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Valpak – UK's Leading Producer Responsibility Scheme

The UK's first and largest Producer Responsibility Scheme



100% compliance record, over 25 years experience, 200 employees



Working in partnership with Government to improve and develop legislation with the aim of increasing recycling rates





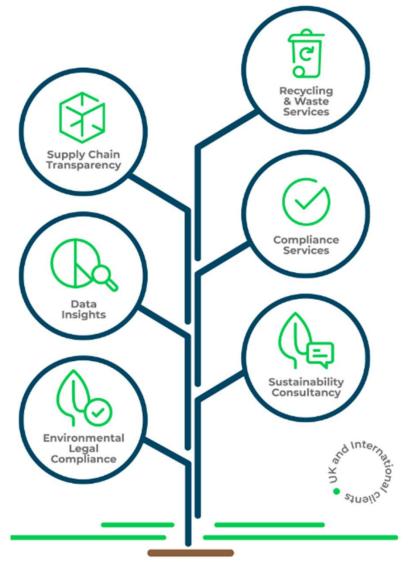












Our roots: Packaging Waste Regulations (1997)

Contents



Changing to Extended Producer Responsibili ty (EPR) Current vs future regulations Changes to reporting requirements

Timeline of reforms

Timeline of packaging waste legislation

EU introduces the Packaging Waste Directive

• UK implements the Packaging Waste Regulations

UK introduces Household Recycling Waste Act

Amendments to Packaging Waste Regulations

Government consults on reforms to Packaging Waste
 Regulations to introduce Extended Producer Responsibility

• Extended Producer Responsibility system introduced



1997

2003

2007

2021

2024





EPR – Single Party Responsibility

From 2023 responsibility will shift from a shared point to a single point.

Only one business will be responsible for funding the entire waste management costs for a piece of household packaging

'Small' businesses - with an annual turnover between £1 - £2m and handle and supply over 25t of packaging through the UK market yearly OR an annual turnover over £1m and handle and supply between 25t and 50t of packaging through the UK market in a year.







Pack/filler (unbranded)





Supplier to nonobligated businesses



100%



Why are reforms taking place?

Current PRN system was established in 1997 to address different objectives & issues to those faced by government and the industry today

Issues highlighted include:

- Inconsistent funding for & performance by those collecting waste
- Regulations do not account for e-commerce boom
- PRN markets can be volatile, with limited revenue usage reporting
- Fragmented consumer communications to drive behaviour
- Insufficient scrutiny of operators & export destinations for waste

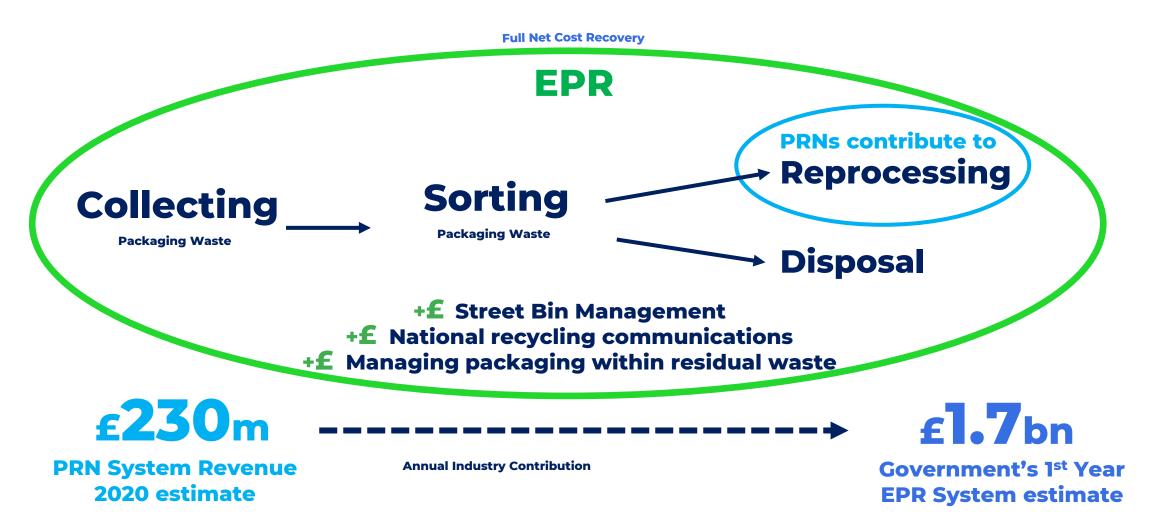
The system is being redesigned to make producers more responsible for the costs associated with waste management of packaging they supply





Full Net Cost Recovery

EPR expands producers' responsibility to fund household packaging waste management







Packaging Definitions and Costs

Household



HH-like







C&I



All packaging incurs PRN obligation: price variable contribution to recycling costs

Packaging subject to EPR fees from 2024

Will require reporting of packaging in greater detail

Also subject to EPR fees unless producer can evidence it won't become HH waste

Not subject to EPR fees -PRNs only

Longer term EPR approach still being considered





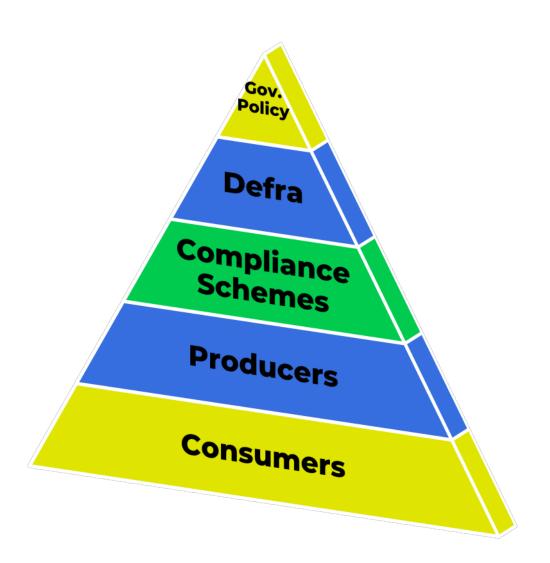


DRS packaging POM in Eng/Wal/N.Ire subject to PRN and EPR fees until introduction of DRS (TBC)



What is a producer compliance scheme?

- Commonly referred to as 'Producer Responsibility Organisations' or PROs abroad.
- Help producers understand and comply with their obligations
- Help government to develop effective and efficient policies
- Help both understand and cooperate for the best possible outcome

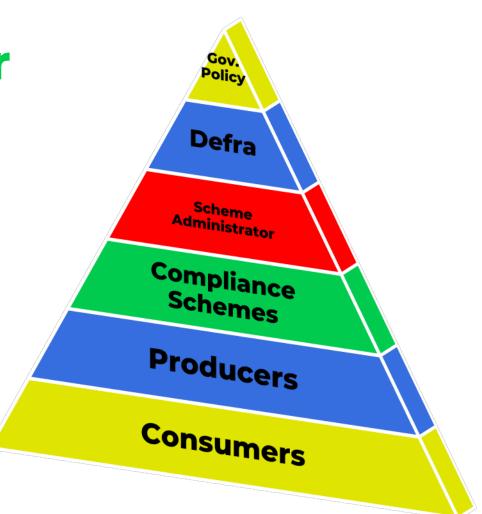






EPR Scheme Administrator

- Will receive EPR data submissions, invoice businesses for EPR payments and redistribute funds to local authorities.
- Also oversees national communications
- Responsibility for determining eco-modulation of fees
- Point of contact for industry and government





Shared Producer Responsibility vs. Extended Producer Responsibility



Shared Producer Responsibility (current system)

- Only obligation for large businesses
- Share of responsibility determined by role in supply chain
- Producers contribute to recycling costs through PRNs for all packaging types
- Data reporting annually with limited detail



Extended Producer Responsibility (future system)

- Financial obligation for large businesses, reporting obligation also includes SMEs
- Single party responsibility
- Producers cover full net costs
- More regular and detailed data reporting (+ removal of 'SME allocation method')



Data Reporting under EPR

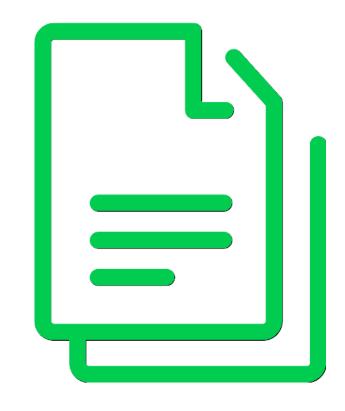
Current reporting requirements

Obligated packaging producers make I data submission annually, by the end of April.

Data is reported in the 7 broad material categories*

Data is not captured for nonfinancially obligated producers

*Paper (incl. card) Glass Steel
Aluminium Plastic Wood Other



EPR reporting requirements

Obligated large producers will make 2 data submissions each year, by the end of April and October respectively.

Obligated SMEs have an annual reporting obligation in the same level of detail as large producers

Data reported in 8 material categories (fibre-based composites is a new category)

Data reported with in line with ecomodulation criteria, likely waste stream and presence in street bins & litter

New data reporting by nation for sellers





Data collection tips

Mixed sources (UK and Overseas)

Purchase records

Supplier data

Mixed customer types and destinations (UK and Export)

Sales data

Customer data

Mixed product types

Product data

Bill of materials





Packaging Weights Data Collection

Understand what your obligated activities are

Which products do you need to collect data for?

What are your priority products?

What layers of packaging do you need to collect information for?

Primary

e.g. can, bottle, sachet

Secondary

e.g. multipack case, outer plastic bag

Tertiary/Transit

e.g. pallets, stretch wrap, banding





Sourcing Weights

In-house weighing (calibrated scales)

Supplier information

Internal specification records

Advisable to refresh weights every 2-3 years

- Lightweighting
- Changes to packaging configurations



Recommendations

- ✓ Maintain a file of all workings
- Have written procedures
- Keep an audit trail to the data form
 - Required for Valpak & Agency audits
 - Maintain for four years

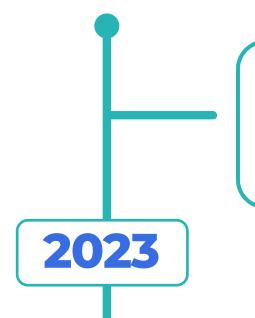




Timeline for EPR



Late 2022



Late 2022

Defra to publish rough EPR fee ranges and legislation for 2023 system

- 2023 PRN Recycling Targets
- Definitions of obligated parties
- 2023 EPR data reporting rules & form

Across Q1 2023
Collation and reporting of
2022 packaging data under
existing rules

Starting 2023 EPR Producers begin to

record packaging POM by

- Expected waste stream
 - Litter likelihood
 - Fibre-composites

(to be reported by 1st Oct 2023)

2023

Starting 2023
EPR Sellers begin to record packaging POM by nation (to be reported by 1st Dec 2024)

1st October 2023
Deadline for first biannual EPR report
2023 H1 data by: type, waste stream etc.

Prior to 2024

Defra to publish legislation that replaces the 1997 regulations

Sets 2024 reporting rules including eco-modulation criteria

2024

Starting 2024
EPR Producers also begin
to record eco modulation
data e.g. polymer of plastic
(to be reported by 1st Oct 2024)

1st April

- First annual data submission by small producers
- Deadline for second bi-annual EPR report for large producers
- First annual HH EPR bill issued

Valpak a Reconomy Group company

1st January Packaging EPR implemented

- Liable producers acquire enhanced financial responsibilities
- Mandatory fibre-based composite cup takeback introduced





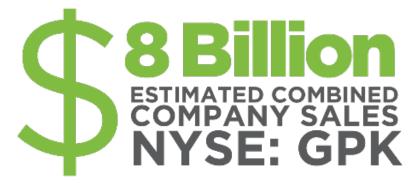






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Graphic Packaging International from a global perspective











FULLY
INTEGRATED
ON 3 MAJOR
PAPERBOARD
GRADES
SUS|CRB|SBS







VERTICALLY 115 CONVERTING FACILITIES PAPERBOARD MILLS

EMEA OPERATIONS

43 PRODUCTION SITES





HEALTHCARE AND BEAUTY SPECIALIST





WEALTH OF EXPERIENCE

CONSUMER INSIGHT & SUSTAINABILITY DRIVEN INNOVATIONS

CONSUMER AND BEVERAGE INDUSTRY LEADER



Over 1400 Machine Placements Since 1960

Designing with Maximum Circularity in Mind





0.2



Sweden		Finland		
Recycling Rate (Eurostat)		 Recycling Rate (Eurostat)		
Paper & Cardboard	Plastic	Paper & Cardboard	Plastic	
81,8	48,4	116,1	26,5	
EPR Fees		EPR Fees		
Paper and Cardboard pelow max plastic threshold)	Harder to Recycle Plastics	Paper and Cardboard (below max plastic threshold)	Harder to Recycle Plastics	
0.203	0.475	0.049	0.119	
•				

Ireland Recycling Rate (Eurostat) Paper & Cardboard Plastic 78,5 30,5 **EPR Fees** Paper and Harder to Recycle Cardboard **Plastics** (below max plastic threshold) (€/kg) (€/kg) 0.089 0.023





Italy

Recycling Rate (Eurostat)

Plastic

41,8

Spa	ain		
Recycling Ra			
Paper & Cardboard	Plastic		
74,6	47,9		
EPR Fees			Recy
Paper and	Harder to recycle	1	Paper & Cardb 98,4
Cardboard (below max plastic threshold)	Plastics		
(€/kg)	(€/kg)		Paper and
0.076	0.739		Cardboard
Plastic Tax (E)		(below max plastic th	
(€/kg Virg		0.165	
0.4	45		
Note: Regulatory consun for plastic rings	nption reduction targets		

France
Recycling Rate (Eurostat)

Paper & Cardboard
98,4
Paper and
Cardboard
(below max plastic threshold)
0.165
Prance
Plastic
98,4
Plastic
Plastics
(€/kg)
0.361

Recycling Rate (Eurostat)

Paper & Cardboard
99,5

EPR Fees

Paper and
Cardboard
(below max plastic threshold)
(€/kg)
0.053

Plastics

Harder to Recycle
Plastics
(€/kg)
0.066

Greece

Disclaimer:

For most data, sources are Eurostat or Circpack report, 2020.

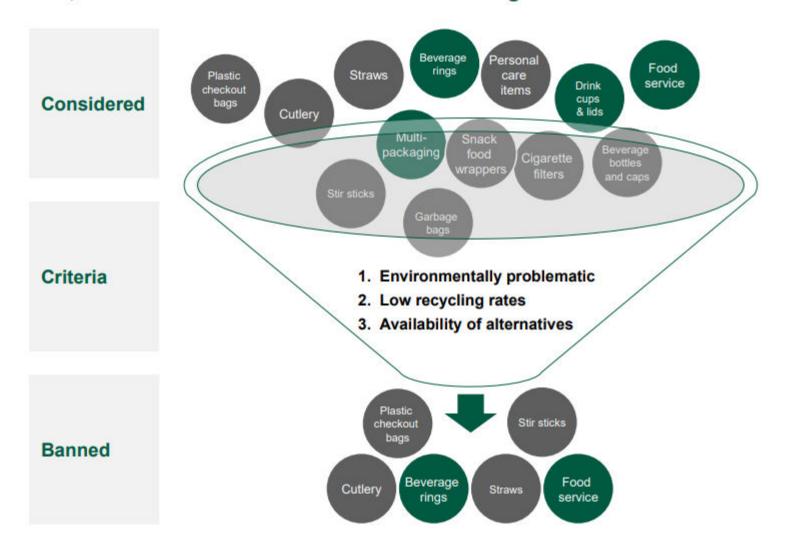
The EPR fees are updated yearly so small variations may have since occurred. There are countries such as the UK and Germany where the fee is not set nationally as it depends on competition between involved parties. Where possible an average was provided.

Paper & Cardboard

79,8

More countries may implement plastic taxes in the future and the data for upcoming ones may also be adjusted. Some countries have taxes on single use packaging that are not limited to plastics.

Government of Canada considered several categories of plastics to ban; criteria assessment revealed 6 warranting a ban



Governments across the world actively pushing for more regulation towards plastics

Brand commitments and voluntary pledges from organizations are accelerating plastic replacement initiatives





SUNTORY





By 2025: 100% of products will be in returnable packaging or made from majority recycled content.

By 2025: 100% recyclable, reusable and compostable consumer-facing packaging.

Develop containers and packaging based on the 3Rs of "Reduce, Reuse, and Recycle

By 2025: Make 100% of our packaging recyclableglobally by 2025.

By 2025: 100% of packaging will be recyclable, compostable or biodegradable



Example goals from US Plastic Pact



Define a list of packaging that is to be designated as problematic or unnecessary by 2021 and take measures to eliminate them by 2025



100% of plastic packaging will be reusable, recyclable, or compostable by 2025



Undertake ambitious actions to effectively recycle or compost 50% of plastic packaging by 2025



By 2025, the average recycled content or responsibly sourced bio-based content in plastic packaging will be 30%

©2022 Graphic Packaging International

We strive to optimize every step of the way

Our fiber raw materials are **REGENERATIVE**

Our products are **RECYCLED** and we use recycled fibre where fit for purpose to help reducing wastes towards a circular economy

Fibre are currently circulated

6,3 times*

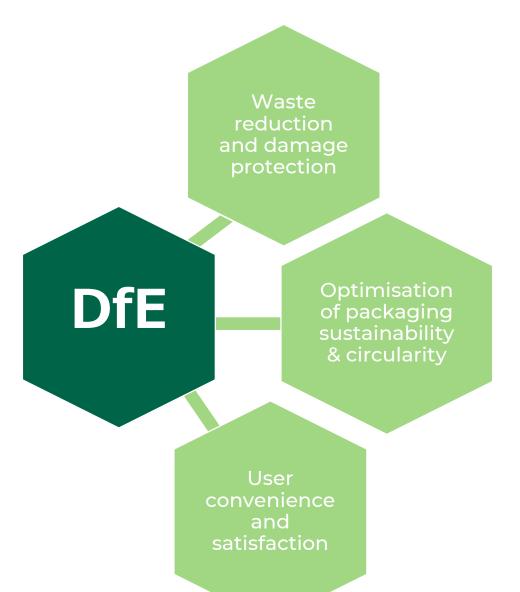


^{*} In Europe, CEPI data- but much greater potential shown by recent research



Designing for the Environment - KPIs

0%



		Sustainability & circularity KPIs	Benchmark	Product X
	_	Carbon footprint	4	
	ţi	Fibre content		
	Composition	Bio-based content		
	ď	Plastic content		
Direct	Ö	Non virgin content		
i i	ľ	Excludes toxic/persistent chemicals		
_	ø	Recyclability by design		
	Life	Actual current recycling rate		
	ō	Material Circularity Indicator		
	End	Resusability by design		
	ш	Biodegradablity/compostability		
Ψ	lm	pact on supply chain		
	Impact on product marketing, pack functionality			
	Impact on shelf life or product waste			
<u>=</u>	Ma	terial efficiency		



We Design Multipacks with Minimal Carbon Footprint and Maximum Circularity In Mind

Evolution of global warming potential (GWP100 excluding biogenic CO2) for different can packaging options: Based on 6 x 12oz cans

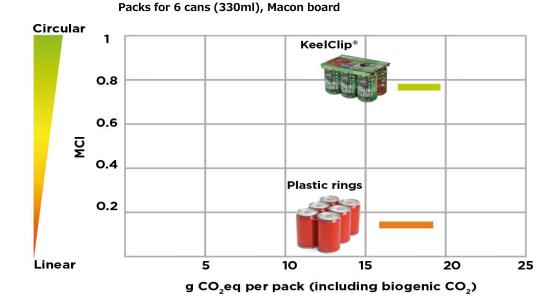


Based on GPI's peer reviewed LCA and other sources, the shrink wrap is estimated in the range of 21-36 g CO2eq (depending on the considered EoL) whereas the Hicone alternative is estimated around 18g. Actual values may vary depending on exact value chain, design, material specification (e.g. r%), transport, etc. Data is for orientative purposes only.

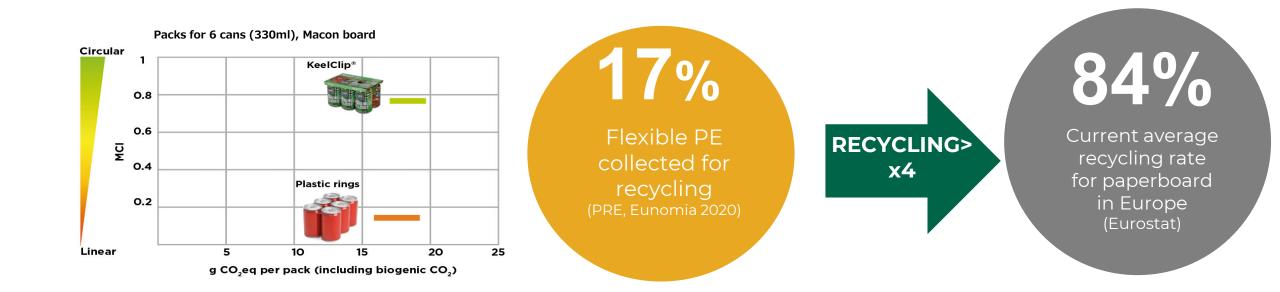
Both recyclability and material circularity are important for environmental protection







Both recyclability and material circularity are important for environmental protection







Craft Beer in North America

9000 Breweries in the North American Market GPI Supplies Over

O

of the North American
Craft Beer Cartons

200+ Customers - 35 Machine Placements - Over 45k Tons Annual Volume

US Craft Beer Packaging Trends



Cans are King!

Over the last 5 years cans have overtaken glass as the preferred container



6 Pack Most Common Format!

around 47% of all craft volume



12 Pack Format

31% and growing 10%/year



Variety Packs

4 out of the top 5 new 12 pack SKUS in the US



Craft Beer in North America

6 Pack Cans



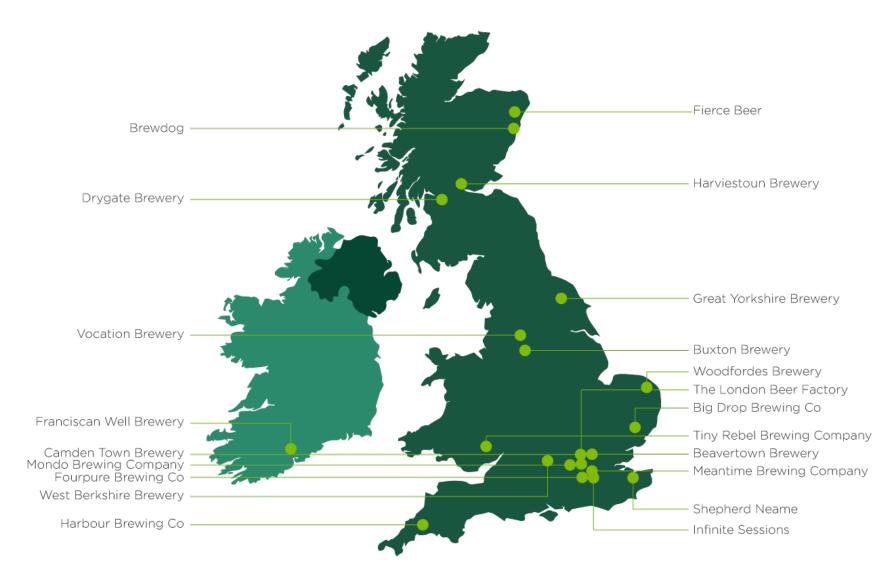
12 Pack Cans







UK Craft Beer Customer Locations





LAGER



WE LIFE A TORN

ELVIS JUICE

6 BOTTLES BEER-

GOOSE CONTROL GOOSE



CAMDEN

ALE

Case Study: Brewdog

Clips to Paperboard

The Start:

Moved into multi packs using a plastic can clip.

Their Challenge:

Supermarkets insisted they move to paperboard before their listings could be extended.



Chose to go PREMIUM

VOLUME GROWTH





Machinery Solutions to Meet Your Volume and Investment

We have partnered with Freemantle to ensure that, together, we can offer you a COMPLETE SOLUTION

GPI Integrated Machinery Options
High Volume
High Investment

Graphic
Packagir
INTERNATIONAL



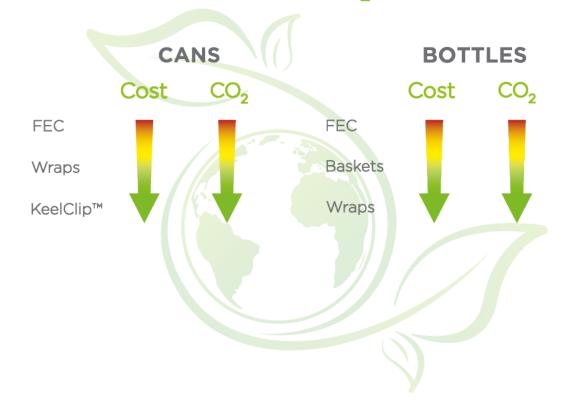
Running GPI Packs
Fully and Semi Automatic Solutions
Lower Volume
Lower Investment



WHY PAPERBOARD?

- Sustainable and responsible plastic replacement solutions
- Multiple product diameters
- Wide range of multipack sizes
- High speed, high accuracy machine solutions
- Design flexibilty to meet brand message and aesthetics
- Plastic replacement solutions ranging from minimal-board, to larger, more premium options

GREATLY REDUCED CO₂ EMISSIONS



Small Pack - Cans

Configurations: 4, 6 & 8 packs.

QUIK**FLEX** 300

QUIK**FLEX** 600 **G3** QUIK**FLEX** 2100 **G3**



Fully Enclosed

Running on QUIKFLEX™ range

- Range of flap styles to suit aesthetic, cost and sustainability needs.
- Variety of corner styles to increase shelf presence, differentiation and product retention.
- Multiple carry and open features available.

Wraps

Running on MARKSMAN™ range

- Options for both locked and glued wraps.
- Barcode-cover and Ad panel capabilities.
- Carry features available.

MARKSMAN™X5

MARKSMAN™750

MARKSMAN™1600HSI







Pillar Pack

Part of the QuikFlex™ Portfolio







QUIKFLEX 300 QUIKFLEX 600 **G3**QUIKFLEX 2100 **G3**QUIKFLEX TS **G3**

Configurations

2x²/₅/₆ 3x³/₆ 4x⁶/₆



4 Sided Rounded Corner

Part of the QuikFlex™ Portfolio





QUIKFLEX 300 QUIKFLEX 600 **G3**QUIKFLEX 2100 **G3**

Configurations





Estrella Damm Market Success

The Goal:

- To Replace 100% of plastic shrink wrap can packaging by 2021

The Result?

FUNCTIONAL DESIGN

A bold design to **DISRUPT** the multipack isle



AESTHETICALLY PLEASING

Protects the product from damage as it moves through the supply chain

Moved into the FIRST
4 SIDED ROUNDED
CORNER PACK

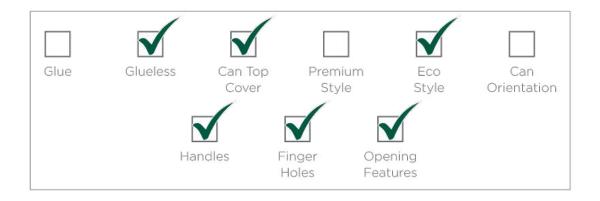
Removes
99
TONNES
of plastic



Top and Bottom Gusset Wrap

Part of the Marksman™ Portfolio





MARKSMAN™750 MARKSMAN™750HS
MARKSMAN™1600HSI MARKSMAN™X5



Small Pack - Bottles

Configurations: 4, 6 & 8 packs.

MARKSMAN™750

MARKSMAN ™X5









Wraps

Running on MARKSMAN™ range

- Neck Through and Over-the-crown options.
- Ad Panel and Bar Code Cover options.
- Handle and Fingerhole carry options.
- Locked or Glued base options.
- Run speeds up to 300ppm*.
 *when running on Marksman™ X5

Baskets

Running on AUTOFLEX™ range

- Multiple styles including Open, Neck Through, Over-the-crown and Fully Enclosed Baskets.
- Locked or Glued base options.
- Run speeds up to 250ppm.

Autoflex 1500HS







Can Clips

Configurations: 4, 6 & 8 packs.

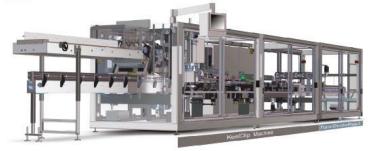


Our entire KeelClip™ range/Clip portfolio fit standard tray sizes, with zero need for shrinkwrap.

Capable of running speeds up to 350ppm (Packs per minute)









The Aim:

3 years prior, Spendrups started a project for a new can line and within that project also evaluated the secondary packaging. Since paper has a higher recycling rate than plastic (shrink film) the project scanned the market for a solution that can deliver a paper-based packaging with a premium appearance and functionality.

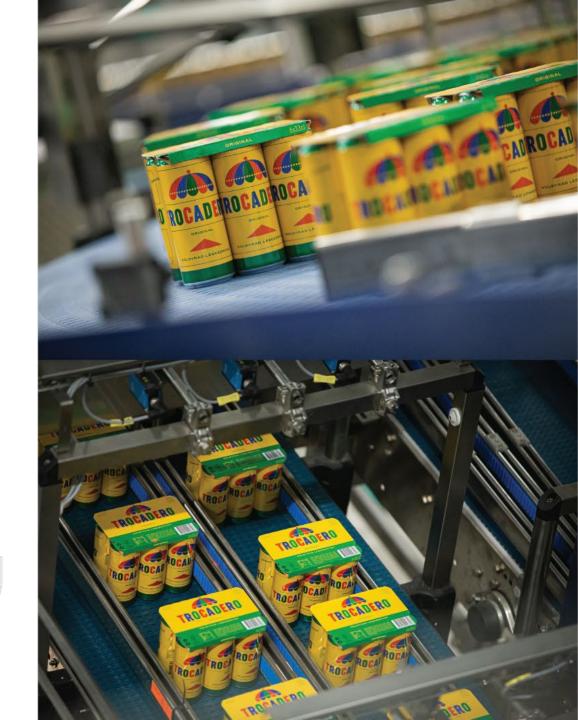
Their Result:

100 Tonnes Plastic saved once fully converted in 2023

Energy Savings through not using a shrink wrap tunnel

Why did you choose this solution?

KeelClip™ is a premium packaging that also supports Spendrups ambition to use sustainable material with high recycling rates. Also KeelClip™ delivers the line capacity that is needed to meet the requirements of a high speed can line.



Large Pack - Cans

Configurations: 9, 10, 12, 15, 16, 18, 20, 24 & 30 packs.

*30 pack requires non-standard pitch.

and occupy fridge space



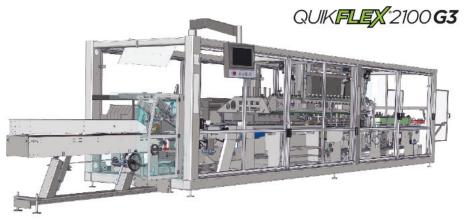
and differentiation.

and ease-of-access.

Fully Enclosed

Running on QUIKFLEX™ range

Our range of QUIKFLEX™ Machines are capable of high volume runs, at speeds reaching up to 300ppm (Packs per minute)



Large Pack - Bottles

Configurations: 9, 10, 12, 15, 16, 18, 20, 24 & 30 packs.

*30 pack requires non-standard pitch.

QUIKFLEX 300 QUIKFLEX 600 G3 QUIKFLEX 2100 G3

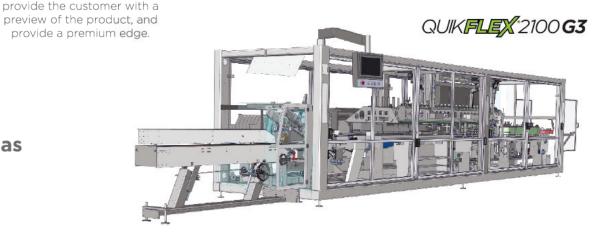


Fully Enclosed

Running on QUIKFLEX™ range

Windows and cutouts can

Our QUIKFLEX™ machine range runs design features such as Two and Four-sided Tapers as standard.





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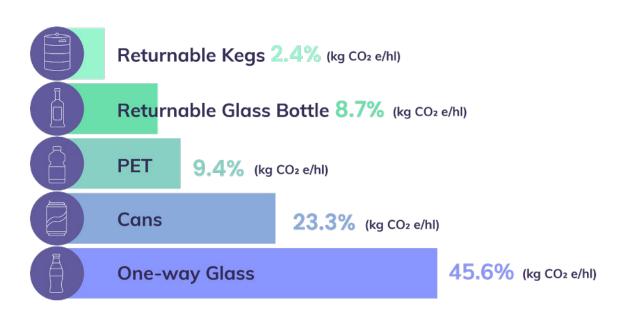


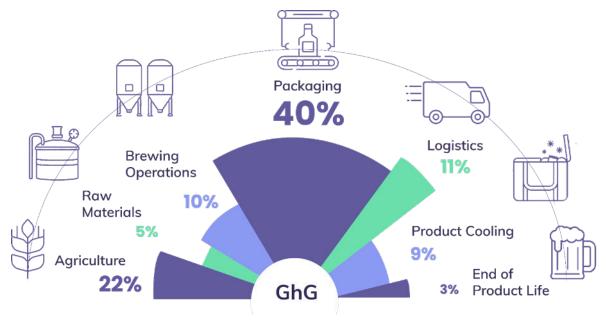
Connecting kegs to the Internet

hello@smartcontainer.co.uk



At Smart Container, we encourage use of the keg, the most sustainable packaging option for beer





Emissions by packaging type

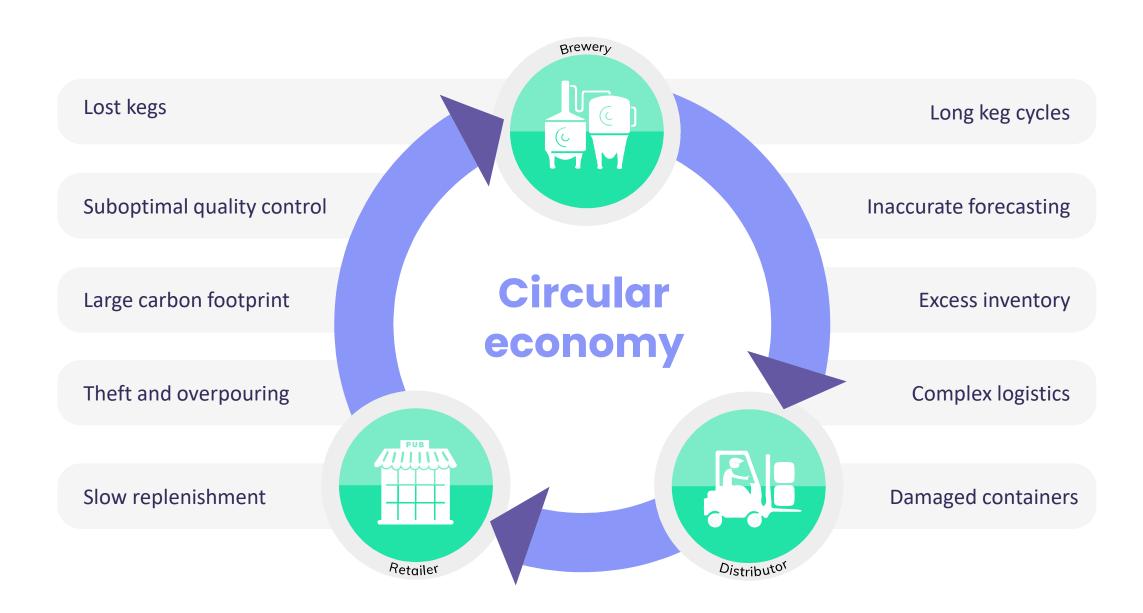
Breakdown of GHG Emissions

Beer is the 3rd most consumed liquid in the world

In the UK,
about 50% of all beer is
transported using a keg



Lack of visibility into the keg leads to many inefficiencies

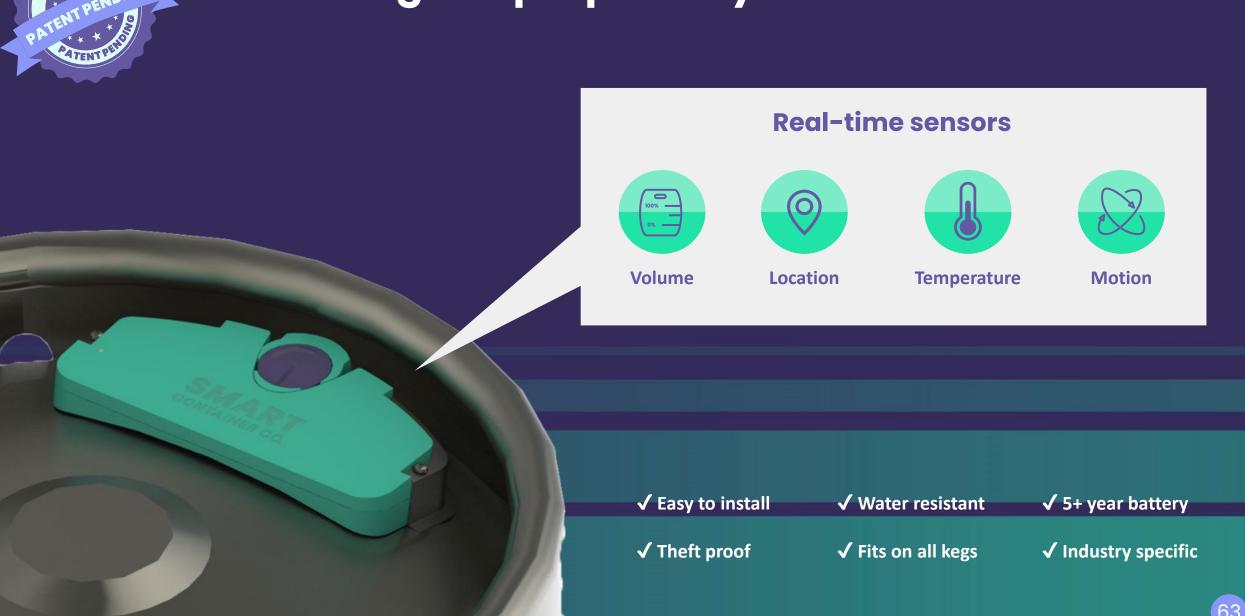


We solve this by connecting kegs to the internet





Using our proprietary IoT device





Intelligence to run the best draught beer business in the world

Using data from the containers, we empower clients with intelligence to





Increase revenues

Understand when, what, where products are consumed



Lower operational costs

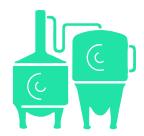
Improve asset utilization and quality control



Improve sustainability

Reduce beer wastage and single use containers

Benefits of increased transparency









Brewery

- Identify new markets
- Demand-driven production planning
- Reductions in lost kegs and spoilage
- Sustainability reporting

Distributor

- Faster keg cycles
- Route optimisation
- Maximise warehouse space
- Predictive maintenance
- Labor productivity

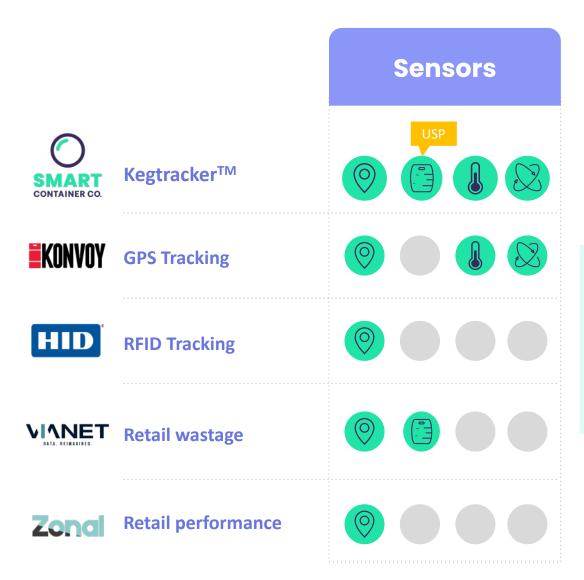
Retailer

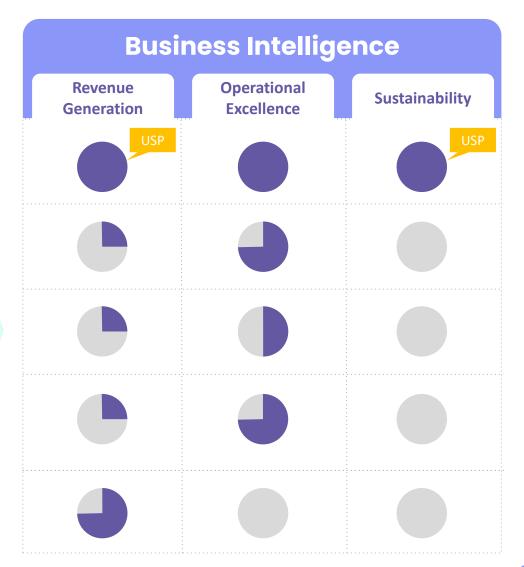
- Curb retail wastage
- Live beer menus
- Auto Replenishment
- Pub-to-Pub peer analysis
- First in, first out

Consumer

- Great tasting beer
- Global beer map
- Knowledge of beer carbon footprint
- Dynamic price offers
- Real-time notifications

Holistic keg knowledge is our unfair advantage















Sample reports



severebbe

Dashboard

Keg Status

Products

Logistics

Reports

Sustainability

Activity Log

12

Logout

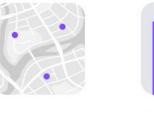
Dashboard

Hi Ryan! Check out your performance statistics

Keg Life Cycle

Your average keg turn is 7 weeks. You are performing on target.









Quantity View •

Energy View

Actions

iii May 21, 2022

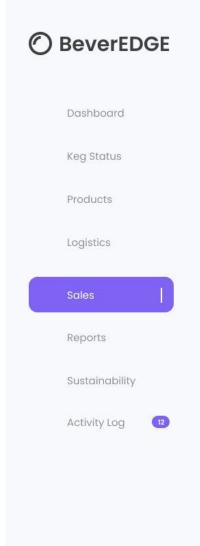
- Collect kegs from pub 1
- Call distributor at 14:30 □
- Move kegs to cold store

Notifications

- Teg #3456 has been refilled

Order Activity

- □ Keg #2673 on way to brewery
 □
- 😙 Venue 1 has made a request
- Keg #7825 has arrived at venue



Logout

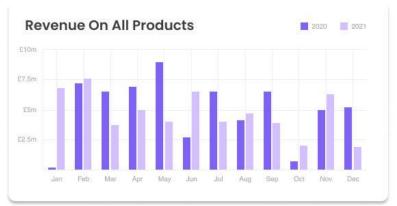
Sales

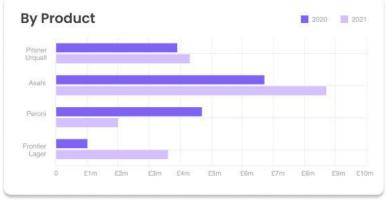
See your profit projections

Total Revenue Total Revenue \$47 M \$11 M Year To Date This Quarter

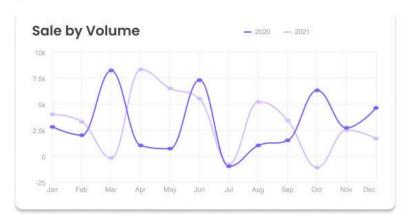
Best-Selling Peroni This Quarter

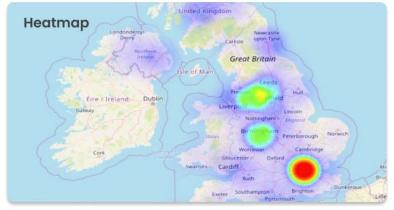
Trending Asahi This Quarter

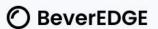




iii May 21, 2022 Q 🗘







Dashboard

Kegs

Products

Logistics

Reports

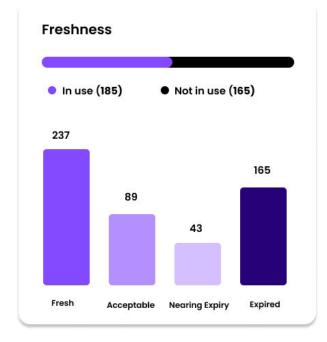
Sustainability

Activity Log

Logout

Product > Quality

See how your products are currently performing





ID	Туре	Status	Product	Volume	Days
#2567	50L	In Use	Clockwork		30
#3993	30L	In Use	Clockwork		30
#7288	50L	Spoiled	King Pin	_	30
#3626	50L	In Use	Clockwork		23
#1039	30L	In Use	Clockwork		21
#8237	50L	Spoiled	King Pin		18
#5524	50L	In Use	Clockwork		n n
#4392	30L	In Use	Clockwork		0
#3561	50L	Spoiled	King Pin	_	0
#2567	50L	In Use	Clockwork		30
#3993	30L	In Use	Clockwork		30
#7288	50L	Spoiled	King Pin	_	30
#3626	50L	In Use	Clockwork		23
#1039	30L	In Use	Clockwork		21
#8237	50L	Spoiled	King Pin	_	18
#5524	50L	In Use	Clockwork		n n
#4392	30L	In Use	Clockwork		0
#3561	50L	Spoiled	King Pin	_	0
#2567	50L	In Use	Clockwork		30
#3993	30L	In Use	Clockwork		30
#7288	50L	Spoiled	King Pin	_	30

⊘ BeverEDGE

Manage your orders

Dashboard

Keg Status

Products

Logistics

Reports

Sustainability

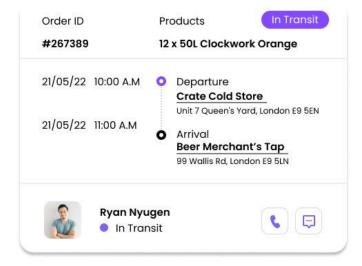
Activity Log

12

Logout



Logistics > Delivery Planning



			2
21/05/22	10:00 A.M	0	Departure
			Crate Cold Store
			Unit 7 Queen's Yard, London E9 5EN
21/05/22	11:00 A.M	_	Arrival
		J	Beer Merchant's Tap
			99 Wallis Rd, London E9 5LN



iii May 21, 2022 Q ↓

⊘ BeverEDGE Dashboard Keg Status Products Logistics Reports Sustainability 12 Activity Log

Logout

Packaging

Overview

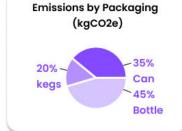
Summary

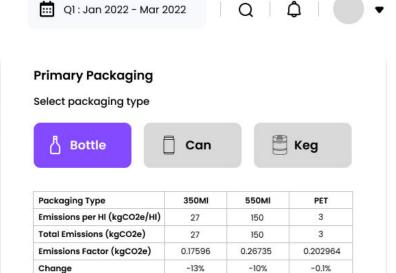


Number of kegs with tracker device 0 300 1,500









Total emissions from primary packaging: 3 tonnes CO2e

Secondary Packaging

Packaging	Weight (Kg)	Emissions (KgCO2e)	Change	
Cardboard	150	15	-16.7(%)	
Bottle Caps	27	18	-21.0(%)	
Plastic Rings	15	31	-3.8(%)	
Paper Packaging	80	12	-11.1(%)	
Plastic Labels	100	54	-13.3(%)	

Total emissions from secondary packaging: 1tonne CO2e

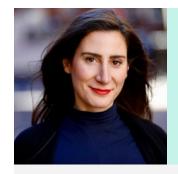
Founders and Advisors



EDUARDO GARCIA

Executive *Co-founder*

20 years of top-tier strategy and technology consulting



TAMARA GOLDSTEIN

Operations *Co-founder*

Former venture capitalist turned entrepreneur



GARY BULL Chairman

Former Global Head of Finance at SABMiller Procurement

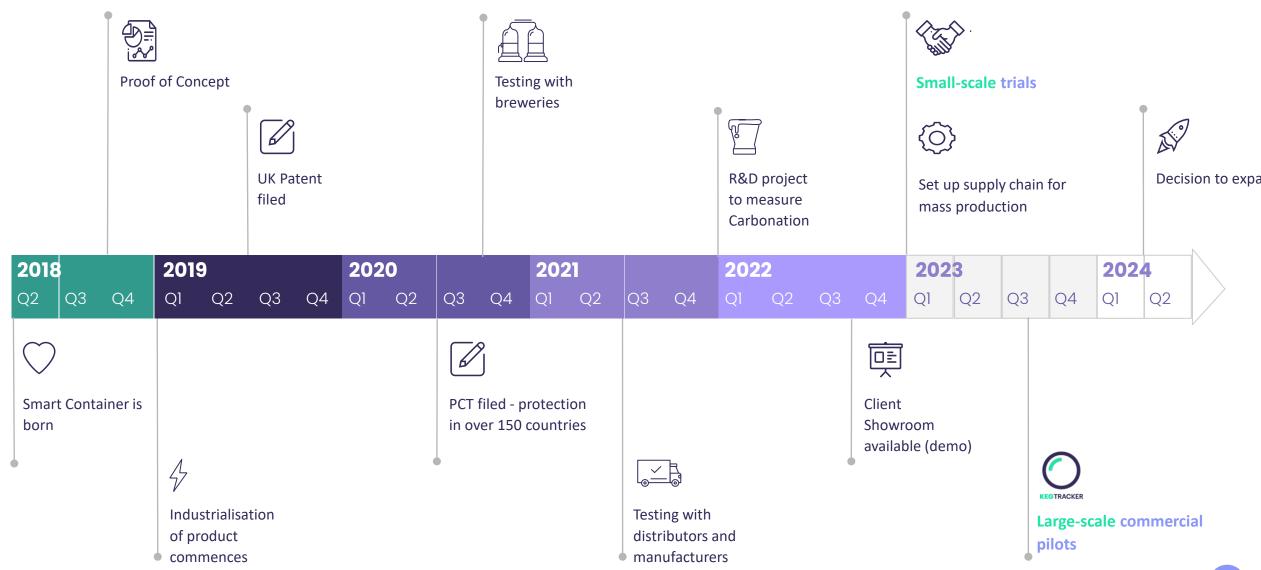


HECTOR GOROSABEL

Advisor

Former Chief Executive Officer at Asahi International

Years of testing and R&D, ready for launch





sales@smartcontainer.co.uk

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