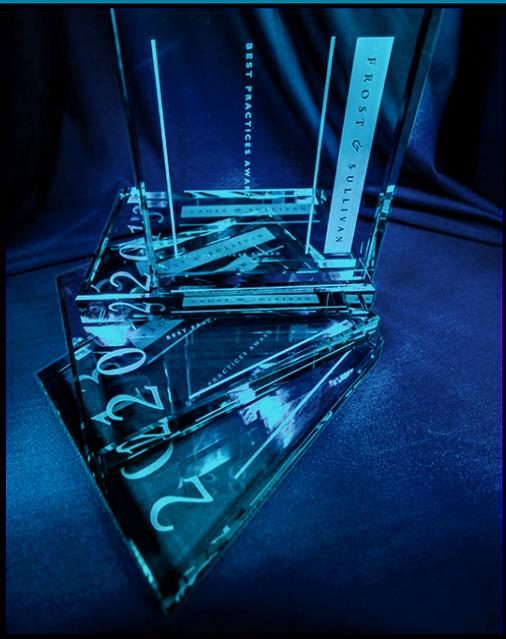




2016 African Rural Portable Water Solutions Product Leadership Award



FROST & SULLIVAN

BEST
2016 PRACTICES
AWARD

AFRICAN RURAL PORTABLE WATER SOLUTIONS
PRODUCT LEADERSHIP AWARD

2016
BEST PRACTICES
AWARDS

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Background and Company Performance

Industry Challenges

Over the next 35 years, 1.8 billion babies will be born in Africa and the continent's population will double in size, increasing from 1.2 billion in 2015 to 2.4 billion by 2050. This is according to a recent report by UNICEF (United Nations Children's Fund) and it indicates a scale of population growth unprecedented in the history of human development. This projected growth rate will further drive significant socio-economic challenges that threaten the continent, including endemic poverty, lack of food security, and underdevelopment.

Another important challenge is ensuring access to water, which is a crucial driver for human and economic development as well as for food production. However, for 40% of Africa's poorest households, piped-in water is non-existent, and less than half of the continent's population has access to improved water sources such as boreholes, wells, or taps. This lack of access to water is accompanied by low levels of sanitation, with more than 600 million people lacking access to proper sanitation facilities in sub-Saharan Africa (SSA) alone.

This low access-to-water rate has triggered growing interest in finding immediate and appropriate rural and domestic water solutions for Africa. This is a major driver for the portable water solutions industry. However, a number of challenges still exist in the design, manufacture, and distribution of appropriate technologies, posing a direct challenge to the industry's growth and sustainability.

A particular challenge lies in ensuring the affordability of companies' portable water solutions, as more than 40% of Africa's population lives in absolute poverty. High distribution costs in remote rural markets create a significant barrier for companies aiming to reach populations at the base of the pyramid. As such, gaining access to end users is costly and challenging. High distribution costs are further driven by the costs incurred as a result of Africa's multiple trade barriers, such as non-tariff and regulatory barriers that raise transaction costs and limit the movement of goods and services across borders.

Companies hoping to take advantage of the significant market potential for portable water solutions in Africa must, therefore, find innovative and strategic ways to combat capital-intensive manufacturing and distribution to reduce operational costs and the costs for rural end users. This requires the advancement of an affordable product or service solution that responds to market needs while ensuring water access and security.

Product Family Attributes and Business Impact

The Hippo Water Roller was developed in South Africa in 1991 and was later established as part of the Hippo Water Roller Project in 1994. Endorsed by the United Nations World Food Programme and Nelson Mandela, the Hippo Water Roller is a distinctive portable water solution that alleviates the daily struggle of rural communities by enabling them to transport water more easily and in less time than with traditional methods. By procuring sponsorships and donor funding, and through strategic partnerships with non-governmental organisations (NGOs), the Hippo Water Roller Project is a for-profit business that has implemented a business model that facilitates the distribution of the product to various rural communities across Africa, while addressing the challenge of end-user affordability. Through this world-class service solution, Frost & Sullivan firmly believes that the Hippo Water Roller Project is set to reduce the suffering associated with water scarcity and lack of sanitation, while making positive strides to improve lives across Africa.

Criterion 1: Match to Needs

The lack of access to improved water sources disproportionately affects women and girls across Africa. Often, they are the main water carriers for families and, on average, walk 10 km each day, carrying 20 litre (kg) buckets on their heads. This daily task is time and energy consuming; it is estimated that women and children spend up to 8 hours a day fetching water and doing water-related chores. According to the United Nations (UN), in SSA this equates to losing 40 billion hours each year to activities related to the fetching and carrying of water, severely hindering economic activity and access to education. In addition, these activities have significant implications on health and contribute to serious



Man using the Hippo Water Roller

musculoskeletal problems, such as neck and spinal injuries. This lack of access to water and sanitation also results in the spread of disease across the continent and an estimated 1,500 children die every day as a result of diarrhoea.

The Hippo Water Roller Project developed its portable water solution in response to the unique needs and constraints of rural women and children across Africa. The Hippo Water Roller's innovative barrel-shaped design holds 90 litres of water, or 5 times more than a single bucket. By enabling more water to be transported concurrently, a daily burden becomes a task that can be completed a few times a week, enabling users to become more economically active. Moreover, the integration of the Hippo Water Roller in rural communities has had a positive cultural impact as men are proud to use it (pictured left¹). In this way, the burden on women and children is alleviated, allowing more time for education and economic activities, having a direct impact on the empowerment of women and children across Africa.

To enhance affordability of this innovative product solution, the Hippo Water Roller Project has developed a business model that attracts corporate sponsors and donor funding. This enables the company to help subsidize the cost of manufacturing and distribution, as well

¹ All photographs sourced from company (www.hipporoller.org)

as reduce the price of the product for end users. Through this strategy, 95% of all Hippo Water Rollers reach economically poor communities at no cost to the end user. However, all beneficiaries are encouraged to contribute toward the cost in cash or in kind as they are able. This promotes a sense of ownership and value. This best-in-class product solution has, therefore, enabled the Hippo Water Roller Project to provide rural communities across Africa with an affordable, high-impact water and sanitation solution.

Criterion 2: Design

The Hippo Water Roller features a range of innovative designs to combat the significant



The Hippo Water Roller

health implications brought on by a lack of access to water and sanitation. The Hippo Water Roller is a barrel-shaped container that holds 90 litres of water (pictured left). Equipped with a steel handle, the Hippo Water Roller can be pushed or pulled. Its innovative design ensures that the weight is borne on the ground and distributed over a wide rolling surface. This means that the effective weight of the 90 kg drum is just 10 kg when pushed or rolled on level ground, preventing long-term injuries caused by carrying heavy loads. The steel handle also enhances ease of use in comparison to competitor products. For example,

the use of a rope rather than a handle limits user mobility and enables the drum only to be pulled rather than pushed and pulled.

In addition, the Hippo Water Roller is designed with a thick drum wall to prevent breakages when rolled across uneven terrain. It is also made of an ultraviolet (UV)-stabilized material to withstand Africa's harsh weather conditions. To enhance its application, the Hippo Water Roller has been further designed with a Hippo Utility Cap, as seen in the picture at right. This is effectively a cap-in-cap design to ensure water is hygienically dispensed and contamination is reduced, as the inside cap enables users to draw water without opening the larger seal. This reduces the risk of contamination and ensures the hygienic storage of water. Filters and other point-of-use water treatment products can be added to further improve the quality of the stored water (as pictured at right). The innovative cap-in-cap design enables the Hippo Water Roller to also be used as an efficient irrigation tool for small-hold farmers and in household gardens, thereby enhancing food production.



The Hippo Utility Cap



With the added feature of a water filter

Criterion 3: Reliability and Quality



The durable design of the Hippo Water Roller ensures a long lifespan, between 5 and 10 years. The design is also maintenance-free and requires no replacement parts. For example, if lost, the Hippo Utility Cap can be replaced with a standard soda-bottle top. In this way, the Hippo Water Roller is specifically designed for use in tough rural conditions by economically poor communities. The performance quality of this portable water solution is further enhanced by the addition of the Hippo Spaza, a specially designed steel frame that can be attached to the Hippo Water Roller (see first picture and picture at left). This steel frame converts into a simple trolley for transporting products, and then into a stand for display.

Thus, the Hippo Water Roller can be converted into a small vendor shop, enabling rural end users the opportunity to grow and develop small enterprises within local rural market locations, as seen in the picture at left. This enhances economic activity and job creation, a priority in poverty alleviation.

Criterion 4: Customer Acquisition

With over 20 years of experience, the Hippo Water Roller has gained international acclaim and has been featured in publications and exhibitions around the world, including the Cubes of Good Ideas in Barcelona and the World Water Forum in Marseille. Its international reputation has enabled the Hippo Water Roller Project to develop a business model that attracts corporate sponsorship, as the Hippo Water Roller can be branded with a company logo and manufactured in a matching drum colour. Branding can also be extended to the canvas top of the Hippo Spaza.

For example, Cargill Incorporated partnered with the Hippo Water Roller Project to provide Hippo Water Rollers to chicken farmers in Mozambique who supplied chickens to Cargill Incorporated's customer, New Horizons Mozambique. The use of the Hippo Water Roller in caring for flocks enabled these farmers to reduce their daily walking distance by more than 70%, which further enabled them to improve efficiency and stimulate productivity. Hence, the viability of the poultry supply chain to local markets was increased, benefiting both farmers and communities across the region, while tangibly demonstrating the value of the product solution. Cargill Incorporated has since rolled out similar projects with the Hippo Water Roller Project across Africa, including Zambia and Zimbabwe. This demonstrates the company's capacity to align its product with international corporations and to enhance its visibility as a sustainable development solution across Africa. In this way, the Hippo Water Roller Project is well-positioned to leverage its current relationships with leading corporations, as well as its international reputation, to enhance its customer base, of both corporate partners and rural end users.

Crowd-funding has been added as a way for individuals, corporations, NGO's, churches, and missions to fundraise to purchase rollers for communities who cannot afford it.

Criterion 5: Operational Efficiency

The Hippo Water Roller Project outsources the manufacturing of the Hippo Water Roller. This enables the company to avoid the high operational costs associated with manufacturing, including overhead costs and the cost of labour. Outsourcing further enables the company to find suitable local manufacturers across Africa, within the region of distribution, which further reduces the cost of export and trade across the continent. The company is also exploring the development of a mobile manufacturing unit, a single container with a small manufacturing machine that is exported into a country with high demand. The Hippo Water Roller Project would then provide the raw materials needed to manufacture its product. Due to the company's optimised and efficient local manufacturing strategy, the product can be purchased at a lower cost, enabling sponsors and corporate customers to purchase more Hippo Water Rollers for greater distribution.

Distribution is further enhanced by the company's agile last-mile distribution strategy; in addition to corporate partners and sponsors, the Hippo Water Roller Project has also developed strategic partnerships with NGOs that work with the company to identify the communities across Africa most in need of Hippo Water Rollers. These NGOs then facilitate the distribution of the portable water solution to beneficiaries within the water-scarce communities. This enhances the Hippo Water Roller Project's reach into rural communities and helps reduce the significant barriers to entry into remote rural markets.

Criterion 6: Growth Potential

Since the launch of the Hippo Water Roller Project in 1994, the company has distributed in excess of 45,000 Hippo Water Rollers; this has a reach of close to half a million people, with an average of 7 people per household. The product has also been distributed in over 20 countries across Africa including Angola, Kenya, Uganda, South Sudan, Burkina Faso, and Somalia, with plans to distribute in North and South America.

To ramp up its distribution and enhance its growth potential, the Hippo Water Roller Project is in the process of extending its business model to include the retail of Hippo Water Rollers within the commercial sector. This would include adapting the product for the retail market, for example, by producing a less expensive version that is smaller and less durable, but more appropriate for use in urban environments. This positions the company to tap into the growing need for appropriate water solutions in urban slums, a rising trend across the continent due to increasing urbanisation—by 2025, Africa is expected to reach an urbanisation rate of 70%.

Through continued investments into strategic partnerships that enhance its manufacturing and distribution process, and driven by best-in-class product performance, Frost & Sullivan firmly believes that the Hippo Water Roller Project is well-positioned to scale up its capacity to match the needs of Africa's water-scarce rural communities. Thus, the company is set to strengthen its position as a product leader and provider of an innovative product solution with significant customer value, for which, current demand is far outstripping supply.

Conclusion

Since the establishment of the Hippo Water Roller Project in 1994, the company has continued to provide an appropriate portable water solution for economically poor communities across Africa. Leveraging its relationships with sponsors, corporate partners, and NGOs, the Hippo Water Roller Project has established itself as a sustainable initiative that provides African communities with an immediate and winning water and sanitation solution. The value of this product for the end user is further enhanced with the addition of features that enable poverty alleviation, such as the Hippo Spaza and Hippo Utility Cap.

With its strong overall performance, The Hippo Water Roller Project has earned Frost & Sullivan's 2015 Product Leadership Award for its rural portable water solution, the Hippo Water Roller.

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.



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, 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

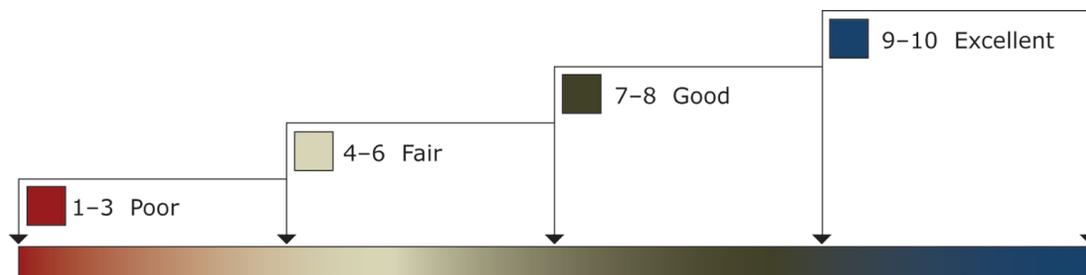
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practice Award Analysis for The Hippo Water Roller Project

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 as Competitor 2 and Competitor 3.

DECISION SUPPORT SCORECARD FOR PRODUCT LEADERSHIP AWARD

<i>Measurement of 1-10 (1 = poor; 10 = excellent)</i>			
Product Leadership	Product Family Attributes	Business Impact	Average Rating
The Hippo Water Roller Project	9.8	9	9.40
Competitor 2	8.5	8	8.25
Competitor 3	8.4	7.8	8.00

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

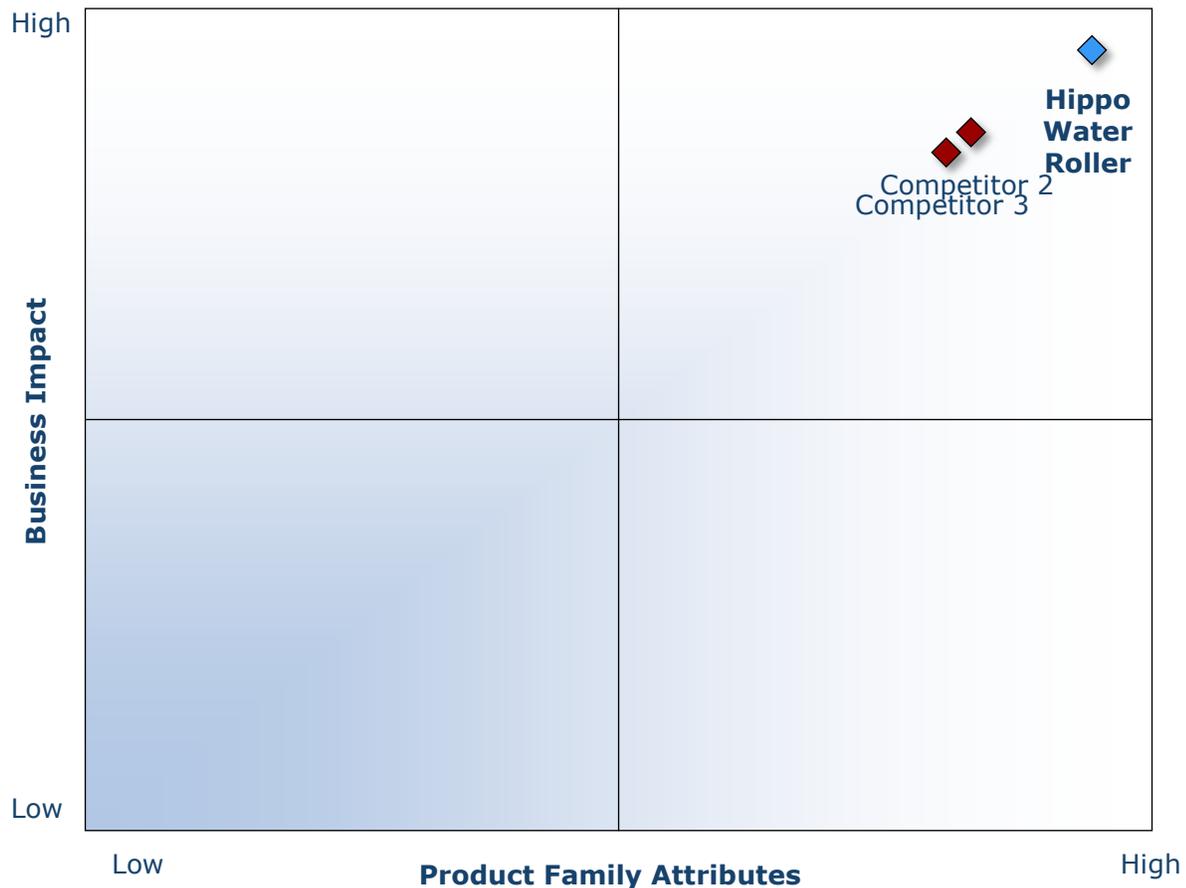
Criterion 5: Human Capital

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



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.



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

Frost & Sullivan Awards 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 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	Upon licensing, company may 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>.