

Product Leadership Award

The Wireless Carrier Mobile Workforce Applications Industry

NORTH AMERICA



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Background and Company Performance

Industry Challenges

Frost & Sullivan defines mobile workforce applications as software solutions that allow mobile employees real-time access to—and exchange of—critical information, collaboration, and/or guidance via their smartphones, tablets, and other mobile devices. This also typically includes transmitting valuable field information—such as worker location, task completion, customer orders, etc.—back to HQ administrators and staff.

These software offerings can range from very simple to complex applications. For example, they include mobile field service management solutions that automate and optimize remote field service work processes, software apps that extend sales force automation capabilities to a field sales rep's mobile device, mobile forms, simple navigation and location tools, mobile situational awareness solutions, and general desktop productivity offerings that are made available via mobile. And this stable of mobile workforce apps has by no means reached its saturation point. New offerings continue to be created and launched.

These solutions constitute a growth market in North America, with annual business survey results revealing high deployment levels, almost-unanimous plans to expand these implementations, multiple user types and use cases, and customers expecting positive hard-dollar business impacts. According to a recent Frost & Sullivan survey, North American businesses that have already implemented mobile workforce applications are convinced of their value, with 84% already deploying 10 or more different mobile workforce software applications to their employees. A striking 95% of businesses currently using these apps plan to introduce new additional solutions over the near term.

The wireless carrier is a key distribution channel in this industry. This channel is spotlighted in the recent Frost & Sullivan study entitled "Wireless Carrier Strategies and Opportunities in the North American Mobile Workforce Apps Market, 2020."

Today, and to varying degrees, all of the Tier 1 wireless carriers in the U.S. and Canada act as resellers of mobile workforce applications. Carriers bring a set of unique capabilities to the mobile application developers and their business targets, including:

- Providing a direct route to all sizes and types of business, via the carrier's monthly invoice and its phone store retail presence: Establishing a reseller relationship with a wireless carrier provides the application developer with a stable, effective, and pervasive distribution and promotion infrastructure that enables and enriches easy, efficient product exposure to the target customer(s).
- Providing the key ingredient—a powerful wireless data network—for mobile communications solutions: The wireless carrier, as the key enabler of wireless data communications, is a natural mobility partner for businesses that are interested in purchasing mobile solutions.
- Providing a convenient one-stop-shop purchase experience: Wireless carriers are uniquely able to provide the customer with all of the components of an end-to-end

mobility solution, including the software application, the requisite mobile devices, network, and support.

- Providing product legitimacy: Carriers are able to evaluate and select a curated selection of best-in-class vendors and apps, leveraging their strong brand image and reputation for high product quality.

The carriers also reap their share of benefits from this reseller relationship:

- These mobile workforce applications give carriers the ability to pursue a high-value solution sale with the customer. Instead of trying to lead with what have become commoditized devices and rate plans, carriers are able to center the sales conversation around mobile apps that provide clear business value—including increased worker productivity, more efficient business processes, etc. Application sales by the carrier can result in increased ARPU and enhanced market share.
- Carriers have learned that the sale of mobile workforce applications helps to reduce customer churn and tighten the carrier-customer relationship.
- These software applications can open up incremental revenue opportunities, providing the carrier with an opportunity to promote and sell more of the carrier's core and adjacent services, such as wireless plans, enterprise mobility management (EMM) products, network security offerings, complementary voice communications offerings, etc.
- In an increasingly competitive environment, these mobile workforce applications can help to position carriers as technology leaders, providing the solutions and support that businesses need to embark on—or advance—their own digital transformation processes.

While mobile workforce applications present a substantial financial and strategic opportunity, they also present challenges to the wireless carrier, including:

- **Choosing the optimal mix of vendor partners and app solutions to offer:** Carriers must determine which apps to enable and support, which markets to target, and which app developers to partner with. In today's dynamic mobility market, this must be an ongoing process. Leaders in this sector stay attuned to the increasingly-sophisticated criteria that businesses are using to select mobile workforce apps, including high data security, scalability, affordability, and ease-of-use. They look ahead, anticipate new needs, and work with their app developer partners to create solutions to satisfy those needs.
- **Differentiating against competitors:** Despite their unique set of advantages, carriers are not the top preferred mobile solutions partner for North American businesses. Wireless carriers now rank #3 after large corporate software vendors and the mobile device manufacturers. They also face strong competition in the mid-market and enterprise segments from systems integrators and middleware vendors. Carrier leaders understand the abilities that today's businesses are searching for in a mobility partner, including strong customization and integration

experience, a high-quality app portfolio, a visionary technology evolution roadmap, and strong customer onboarding expertise.

- **Defining which areas of solution adjacency and integration to pursue:** To boost ARPU and reduce churn, the best-in-class carrier is identifying synergies between its mobile workforce apps and other components of its business solutions portfolio. Adjacent offerings can include fleet management and asset tracking products, EMM platforms, business messaging, push-to-talk, etc.

Product Family Attributes and Business Impact

AT&T is a major wireless carrier headquartered in Dallas, Texas. Its product leadership role is rooted in not just one offering, but across the composite of mobile workforce applications it has assembled and manages. Key components of AT&T's leading product strategy in the mobile workforce apps industry include:

A Dynamic and Comprehensive Portfolio That Anticipates Evolving Customer Needs

AT&T has demonstrated a keen sensitivity to customer needs, creating a comprehensive platform of prebuilt, third-party mobile workforce solutions. These include:

- **AT&T Workforce Manager:** A mobile field service management solution that offers customers an extensive selection of task modules, including wireless forms, job dispatching, mobile timekeeping, event-based tracking, work order management. Three versions are available, and the monthly per-user price ranges from \$10 to \$20, based on the number of modules activated.
- **AT&T Workforce Manager Shield:** This version of the AT&T Workforce Manager solution adds HIPAA compliance and government-grade security controls. This solution is FirstNet® certified and is hosted in Microsoft Azure Cloud with Azure Advanced Data Security.
- **AT&T Workforce Manager Add-ons:** These include GPS Intelligent Tracking, Mobile Asset and Vehicle Tracking, and HOS/ELD Hours of Service/Electronic Logging Device offerings.
- **AT&T Workforce Manager Shield--EVV Electronic Visit Verification** for Homecare Industry as mandated by the U.S. government: As an add-on or in standalone form to AT&T Workforce Manager Shield, these solutions are available in three iterations: 1) Visit Schedules for mobile schedule access, care plans, and navigation, 2) Mobile Forms for prebuilt forms and data capture, and 3) EVV + Timekeeping which adds clock in/out and mileage tracking.
- **AT&T Mobile Forms:** A digital forms solution that is used to collect and analyze field data. Two additional versions—Mobile Forms Professional and Mobile Forms Deploy—are available via AT&T Professional Services.
- **Microsoft Office 365 from AT&T:** General productivity software that provides the full set of Office applications on the user's mobile device via the cloud.

- **AT&T Enhanced Push-to-Talk (EPTT):** Instant voice communications, integrated messaging, and location tracking/sharing. This solution connects field workers seamlessly to Land Mobile Radio (LMR) systems. AT&T Workforce Manager and AT&T Workforce Manager Shield have a built-in API to EPTT, enabling the dispatcher to group call part of or the whole fleet.
- **AT&T Enhanced Push-to-Talk Advanced:** Enhanced situational awareness and emergency calling on the 4G LTE network. Includes interoperability with legacy 2-way radios and is FirstNet Certified™.

AT&T recognizes that prebuilt mobile workforce apps are significantly more popular in North America than fully custom solutions. A recent Frost & Sullivan survey reveals that 80% of the North American business community using mobile workforce apps prefers deploying prepackaged solutions, as opposed to 20% favoring truly customized offerings.

Recognizing the dynamic nature of this industry, AT&T does not let its product portfolio get stale. In particular, Frost & Sullivan is impressed with AT&T's effort to add vertical-specific applications during the past year. Wireless carriers' mobile workforce app offerings have traditionally been horizontal in nature. However, two trends are driving the need for more industry-specific apps: 1) Today's businesses are becoming more knowledgeable about mobile workforce solutions, and are looking for apps that better meet the information and guidance needs of their specific industry, and 2) New government mandates often require that more vertical-specific solutions be created to satisfy regulatory requirements. AT&T has gotten out in front of both of these trends, typically by creating an augmented and more targeted version of one of the carrier's current solutions. These include:

- AT&T Workforce Manager Shield, which adds the stricter security controls that the health care, financial services, and government sectors require.
- An advanced version of AT&T Enhanced Push-to-Talk, which provides enhanced situational awareness features and is targeted at the first-responder market.
- AT&T Workforce Manager Shield which includes the EVV plans, meeting new U.S. regulatory standards and targeting the home health care and home personal care segments.

It should be noted that, while the carrier is selectively expanding its product line, it has not lost sight of its customers' basic priorities. According to recent Frost & Sullivan research, businesses—no matter what size they are—prefer apps that are easy-to-use and easy to administer. AT&T's no-code platform is critical in this regard. And AT&T also invests ongoing time and dollars in making UX/Design a priority.

In comparison, Competitors #1 and #2 also offer broad mobile workforce application portfolios. However, neither have expanded into vertical-specific offerings as strongly as AT&T. Competitor #2 has lagged on augmenting its product line and its only industry-specific effort has been adding EVV plans. Competitor #1 has been certifying additional

niche products, but only has one noteworthy industry solution—a first-responder mobile situational awareness offering.

Working Proactively with Partners to Provide Product Reliability and Quality

AT&T has forged partnerships with a top-tier set of mobile-first workforce application developers, including Actsoft and ProntoForms. The developers are chosen because they excel in designing and creating easy to use, high-quality mobile software. The carrier also expects its app partners to assist when necessary with post-sale onboarding and support.

Even more significantly, AT&T has assumed a strong product development role. In that capacity, the carrier works with its app developer partners throughout the product life cycle to improve their solutions and anticipate customer needs. An example of this more activist approach took place when AT&T worked with its partner Actsoft to develop a new modular approach to field service management solutions, resulting in the 2017 launch of its new flagship Workforce Manager solution. The carrier continues to work directly and proactively with its key partners to meet AT&T's high product quality and reliability standards.

Neither Competitor #1 nor #2 has taken on such a proactive product development role with their application development partners.

Clear Product/Service Value

AT&T's mobile workforce applications are offered in a cloud-based as-a-service format, with predictable monthly per-user pricing that is typically invoiced on an annual basis.

Price points range from \$8 per-user per-month (PUPM) for an EVV plan to \$25 PUPM for AT&T Workforce Manager Shield. Add-ons and support services are available for incremental fees. The subscription pricing model and low entry price points make AT&T's solutions affordable to small, mid-sized, and enterprise businesses.

AT&T sales representatives also share a clear ROI story with perspective customers, reinforcing the hard-dollar value-add these solutions provide. Frost & Sullivan survey research reinforces that users experience increased worker productivity, more efficient business processes, and cost savings.

Competitor #1 and #2 price points are similar, however, AT&T provides a lower entry price point for the cornerstone mobile field service management solution.

Recognizing Opportunities to Break Out and Create New Positioning Opportunities

AT&T has demonstrated a strong understanding of, and sensitivity to, evolving customer needs regarding mobile workforce applications. This knowledge of the market translates directly into new mobile workforce offerings, introducing new solutions before competitors and further establishing AT&T as a product visionary.

One example of this dynamic is the AT&T Workforce Manager Shield solution, which was launched in July 2019. This product adds support of HIPAA compliance and government-grade security controls to the carrier's cornerstone Workforce Manager application. It is hosted in the Microsoft Azure cloud with Azure Advanced Data Security, and Azure

Advanced Threat Protection detects illegitimate attempts to access or exploit data on a 24x7 basis.

AT&T Workforce Manager Shield is designed to directly address the increased data security concerns of government agencies, health care companies, and financial services institutions. Frost & Sullivan views this as a noteworthy example of the process and priorities AT&T brings to its new product development efforts, including: 1) It grew out of—and expanded upon—a specific customer request; 2) It was developed in alliance with a top-tier technology partner, Microsoft, and 3) It was designed to meet the highest performance standards, earning the highest level of FirstNet certification.

Proactive product development is not limited to the Workforce Manager solution. The carrier is also pursuing new opportunities to leverage and enrich its Enhanced Push-to-Talk portfolio.

To date, neither Competitor #1 nor #2 have taken a similar leadership role in creatively augmenting the mobile workforce applications product line.

Strong Financial Performance That Enables Proactive Productive Development

AT&T's overall financial performance continues to be strong, providing significant resources for product and marketing efforts across product lines. 2019 consolidated revenues totaled \$181.2 billion, compared to \$170.8 billion in 2018. Adjusted 2019 operating income was \$38.6 billion versus \$35.2 billion in 2018. Operating income margin was 21.3% versus 20.6%. Full-year free cash flow was \$29.0 billion compared to \$22.4 billion in 2018.

In 2020, the carrier expects revenue growth of 1-2%, adjusted EBITDA margin that is stable with 2019 results, and free cash flow of approximately \$28 billion. The carrier clearly enjoys significant financial resources.

Both competitors have similar financial assets available to bring to the mobile workforce apps sector.

Driving Growth Via New Markets

The mobile workforce applications industry continues to follow a strong growth trajectory in the U.S. and Canada. Frost & Sullivan business survey results reveal that 84% of North American businesses that have already implemented mobile workforce applications are already deploying 10 or more different mobile applications to their employees.

Very importantly, 95% of businesses currently using these apps plan to introduce new additional solutions over the near term. AT&T very consciously pursues these follow-up sales opportunities, staying in touch with customers to ensure they are achieving the results they had initially envisioned and being available to quickly identify and promote any expansion possibilities.

The carrier sees specific growth potential in multiple markets, including: 1) The home health care sector, starting with the newly-mandated Electronic Visit Verification EVV apps

and 2) Government and financial services entities, with strengthening interest in the Shield solution and in mobile forms (reduced paperwork).

AT&T views the mobile workforce application category as a strategic fit with its larger AT&T Business growth strategy, adding clear incremental value to commoditized device and rate plan sales, raising ARPU, and reducing customer churn.

In comparison, both top Competitors recognize the incremental revenue potential of their current customer base. However, their strategies going forward are not as well-defined or as grounded in leveraging industry-specific solutions.

Conclusion

The mobile workforce apps category is a growing market in North America, and one that offers powerful synergies with the wireless carrier portfolio and mission. AT&T stands out as a product leader in this sector based on its curated and comprehensive selection of offerings, an ecosystem of top-tier, mobile-first application developer partners, its active role in product development, and its progress in adding new industry-specific solutions to this dynamic app portfolio.

For its strong overall performance, AT&T Workforce Manager Shield is recognized with Frost & Sullivan's 2020 Product Leadership Award.

Significance of Product Leadership

Ultimately, growth in any organization depends on 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 critical roles 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 communication, 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, market share will inevitably increase.

Key Benchmarking Criteria

For the Product Leadership Award, Frost & Sullivan analysts independently evaluated 2 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

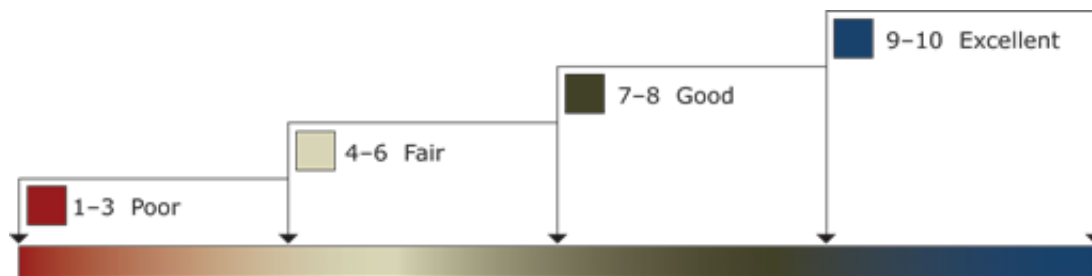
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practices Award Analysis for AT&T

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 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 considers Product Family Attributes and Business Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criterion 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, Frost & Sullivan has chosen to refer to the other key participants as Competitor 1 and Competitor 2.

<i>Measurement of 1-10 (1 = poor; 10 = excellent)</i>			
Product Leadership	Product Family Attributes	Business Impact	Average Rating
AT&T	10	10	10
Competitor 1	7.5	9	8.25
Competitor 2	7.5	8	7.75

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 address unique, unmet needs 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: Overall financial performance is strong in terms of revenue, 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

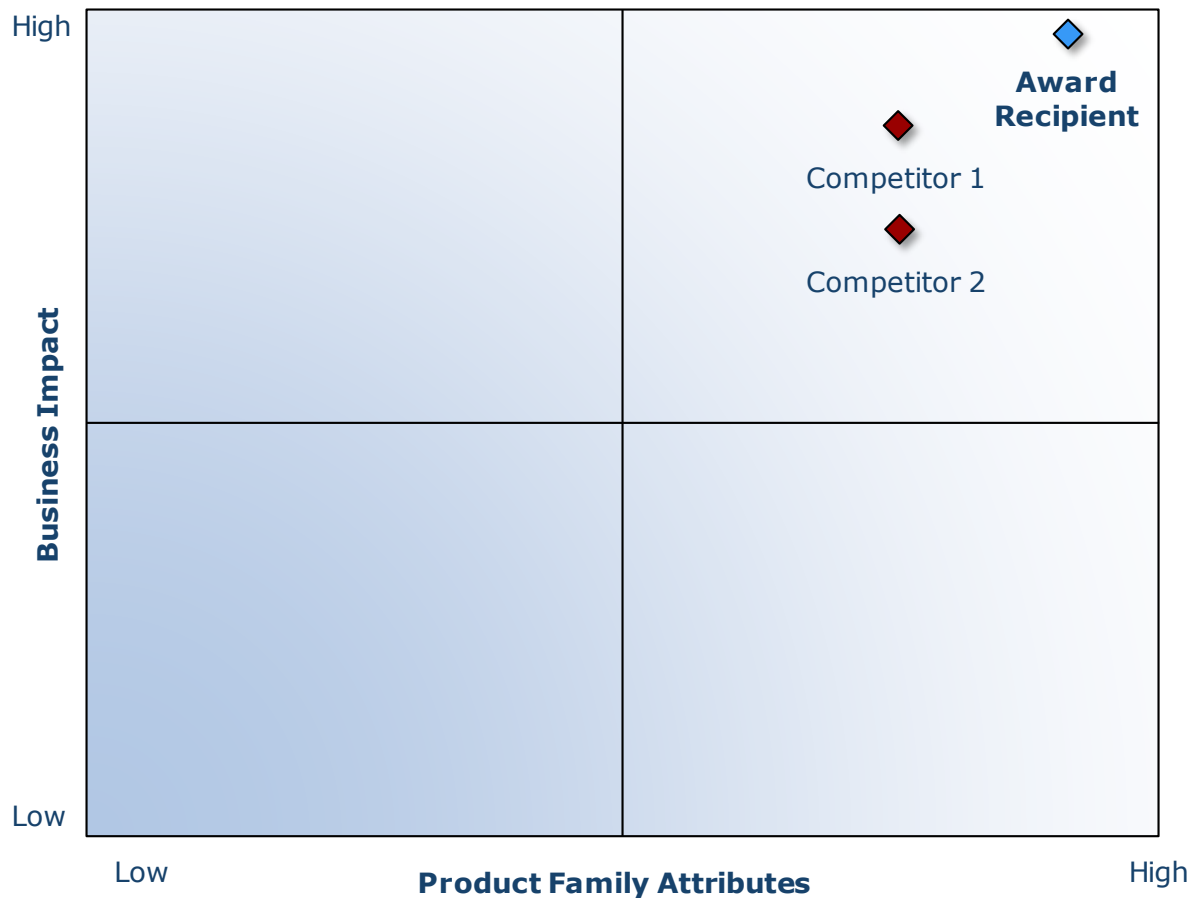
Requirements: Product quality strengthens brand, reinforces customer loyalty, and enhances growth potential.

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 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.



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 practices 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 world	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging industries • Scan multiple regions 	Pipeline of candidates that 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 practices 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 practices 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 practices 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 practices 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 practices criteria
9 Communicate recognition	Inform award recipient of recognition	<ul style="list-style-type: none"> • Announce 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 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, resulting in 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.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



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