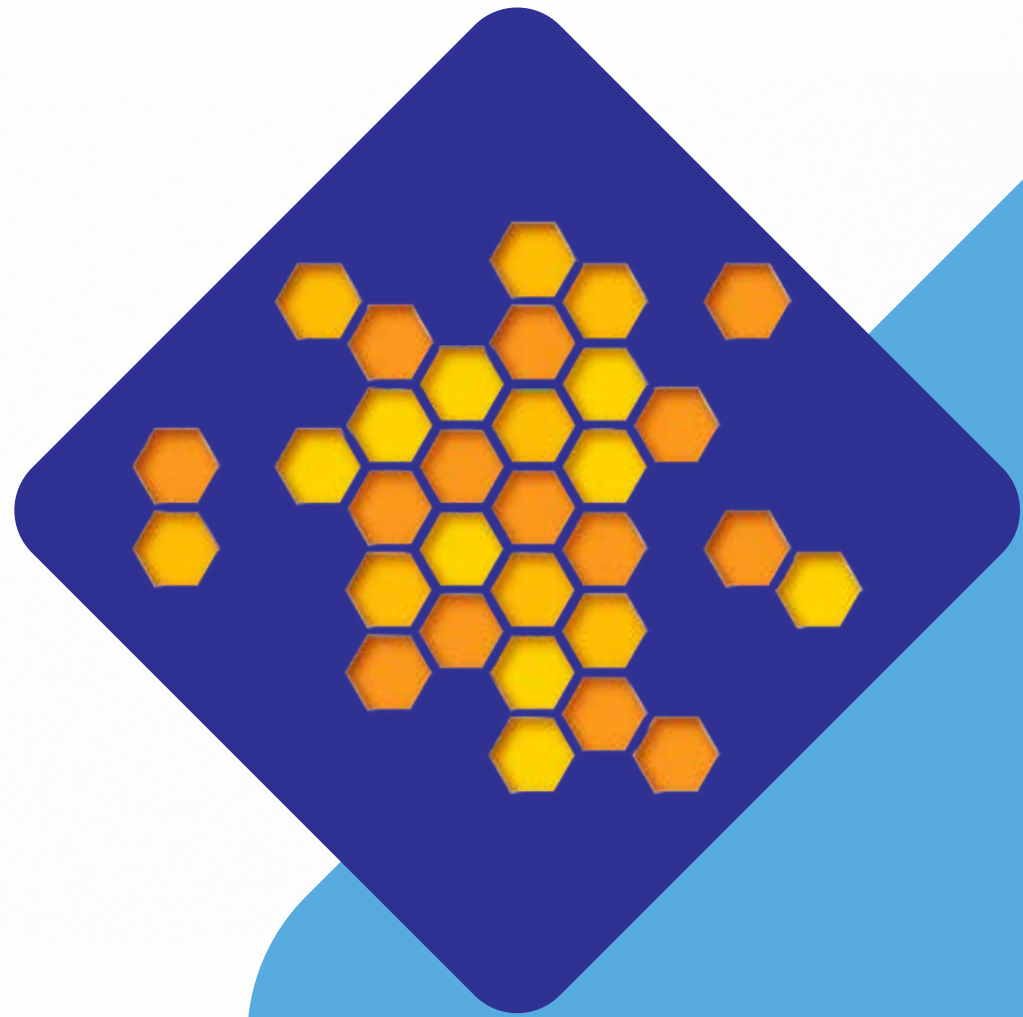


3) What does “being in a niche” in the European paper packaging market mean?



6) Thoughts & opportunities





Strategic plans for EMPHA - “Breakthrough”



2010

2015

2020

2025

2030







Establishment

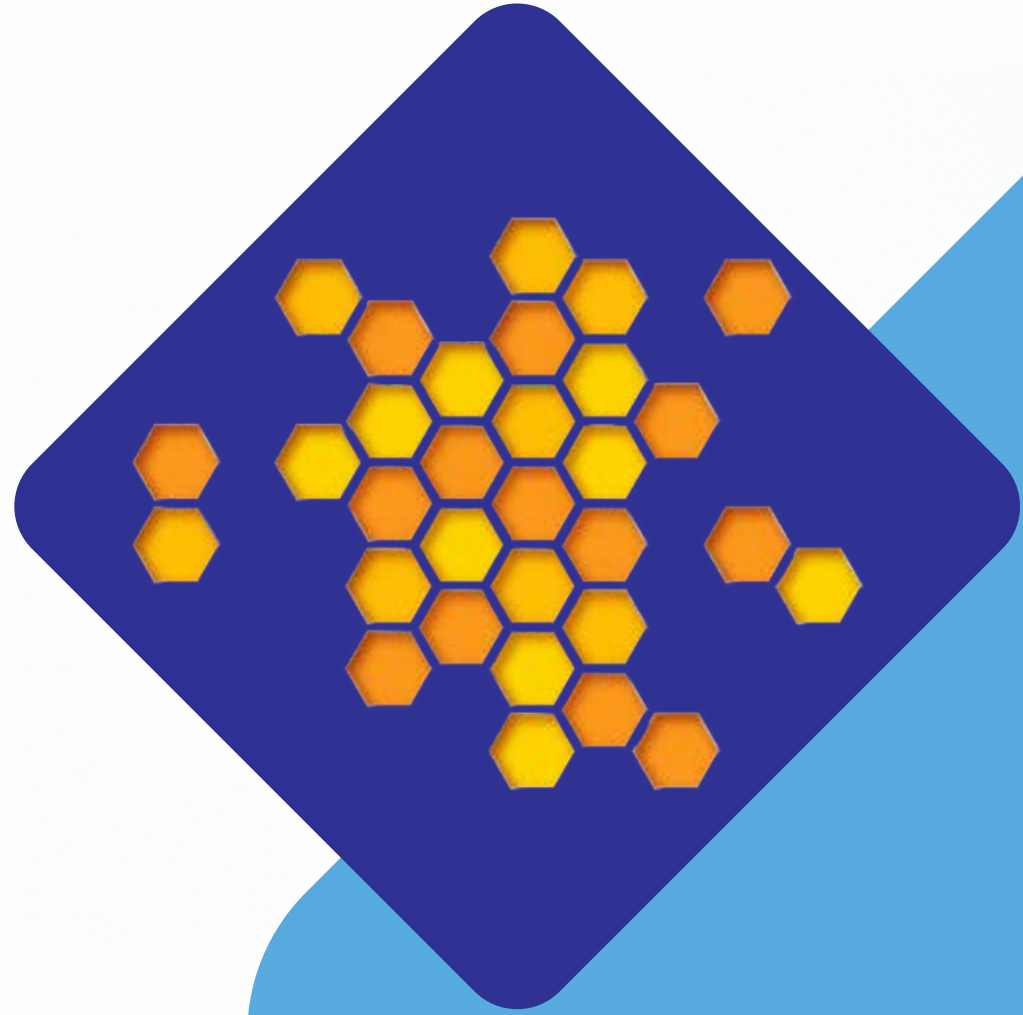
Consolidation

Driving

Breakthrough

-  Entrepreneurial membership
-  Innovative teams & individuals
-  Sustainability as a key industry driver for growth in all sectors
-  We have an industry model to follow





**Likely winners
within the
European paper
packaging
market**



PS Winners?



Corrugated

Especially Microflute due to flexibility and availability for PS



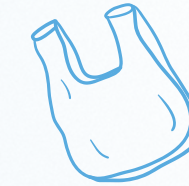
Folding Cartons

Making major inroads with PS



Paper Bags

Gaining traction in eCommerce especially



Flexibles

Gaining volume from plastics in many EUMs, especially food



Moulded Fibre

Gaining share (especially non-Food) due to lower production costs

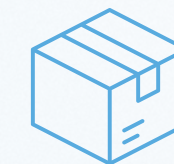


Honeycomb



Liquid Cartons

Although a “hybrid format”, gaining share specifically in drinks EUM

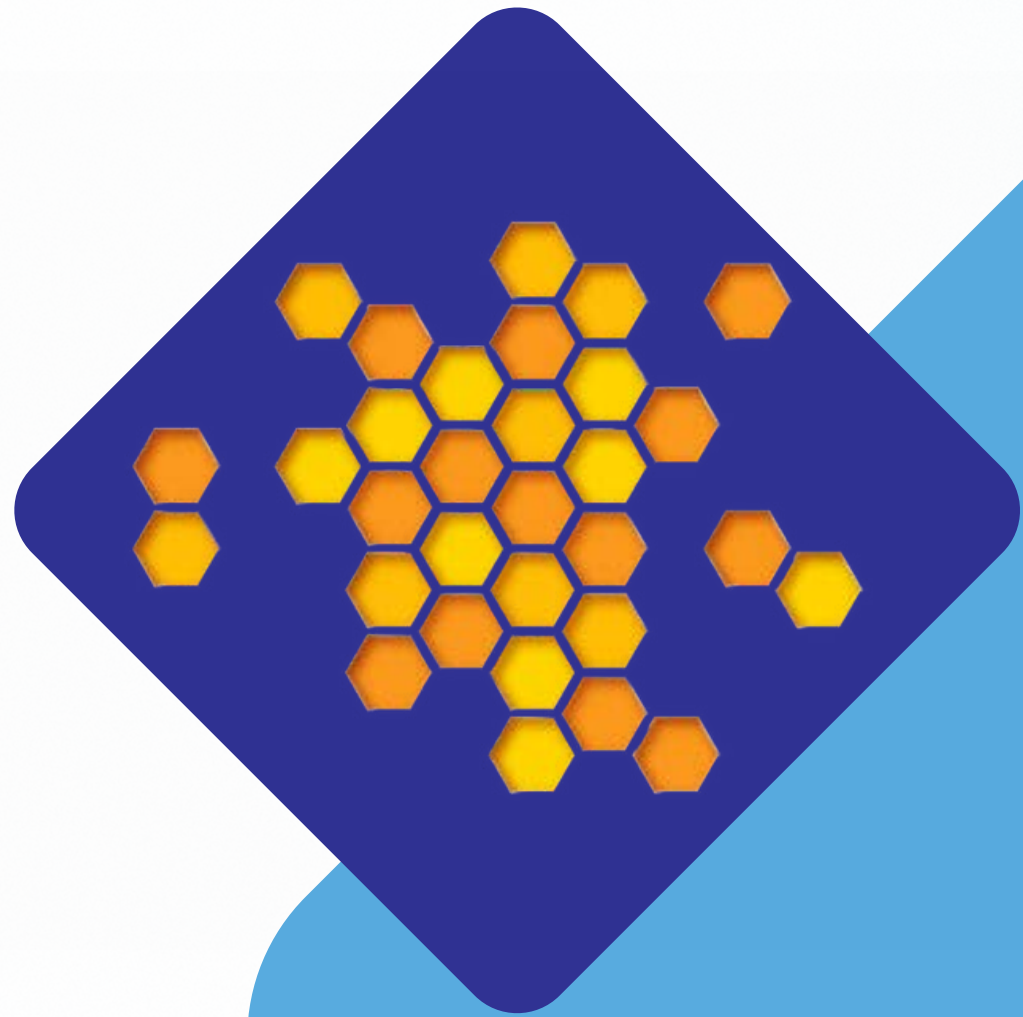


Others

Several other niche fibre packaging niches (e.g. glassine)

..... and the most favoured will be those where packaging is the easiest to recycle.





**“Being in
a niche”**



European Honeycomb Market - 2018 to 2028

West & Central European Honeycomb Production Compared with GDP Growth - 2018 to 2028 – 000 Tonnes, Annual % Change

Year	Honeycomb Production			GDP	
	000 Tonnes	% Change	Index*	% Change	Index*
2018	182.4	n/a	100.0	2.1	100.0
2019	231.6	27.0	127.0	1.7	101.7
2020	232.8	0.5	127.6	-5.5	96.1
2021	269.4	15.7	147.7	6.7	102.5
2022	273.4	1.5	149.9	3.8	106.4
2023	268.5	-1.8	147.2	1.0	107.5
2024	252.4	-6.0	138.4	1.2	108.8
2025	259.6	2.9	142.3	1.9	110.8
2026	268.7	3.5	147.3	1.9	112.9
2027	280.8	4.5	153.9	1.8	114.9
2028	296.2	5.5	162.4	1.8	116.9

*Index 2018 = 100

European Corrugated Market - 2018 to 2028



Comparison Between GDP & Corrugated Production - Shipments of Converted Corrugated - Western & Central Europe - 2018 to 2028 - Msm, % Change

Year	Corrugated			GDP	
	Msm	% Change	Index*	% Change	Index*
2018	52681	2.6	100.0	2.1	100.0
2019	53505	1.6	101.6	1.7	101.7
2020	54625	2.1	103.7	-5.6	96.0
2021	59247	8.5	112.5	6.4	102.2
2022	55770	-5.9	105.9	3.7	106.0
2023	52702	-5.5	100.0	1.0	107.1
2024	53556	1.6	101.7	1.5	108.6
2025	54702	2.1	103.8	2.1	110.9
2026	55724	1.9	105.8	2.1	113.2
2027	56700	1.8	107.6	1.9	115.4
2028	57623	1.6	109.4	1.8	117.4

*Index 2018 = 100

European Folding Carton Market - 2018 to 2028



Estimates & Forecasts of Cartonboard Purchases, Folding Carton Output & Sales Turnover - All Countries – 2017 to 2027 - 000 Tonnes & € Million (Excludes PS Growth within these estimates)

Year	Carton Output			GDP Index	Carton Sales		
	000 Tonnes	% p.a.	Index*	Index*	000 Tonnes	% p.a.	Index*
2017	5749	3.4	100.0	100.0	11342	2.8	100.0
2018	5806	1.0	101.0	102.2	11390	0.4	100.0
2019	6077	4.7	106.0	103.9	11913	4.6	105.0
2020	6312	3.9	110.0	98.2	12155	2.0	107.0
2021	6524	3.4	113.0	104.5	13071	7.5	115.0
2022	6624	1.5	115.0	108.4	15001	14.8	132.0
2023	6371	-3.8	111.0	109.5	14262	-4.9	126.0
2024	6435	1.0	112.0	111.1	13683	-4.1	121.0
2025	6640	3.2	115.0	113.5	14089	3.0	124.0
2026	6847	3.1	119.0	115.8	14499	2.9	128.0
2027	7048	2.9	123.0	118.1	14896	2.7	131.0
Average % p.a. 17 to 22	2.9			1.6	5.8		
Average % p.a. 22 to 27	1.2			1.7	-0.1		

*Index 2017 = 100

Market Sizes (Europe)



Honeycomb



Corrugated



Folding Cartons



What does “being in a niche” mean?



Corrugated

24.4M tonnes/annum



Folding Cartons

6.6M tonnes/annum



Moulded Fibre

0.40M tonnes/annum



Honeycomb

0.26M tonnes/annum

- Under **1M tonnes/annum** unlikely to afford dedicated Paper Mill capacity.
- To have “significance” a niche industry should be closer to **3Mt** in volume.



What do academics say? - Competing in a niche market

Porter Model - Niche = “Focus”

What type of “Focus” is our HC market in?

- ⬡ **Cost Focus:** Aims at becoming the low-cost producer within a very narrow market segment (e.g. EasyJet & RyanAir or Palm & Pro-Group).
- ⬡ **Differentiation Focus:** Aims at offering unique or specialised products to a niche, often premium, segment (e.g. Rolls Royce & Prada, or Metsa & Billerud).
- ⬡ Where do we think EMPHA is positioned? Are we in one of the boxes or “stuck in the middle”?



Competing in a bigger market

Porter Model - “Differentiation” - Is “Differentiation” the strategy for EMPHA members?

Key Aspects of the Differentiation Model:

- 🟡 **Goal:** Establish a competitive advantage by being unique (and charging a premium)
- 🟡 **Value Creation:** Differentiation tied to customer needs and willingness to pay
- 🟡 **Sources of Differentiation:** Companies can differentiate through brand marketing (e.g. Coca-Cola), technical features (e.g. Metsa or Billerud), or safety and quality (e.g. Volvo)
- 🟡 **Strategic Advantages:** Increased brand loyalty, lower sensitivity to price increases, and higher profit margins
- 🟡 **Risks:** Competitors may imitate the products, or the price difference between the competitor and the differentiator may become too large

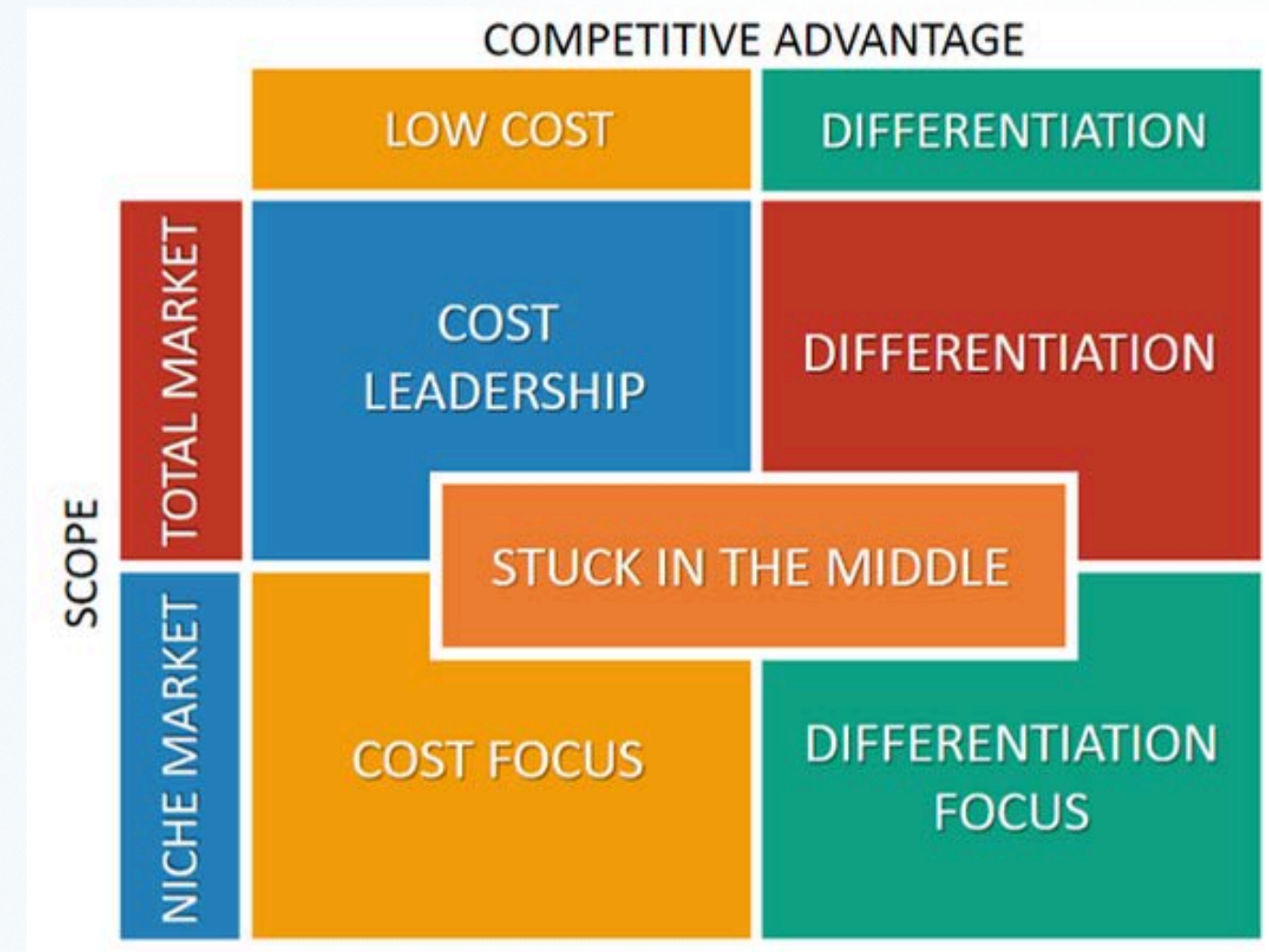


Competing in a bigger market

Difference vs. other Porter Strategies:

🟡 Broad Differentiation vs. Differentiation Focus:

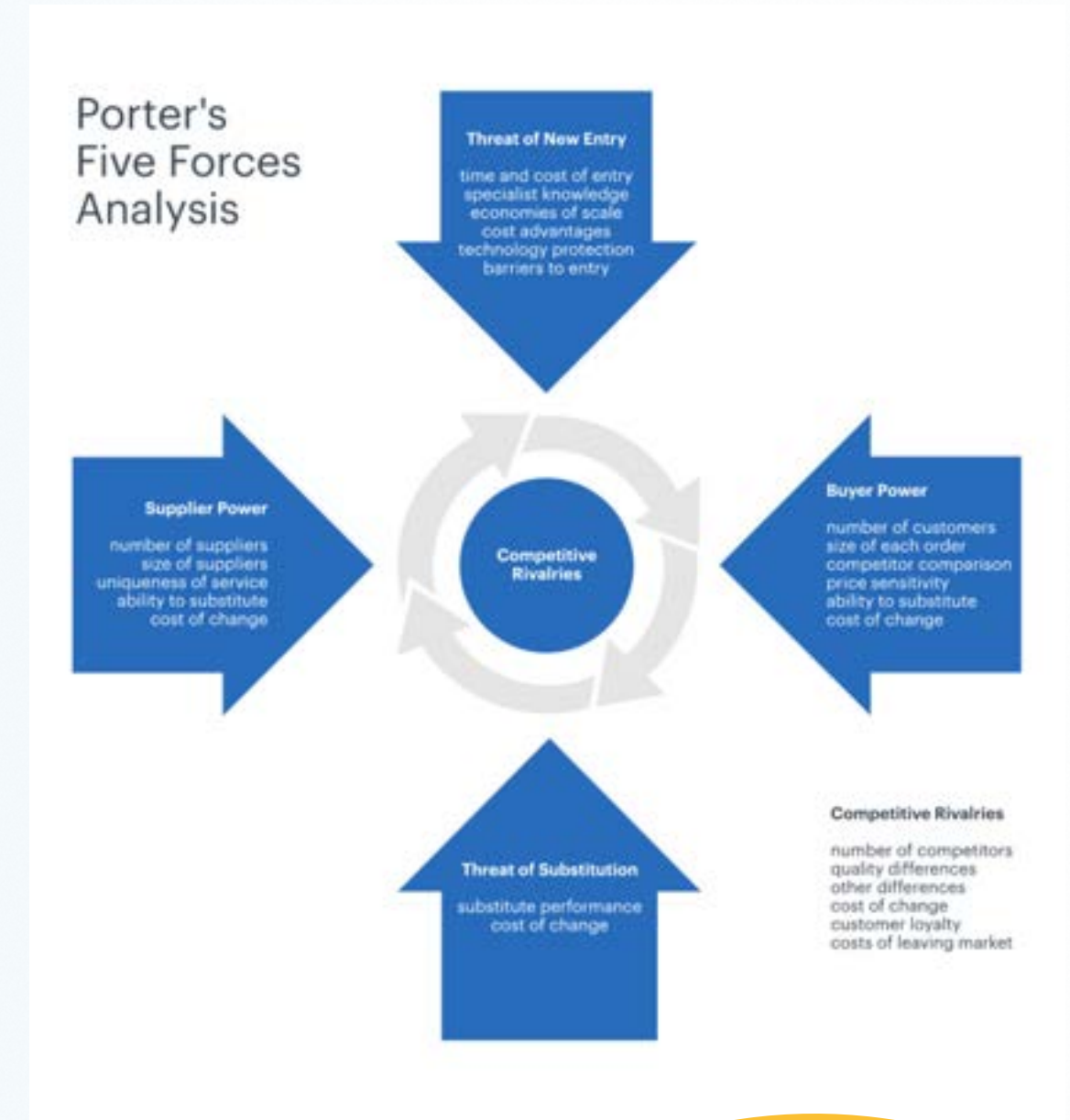
Broad differentiation targets the entire market, while differentiation focus targets a specific, narrow niche (e.g. Whole Foods for Organic Foods or TriWall for Heavy Duty Corrugated)



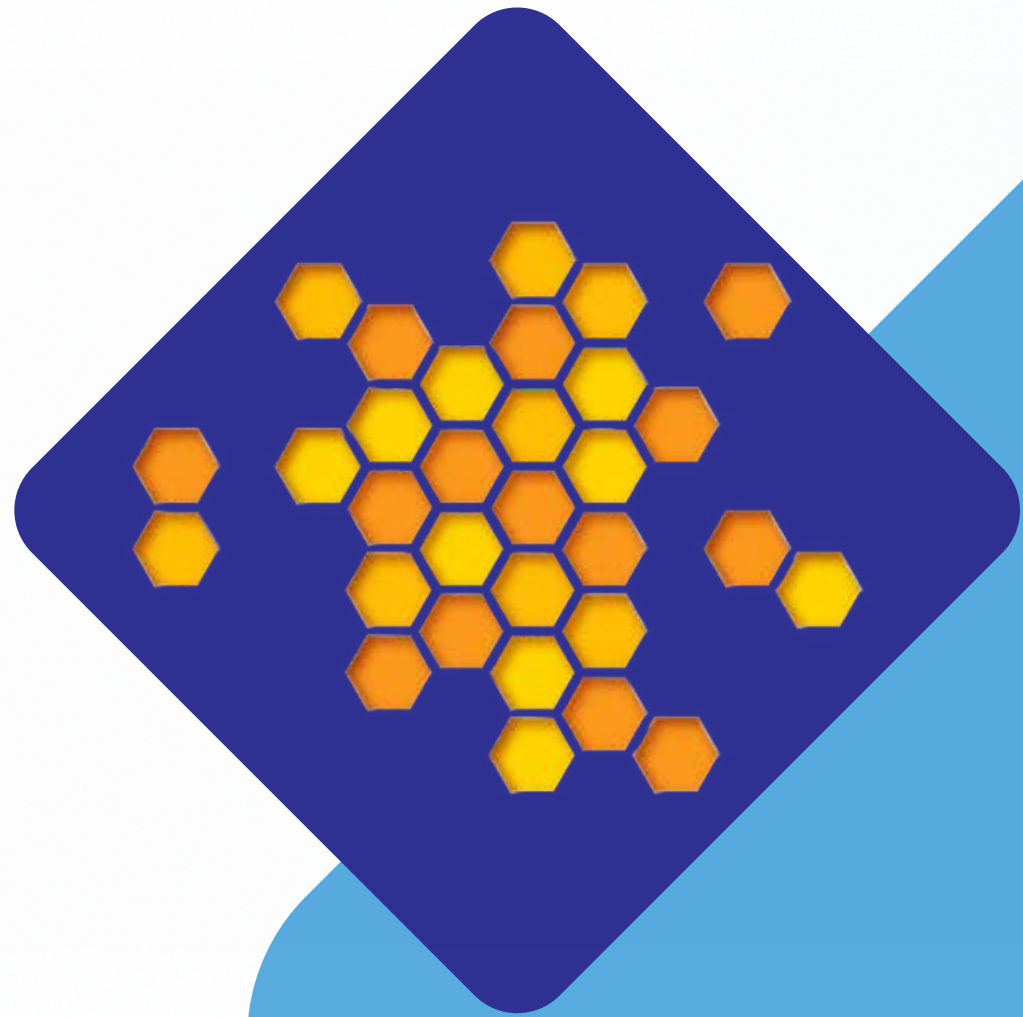
Competing in a Niche Market

Porter Model:

- “**Substitutes**” - technical development for Moulded Fibre around speed making it a more attractive base substrate vs HC
- “**New entrants**” - Greenfield site investments by Rossmann happening in central Europe – more to come or is that it?
- “**Suppliers**” – Smurfit Westrock, IP/D.S. Smith, SAICA & Mondi all showing an interest in HC to (potentially) add into their portfolios
- “**Buyers**” – Pressure on pricing due to an increased choice of fibre options PLUS reduced momentum around demand (from CofL Crisis on white goods, impact of inflation on cost of daily goods, slowdown of impact from PPWR & EPR on new packaging formats, etc.)
- “**Competition amongst rivals**” –
 - More acquisitions leads to consolidation due to slowdown in growth
 - Routes to market – Increased attention from plastic injection moulder companies to invest in HC capacity



**The challenge for EMPHA as a group and as individual members, is.....
How significant are we as a Niche?**

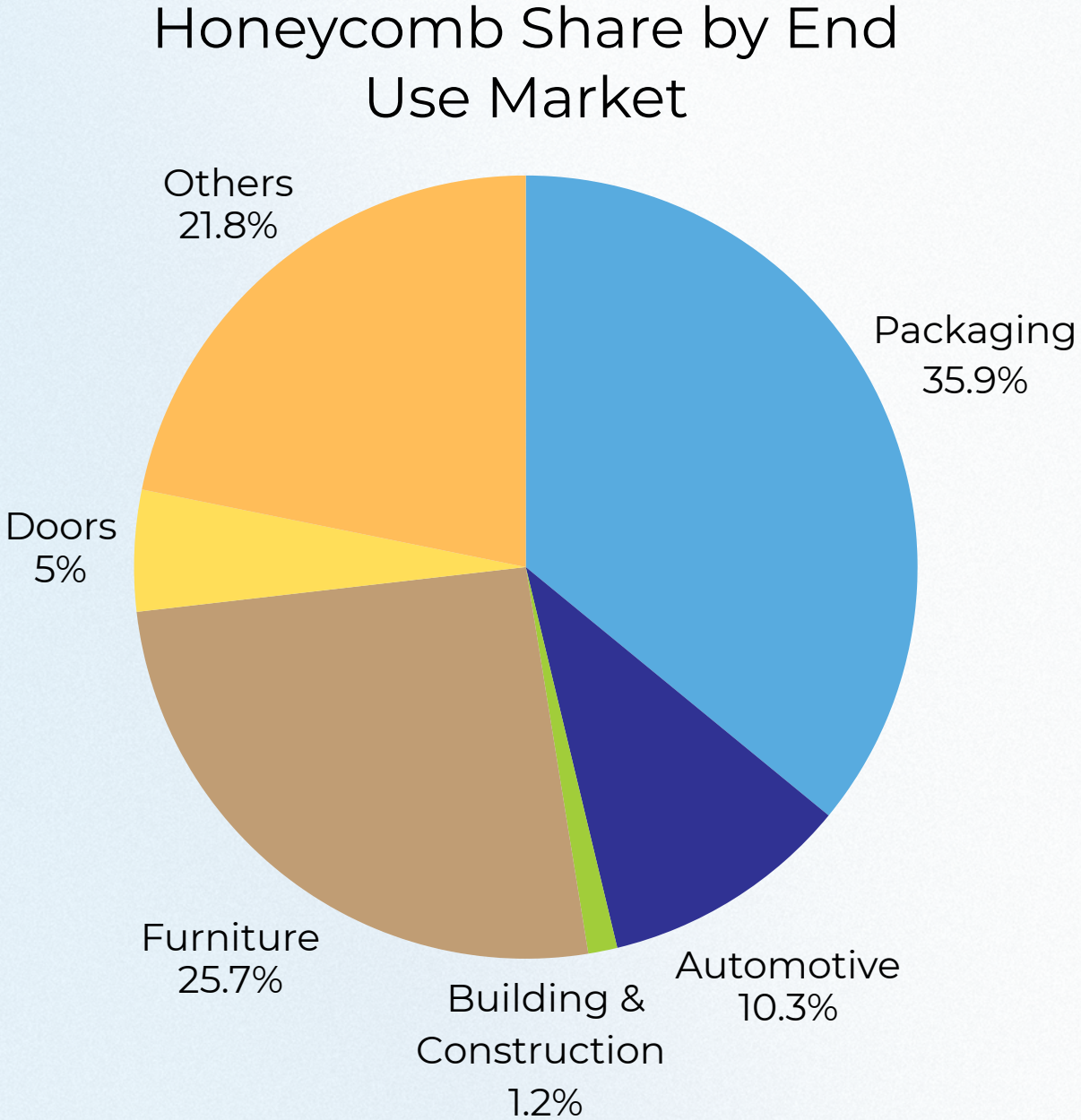
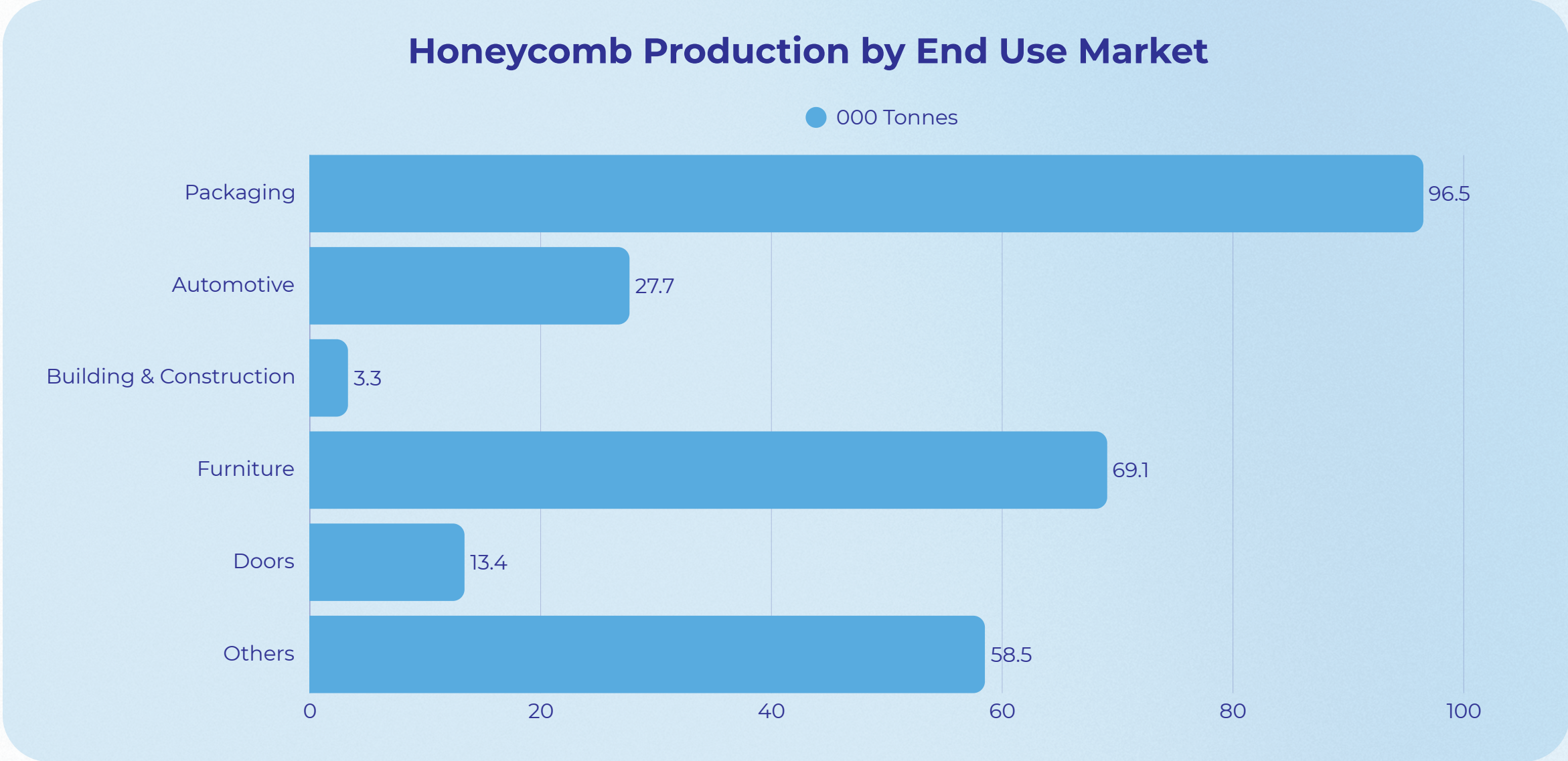


Traditional European Honeycomb Markets

What did the 2024 Market
Survey tell us?



Main Honeycomb End Use Applications - 2023



Main Honeycomb End Use Applications - 2023

West & Central European Honeycomb Production - Analysed by End Use
Market Sector - 2023 - Honeycomb Core, 000 Tonnes, % Share

End Use Market Sector	000 Tonnes	% Share
Packaging	96.5	35.9
Automotive	27.7	10.3
Building & Construction	3.3	1.2
Furniture	69.1	25.7
Doors	13.4	5.0
Others	58.5	21.8
Total Europe	268.5	100.0

Applications - Furniture

- Doors have been a traditional “high volume, low cost” part of the sector
- IKEA are leading the charge for Honeycomb and are the major driver (in the world) for this change
- Furniture swiftly moving to using Honeycomb as the main light weight alternative for replacing wood for their products (for sustainability, less about cost)
- Other furniture producers based mainly in Southern and Eastern Europe are anticipated to be where main volume growth lies



Applications - Furniture

- Doors have been a traditional “high volume, low cost” part of the sector
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- Furniture swiftly moving as the main light weight alternative for rental products (for sustainability, less about cost)
- Other producers based mainly in Southern and Eastern Europe anticipated to be where main volume growth lies

Growth slowed due to cost of living Crisis, Ukraine War & impact of inflation



Applications - Automotive

- Used to replace heavier parts – inside of roof, under floor, inside doors, parts of dashboards, etc
- Composite parts for cars – combined with outer plastics envelope
- Trend for lighter materials in cars is strong in Europe for current vehicle models. Trend is growing as we switch to electric cars (requiring a lighter body to offset heavy weight battery power sources)
- Several Honeycomb producers have attained Tier 1 approved supplier status
- Countries using Honeycomb Core for automotive applications include Germany, Spain, Switzerland, Austria, France & Poland

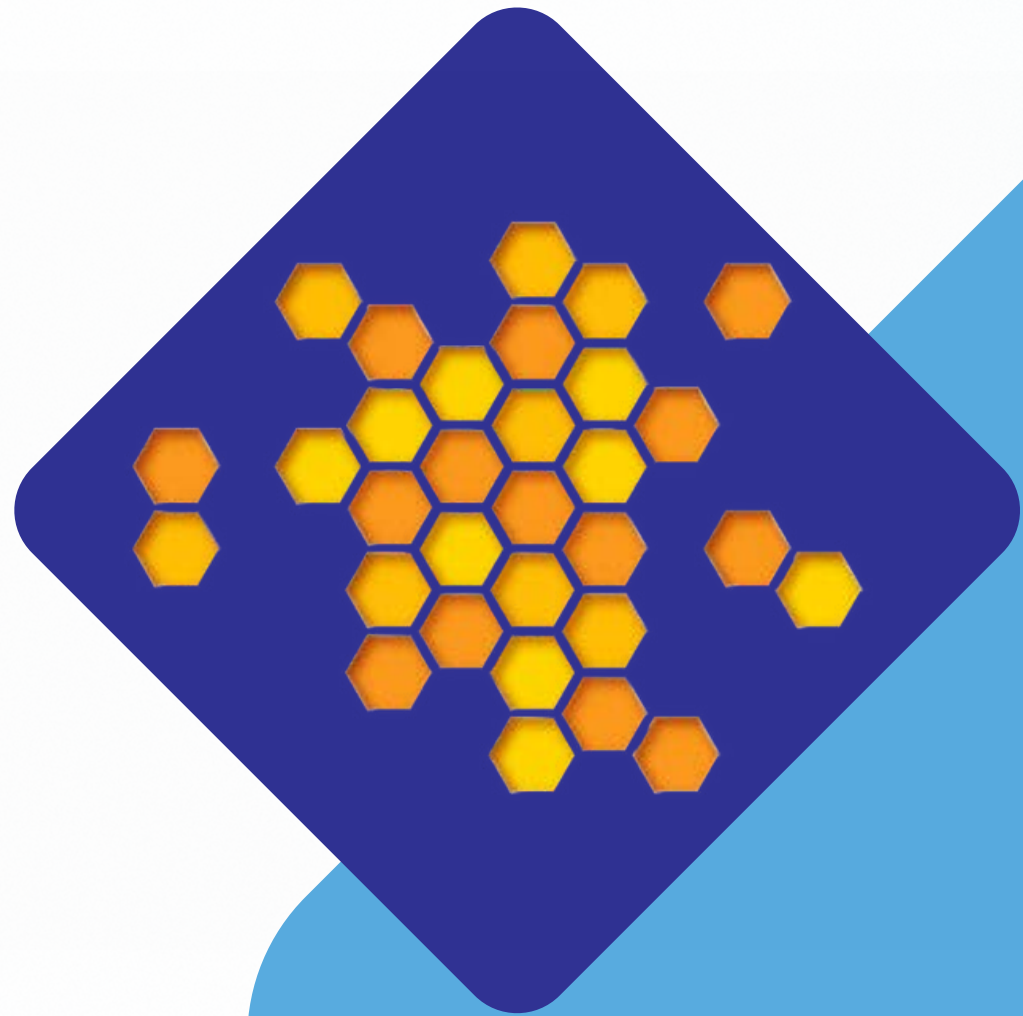


Applications - Automotive

- Used to replace heavier parts – inside of roof, under floor, etc. parts of dashboards, etc
- Composite parts for cars – combined
- Trend for lighter materials in current vehicle models. Trend is towards electric vehicles (requiring a lighter body to offset battery weight)
- Several Tier 1 approved supplier status
- Country of origin for automotive applications include Germany, Spain, Switzerland, Austria, France & Poland

Growth slowed due to supply chain troubles (mainly from Ukraine war) and slower technical uptake for electric car market





Future Opportunities



Future Opportunities - Substitutes



Summary of Transit Outer Fitment Materials - Analysed by Material - 2023, % of Product Packed

Paper Based	
Honeycomb	70.5
Corrugated	1855.7
Moulded Fibre	195.0
Other Paper Based	980.0
Sub-total Paper Based	3101.2
Plastic Based	
EPS Fitments	280.0
EPS Loosefill	68.0
Other Plastics Based	201.0
Sub-total Plastics Based	549.0
Total Europe	3650.2

NB1: Other paper based includes shredded paper, kraft wrap filler and solid board

NB2: Other plastics based fitments includes bubble wrap

EPS fitments sector



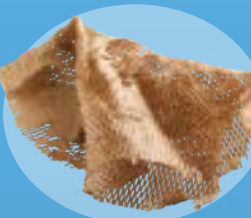
280,000 T

Other Plastic Based Fitments



201,000 T

Honeycomb = 2% of this sector



70,500 T

Fibre-based solutions dominate the fitments market (**85%**) and Corrugated dominates the fibre-based solutions (**over 50%** of this sector overall)

100% of this target is **0.48M tonnes**

Future Opportunities - Substitutes



Flute Profile Trends & Forecasts - Shipments of Converted Corrugated – Western & Central Europe – 2020, 2025 & 2030 – Msm

Board Construction	2020		2025		2030		2020 to 2025	2025 to 2030
	Msm	%	Msm	%	Msm	%	% p.a.	
Single Face	942.1	1.7	1010.9	1.8	1039.7	1.7	1.4	0.6
Single Wall								
A flute	1995.0	3.6	1853.3	3.3	2079.4	3.4	-1.5	2.3
C flute	7869.1	14.2	7076.4	12.6	7094.4	11.6	-2.1	0.1
B flute	17899.4	32.3	14377.4	25.6	11864.8	19.4	-4.3	-3.8
Intermediate (R, S, T, etc.)	6483.7	11.7	11120.0	19.8	16574.1	27.1	11.4	8.3
E flute	7592.0	13.7	8368.1	14.9	9846.6	16.1	2.0	3.3
Fine flutes (F, G, O & N)	775.8	1.4	898.6	1.6	1162.0	1.9	3.0	5.3
Sub total Single Wall	42614.9	76.9	43693.7	77.8	48621.3	79.5	0.5	2.2
Double & Triple Wall	11859.0	21.4	11457.0	20.4	11497.9	18.8	-0.7	0.1
Total	55416.0	100.0	56161.6	100.0	61158.9	100.0	0.3	1.7

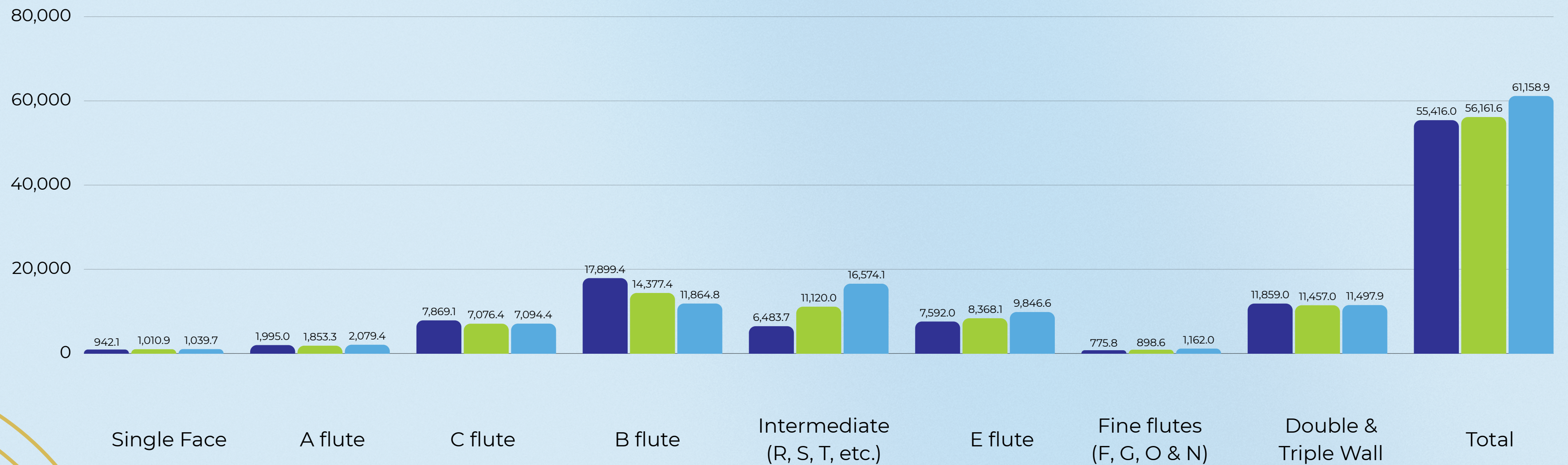
11,457
Msm
=
4.8M
tonnes

Future Opportunities - Substitutes



**Flute Profile Trends & Forecasts - Shipments of Converted Corrugated – Western & Central Europe
– 2020, 2025 & 2030 – Msm**

● 2020 ● 2025 ● 2030



EMPHA members identified opportunities

- Replacement fittings for plastic inserts for electrical goods
- Fittings for furniture to replace plastics
- Die-cut layer pads for drinks market (cans and bottles)
- Die-cut fittings for food market (e.g. recipe boxes)
- Die-cut fittings for electrical products
- Fittings for Boilers, Coolers & Heat Pumps



EMPHA members identified opportunities

- ⬡ Heavy duty export boxes for chemical, medical & pharma products
- ⬡ Packs for car parts (catalytic converters, battery caps, brake callipers, etc.)
- ⬡ Boxes for Vehicle & Jet Engines
- ⬡ Die-cut fittings for automotive parts
- ⬡ Combination packs (plastic + HC)
- ⬡ Pallets & Pallet Boxes

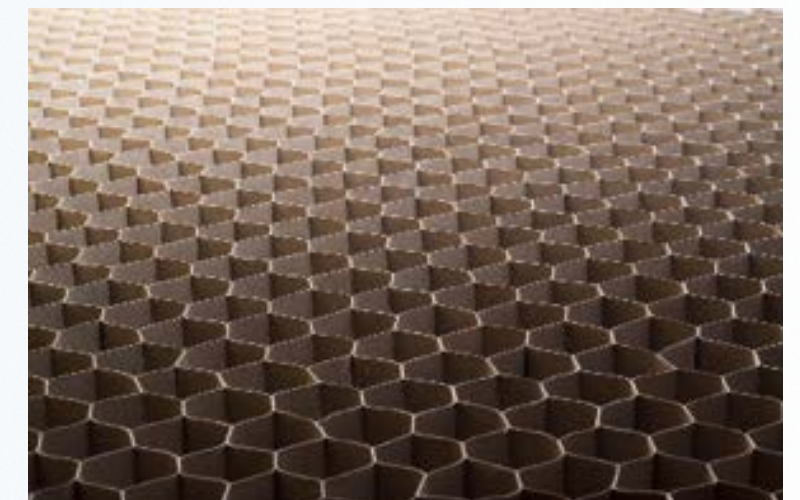


Are all EMPHA's target EUMs enough for "significance"?

- Contract packing
- Events/Display/Retail
- Aerospace
- Trains
- Medical
- Temporary buildings
- Green Energy
- Defence/Military
- Caravans
- Logistics & Transport
- Appliances
- Re-sale



Are there enough opportunities?



Our niche is small - too small maybe?

- Consists of HC producers, HC producers & sheet converters, and solely Sheet converters
- HC Producer/Suppliers with other products in their portfolio (e.g. Corrugated) may not always be able to join EMPHA. Why not?
- HC Producer/Suppliers with other products in their portfolio (e.g. EPS or injection moulded plastics) may not be welcomed as members. Why not?



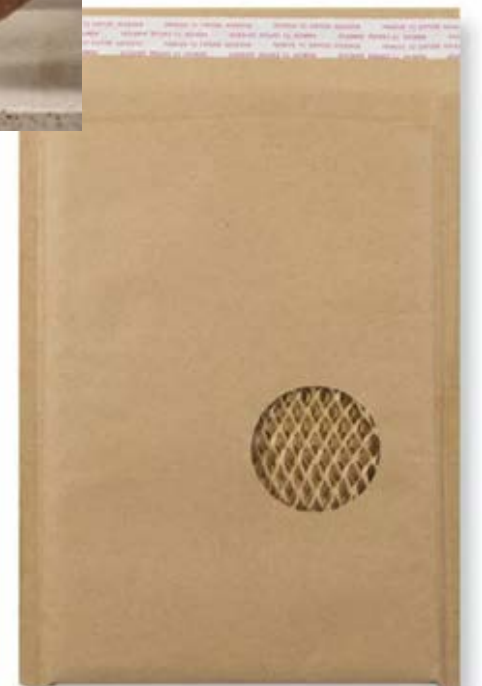
Our niche is small - too small maybe?

- ⬡ Big groups are missing from the membership (e.g. Smurfit Westrock)
- ⬡ Some other key players are missing too (e.g. Bestem & Grigio)
- ⬡ Converter/Suppliers of lighter weight HC products (e.g. Hexacomb sold by Flexi-Hex) may not be considered as suitable members either. Why not?
- ⬡ N.B. the volume that these companies enjoy, or that their niche markets represent, could boost the EMPHA community towards the **3M Tonnes/annum** figure



What else could EMPHA do to gain more “significance”?

- Hexagon icon Widen how we describe our product?
 - Light weight HC (e.g. Hexicomb, 4mm HC, etc.)
 - Padded Envelopes (e.g. Enviro Mailers)
- Hexagon icon Invite major players to become part of our membership?
 - PCA
 - Smurfit Westrock
- Hexagon icon Promote examples of other EUMs where HC thrives?
 - Sporting Goods (e.g. skiing helmets, bicycle helmets, etc.)
 - Leisure in general (e.g. motorbike helmets, surf boards, etc.)



Q1 - How do we see ourselves?



~~Q1 - How do we see ourselves?~~



~~Q1 - How do we see ourselves?~~
**Q1 - How do our customers and end
users see us?**



**Q2 - How do we become more
“*SIGNIFICANT*”?**



Open Forum Session

Please split into 3 groups, to discuss these 3 questions and offer your thoughts:

Q1 – What does “**Driving**” and “**Breakthrough**” look like for you?

Q2 – Do we represent enough/all “**Paper Honeycomb**” **products**?

Q3 – What should we do next to become even **more significant**?



What's new at NOA?



 **THE BOARDROOM**
Unravelling opportunities for fibre packaging



18+ EUMs!

How can NOA be of extra help?

If you need some help around:

- The Boardroom – for market trends and outcomes
- Coaching & Consulting – for personal and strategic support
- Marketing – for getting your brand out there
- Recruitment Support – for attracting the right talent
- Talented Leaders Programme – for empowering talent

Please scan the QR code to find out more details



Policy and Practice

Please be wary of sharing any of this data via any AI channels as it:

- (1) Becomes available to all users of the WWW by default (including your competitors)
- (2) Gives away your competitive advantage around this knowledge
- (3) Provides data to others who may not have paid for it or invested in it
- (4) If you share NOA's data on any AI channel or platform you will also be sharing NOA's Intellectual Property (IP) too

