2017 Global Clinical Diagnostic Lab IT Company of the Year Award
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Background and Company Performance

Industry Challenges

Clinical laboratory testing is a small component of US healthcare expenditure (about 3%) and governs 70% to 80% of diagnostic decisions. Diagnostic lab testing has an important role in delivering low-cost and high-quality healthcare; healthcare delivery is slowly transitioning from a fee-for-service model to a value-based model in order to strengthen precision medicine.

Healthcare expenditure was estimated at $3.2 trillion in 2015—almost a 6% increase from the previous year. Laboratory test expenditure was almost $7.0 billion and amounted to about 3% of all the Medicare Part B payments. Independent laboratories received more than half of these payments, making them one of the most important stakeholders in the diagnostic care continuum.

Clinical laboratories are in a nail-biting waiting game at the moment pending the direction of changes in US health policy. In spite of the lack of a clear direction in healthcare reform, several important trends and challenges have emerged. Given the consolidation observed in clinical laboratories some of the healthcare IT-specific challenges affecting them include connectivity between instruments, care coordination, seamless transfer and information consolidation from one provider to another, access to clinical data, and other hidden costs.

With the changing landscape, laboratories are moving toward a value-based care approach from the traditional volume-based approach. As a result, investment into high-performance capital equipment (hardware costs) has made less money available for other software needs: Labs need to function with existing technologies and work through process optimization wherever possible rather than installing new software systems with additional hidden costs (such as wages of non-clinical IT staff to manage data and workflow processes).
Labs and health systems need to function in an interconnected manner for accessing secured information across multiple settings, such as outpatient, inpatient, ambulatory outreach, and accountable care organizations, to avoid redundancy in testing and medical errors and ensure reimbursement of a particular test. This requires multiple laboratory information management systems (LIMS), electronic health record systems, and order management systems to communicate with each other regardless of the venue. Instruments and analyzers in each provider setting must also communicate with existing systems—a critical challenge in today’s provider environment.

**Visionary Innovation & Performance and Customer Impact**

**Implementation of Best Practices**

Sunquest Information Systems Inc. (Sunquest) was founded in 1979 and was acquired by Roper Technologies (formerly Roper Industries Inc.) in 2012. Headquartered in Tucson, Arizona; the company provides software solutions and services that enable end-to-end diagnostics for hospital labs and independent labs, including order management, sample tracking, and analytics. Sunquest extends its solution to cater to point-of-care and ambulatory settings to cover workflows outside of the doctor’s office. The company is an established market leader as a diagnostic informatics solution provider for both clinical, anatomic pathology, as well as molecular and genetics laboratories, automating processes such as order management, sample management, and analytics.

The company is always thinking ahead in terms of the trends impacting the laboratory landscape, Sunquest is a strong propagator of the “Five Rights of Laboratory Testing” concept, ensuring that the Right test is performed on the Right patient at the Right time for the Right indicators, leading to the Right diagnosis. With this as its guiding principle, the company has made several strategic product development investments to support the growth of predictive and personalized medicine.

**Blue Ocean Strategy**

Adopting a blue ocean strategy helps create uncontested market space. Frost & Sullivan recognizes Sunquest for championing business transformation through strategic acquisitions to gain access to new markets and customers and to boost its organic growth in the clinical diagnostic lab IT market. In 2015 and 2016, Sunquest and its parent company witnessed a major wave of corporate acquisitions to solidify Sunquest’s position as a diagnostic IT leader and enable connectivity and clinical data interoperability. Acquisitions in 2015 included Atlas Medical, the best-of-breed provider of clinical diagnostic process integration to the public and private sectors; and Data Innovations, which focuses on data management for clinical laboratories and blood banks and has world’s largest proprietary interfaces and drivers to connect to more than 1,000 types of clinical lab analyzers, lab instruments, and laboratory information systems. Data Innovations has more than 4,500 customers in 83 countries. Sunquest and Data Innovations can address the critical challenge many laboratories face—the lack of connectivity among different software systems—using Data Innovation’s vendor-agnostic clinical middleware products. In 2016, Sunquest acquired GeneInsight, to bolster its
presence in the precision medicine market and promote an integrated workflow for inherited and somatic testing in the molecular and genomic testing space. With nearly four decades of experience in the diagnostic IT space, Sunquest is focused on investing its efforts to translate genomics into routine diagnostic workflows and make the information accessible to genetic counselors and molecular pathologists in real time. The GeneInsight solution bridges the gap between laboratories and clinicians by offering deep, cross-organizational communication.

Because of the tremendous growth in the molecular biology area and to advance its molecular informatics solution, Sunquest acquired UniConnect to support the informatics component of analysis, interpretation, and reporting for complex genetic tests. GeneInsight and UniConnect strategically target molecular diagnostics labs, where patient data must move easily and intuitively between platforms.

Sunquest recently announced the general availability of Sunquest Mitogen™, which combines the capabilities of both GeneInsight and UNIConnect, and optimizes the combined value with a set of pre-defined workflows (such as Gel Electrophoresis, PCR, FISH, Karyotyping, Cytogenetics, Microarray, Sanger Sequencing and Next Generation Sequencing) out of the box for either the molecular LIMS or genetic analysis components. A single, cloud-based platform, Sunquest Mitogen provides a laboratory informatics solution for genetic testing that manages both wet bench and dry bench, from initial sample receipt, sample processing, data generation, data analysis, and actionable clinical reporting with not only the clinical results, but also the ability to incorporate disease, drug, and clinical trial information.

To bolster the company’s presence in Europe and increase its geographic footprint, Sunquest acquired CliniSys in 2016. CliniSys and Atlas Medical combined account for the majority of installed LIMS solutions in Europe and the United States. Through the CliniSys acquisition, Sunquest gained access to more than 2,000 laboratories in 34 countries.

Overall, the acquisitions are aimed at exploring or expanding growth opportunities in new markets and providing innovative products to integrate lab processes where connectivity has been an issue.

Sunquest is focused on the evolution of precision medicine. It is investing in leading-edge technology to enable efficient and accurate genetic interpretation and analysis to help clinicians provide highly specific diagnosis and targeted treatment options that take
individual variability into account; some of its strategic acquisitions are aligned with the goals of the precision medicine landscape.

**Customer Ownership**

Sunquest has earned Frost & Sullivan’s recognition for its strategic thought leadership, innovation, and performance in the clinical diagnostic IT space. With a strong international presence, the company processes more than 2 billion lab tests and has a base of more than 500,000 users. Its reach extends to top hospitals and health systems including Mayo Clinic, UPMC, and Cleveland Clinic. Its strong partnerships and ties with the in vitro diagnostic vendor community (such as Roche, Abbott, and Ortho Clinical Diagnostics) is proof of its ability to understand the laboratory analyzer point of view. In the United Kingdom, Sunquest now holds more than 70% of NGS Trusts and General Practitioners (GPs) in its wheelhouse. The company is currently exploring contract partnership opportunities in Japan, Malaysia, Singapore, and Australia. Its product development efforts reflect voice of consumer perspectives, especially for patient and consumer engagement solutions. Smaller innovation teams comprising 6 to 10 people steer customer engagement to advance the company’s product development roadmap.

Under the leadership of President Matthew Hawkins, Sunquest is driven by strong core values of agility, innovation, partnership, teamwork, tenacity, and flawless execution to create a brand that will give patients the best chance at overall well-being and good health.

**Addressing Unmet Needs**

As the healthcare industry transforms, so must the company to keep up with changing trends so that its solutions remain innovative and disruptive. During its best practices analysis of the clinical laboratory market; Frost & Sullivan witnessed how Sunquest was transforming its long-term strategy to build solutions that catered to the top trends in the lab diagnostics space, including payer-provider consolidation, the rise of precision medicine, bundled payments, healthcare decentralization, and the transition of care from hospital to ambulatory settings. In addition to its LIMS capabilities, Sunquest has become a leader in diagnostic informatics to address end-to-end diagnostics and drive targeted diagnosis. By thinking of the patient at the center of the ecosystem, Sunquest has taken the diagnostic informatics into the future.

End-to-end diagnostics offer superior reliability and diagnostic integrity by incorporating comprehensive and interoperable workflows for molecular, clinical, and anatomic pathology lab environments and enabled diagnostic connectivity, specimen tracking, multisite capabilities and multidisciplinary reporting, closed-loop test order to result management, blood bank management, advanced clinical decision support, and genetic interpretation and analysis. Sunquest also supports outreach programs to offset cuts to reimbursement and declines in collection rates for certain test orders, and maintains the highest standards of regulatory compliance.
Conclusion

Sunquest is focused on guiding coordinated care through challenges in the clinical lab diagnostic environment with its end-to-end diagnostic capability. Sunquest’s HIT offerings targeted at molecular and anatomic pathology labs address the workflow, connectivity, and interoperability issues that have emerged because of the changing healthcare landscape that requires labs to embrace lean practices.

With its strong overall performance, Sunquest has earned Frost & Sullivan’s 2017 Company of the Year Award.
Significance of Company of the Year
To win the Company of the Year Award (i.e., to be recognized as a leader not only in your industry, but among your non-industry peers as well) requires a company to demonstrate excellence in growth, innovation, and leadership. This kind of excellence typically translates into superior performance in three key areas: demand generation, brand development, and competitive positioning. These areas serve as the foundation of a company’s future success and prepare it to deliver on the two criteria that define the Company of the Year Award (Visionary Innovation & Performance and Customer Impact).

Understanding Company of the Year
As discussed above, driving demand, brand strength, and competitive differentiation all play a critical role in delivering unique value to customers. This three-fold focus, however, must ideally be complemented by an equally rigorous focus on Visionary Innovation & Performance to enhance Customer Impact.
Key Benchmarking Criteria
For the Company of the Year Award, Frost & Sullivan analysts independently evaluated two key factors—Visionary Innovation & Performance and Customer Impact—according to the criteria identified below.

Visionary Innovation & Performance
- Criterion 1: Addressing Unmet Needs
- Criterion 2: Visionary Scenarios through Mega Trends
- Criterion 3: Implementation Best Practices
- Criterion 4: Blue Ocean Strategy
- Criterion 5: Financial Performance

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 Practices Award Analysis for Sunquest
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 Visionary Innovation & Performance and Customer Impact (i.e., these are 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 participants as Competitor 2 and Competitor 3.

<table>
<thead>
<tr>
<th>Measurement of 1–10 (1 = poor; 10 = excellent)</th>
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<tbody>
<tr>
<td>Company of the Year</td>
</tr>
<tr>
<td>Sunquest</td>
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<tr>
<td>Competitor 2</td>
</tr>
<tr>
<td>Competitor 3</td>
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**Visionary Innovation & Performance**

**Criterion 1: Addressing Unmet Needs**
Requirement: Implementing a robust process to continuously unearth customers’ unmet or under-served needs, and creating the products or solutions to address them effectively.

**Criterion 2: Visionary Scenarios through Mega Trends**
Requirement: Incorporating long-range, macro-level scenarios into the innovation strategy, thereby enabling “first-to-market” growth opportunity solutions.

**Criterion 3: Implementation of Best Practices**
Requirement: Best-in-class strategy implementation characterized by processes, tools, or activities that generate a consistent and repeatable level of success.

**Criterion 4: Blue Ocean Strategy**
Requirement: Strategic focus on creating a leadership position in a potentially “uncontested” market space, manifested by stiff barriers to entry for competitors.

**Criterion 5: Financial Performance**
Requirement: Strong overall business performance in terms of revenues, revenue growth, operating margin, and other key financial metrics.

**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 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 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 practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

<table>
<thead>
<tr>
<th>STEP</th>
<th>OBJECTIVE</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
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</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 of 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 able to 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 |
The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

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

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.