2014 North American Integrated Fleet Automation Solutions Product Line Strategy Leadership Award
Background and Company Performance

Industry Framework

The resurgence of the oil and gas industry in the United States, mostly driven by increased activity in shale oil and gas exploration, has generated tremendous opportunities for companies involved in the upstream and midstream market. Given the rapid growth of the industry, Frost & Sullivan independent research analysis developed an industry framework that outlines the most critical issues facing the current operations and offers a vision toward its future transformation.

3R Framework for Challenges in the O&G Industry
Frost & Sullivan’s 3R Oil and Gas Framework encompasses three major components: resource, recovery and reliability. The first component refers to the industry gravitation toward unconventional hydrocarbon resources, which poses several challenges in terms of dull attributes, distant location, dirty composition, and dangerous operations.

The second component in the framework refers to hydrocarbon recovery. Despite advances in resource availability, costly operation costs are reducing well production. Demand for optimizing well production by extracting more from various wells and reducing surrounding costs through effective well economics is a core necessity of the industry.

The third component refers to the ability to attain sustainable production levels in order to meet future energy requirements of around 80 MMBBoe a day.

Digital Transformation of the Oil and Gas Industry- Our Vision

At the core of the oil and gas value chain is the reality that there is a hydrocarbon resource; it needs to be recovered reliably. However, the operational status quo of fragmented operations, siloed equipment and systems, and high human capital costs is becoming increasingly unsustainable given the new hydrocarbon demands. Although attempts toward the automation and integration of systems and processes are beginning to occur, current operational practices restrain the momentum toward the adoption of untried technologies. Therefore, Frost & Sullivan's vision for the industry on how it should approach this shift toward the digitalization of the oil field revolves around three broad ideas.

The first concept of Frost & Sullivan's vision refers to the ability of changing interaction with machines; instead of humans adapting to machines, machines will increasingly adapt to humans. As machines become more appealing to innate senses in terms of visualization, vocalization and real time feedback, industry operators will be able to take actions that will have a positive impact on the bottom line and ensure risk management.

The second component of this vision revolves around the concept of the “fog.” This resembles an intermediate layer where all data is analyzed through predictive analytics, including pattern recognition, and only the most valuable data sets are escalated to the next level of action; the rest remains in the fog. As a result, raw data, which is collected with high velocity, variety and volume, will reside in the data ocean, and only data with an “intelligence tag” will be processed to reach an action driven level.

The third concept of the vision argues in favor of the continued emergence of independent data holders with key encryptions tagged to them that will allow data to be present in other platforms. This will enable independent data miners to analyze data through advanced pattern recognition methods.
As Frost & Sullivan continues to develop the vision of the future and of the cloud for the oil and gas industry through ongoing panel discussions with industry stakeholders and end-users, Frost & Sullivan seeks to identify key technology enablers whose value proposition targets the main industry challenges within the 3R framework of resource, recovery, and reliability - and are in line with this vision of the totally integrated digital oilfield.

**Challenges in the Oil and Gas Industry and Fleet Management Market**

In the oil and gas industry, one of the most important performance metrics is operational efficiency. Across the industry’s supply chain, companies aim to optimize performance, control costs and improve safety. Nonetheless, highly complex operations in oil and gas wells, complicated logistics for hydrocarbon transportation, and geographically difficult to reach areas prevent optimal asset and employee utilization, increase operational expenses, and negatively impact the bottom line.

Current industry trends seek to reduce performance variability among its operations by installing communication infrastructure, machine-to-machine connectivity and digital devices that can more accurately monitor, measure, and manage operations, and ensure proper safety standards. However, these applications are not always engineered into the same platform or are able to communicate with each other. Similarly, companies from small to large sizes are looking for companies that provide cloud-as-a software or as a service that deliver solutions by browser to mobile devices and therefore eliminate the need for further IT infrastructure expenses.

However, the fastest growing industry trend among the supply chain is not reducing performance variability, but rather enhancing performance predictability. As the era of Big Data continues to penetrate the industry, oil and gas companies are eager to solve current challenges - for example, employee safety, by collecting data that will yield insightful information that will prevent future problems. The quest for companies to turn real-time raw data into action-driven business intelligence is driving the need for more sophisticated data analytics that can be safely integrated into current operations and provide “the right data, to the right people, at the right time.”

The fleet management industry, which is responsible for the transportation of crude oil to refineries and is composed of many independent crude and water hauling companies, embraces some of the main industry measures, such as maximizing and optimizing asset utilization, reducing operational expenses, and ensuring safety. In a similar manner, fleet operators are in a quest to find solutions in the digital world that will target some of the main challenges they are facing and yield business intelligence that will allow them to monitor, measure, and manage their operations.
Solutions for Fleet Management in the Oil and Gas Industry

Current trends among oil and gas industry executives suggest that companies are more likely to invest in their OPEX rather than their CAPEX, thus allowing them to contract services as needed rather than establishing the systems in-house. Consequently, there is a trend toward acquiring software-as-a-service solutions that address current industry challenges.

Fleet management operators looking to optimize critical issues, such as fleet tracking, route optimization, staff management, DSO automation, safety management, and data intelligence, are being offered several types of applications and software systems, some more comprehensive than other solutions, and some more industry-specific than others. As companies continue installing IT software to streamline their processes and optimize their operations, Frost & Sullivan conducted an analysis to review the industry’s best practice providers offering complete solutions in this area.

Product Line Strength and Customer Impact of TouchStar

TouchStar is a multinational provider of integrated field work force and fleet automation solutions for multiple industries, including the entire value chain within the Oil & Gas Sector. The company is positioned as a key industry provider and market leader due to its well-developed FleetAtlas Framework, which systematically integrates data from multiple applications into one platform. This platform empowers operators to enable the seamless communication and data transmission between drivers in the field and the back office and integrate data from multiple systems, thus generating a powerful source of information that improves user efficiency and provides business intelligence that can be analyzed from multiple locations.

The company developed its FleetAtlas Framework, which specifically addresses fleet operator critical needs in the areas of fleet tracking, staff management, DSO automation, safety management and business intelligence. Given the large amount of competitors in the industry that offer targeted solutions, such as telematics, which offer limited insight into the complete cost of operations, TouchStar truly seeks to differentiate itself by building a platform that can extract data from various applications to provide complete analysis of the operations.

The platform consists of telematics applications for fleet tracking and driver management, dispatch and planning applications for improved efficiency in fleet management and scheduling, mobility applications for automated transaction processing, compliance applications for accurate record of DOT safety procedures, planning applications, and business intelligence that provides data analytics for accurate reporting and decision-making purposes. This integrated platform helps end-users reduce risk by working with one vendor rather than multiple. The preferred vendor relationship helps end-users to reduce cost, increase agility, scalability and system availability. As a result, TouchStar's
FleetAtlas platform offers a robust solution that enables fleet operators to travel the technology journey, gain competitive advantage, and realize measurable business outcomes while giving end users an exceptional experience in the process.

Breadth

During the last decade, companies selling software-as-a-service have targeted the fleet management industry by offering telematics services that tracked crude-haulers using GPS and fleet routing solutions. Although telematics and dispatching are critical to fleet operators, the trend toward more advanced real-time connectivity is challenging fleet management software providers to develop information platforms that can integrate various solutions that monitor the true performance of the fleet in real-time. The increasing cost pressure on fleets require end-users to look at aspects of ‘connected efficiency’ – which is defined as the measure of cost inlays by revenue output across multiple fleets that an organization might control.

Although many software service companies offer telematics as their core service, they lack integrated platform capabilities that can integrate this data quickly to determine optimal dispatching routes, delivery costs, field force effectiveness and operational expenses. Moreover, the availability of more sophisticated and targeted applications for fleet operators in the oil and gas industry begins to shrink, as the demand for more integrated solutions increases. This supports the trend of end-user’s preference of pre-integrated solution platform which they can plug-and-play as compared to commercial-off-the-shelf solution that needs further customization.

TouchStar’s value proposition strongly addresses the need for an integrated platform that meets the industry’s critical needs for efficient telematics and dispatching solutions, as well as DSO automation and safety management applications. In addition, the company’s genuine interest to deliver solutions that can turn raw data into significant information that measure performance, establishes them as a leader in the new industry’s hot trends and demand for smart and predictive performance analytics. Frost & Sullivan appreciates the fact that TouchStar’s ability to provide a business-ready platform entices customers with total systems integration across different vendor products.

Best Practice Example:

A 260 truck operation, which provides crude hauling transportation services across the United States, had been a longstanding customer of TouchStar – utilizing its WellSite crude oil distribution software and TS WellSite Manager back office interface. However, the company’s substantial growth in recent years required additional software capabilities to optimize dispatching solutions and automate data transfer from the field to back office systems. Prior to the integrated system upgrade, delivery information took nearly a full week to be delivered to the administrative team for entry into the accounting system. Shortly after the new integrated system was installed, fleet efficiency levels improved as
electronic data was transferred in near real-time between field resources and the back office, significantly reducing day’s sales outstanding.

**Scalability**

The rising demand for crude oil, gas, and wastewater transportation has doubled the degree of complexity in managing fleet operations. In addition, the geographic conditions in which the natural resources are found are more remote and have significant road and communication infrastructure limitations. As a result, demand for well-connected mobile devices enables an information exchange that triggers high levels of responsiveness between the drivers and the back office.

The ability to provide mobile devices that are well connected and have an intuitive interface is an important challenge for all software providers to the industry. In addition, the wide adoption of smartphones which have become a vehicle for transaction between customers and businesses is prompting industry end-users to desire industrial applications as well. As the size and capabilities of fleet operators are quite diverse, the versatility of fleet management providers to offer a range of options is becoming an important differentiator. The market is definitely awash with many mobile solutions from established peers. However, the area where they lag is the backward and forward integration capabilities. The inability to seamlessly integrate with back-end systems leaves the solution like an island with no support.

In order to provide the most comprehensive mobile solutions, TouchStar has partnered with leading software and hardware providers that enable them to offer device and smartphone capabilities that can be used with or without cellular connections. Along with mobility integration, TouchStar has WellSite, which serves like a personal assistant to truck drivers in managing their field operations end-to-end. ServiCE mobile application helps in increasing the service technician utilization, inspection and workforce automation. Both of these mobile applications have been strategically designed aimed at improving end-user performance. TouchStar has many more innovative applications that have been designed with keeping the customer’s pain points in mind. These include iTRACK (Cloud-based fleet tracking solution), intelTRACK (expandable dynamic telematics), and OPTITOOL (Advanced scheduling and optimization). The collection of tools and innovative applications are tuned to reduce performance variability of an organization - without compromising the ability to scale efficiently.

**Best Practices Example:**

During a period of significant growth, an industry leading first purchaser and crude transporter needed a standardized solution to ease growing pains without adding additional resources as it had grown from 20 trucks to more than 375 in the span of 12 months. Some of the acquired companies had previously attempted to implement other automation solutions with no success. This lead to TouchStar being chosen as the
standardized system for automated ticketing through its WellSite mobility solution and TS WellSite Manager to store orders, leases, tanks, and tank strapping data in the back office. Additionally, eLog will be integrated into the existing system to automate the company’s Hours of Service reporting. The scalable TouchStar system allows the company to easily add trucks into the existing workflow in the future.

Features

The essence of the hydrocarbon industry involves highly explosive material being extracted and transported in all kinds of complex and extreme conditions. As a result, operational safety is at the front line of all industry operators. The concern for safety is so strong in this industry that operators will sacrifice operations in order to ensure the safety of employees.

TouchStar has been able to differentiate themselves by providing safety management controls embedded into the FleetAtlas platform. The company’s emphasis on providing products and applications that are designed to meet the most critical issues facing fleet management operators in oil and gas establishes a key difference among other competitors.

Price/Performance Value

As previously mentioned, industry companies prefer to raise some of their OPEX expenses before they raise a CAPEX expense. Thus, the risen interest for on-demand software applications has been considerable in the industry. However, the trend toward acquiring low-cost software applications limits the capabilities of this new technology by installing basic tools that may provide data that is too fragmented to deliver real value.

Needless to say, there are many competitors that provide siloed applications that meet the low-cost needs of some clients. Nonetheless, as the value of real-time data continues to gain industry importance, customers looking for software that not just provides data, but also business intelligence, will look for solutions with added value.

TouchStar’s value proposition addresses both of these issues by providing a low-cost price tag for customers that are only looking for basic applications, as well as offering a comprehensive platform that integrates multiple sources of data into a manageable packet of information. While TouchStar seeks to meet the different price lines of their customers, its well-designed FleetAtlas platform offers a solution that targets the area of predictive analytics, where businesses can make sound-decisions based on real evidence. This solution’s price to performance value offers a highly competitive value proposition.

Best Practice Example:

A leading truck and rail transporter of US crude oil, with a fleet of 70 trucks, was searching for a solution that would systematically track truck deliveries of thousands of
barrels from various fields to its terminals. Based on its established experience in crude transport and well site service automation, TouchStar was chosen to provide an automated pickup and delivery ticketing system, including integrated scheduling and dispatching processes. Since the solution has been implemented, the company has reported a significant reduction in data entry errors and overall operating costs, as well as an increasingly efficient process to schedule and dispatch pickups and deliveries with detailed reporting on pickup location included.

Customer Service Experience

The threat of change across organizations always creates certain types of resistance - especially where newer technologies are being adopted. Different employee generations make adoption of new systems easier to embrace than others which creates, at best, delays on the integration of evolving systems in the work space.

The ability of software companies to provide sufficient training and assistance depends on its capabilities and attention to customer needs. While most companies offer customer service support, not all are able to provide around the clock customer service or dispatch the most knowledgeable personnel for the task.

TouchStar’s built-in capabilities enable it to dispatch well-trained personnel wherever necessary and offers 24/7 customer service. In addition, the company provides enough time to train an organization’s employees to soothe assimilation difficulties. As a result of their 20 years of experience in the industry, the company has built up a superior technical workforce that is available and can deliver an exceptional end-user experience.

Brand Equity

The software providers in the oil and gas fleet management industry vary greatly in terms of the depth and breadth of applications and solutions they deliver. Although all of the providers claim to have the most suitable solutions that meet the challenges of the fleet operators, Frost & Sullivan believes that very few offer an integrated approach of fleet and dispatch management solutions and data processing and analytical capabilities.

TouchStar has developed its value by demonstrating the strength of its solutions one client at a time. Its successful framework have driven many companies to change previously used providers, based on the positive and real impact it has had to reduce company expenses and increase operational efficiencies. The company’s ability to deliver a software solution that directly impacts a fleet operator’s bottom line by meeting its operational benchmarks places them as a clear frontrunner for the industry. The culture of innovation, brought about by TouchStar in a market that is booming due to shale gas, puts a distinct spotlight on the company. A case in point is the geofencing solution. This utilizes location-based services capability and alerts network operations manager on the vehicular movement.
Conclusion

The transportation of natural resources in the United States and across the world creates a challenge for customers to install fleet solutions that are reliable, adaptable, and scalable in all geographic and climatic possibilities. A solution provider’s ability to provide a comprehensive solution that improves process efficiency and employee accountability and safety, which in turn will increase customer profit, is likely to deliver the best value proposition to the market.

TouchStar clearly commits to improving fleet operator efficiency by developing an integrated platform system that provides fleet and dispatch applications, combined with process-data analytics and safety management; this solution offers small- and medium-sized business customers a comprehensive system designed to enhance business operations that will directly yield positive financial results. The company’s FleetAtlas platform provides a complete set of automation solutions, including telematics, dispatch management, fleet scheduling, and business intelligence, which enables seamless communication between field operations and the back office. In addition, TouchStar’s WellSite mobility solution, which was specifically designed to meet the dispatching, delivering, and invoicing challenges of crude and water haulers, has given the company strong market recognition, due to its effectiveness in improving data accuracy, reducing costs, and boosting profitability.

Based on the aforementioned factors as measured through Frost & Sullivan independent analysis, TouchStar is the recipient of the 2014 Product Line Strategy Leadership Award.
Significance of Product Line Strategy

Ultimately, growth in any organization depends upon customers purchasing from your 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 a critical ingredient to any company’s long-term retention efforts. To achieve these dual goals (customer value and product line strength), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.
Key Benchmarking Criteria
For the Product Line Strategy Leadership Award, Frost & Sullivan analysts independently evaluated two key factors — Product Line Strength and Customer Impact — according to the criteria identified below.

Product Line Strength
- Criterion 1: Breadth
- Criterion 2: Scalability
- Criterion 3: Technology Leverage
- Criterion 4: Features
- Criterion 5: Supply Chain Reliability

Customer Impact
- Criterion 1: Price/Performance Value
- Criterion 2: Customer Purchase Experience
- Criterion 3: Customer Ownership Experience
- Criterion 4: Customer Service Experience
- Criterion 5: Brand Equity

Best Practice Award Analysis for TouchStar

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 Line Strength and Customer 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, we have chosen to refer to the other key players in as Company 2 and Company 3.

**DECISION SUPPORT SCORECARD FOR PRODUCT LINE STRATEGY LEADERSHIP AWARD**

<table>
<thead>
<tr>
<th>Product Line Strategy</th>
<th>Product Line Strength</th>
<th>Customer Impact</th>
<th>Average Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>TouchStar</td>
<td>9.5</td>
<td>9.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Competitor 2</td>
<td>9.0</td>
<td>8.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Competitor 3</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
</tr>
</tbody>
</table>

**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, for 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 key components and thereby the availability of products in the product line

**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 like they are buying the most 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

**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 LINE STRATEGY LEADERSHIP AWARD (ILLUSTRATIVE)
The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology
Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

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

<table>
<thead>
<tr>
<th>STEP</th>
<th>OBJECTIVE</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
</tr>
</thead>
</table>
| 1 Monitor, target, and screen | Identify Award recipient candidates from around the globe | • 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 | • 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 | • 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 | • 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 | • 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 | • 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 | • 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 | • 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 | • 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 | • 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.