

F R O S T & S U L L I V A N

FROST & SULLIVAN BEST PRACTICES AWARD

HEALTHCARE ASSET, PATIENT, AND STAFF FLOW
MANAGEMENT SOLUTIONS - NORTH AMERICA

Product Line Strategy Leadership 2019

STANLEY[®]
Healthcare

FROST & SULLIVAN

2019

BEST
PRACTICES
AWARD

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Background and Company Performance

Industry Challenges

Operating health facilities in today's **transforming healthcare industry** is a multifaceted challenge. Under a regulated environment, new pressures have surfaced in response to value-based reimbursement requirements, which effectively puts the onus on the hospital to ensure improved patient outcomes and at lower costs. What this pressure on facilities translates to is demand for improved care coordination and better operational efficiency to successfully reduce operating costs. A rapidly expanding aging population and escalating chronic disease burdens only add to the pressure by exacerbating challenges of care coordination and increasing wait times, for example.



To best serve its patients, every hospital owns several mobile assets, ranging from wheelchairs to infusion pumps. Other care delivery entities such as senior living facilities, mental health facilities, urgent care centers, and the like, face similar challenges. For instance, a daily challenge for nurses is locating mobile assets and making them available when required, which quite often results in delayed care delivery.

The problem is that mobile assets are frequently stored in various locations so become hard to track down, are forgotten, or even hidden by nurses who hoard in order to access them quickly when needed. Not only do these occurrences hamper workflow operations, but hospitals must buy additional equipment to meet demand, resulting in extra capital costs as well as annual maintenance costs to address wear and tear, and preparing medical equipment such as infusion pumps for use with every new patient. This practice is highly inefficient, as the utilization of existing equipment is already low because of hoarding or misplacement. The answer to this quandary is smart solutions such as Real-Time Location Systems (RTLS) that can be used to track assets, among several other use cases in hospital operations.

For instance, from an operational efficiency perspective, RTLS can enable environmental monitoring for parameters such as temperature and humidity that deliver beneficial data for tracking the viability of vaccines and drugs that have special storage requirements. The technology also helps with monitoring compliance with processes, such as hand hygiene, especially as hospitals continually deal with infection control challenges. Also, RTLS can help iron out patient flow through the hospital, eliminating bottlenecks and reducing patient wait times. Simultaneously, hospital staff workflow can be improved using the same real-time location

"If you're doing paper-based monitoring, even if they're 100% compliant with twice-daily monitoring, it's still a 'snapshot' approach. As the old saying goes, even a broken clock is right twice a day."

TOM WRIGHT
AMBULATORY SERVICES & COMPLIANCE
PHARMACIST PHOENIX CHILDREN'S HOSPITAL

technology. And in environments such as emergency departments and mental health facilities where staff members are prone to attacks by patients, or where residents/patients must remain secured within the facility, RTLS technology can greatly assist.

As is evident from the breadth of applications that RTLS offer in the healthcare environment, staff members need to keep track of a diverse set of people and things across the organization. This has led to a variety of solution vendors offering these capabilities for specific use cases or for specific care delivery center types. Disparate technologies are being used simultaneously to create more robust solutions for end users, which is encouraging vendor partnerships aimed at achieving a diversity of offerings. Nonetheless, clients want both fewer vendors to deal with and interoperable solutions, yet with the benefit and cost burden shared across departments. While end users demand fewer vendors, they sustain a need for diverse products, creating a dichotomy many companies and partners struggle to address. Moreover, although they are demanding more holistic and comprehensive solutions, end users value the expertise of dedicated vendors. Ultimately, a unified, platform-based approach that addresses the various needs of a diverse set of users within healthcare facilities by providing them the appropriate insights derived from RTLS data is therefore lacking in the industry.

"That's \$1,400,000 worth of equipment we could have lost and needed to replace."

EDGAR NEWELL
DIRECTOR CLINICAL ENGINEERING
RWJ UNIVERSITY HOSPITAL

Product Line Strength and Customer Impact

STANLEY Healthcare is a division of STANLEY Black and Decker and is associated with STANLEY Security. Its mission to empower caregivers embodies every element of its product line. By connecting caregivers and networks to critical information, STANLEY Healthcare helps end users generate actionable insights, enhance safety and security, and improve workflow efficiency.

Breadth of Flow Management Solutions

STANLEY Healthcare offers multiple solutions based on RTLS technology, covering a wide array of healthcare organization needs, under the AeroScout®, Hugs®, and MyCall® brand names.

The AeroScout brand (a 2012 acquisition), covers asset tracking, patient flow management, staff workflow management, hand hygiene compliance monitoring, and temperature and environment monitoring. The asset tracking solution results in cost efficiencies by improving asset utilization, preventing stolen or misplaced equipment, and therefore reducing reliance on rentals. Some healthcare organizations have realized \$1.4 million saved by avoiding loss; \$250,000 saved from improved utilization of existing equipment

"The AeroScout solutions are so important and easy to use that we made sure everyone at PRMC, including our CEO, has access to the applications."

MARK CORNELIUS, BIOMEDICAL
DEPARTMENT DIRECTOR PENINSULA
REGIONAL MEDICAL CENTER

such as infusion pumps, thereby avoiding new purchases; and \$42,000 saved on rental costs of specialty beds. More importantly, AeroScout solutions improve caregivers' efficiency by helping them find equipment almost immediately, with some estimates suggesting that search times were reduced from 30 minutes to just 2 minutes and enhance patient safety by 100% retrieval and remediation of recalled devices within five days.



By tagging patients with RTLS wrist bands and leveraging existing Wi-Fi infrastructure, AeroScout solutions also help process patient locations in real-time, helping improve patient flow throughout a facility, thus empowering caregivers with real-time insights for improved decision-making. Similarly, staff members can be tracked to improve workflows and automate nurse calls, resulting in higher patient satisfaction

and better care coordination. In addition, the temperature and environment monitoring solutions help ensure all critical and expensive products such as drugs or vaccines are stored at optimal temperatures, and any deviations are immediately brought to the notice of staff with typical savings of \$40,000 to \$400,000 a year from timely response. Automated, around-the-clock monitoring allows caregivers to focus on patients instead of the manual task of recording these parameters, while saving one day of labor per week for every 15 devices automatically monitored. Last, the



hand hygiene compliance monitoring solution ensures that staff members follow hand wash/sanitization protocols, which subsequently improves patient safety and helps address the growing challenge and patient concern over mitigating hospital acquired infections.



Addressing the growing concern over infant abduction by strangers or family is the Hugs infant protection

solution, which is used across 1,600 facilities globally to protect over 2 million infants annually. The Hugs solution addresses workflow by helping assign routine tasks to nurses or certified nursing assistants at the point of care, or even at a central station. It offers scalability to fit any facility size, which is a huge advantage because it allows all facilities to adopt the solution as desired.

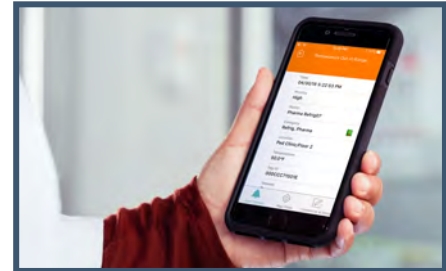
"Birth is a huge and exciting time for families... Knowing we have that extra added level of security for our newborns is so important."

**ELIZABETH DABLOCK
CROUSE HEALTH**

Tackling the rising phenomenon of violence in healthcare facilities, across emergency departments, mental health facilities, or any other care facility for that matter, is the MyCall staff protection solution, which allows staff members to summon help with the click

of a button, irrespective of their location in the hospital/facility. By empowering staff to do so, they can continue their daily work without changing workflows as often done otherwise out of fear over **personal or colleagues' security**. Additionally, STANLEY Healthcare's product line includes fall prediction and wandering risk prediction solutions for seniors, applicable for senior living facilities.

Frost & Sullivan applauds STANLEY Healthcare's commitment to providing a wide variety of RTLS solutions for healthcare organizations (across hospitals, clinics, and senior living facilities). These solutions are scalable, and their ability to be customized for specific healthcare organization needs is one of the factors that sets STANLEY Healthcare apart from some competitors who offer only static or narrow solutions.



MobileView Platform

Apart from the breadth of the solutions that STANLEY Healthcare has to offer, it also provides the MobileView™ platform, which integrates data from all the RTLS solutions to offer staff a dashboard from which they can remotely track all assets and people. The



MobileView platform features a user interface including interactive maps with search capability to remotely check status and condition data in real-time, and also view inventory levels as well as their locations. The interface is customized for each user type, providing only the relevant information and commands, making it user-friendly. It also will send real-time notifications to caregivers' mobile devices, or information on current asset location on a map, with an

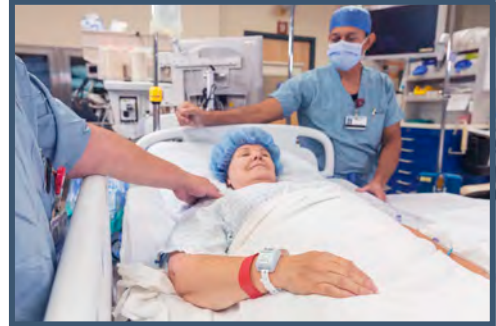
accompanying icon or photo. The platform thus provides a holistic view of all activities in the facility, creating a truly insightful tool for hospitals and caregivers.

By creating a common platform, STANLEY Healthcare has addressed a major industry challenge by making the incorporation and use of different solutions easier for end users, an approach that Frost & Sullivan appreciates as a best practice because it encourages more and varied use cases, thus empowering customers to leverage the **technology's** performance possibilities.

Interoperable Solutions

Perhaps the true power of STANLEY Healthcare's **breadth of offerings** comes from the interoperable nature of its solutions. The AeroScout patient flow solution, for example, leverages an HL7 open architecture, allowing it to be integrated with Electronic Health

Record (EHR) systems, emergency department information systems, operating room information systems, admission discharge transfer systems, and nurse call and capacity management solutions. The MobileView platform can also supply real-time information to any other system such as the EHR, or even receive information from these systems, thanks to its ability to integrate information using open application program interfaces. The platform itself is now also Integrating the Healthcare Enterprise (IHE) Patient Care Device domain compliant, thus allowing data from equipment such as infusion pumps to send detailed information on entire infusion operation for patient care, thus improving its interoperability measures for care delivery.



Frost & Sullivan recognizes that STANLEY Healthcare has exerted great effort to build interoperable solutions that successfully generate insights for customers whereas several healthcare incumbents are still struggling with the concept.

Technology Partnerships

Acknowledging the limitations of RTLS for some use cases, such as when assets are too small or immobile to be tagged, or the Wi-Fi infrastructure may not support active RTLS tags, STANLEY Healthcare has partnered with Impinj for its RAIN RFID (Radio Frequency Identification) solution. This additional technology support, data which also integrates into MobileView platform, enhances the value of the solution manifold for healthcare organizations.

Similarly, the company has partnered with Sonitor for its Sense High Definition Ultrasound indoor positioning system that provides precise location accuracy and allows for RTLS implementation at a lower total cost of ownership for clients.

Frost & Sullivan appreciates STANLEY Healthcare's ability to provide holistic technology solutions for end clients, freeing them to work with a single vendor and receive seamless insights, despite the use of disparate technologies.

STANLEY, Black & Decker Brand

STANLEY Healthcare is a part of the larger Fortune 250 company STANLEY, Black & Decker Group that is known for innovation as well as sustained growth. It therefore leverages the strong brand identity of its parent company and has been successful in building a loyal customer base of over 17,000 hospitals, health systems, clinics, and senior living communities globally.

Frost & Sullivan acknowledges the existing brand equity the company leverages, which few competitors can match, while also noting that STANLEY Healthcare itself is a well-known brand in the industry.

Conclusion

Addressing healthcare organizations' challenge to improve operational efficiencies and patient care in a tightening value-based care environment is STANLEY Healthcare's wide range of RTLS solutions. Through its AeroScout RTLS offerings, it provides among the most robust healthcare asset, patient, and staff flow management solutions available. Beyond just tools, the MobileView platform integrates data from all RTLS solutions along with hospital information systems to derive unprecedented real-time insights into hospital operations, providing caregivers more power in decision-making. The wide-reaching implementation options, customization, and interoperability with existing hospital information systems are unmatched in the market.

The breadth of the AeroScout technology coupled with the company's advanced features create a product line that can be adapted for countless physical locations and use cases, not to mention its easy scalability. To overcome RTLS technology limitations, STANLEY Healthcare also partners with other technology vendors to incorporate RAIN RFID or ultrasound-based solutions, providing clients with a single seamless solution, thus addressing customers' desire to work with fewer, dedicated vendors. Leveraging its technological capabilities, STANLEY Healthcare has reached an unparalleled level of performance value in RTLS for healthcare asset, patient, and staff flow management.



For its strong overall performance, STANLEY Healthcare has earned Frost & Sullivan's 2019 Product Line Strategy Award.

Significance of Product Line Strategy

Ultimately, growth in any organization depends on customers purchasing from a company and then making the decision to return time and again. A full, comprehensive product line that addresses numerous customer needs and preferences is, therefore, critical to a **company's long-term** retention efforts. To achieve the dual goals of customer value and product line strength, an organization must be best in class in 3 key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Product Line Strategy Leadership

Driving demand, strengthening brand, and differentiating from the competition all play critical roles in delivering unique value to customers. This three-fold focus, however, must ideally be complemented by an equally rigorous focus on building a superior and comprehensive product line.

Key Benchmarking Criteria

For the Product Line Strategy Leadership Award, Frost & Sullivan analysts independently evaluated Product Line Strength and Customer Impact according to the criteria identified below.

Product Line Strength

Criterion 1: Breadth

Requirement: Product line addresses the full range of customer needs and applications.

Criterion 2: Scalability

Requirement: Product line offers products at a variety of price points and functionality levels.

Criterion 3: Technology Leverage

Requirement: Demonstrated commitment to incorporating leading-edge technologies into product offerings results in greater product performance and value.

Criterion 4: Features

Requirement: Products offer a comprehensive suite of features to serve customers at multiple levels of functionality, ease of use, and applications.

Criterion 5: Supply Chain Reliability

Requirement: There is sufficient control over the supply chain to ensure availability of products and components.

Customer Impact

Criterion 1: Price/Performance Value

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

Criterion 2: Customer Purchase Experience

Requirement: Customers feel they are buying the optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience

Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience

Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity

Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

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 practices 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"> • 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 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 the 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.



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients 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 practices models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join **Frost & Sullivan's** Growth Partnership, visit <http://www.frost.com>.