



2014 European Non-Phthalate Plasticizers
Product Leadership Award



FROST & SULLIVAN



50 Years of Growth, Innovation & Leadership

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Background and Company Performance

Industry Challenges

The European plasticizers market is a mature market whose participants face numerous challenges, one of which is the dynamic regulatory landscape, which has led to continuous changes in customer requirements. A growing focus on health and environmental concerns leads to changes in regulations, compelling market participants to modify their product formulations to ensure products that comply with regulations without compromising on performance. Furthermore, customer perception is a major factor affecting the market. For instance, unlike low molecular weight phthalates, high molecular weight phthalates are not harmful to human health. Despite this, customers prefer non-phthalate plasticizers as a result of the public perception.

The European plasticizers market faces an oversupply of product, which leads to intense competition and, in turn, has resulted in difficulties in customer acquisition and retention for market participants. Customers expect manufacturers to closely observe marketplace trends and develop new products; customer value enhancement plays a crucial role in customer retention. For instance, demand for non-phthalate plasticizers has been increasing in the marketplace as a result of a study from Karlstad University in Sweden that concluded phthalates harm the human body.

Customers expect manufacturers to develop quality products and ensure the supply reliability of plasticizers. Furthermore, plasticized PVC products are used in various end-user industries such as wire and cable insulation, construction, automotive, household, medical, and flooring. The customer requirements vary with application. For instance, automotive applications require long service life, low emissions and low odour, while reduced volatility and prolonged service life are the key requirements for roofing applications in the construction industry. Hence, a comprehensive product line with products that suit the different end-user requirements is critical.

Product Family Attributes and Business Impact of Oxea GmbH

Match to Needs

Oxea GmbH has developed a range of non-phthalate and bio-based plasticizers that meets the customer demands for regulatory compliance and safety. The company offers 6 non-phthalate plasticizers and 2 bio-based plasticizers to its customers. The market for phthalate based plasticizers is decreasing as a result of the growing focus on health and environmental concerns. The products introduced by Oxea GmbH replace conventional phthalate plasticizers and meet and exceed performance requirements.

The company has established an extensive product line with non-phthalate and bio-based

plasticizers to ensure quality plasticizer products to different end-user industries based on their requirements. For instance, flooring applications require low migration, ease of processing and long service life. Oxea GmbH products such as OXSOF[®]DOA, OXSOF[®]GPO, OXSOF[®]DUO1 and OXSOF[®]DUO2 from the non-phthalate plasticizer range and OXSOF[®]DOSX from the bio-based plasticizer product line are applicable to flooring applications, while OXSOF[®]TOTM, OXSOF[®]DUO1 and OXSOF[®]DUO2 are applicable for building wires in the wire and cable insulation industry.

Reliability and Quality

Oxea GmbH has developed strategies to ensure efficient product performance. The company is vertically integrated into raw material manufacturing, thereby enabling it to maintain the quality of plasticizer products beginning with raw material selection. This backward integration allows the company to reliably meet the high level of demand and accommodate the needs of customers. Furthermore, vertical integration also provides significant cost advantage to the company, enabling delivery of an enhanced cost-performance index to customers.

Oxea GmbH holds ISO 9001:2008 and ISO 14001:2008 accreditation. Furthermore, the company's plants also meet the hazard analysis and critical control points standards. The company has enforced a stringent quality control programme with continuous monitoring of quality from the raw material stage to production stage. Further, the final product formulation is tested by certified 3rd-party laboratories to ensure that products meet the required specifications before being sold to customers.

Product/Service Value

Understanding the importance of product/service value in this highly commoditized market, Oxea GmbH has developed other strategies to ensure prompt delivery of products and efficient customer service. As a vertically integrated company, Oxea GmbH is able to ensure timely delivery of products as well as maintain high quality from the raw material stage enabling it to deliver value to customers by enhancing their productivity. Furthermore, the performance of products exceeds the minimum requirements from compounders, as evidenced by the results of standard tests. For instance, OXSOF[®]3G8, DOA and OXBLUE[®]DOSX show excellent low temperature flexibility with cracking temperature of -58.5°C, -52°C and -47°C respectively as compared to -26°C of conventional DOP and DINP plasticizers. This makes the company's products suitable for applications where low temperature properties are required. Similarly, the company's products OXSOF[®]3G8, OXSOF[®]DUO1, OXSOF[®]DUO2 perform better than DOP and DINP products in elevated temperature volatility test. The company's products deliver value to customers by delivering high performance, translating into longer service life for their products.

Oxea GmbH follows a reactive product development strategy to cater to customer demands and expectations. The company closely follows regulatory trends and customer perceptions to understand the demand scenario and develop new products. For instance, the company has introduced 2 bio-based plasticizers to cater to customers demanding bio-based products that offer performance similar to conventional plasticizers. The company has also constantly expanded its production capacities to accommodate the growing demand for its products.

Positioning

Oxea GmbH has placed sole focus on development of non-phthalate and bio-based plasticizer products because it understands customers' preferences for health and environmentally compliant plasticizers. The company emphasises research and innovation to improve customers' productivity and profitability. The company won the 2013 German Ideas Award for the creativity and innovative power of its employees. The ability to arouse and systematically tap wealth of ideas among its employees is a decisive competitive advantage. The number of ideas generated per employee and the ratio between generated and implemented ideas at Oxea GmbH is among the best in the industry. Indeed, Oxea GmbH's competitors have not been able to replicate its success in the plasticizers market. Recognitions such as the 2013 German Ideas Award have helped the company strengthen its brand value in this highly competitive market.

Oxea GmbH positions itself as an environmentally friendly company with the introduction of bio-based products in the European plasticizers market. Oxea develops health and environmentally compliant products that also meet and exceed customer expectations in terms of performance. For instance, the company's products OXSOFT® TOTM, OXSOFT® GPO are migration resistant products with relevant approvals and have a safe history, thereby enabling their use in the healthcare industry for blood bags, tubing, and nutrition applications. In terms of performance, OXSOFT® TOTM outperforms conventional phthalate plasticizers with a volatility of 1.1 weight% when compared to 16.1 weight% for di-octyl phthalate. It has been difficult for competitors to replicate the performance of Oxea GmbH's products.

Customer Acquisition

Growing focus on health and environment issues has aided Oxea GmbH in expanding customer acquisition. Its vertical integration into raw material manufacturing allows it to guarantee quality and timely delivery of products to customers. Furthermore, best-in-class technical support that assists customers in smooth transition from phthalate-based plasticizers to non-phthalate plasticizers has created improved value for the company. Proactive research activities have enabled the company to offer varied and customised products to its customers, ensuring a higher degree of suitability and performance for different applications.

Oxea GmbH has developed various models apart from conventional marketing techniques to maximise customer acquisition. Participation in tradeshows, tradefairs, and conferences has enabled it to showcase its products and services with potential customers. Moreover, the company has placed immense focus on leveraging online marketing techniques to strengthen its products' brand value. The company's strong focus on non-phthalate products, coupled with innovative marketing strategies, has ensured customer acquisition while focus on continuous product development and collaborative research with customers has helped Oxea GmbH retain its existing customers. New innovative products such as Oxsoft® TOTM ST stabilized plasticizer for applications requiring low volatility has ensured increased adoption of company's products by end-user industries such as automotive where low volatility is a key requirement.

Growth Potential

Because it understands its customers' demand for phthalate-free and bio-based plasticizers, Oxea GmbH has developed new products that deliver improved performance and are health and environmentally compliant. Oxea's development of products that match the performance standards of phthalate-based plasticizers has enabled the company to create brand equity for its products. Furthermore, the company has won prestigious recognitions such as ISO50001 energy management certification and the 2013 German Ideas Award, which has enhanced its reputation and created brand value.

Oxea GmbH has developed strategies to ensure extensive research and development to improve its products' cost/performance index and develop tailor-made products. The company markets its products to customers directly as well as through exclusive distributors, thereby ensuring dedicated marketing and customer service. Oxea manufactures its plasticizer products at its facilities in Germany and Netherlands. The products are marketed throughout Europe by direct sales through its sales offices in different locations as well as through exclusive distributors. The immense focus on product development, coupled with innovative marketing and distribution structure, strengthens the brand equity of Oxea GmbH's products and services, thereby enhancing the company's growth potential.

Conclusion

Oxea GmbH has demonstrated commitment to differentiation and competence in the European plasticizers market. Product quality, performance, and reliability are key areas where the company has excelled. Oxea's focus on continuous product development has gained significant popularity among its customers. The company has portrayed itself as a socially responsible company in the market through the introduction of bio-based plasticizers. Its relentless customer-centric approach in all activities from product development to product delivery and service, coupled with its backward integration into raw material manufacturing and ensuring timely delivery of products to customers has

propelled the company to the forefront of European plasticizers market.

With its strong overall performance, Oxea GmbH has earned Frost & Sullivan's 2014 Product Leadership Award.

Significance of Product Leadership

Ultimately, growth in any organization depends upon customers purchasing from your company, and then making the decision to return time and again. A comprehensive product line, filled with high-quality, value-driven options, is the key to building an engaged customer base. To achieve and maintain product excellence, an organization must strive to be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition. This three-fold approach to delivering Product Leadership is explored further below.



Understanding Product Leadership

Demand forecasting, branding, and differentiation all play a critical role in finding growth opportunities for your product line. This three-fold focus, however, must be complemented by an equally rigorous focus on pursuing those opportunities to a best-in-class standard. Customer communications, customer feedback, pricing, and competitor actions must all be managed and monitored for ongoing success. If an organization can successfully parlay product excellence into positive business impact, increased market share will inevitably follow over time.

Key Benchmarking Criteria

For the Product Leadership Award, we evaluated two key factors—Product Family Attributes and Business Impact—according to the criteria identified below.

Product Family Attributes

- Criterion 1: Match to Needs
- Criterion 2: Reliability and Quality
- Criterion 3: Product/Service Value
- Criterion 4: Positioning
- Criterion 5: Design

Business Impact

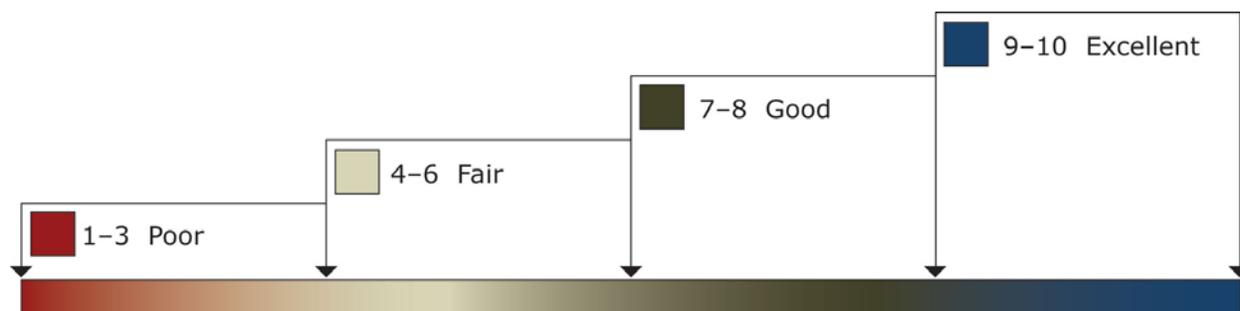
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practice Award Analysis for Oxea GmbH

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

RATINGS GUIDELINES



The Decision Support Scorecard is organized by Product Family Attributes and Business Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criteria are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, we have chosen to refer to the other key players in as Company 2 and Company 3.

DECISION SUPPORT SCORECARD FOR PRODUCT LEADERSHIP AWARD (ILLUSTRATIVE)

<i>Measurement of 1–10 (1 = poor; 10 = excellent)</i>			
Product Leadership	Product Family Attributes	Business Impact	Average Rating
Oxea GmbH	9.2	9.2	9.2
BASF SE	8.6	8.8	8.7
ExxonMobil Chemical	8.0	8.2	8.1

Product Family Attributes

Criterion 1: Match to Needs

Requirement: Customer needs directly influence and inspire the design and positioning of the product family

Criterion 2: Reliability and Quality

Requirement: Products consistently meet or exceed customer expectations for performance and length of service

Criterion 3: Product/Service Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market

Criterion 4: Positioning

Requirement: Products or services unique, unmet need that competitors cannot easily replicate or replace

Criterion 5: Design

Requirement: The product features an innovative design, enhancing both visual appeal and ease of use

Business Impact

Criterion 1: Financial Performance

Requirement: Strong overall financial performance in terms of revenues, revenue growth, operating margin and other key financial metrics

Criterion 2: Customer Acquisition

Requirement: Product strength enables acquisition of new customers, even as it enhances retention of current customers

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard

Criterion 4: Growth Potential

Requirements: Product quality strengthens brand, reinforces customer loyalty and enhances growth potential

Criterion 5: Human Capital

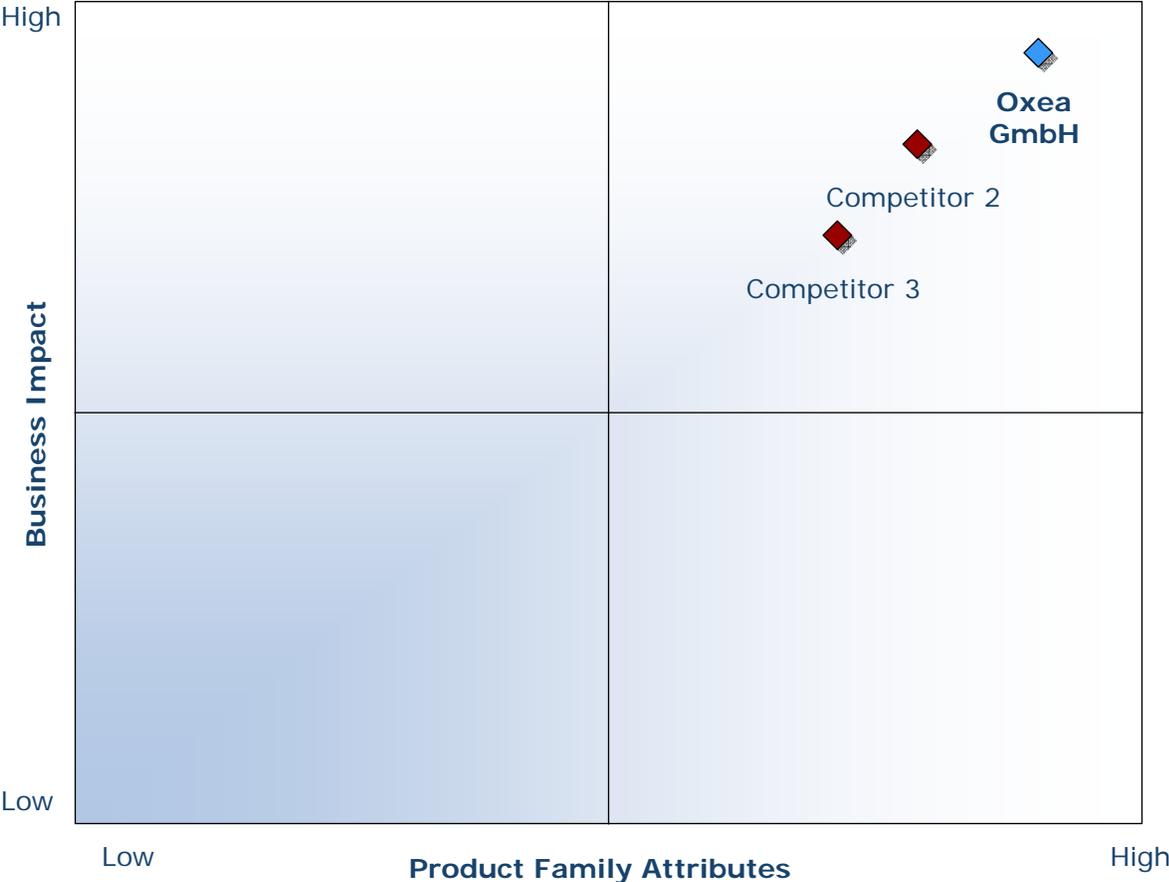
Requirement: Company culture is characterized by a strong commitment to product quality and customer impact, which in turn enhances employee morale and retention

Decision Support Matrix

Once all companies have been evaluated according to the Decision Support Scorecard, analysts can then position the candidates on the matrix shown below, enabling them to

visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.

DECISION SUPPORT MATRIX FOR PRODUCT LEADERSHIP AWARD (ILLUSTRATIVE)



The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan’s research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Our awards team follows a 10-step process (illustrated below) to evaluate award candidates and assess their fit with our best practice criteria. The reputation and integrity of our awards process are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify award recipient candidates from around the globe	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> • Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates 	Matrix positioning all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> • Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> • Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles 	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> • Share findings • Strengthen cases for candidate eligibility • Prioritize candidates 	Refined list of prioritized award candidates
6 Conduct global industry review	Build consensus on award candidates' eligibility	<ul style="list-style-type: none"> • Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates 	Final list of eligible award candidates, representing success stories worldwide
7 Perform quality check	Develop official award consideration materials	<ul style="list-style-type: none"> • Perform final performance benchmarking activities • Write nominations • Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best-practice award recipient	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select winner 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform award recipient of award recognition	<ul style="list-style-type: none"> • Present award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of award and plan for how recipient can use the award to enhance the brand
10 Take strategic action	Once Licensed, share award news with stakeholders and customers	<ul style="list-style-type: none"> • Coordinate media outreach • Design a marketing plan • Assess award's role in future strategic planning 	Widespread awareness of recipient's award status among investors, media personnel, and employees

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best in class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages almost 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.