

LYONDELLBASELL RECEIVES THE 2023 COMPANY OF THE YEAR AWARD

Identified as best in class in the global medical plastics industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. LyondellBasell excels in many of the criteria in the medical plastics space.

AWARD CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Implementing Best Practices to Enhance Customer Experience

LyondellBasell is a leading chemical and polymer manufacturer operating throughout the petrochemical value chain. The company is among the top three global polyolefin (polypropylene and polyethylene) manufacturers in terms of capacity. With nearly 100 production facilities strategically located across the

Americas, Europe, and Asia-Pacific, LyondellBasell caters to diverse customer segments.

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– Saurabh Ajay Todi
Senior Research Analyst
Chemicals, Materials, and Nutrition

LyondellBasell mainly operates in the medical plastics industry through its *Purell* product line, encompassing more than 30 grades of polypropylene and polyethylene. The company’s dedicated *Purell* Healthcare Service Concept for medical clientele addresses all the critical regulatory and quality requirements in the healthcare sector, ensuring a seamless customer experience. Under this initiative, the company ensures consistent formulations, customer-specific supply solutions, minimum 2-year Notification of change, EU/US pharmacopeia compliances, and Drug

Master File (DMF) listings to assist customers throughout the procurement process. LyondellBasell also emphasizes continuous product development and rollout, extending the *Purell* brand’s penetration for

wider medical applications. Between 2016 and 2018, it launched four medical grades of polypropylene and one grade of polybutene-1, an alternative material for PVC medical applications. While regulatory authorities regulate and monitor the use of PVC in medical applications due to the ill effects of its plasticizers and PVC disposal, polybutene-1 acts as a soft PVC replacement material in applications such as medical tubing and IV bags. LyondellBasell's strategic focus on product development considering industrial megatrends offers the company a first-mover advantage. This, together with its vast scale of operations, positions it as a frontrunner in the medical plastics industry.

LyondellBasell's robust product distribution strategy utilizes multiple channels to penetrate the medical plastics market. The company markets its products through in-house sales channels and an extensive network of third-party distributors. It also maintains long-term relationships with distributors in North America and Europe. For instance, in October 2022, LyondellBasell entered a strategic distribution agreement with M. Holland Company to distribute the LyondellBasell *Purell* resin line. This collaboration strengthens LyondellBasell's *Purell* resins in the healthcare sector in North America. Additionally, to leverage the increasing popularity of eCommerce platforms in the industrial supply chains, LyondellBasell launched a store on a well-established Chinese eCommerce platform in June 2022. At the time of launch, the site included the company's 15 products under its polyolefin business unit, including the *Purell* line of products. Frost & Sullivan finds that LyondellBasell's all-encompassing distribution strategy augments product visibility across geographies for various medical applications.

Enhancing the Business Model to Ensure Future Growth

LyondellBasell is one of the world's largest polymer manufacturers, catering to multiple industries, including pharmaceuticals and medical devices. With discussions surrounding sustainability gaining traction in the healthcare sector, the company is notably enhancing its product portfolio and operational capabilities to meet such demands. For example, LyondellBasell has announced its target to produce and market 2 million metric tons of recycled and renewable-based polymers annually by the end of 2030. In line with this goal, in April 2021, the company launched a range of sustainable products under a new brand, *Circulen*, allowing consumers to enhance the sustainability of downstream products. The *Circulen* brand includes the *CirculenRecover*, mechanically recycled polymers; *CirculenRevive* polymers, produced using a molecular/chemical recycling process; and *CirculenRenew* polymers, produced using renewable feedstock such as used cooking oil.

Its *Circulen* products are gaining prominence among pharmaceutical and medical device packaging applications. In August 2022, Röchling Medical, part of Röchling Group, created eye drop containers using *CirculenRenew* Low-density Polyethylene (LDPE) polymers. Further, in April 2023, Wellspect HealthCare, a Swedish MedTech company, announced using *CirculenRenew* polymers in housing its female urinary catheter, LoFric Elle. LyondellBasell is also transforming its raw material procurement strategy to cater to the demand for its *Circulen* product line. For instance, in June 2021, the company announced its long-term collaboration with Neste Corporation to procure Neste RE™, a 100% renewable feedstock from bio-based sources produced by Neste. LyondellBasell processes the feedstock and sells it under its *CirculenRenew* brand. In October 2022, the company formed a joint venture with Genox Recycling and announced a plastics recycling plant in China. The facility will employ mechanical recycling for post-consumer plastic waste and the company will market the new polymers under its *CirculenRecover* brand. Similarly, in

February 2023, LyondellBasell and Nexus Circular announced a long-term collaboration wherein LyondellBasell will receive 24 KT of recycled feedstock annually, produced at Nexus's new advanced recycling site, set to begin construction in 2023. LyondellBasell plans to use this recycled feedstock to produce new plastics under the *CirculenRevive* brand.

In addition to these material procurement partnerships, the company is restructuring its overall business portfolio to focus on future strategic objectives. For instance, in April 2022, LyondellBasell announced exiting its crude oil refining business by the end of December 2023. It announced shutting operations at

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its Houston Refinery (capacity of 268,000 barrels per day) to streamline its resources and efforts toward its future strategic goals, including decarbonization and circularity. The company also plans to divest its Australia-based polymers business, catering predominantly to Australian and New Zealand food packaging and medical equipment consumers. In March 2023, it announced its decision to acquire Mepol Group, a manufacturer of high-performing recycled polymers. As part of the deal, LyondellBasell will gain access to Mepol Group's recycling facilities in Italy and Poland. The acquisition

integrates Mepol Group's technical expertise in sustainable compounds with LyondellBasell's scale of operations and enhances its *CirculenRecover* brand. With several mechanical recycling facilities in Europe and ongoing construction of waste sorting and recycling plants in Germany, China, India, and the United States, LyondellBasell is firmly positioned to source and process sustainable feedstock.

These strategies represent the company's shifting focus from traditional business concepts to circular models, rebranding its offerings and aligning them with future trends. Frost & Sullivan identifies such efforts in line with LyondellBasell's accelerated end-user shift toward greener, sustainable materials. This will create lucrative opportunities for the company in upcoming years, positioning it as one of the leaders in supplying sustainable plastics for medical applications.

Conclusion

LyondellBasell's focus on product development in alignment with global megatrends positions the company in a leadership spot. The company works closely with healthcare OEMs, understanding their needs and challenges and providing custom solutions to assist them. Launching polybutene-1 as a PVC alternative to mitigate the harmful effects of PVC or introducing sustainable (*Circulen*) products reflects the company's ability to identify future trends and gain a head start when demand increases. Following the refinery closure announcement, the company is also focused on restructuring its business portfolio to direct its resources toward developing sustainable polymers and widening the impact of its green initiatives. For its strong overall performance, LyondellBasell is recognized with Frost & Sullivan's 2023 Global Company of the Year Award in the medical plastics industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

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- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

