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3EPAK® Paper Bottle & Technology

www.3EPAK.com

Summary

3Epak® is a patented, cost-saving, eco-friendly alternative to plastic bottles, aseptic cartons & stand alone pouches for non-carbonated beverages.

3Epak® technology offers the best combination of low costs, less waste, extended shelf-life, recyclability, biodegradability and compostability.

3Epak® enables each link in the supply chain to reduce environmental impact and demonstrate social responsibility.

Problems



COST

High costs of mass market Eco-Friendly beverage packaging solutions



WASTE

80% of plastic bottles & aseptic cartons end up in oceans and landfills



POLLUTION

Plastic bottles & aseptic cartons are not biodegradable under natural conditions

3Epak[®] Solution



COST savings:

- up to 50% by using low-cost materials and Patent Pending sterilization method
- up to 80% reduction in capital investment by using PATENTED production method
- up to 20% reduction in transportation and storage costs through PATENTED design & better utilization of space
- by increasing the shelf life up to 350% using Patent Pending film
- by minimizing energy consumption and need for refrigeration by using PROPRIETARY production process



WASTE is reduced by:

- cutting use of plastics by up to 75% compared to PET bottles
- reducing product/food spoilage by extending the shelf life
- enabling standard, low-cost recycling in contrast to aseptic boxes and stand alone-pouches



POLLUTION is reduced by:

- using materials that decompose harmlessly under natural conditions
- lower CO2 emissions during production, transportation, storage and display

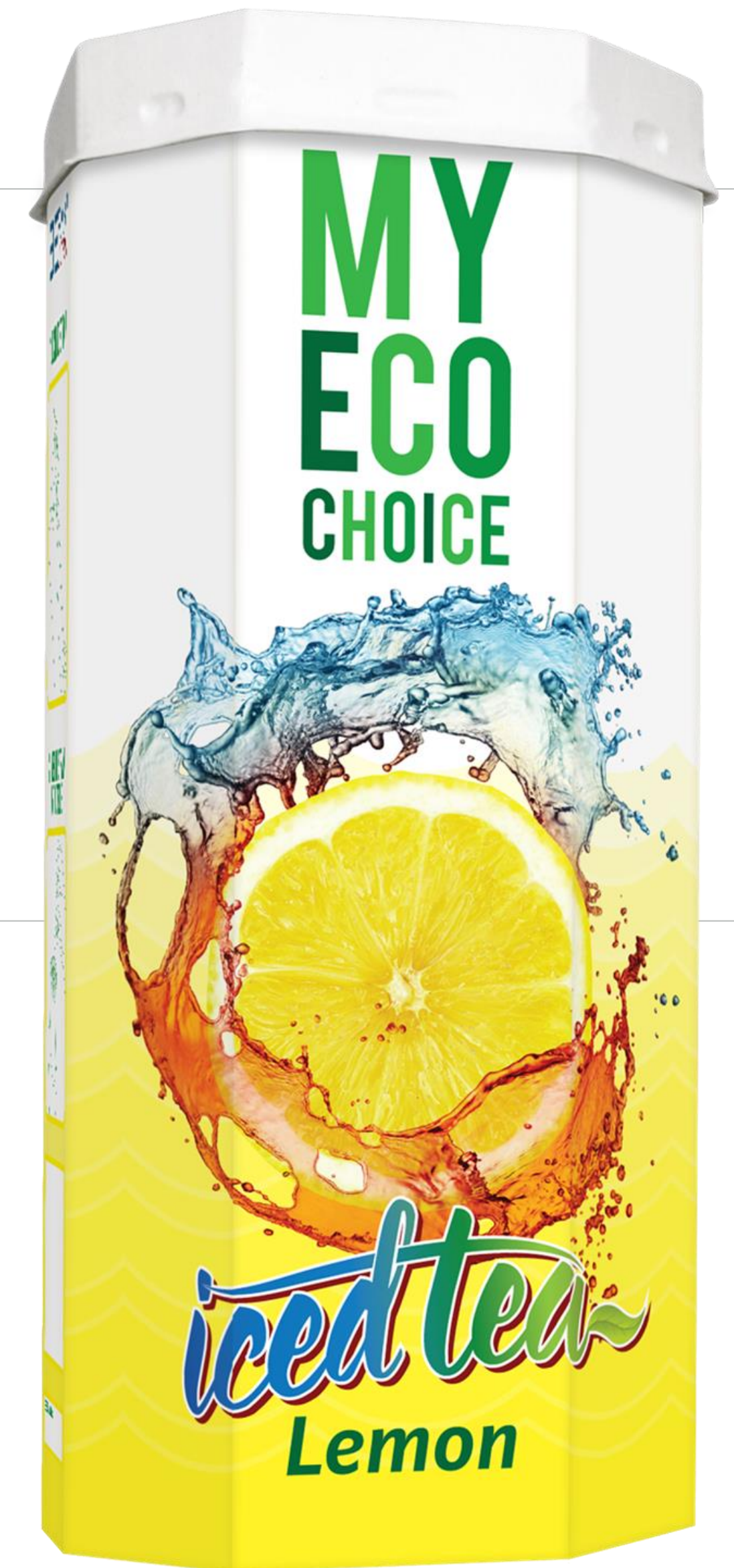
Market Size

- *400,000,000,000 plastic bottles and aseptic boxes are produced every year*
- *The global non-alcoholic & non-carbonated beverage market is projected to reach \$1,138 billion by 2020.*

References: <https://www.transparencymarketresearch.com/pressrelease/non-alcoholic-drinks-industry.htm>
<https://marketrealist.com/2015/03/alcoholic-beverages-key-category-beverage-industry>
<https://www.grandviewresearch.com/press-release/global-nonalcoholic-beverage-market>
<https://www.prnewswire.com/news-releases/worldwide-retort-pouch-market-to-reach-us751-bn-by-2025---transparency-market-research-650760393.html>

Competition

- ***Ecologic*** - \$20,000,000 of investment, high product price, slow production method
- ***ecoXpack*** - \$10,000,000 USD of investment, after 10 years still no product ready for the market
- Aseptic bottling equipment leaders with combined annual revenue approaching 20 billion - although 3Epak® technology is a competitor, it also provides them with the opportunity to leverage our patents/technology to expand beyond their core markets
- PET bottles – all pasteurized beverages such as Juices, Iced teas, Dairy drinks, Value added waters, etc. require thick & heat resistant bottles, 3Epak® paper bottle provides cost saving edge, environmental and other advantages described in the appendix comparison table.



Traction & Validation

- Created minimum viable product
- Designed and produced commercial paper bottle beverage container (**Patent** #US/9499295)
- Designed and implemented paper bottle production/assembly process (**Patent** # GB/2543675)
- Designed and life-cycle tested metal free, high gas-barrier film (**Patent pending**)
- Designed, produced and operated film sterilization method/apparatus (**Patent pending**)
- Designed, produced and operated prototype aseptic production line
- Trial sales - validated end-user acceptance and product-market-fit
- Brand owners' feedback obtained – Pepsi Co., LWW Co. and others
- Performed successful Verify & Validate laboratory testing
- **Patents** issued in USA, UK, China and BG; **Pending patents** in US, Canada, Japan & Indonesia; potential for further strengthening of technical and geographical scope



3Epak® Business Model



A - IP Licensing

B - 3Epak® product components sales

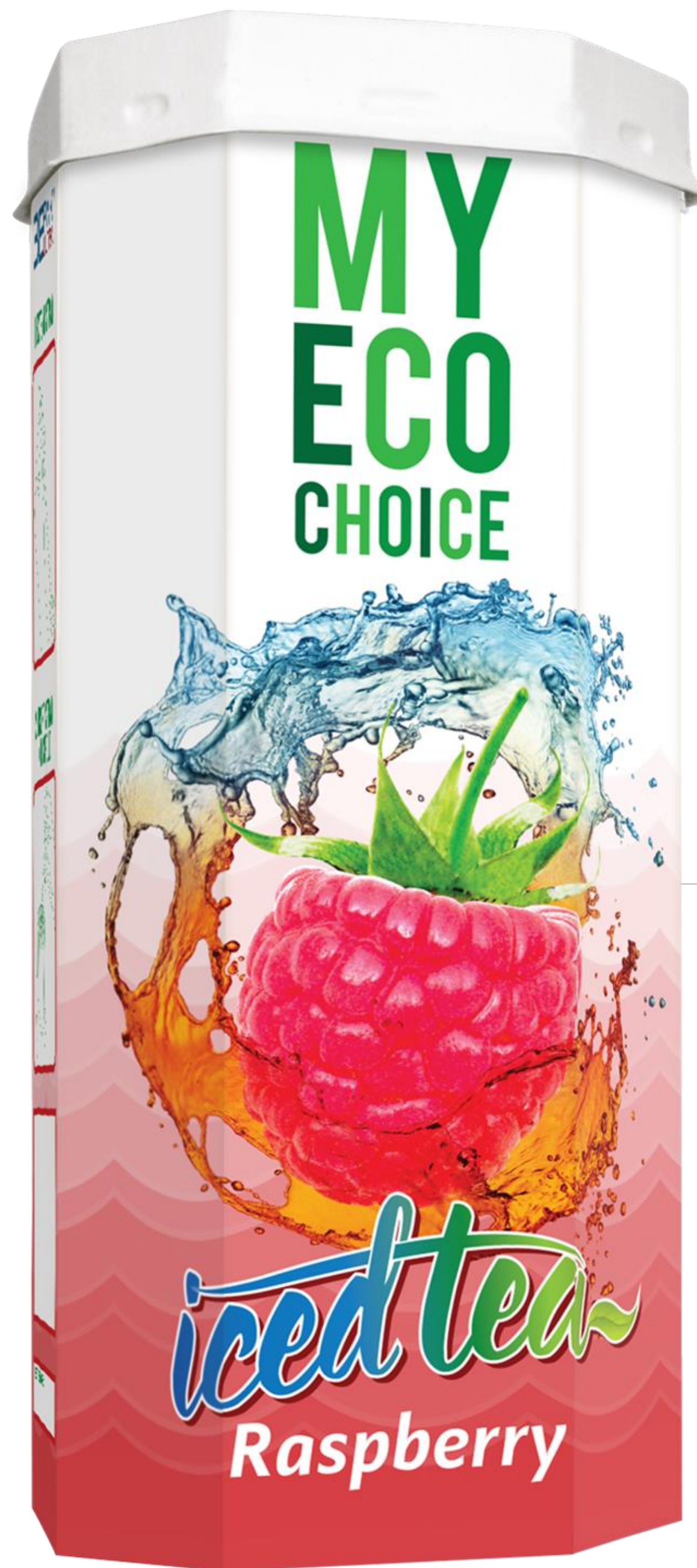
C - Private label, Contract bottling & Consumer products sales

Financials

		Year 1	Year 2	Year 3	Year 4	Year 5
3Epak® product licensing fees	Revenue	\$ 11,520	\$ 120,000	\$ 2,208,000	\$ 8,320,000	\$ 27,000,000
	Gross Profit	\$ 11,520	\$ 120,000	\$ 2,208,000	\$ 8,320,000	\$ 27,000,000
3Epak® product components sales	Revenue	\$ 56,160	\$ 585,000	\$ 10,764,000	\$ 40,560,000	\$ 131,625,000
	Gross Profit	\$ 9,360	\$ 97,500	\$ 1,560,000	\$ 5,070,000	\$ 17,550,000
Private label & Contract bottling, Consumer products sales	Revenue	\$ 81,800	\$ 396,500	\$ 1,641,000	\$ 7,960,000	\$ 16,750,000
	Gross Profit	\$ 30,300	\$ 148,500	\$ 598,000	\$ 2,962,500	\$ 6,285,000
All channels	<i>Total Revenue</i>	\$ 149,480	\$ 1,101,500	\$ 14,613,000	\$ 56,840,000	\$ 175,375,000
	<i>Total Gross Profit</i>	\$ 51,180	\$ 366,000	\$ 4,366,000	\$ 16,352,500	\$ 50,835,000



All revenue streams start after the launch of the first commercial scale bottling line.
Major markets - USA, Europe and Asia



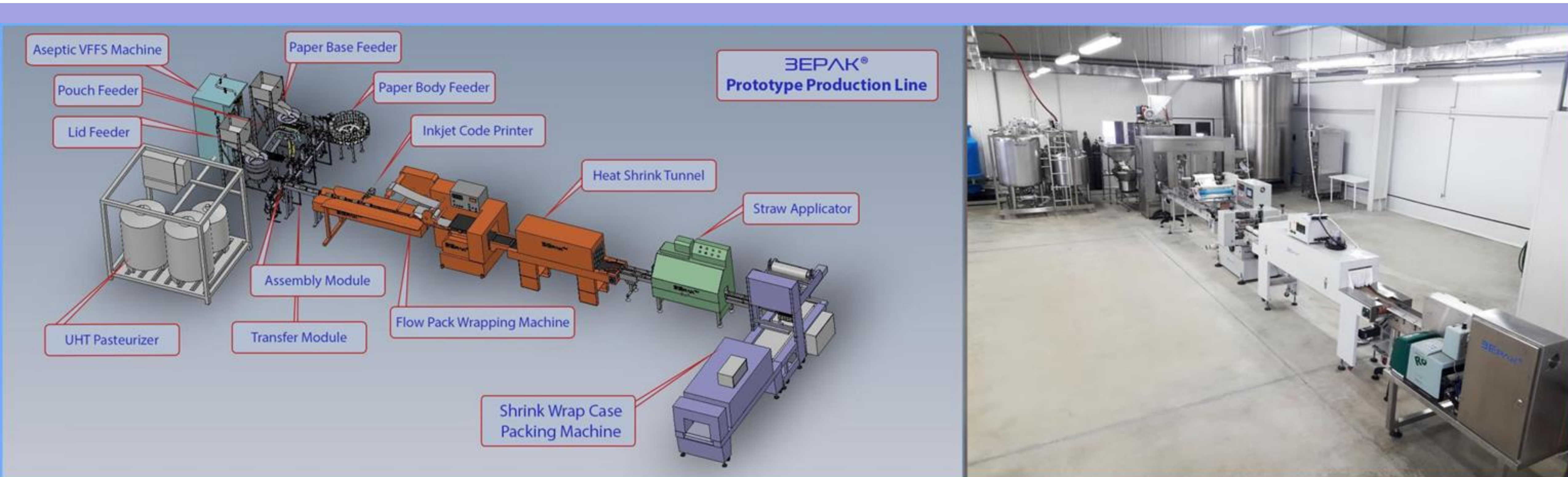
Growth Strategy

Licensees, Allies and Partners Include:

- Beverage Brands such as PepsiCo, Nestle, Coke, Kraft Heinz, Unilever, Starbucks, McDonalds, Dunkin Donuts, Peet's, Caribou, JAB, etc.
- Bottling Equipment Makers such as Evergreen, Elopak, SIG, etc.
- Bottlers – partnerships in niche markets for swift expansion of private label, contract bottling & consumer products sales

Facilities

3Epak® prototype automated aseptic production line forms, fills, seals, assembles and packs 3Epak® containers with non-carbonated beverages of varying content and sizes.



[Click here for video](#)

Team



Todor Saslekov
CEO

*R&D, strategy, global operations,
investor relations*



Neal Stender
Director

*Corporate Structuring,
Contracting, & IP Protection*

Asparuh Gavrilov
CTO

*R&D, equipment integration
& testing*



Michael Chen
Regional Manager CN

*Equipment, materials & components
sourcing and testing*

Ivailo Georgiev
Regional Manager BG

Production, sales & marketing



Funding

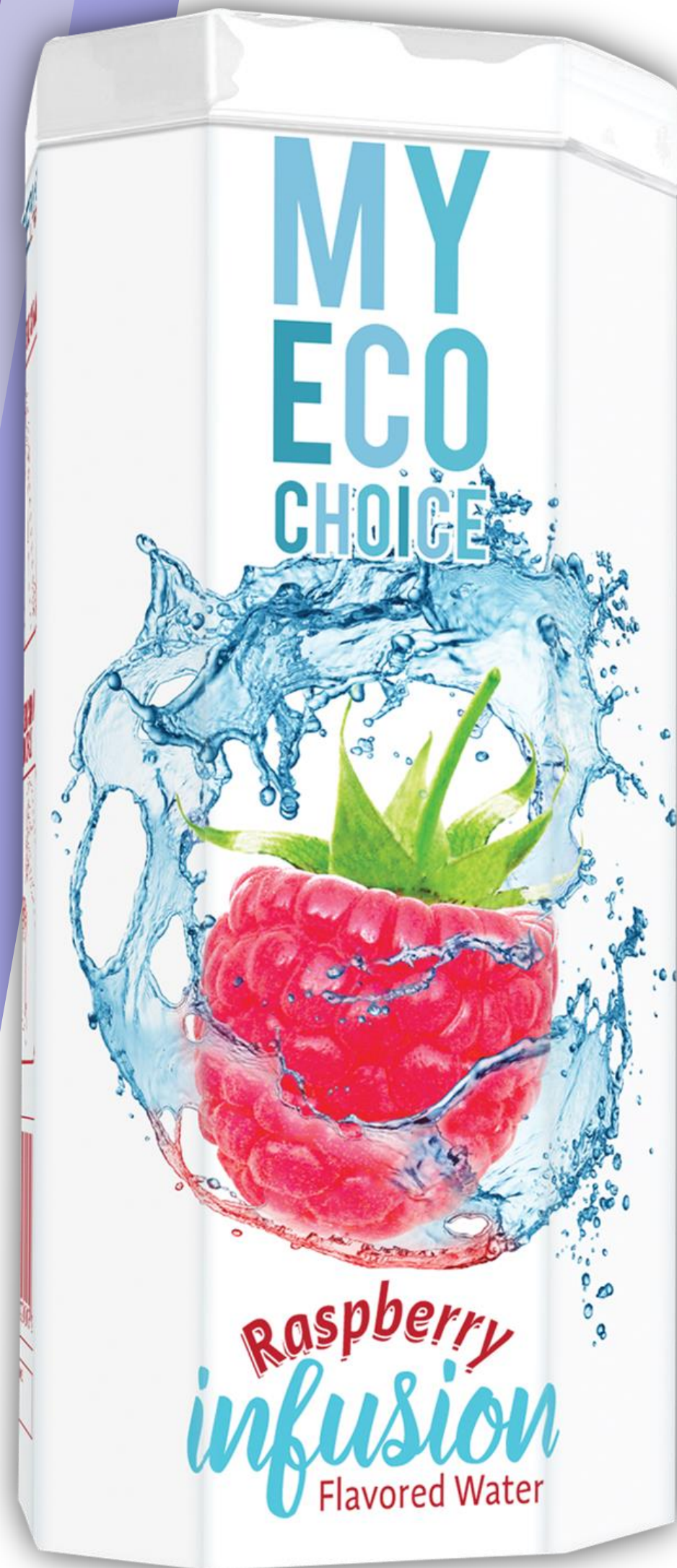
Investment:

- Seeking: \$380,000 | Round: Series A
- Raised up to date: \$975,000 USD

Use of funds:

- Maximize patents' technical and geographical scope
- Present 3Epak® technology, offer patent licenses & establish partnerships with beverage brand owners & equipment makers
- Expand market testing & improve the prototype line for scaling

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FUNDING ROUNDS

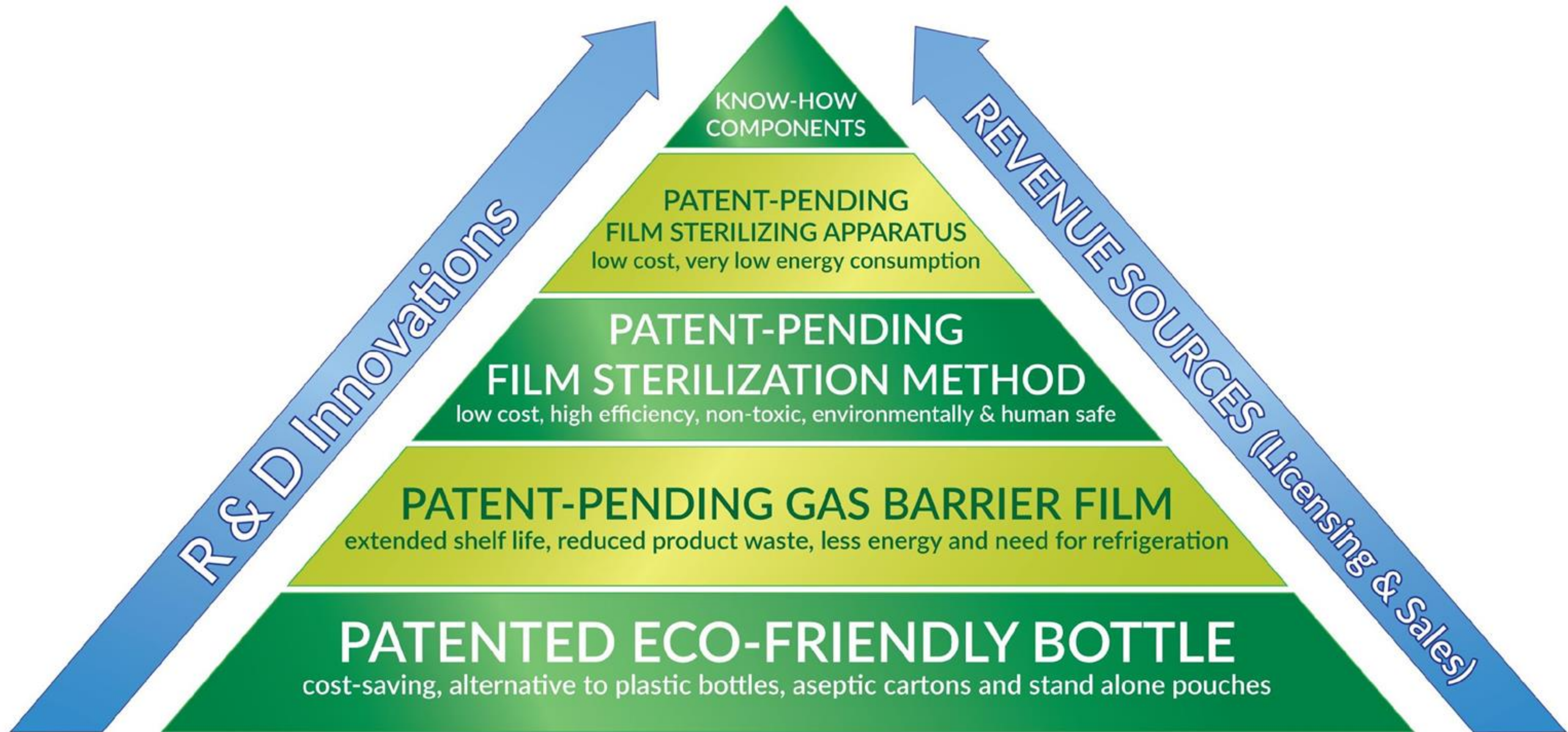
Round 1	Round 2	Round 3
Maximize patents' technical and geographical scope	Develop, manufacture & commission a commercial scale production line	Begin offering full commercial package to customers
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Expand market testing & improve the prototype line for scaling	Use the first commercial scale production line to establish fully functional commercial operation in Europe, ourselves or with bottling partner	Create a commercial operation in US, ourselves or with bottling partner
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Present 3Epak® technology, offer patent licenses & establish partnership(s) with beverage brand owners & equipment makers, continue until major markets saturated	Expand capabilities to supply and support licensed customers' operations in US and EU	Expand private label, contract bottling & consumer products sales in markets not reserved to our licensees
Funds sought: \$380,000 Time frame: 6-9 months	Funds sought: \$2,500,000 Time frame: 18-24 months	Funds sought: \$3,000,000 Time frame: 18-24 months

Notes: Functions may overlap and funding rounds could be combined.
Round 3 will be reconsidered if a partnership with a global master licensee/strategic partner(s) is established.



APPENDICES

Appendix: Upstream Moats



Appendix: 3Epak® Patents

Title	Type	Applic./Ref. #	Patent #	Juris.	Filing date	Issue Date	Status	Duration
ECO-FRIENDLY LIQUID CONTAINER (product)	Utility	14951838	US9499295B2	USA	25-Nov-15	22-Nov-16	Issued	20 years
ECO-FRIENDLY LIQUID CONTAINER (product)	Utility Mod.	2014 20082629	203806423U	China	26-Feb-14	3-Sep-14	Issued	10 years
LIQUID CONTAINER (product)	Utility Mod.	2767	BG2072 (U1)	BG	15-May-14	30-Jun-15	Issued	10 years
BLOCKING CLOSURES FOR CONTAINERS (LID)	RCD (registered community design)	2727461	002727461-0001	EU	29-Jun-15	30-Jun-15	Registered	25 years
ECO-FRIENDLY LIQUID CONTAINER (product)	Utility	2016-550674	Pending	Japan	22-Apr-16	N/A	Pending	20 years
ECO-FRIENDLY LIQUID CONTAINER (product & method)	Utility	2950270	Pending	Canada	24-Nov-16	N/A	Pending	20 years
ECO-FRIENDLY LIQUID CONTAINER (product & method)	Utility	GB1621636.8	GB2543675	UK	19-Dec-16	25-Oct-17	Issued	20 years
ECO-FRIENDLY LIQUID CONTAINER (product & method)	Utility	P00201703289	Pending	Indonesia	23-May-17	N/A	Pending	20 years
STERILIZED MULTILAYER FILM & METHOD & APPARATUS FOR MAKING SAME	Utility (fast track) non-provisional	15/883,586	Pending	USA	30-Jan-18	N/A	Pending	20 years
LID FOR CONTAINER COMPRISING FLEXIBLE STORAGE BAG	Provisional	62/633,281	Pending	USA	21-Feb-18	N/A	Pending	1 year
METHODS OF FOLDING AND GLUING SHEETS	Provisional	62/633,284	Pending	USA	21-Feb-18	N/A	Pending	1 year

Appendix: Comparison Table

Rating from 0 to 4	PET bottles	PET bottles	Glass bottle	Doy pouch	Aseptic containers	Aseptic containers	3EPAK®
4 = best 0 = worst	Thin (~12g)	Thick (~23g)			3 layers (without alum.)	7 layers (with alum.)	
Recyclable in standard facilities	4	4	4	1	1	0	3
Biodegradable & Compostable (under natural conditions)	0	0	0	0	1	0	3
Consumption of non-renewable resources	0	0	4	0	3	2	3
Capital investment	4	2	3	3	1	0	3
Production speed	4	4	3	2	2	2	2
Multi-size packaging ability	3	3	2	2	1	1	2
Equipment maintenance cost	4	2	2	3	2	0	2
Labor intensity	4	3	2	3	3	4	3
Energy consumption	4	1	2	2	2	1	2
Production space requirements	3	3	2	4	3	3	3
Materials cost	4	1	2	2	2	1	3
Materials transport cost	3	2	0	3	3	3	4
Materials storage cost	3	2	2	3	3	3	4
Bottled product shelf life	0	2	4	3	0	4	3
Bottled product refrigeration cost	0	2	4	3	0	4	3
Bottled product wastage	0	2	4	3	0	4	3
Bottled product storage cost	2	3	3	2	3	3	4
Bottled product transportation	2	3	0	1	3	3	4
Bottled product shelf space cost	2	2	2	1	2	2	3
Total score of all estimates:	46	41	45	41	35	40	57

Appendix: Business Model



Appendix: Company Structure

3Epack Group Organizational Structure

3Epack Limited (Hong Kong)

Holds Global IPR licensing rights. Received seed capital (from the inventor and from investors in Europe, North America and Asia) which it has used to cover global costs of development and operations

3Epack NA, Inc. (USA) – 3Epack Ltd. fully owned subsidiary

Holds USA license; Provides North American markets research capabilities as well as investor relations, strategic partnerships, branding, and IPR development opportunities

3Epack BG Co. (Bulgaria) – 3Epack Ltd. fully owned subsidiary

Handles cooperation and liaison, on R&D and trials. Applied for a 2.6 MM EUR grant from EU's research and innovation fund - Horizon 2020.

Toshitomo Co., Ltd. (Bulgaria) – affiliated company

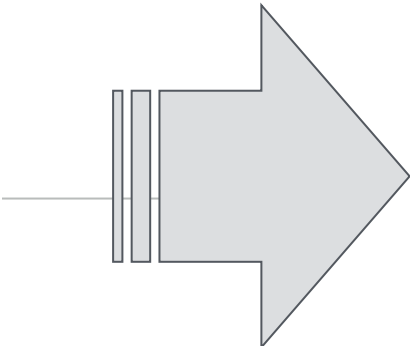
Provides technical and commercial resources, food-grade production facility and capabilities to continuously test and improve 3Epak® bottle, its components and prototype equipment modules

Saneco Corporation Limited & its subsidiary (China) – affiliated companies

Provides China R&D, sourcing and export capabilities

Appendix: Recycling & Pollution

PROBLEM	COMPETITORS	“3Epak® BOTTLE”
Waste	Many not recyclable	Easier recycling
Pollution	Eco harm forever	Less plastic - More paper



Appendix: Supply Chain - Costs Down

Expenditure Category:	Capex				Opex			
Supply Chain Participant:	Small Start-Up	Bottling Equip.	Refrig. Equip.	Other Equip.	Storage & Transport	Power	Materials & Tools	Staff Training
Equipment Manufacturer	↓	NA	NA	↓	↓	↓	↓	↓
Bottler	↓	↓	↓	↓	↓	↓	↓	↓
Beverage Brand Owner	↓	NA	NA	NA	NA	NA	NA	NA
Distributor	↓	NA	↓	↓	↓	↓	NA	NA
Retailer	↓	NA	↓	↓	↓	↓	NA	NA
Consumer	↓	NA	↓	NA	↓	NA	NA	NA
Trash Collector	↓	NA	NA	↓	↓	↓	NA	NA
Landfill Operator	↓	NA	NA	↓	↓	↓	NA	↓
Recycling Processor	↓	NA	NA	↓	↓	↓	↓	↓

Appendix: Traction-Milestones

Milestones:	Development			Validation		
Products & Methods:	Designed	Tested	Produced	Lab	Consumer	Retailer
Bottle	↑	↑	↑	↑	↑	↑
Gas Barrier Film	↑	↑	↑	↑	↑	↑
Sterilization -- method	↑	↑	↑	↑	↑	↑
Sterilization -- apparatus	↑	↑	↑	↑	↑	↑
Fold & glue -- method	↑	↑	↑	↑	↑	↑
Assembly -- method	↑	↑	↑	↑	↑	↑
Filling -- method	↑	↑	↑	↑	↑	↑
Fill, Assembly -- apparatus	↑	↑	↑	↑	↑	↑