

Arla Foods Ingredients

Discovering the wonders of whey 

**2018 Global Infant Nutrition
Product Leadership Award**



2018
BEST PRACTICES
AWARDS

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Background and Company Performance

Industry Challenges

The age between birth to 12 months is a critical nutritional period in order to support infants' rapid growth and immense development. Human breast milk has long been recognized as the best source of balanced nutrition for infants as it contains adequate amounts of macronutrients and micronutrients like vitamins, minerals, and iron—essential nutrients to support the growing infant. Global health organizations such as the World Health Organization and the United Nations Children's Fund recommend breastfeeding young infants from birth up to two years of age. In cases where mothers are either unwilling or unable to breastfeed due to employment and other factors, infant formula is a nutritional alternative to breast milk. Infant formula-based bovine milk was developed in the late 19th century but is far from comparable to current formulations which are developed with modern insights into human milk composition and the nutritional requirements of infants. As the major components in human milk, such as alpha-lactalbumin, are already isolated and commercialized, manufacturers are increasingly focusing on factors such as sialic acids, milk fat globule membrane (MFGM), and osteopontin.

Infant formula is one of the most complex foods made of a combination of proteins, sugars, fats, and vitamins and is designed to mimic human breast milk as closely as possible. While infant formula is made to a common international codex and national regulation, formulations and ingredients do vary.

Due to increasing regulation worldwide, a pre-requisite for all infant formula manufacturers is to ensure the highest quality standards of their products. In China, infant formula was contaminated with melamine, a compound used to produce plastic, resulting in 54,000 hospitalizations and six deaths—spurring rapid regulation implementations. In 2013, the country took the radical action of banning all imports of milk powder from New Zealand, nearly 90% of its milk powder imports, due to the appearance of a bacterial strain that can cause botulism. Currently, infant formula registration worldwide requires a rigorous process that manufacturers must provide clinical evidence to meet international food and drug administration requirements.

Consistent product quality with superior ingredients forms the foremost competitive factor in the infant nutrition market. With increasing customer concerns over food safety¹, ingredient manufacturers have focused their attention on improving the quality of their ingredients. Ensuring transparency and traceability of ingredients used in their final product while undertaking stringent safety procedures at every stage of the supply chain is a key consideration for manufacturers. Infant formula is a highly attractive product segment because it is a highly defensible category which is derived from product complexity, economies of scale, intellectual property, global regulations and widespread government market intervention.

However, infant nutrition products have reached maturity stage; thus it is imperative to differentiate in this competitive scenario by offering innovative and documented ingredients that are getting closer to mimic the nutritional benefits of breast milk. Thus, product differentiation and creation of individual product identity is a crucial competitive factor in the infant nutrition market. That is achieved by optimizing formulations to support growth and development,

¹ *Technologies Enabling Food Safety: Technologies that Will Ensure Food Safety Across the Food & Beverage Value Chain* (Frost & Sullivan, May 2018)

addressing specialty dietary needs of certain cohorts, and increasing the ease of use of the given formula. Finally, effective customer service and ongoing customer relationship are crucial to differentiate and win market share.

Product Family Attributes and Business Impact of Arla Foods Ingredients

Headquartered in Denmark and producing whey ingredients since 1980, Arla Foods Ingredients (AFI), a subsidiary of the Arla Foods Group (Arla Foods), is one of Europe's largest dairy companies and a global leader in natural whey protein and lactose ingredient production. In the infant nutrition sector, AFI's innovative infant formula ingredient solutions are developed with the mission to minimize the gap between breast feeding and infant formula.

AFI's ingredients focus on both major and minor components present in human milk. One novel ingredient, where AFI has put specific emphasis to further differentiate itself in the industry, is osteopontin. Upon discovery that human milk has up to 20 times more osteopontin as compared to conventional infant formula, AFI worked diligently to bring the osteopontin content in its offerings on par with human milk concentrations. The result is the company's Lacprodan® OPN-10 product. Due to its innovative work with Lacprodan® OPN-10, AFI is a pioneer concerning commercializing the use of osteopontin in infant formula. Frost & Sullivan firmly believes that the company will experience a higher penetration of the market due to its technology leadership and positioning.

Earning Customer Trust through Quality and Innovation

With over 10,000 farmers, Arla Foods has some of the largest dairies in the world and enjoys complete control over the value chain. Arla Foods' farmers follow an intensive quality control program which includes numerous restrictions and audits associated with how to treat the cows, reduce contaminants, and extract and deliver high-quality milk. Arla Foods Ingredients' has a very ambitious quality strategy recognized by market leaders in the food industry.

A strong investment in research and development (R&D)—with over 70 employees in the R&D division alone—allows AFI to anticipate and meet customer needs through powerful value-added products.

To maintain customer satisfaction, AFI has an ongoing dialogue between account managers, technical teams, and customers. With offices all over the world, the company embarks on hands-on management that regularly travels from headquarters to regional offices. As a result, the company eliminates the knowledge gap that typically occurs between corporate headquarters and local markets, helping AFI identify and follow market trends and customer leads in a structured manner.



Overall, AFI is experiencing remarkable growth in the whey ingredients and infant formula industry due to its innovative technology and earned consumer trust, and is playing a leading market role. With an emphasis on operational excellence, meeting and exceeding regulatory requirements, and prioritizing capital investments, AFI is well-positioned to capture substantially increased market share. Furthermore, AFI's powerful partnerships with leading universities, non-governmental organizations, and other thought leaders provide a uniquely comprehensive knowledge base that serves as a foundation for innovation. Frost & Sullivan research reveals that the company's entrepreneurial spirit sparks constant ingenuity, while AFI's focus on sustainability ensures the extraction of the full potential of whey in the infant nutrition industry.

Conclusion

While breastfeeding is the preferred source of nutrition, it is not always a viable option. Arla Foods Ingredients' develops, documents, and markets innovative milk-derived ingredients that support the continual development of infant formula via enrichment of components present in human milk. Exceptional quality control alongside strong research partnerships further positions AFI to expand its leadership role in the industry. With its visionary innovation, consumer trust, and unflinching commitment to excellence, Arla Foods Ingredients earns Frost & Sullivan's 2018 Product Leadership Award in the global infant nutrition market.

This article contains information that is only intended for business-to-business exchange. The information given on efficacy is based on publicly available scientific research or generated by Arla Foods Ingredients and does not comply with claims regulations in different countries. Breastfeeding is the best nutrition for a baby, and the information given in this article is relevant if breastfeeding is not an option. Recommendations made by the World Health Organization or national authorities should be followed.

Significance of Product Leadership

Ultimately, growth in any organization depends upon customers purchasing from a 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.



Understanding Product Leadership

Demand forecasting, branding, and differentiating 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, Frost & Sullivan analysts independently 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 Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

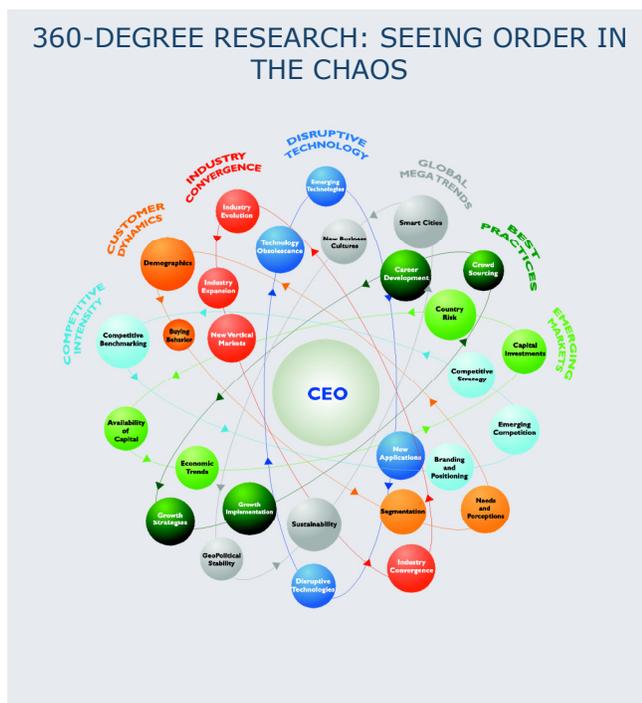
STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify Award recipient candidates from around the globe	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies 	Pipeline of candidates who potentially meet all 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 of 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

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT	
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 recipient 	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	Upon licensing, company is able to 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

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 participants and for identifying those performing at best-in-class levels.



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 more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.