



Seeq Recognized for

2021

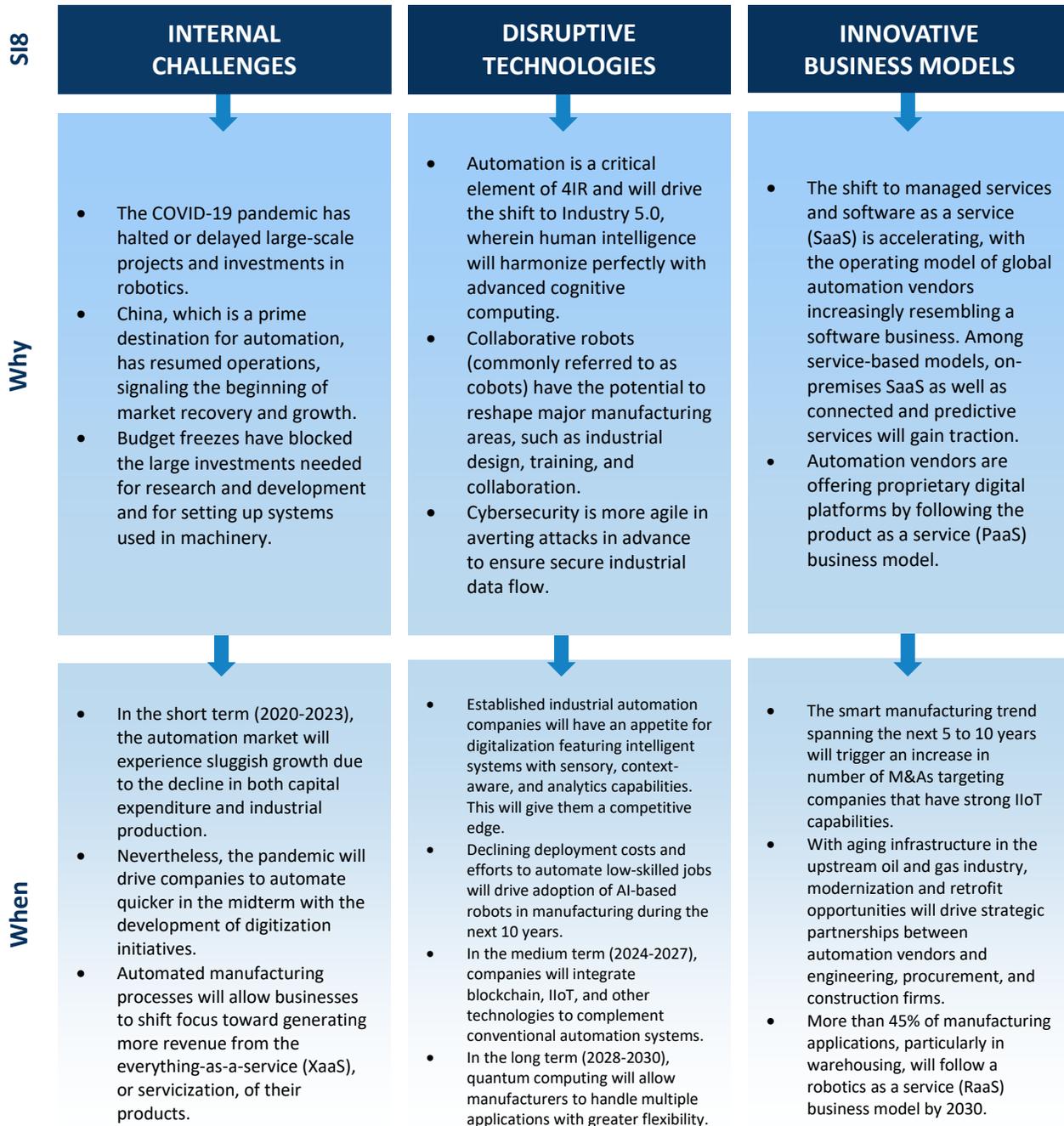
Technology Innovation Leadership

North American Advanced Analytics for
Process Manufacturing Industry

Excellence in Best Practices

Strategic Imperatives

Frost & Sullivan identifies three key strategic imperatives that impact the automation industry: internal challenges, disruptive technologies, and innovative business models. Every company that is competing in the automation space is obligated to address these imperatives proactively; failing to do so will almost certainly lead to stagnation or decline. Successful companies overcome the challenges posed by these imperatives and leverage them to drive innovation and growth. Frost & Sullivan’s recognition of Seeq is a reflection of how well it is performing against the backdrop of these imperatives.



Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. Some of the companies considered in this year's award process included TrendMiner, Sight Machine, SensrTrx, Seeq and GrayMatter. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Seeq excels in many of the criteria in the advanced analytics space.

AWARD CRITERIA	
<i>Technology Leverage</i>	<i>Business Impact</i>
Commitment to Innovation	Financial Performance
Commitment to Creativity	Customer Acquisition
Technology Incubation	Operational Efficiency
Commercialization Success	Growth Potential
Application Diversity	Human Capital

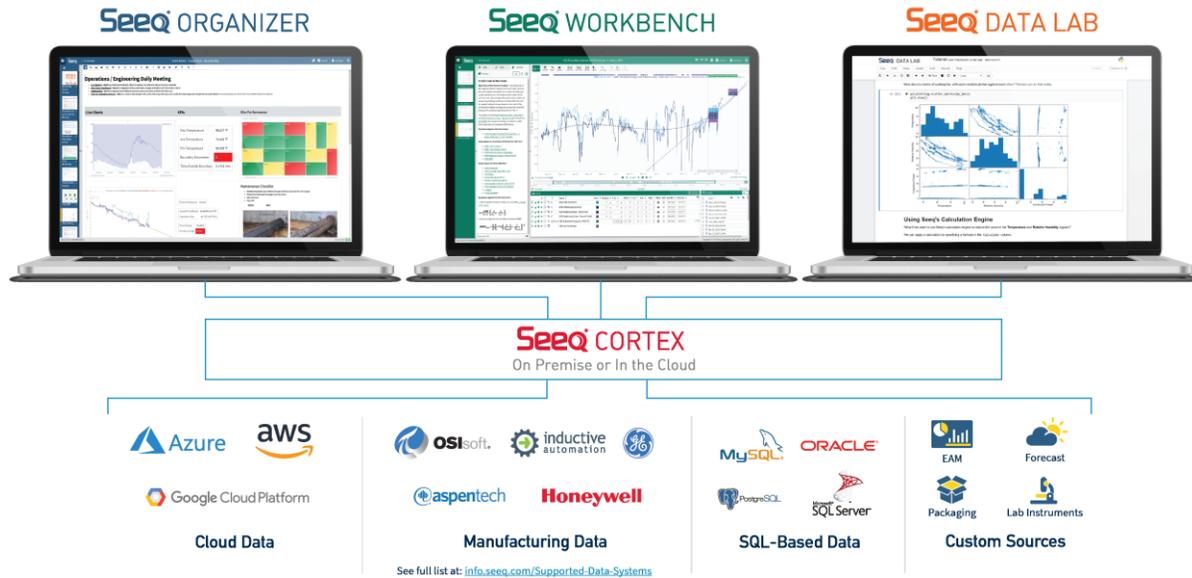
Technology Leverage – Commitment to Innovation & Creativity and Application Diversity

Digital transformation catalyzed by the Industrial Internet of Things (IIoT), Industry 4.0, and smart manufacturing/smart factory initiatives is driving data creation rates higher and at a ceaseless pace. Nevertheless, today's process manufacturing organizations already own massive volumes of historical data. Managing the complexity of both historical and new data, making sense of it, and translating it into critical business decisions proves challenging. Therefore, process manufacturing companies need comprehensive solutions to quickly derive actionable insights from their data.

Seattle, Washington-based Seeq Corporation, a provider of process manufacturing and IIoT analytics software, offers advanced analytics applications designed specifically for time series, sensor, or telemetry data. Seeq applications, such as Seeq Workbench and Seeq Organizer, address a scope of issues, ranging from connecting to data within an organization without moving or copying it, to deriving insights, to taking action on those insights and improving production and business metrics. Seeq Workbench, introduced in 2015, creates a place for engineers to perform their work on diagnostic, descriptive, and predictive analytics using process manufacturing data; whereas Seeq Organizer, introduced in 2017, enables engineers and supervisors to assemble and distribute Seeq analyses as reports, dashboards, and web pages.

Seeq has grown tremendously during the last two years, driven by its commitment to develop innovative technology. In particular, 2020 was a big year. Innovation underlies every step of Seeq's

customers’ data analytics journey: connecting to data, enabling insights, and responding optimally in an extensible IT/OT environment. To this end, Seeq’s key announcements in 2020 include Seeq Data Lab and partnerships in the cloud (AWS and Azure), and support in IT governance for enterprise deployments.



Seeq Data Lab: As Seeq grew to deliver more applications that extended across manufacturing organizations, it started bumping into IT-related conversations in the areas of cloud, data lake, and machine learning (ML). At one end of the organization are subject matter experts (SMEs), and at the other end are data scientists in IT departments. In addition, analytics engineers and Gen-X or Y era process engineers are now comfortable executing some light coding and scripting. To serve this scope of users, Seeq Data Lab was designed to bridge the gap between process data and expertise and IT data

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**- Sankara Narayanan,
Senior Industry Analyst**

scientists and algorithms. Specifically, data scientists and process engineers can use/access Python libraries with Seeq data to expand their analytics.

Frost & Sullivan finds that Seeq is enabling today’s analytics-driven organizations to tap the expertise of their employees by democratizing ML for all types of users: a Workbench user who wants to use point-and-click tools exclusively or a data scientist who wants to

use Jupyter Notebook, which is an open source programming environment for Python. Therefore, whatever users want to access, in terms of their skillset and interest, Seeq has created a space for; and from an extensibility angle, no hard edge or limit exists. Users can operate from no-code to low code solutions all the way to pure scripting.

Engineers and data scientists with different capabilities and levels of comfort can now collaborate and interact with using Seeq Data Lab. Frost & Sullivan applauds Seeq as it enables users across a huge spectrum to work together and share their insights, building off of what others are doing to quickly improve outcomes. Uniquely, Seeq Data Lab is not only interesting to the data scientists within a process manufacturing organization but also interesting among analytics and process engineers. While users may be different, they share a common experience because of the same security, same administration, and same data access; therefore, it is easy to collaborate.

Noteworthy Seeq Data Lab scenarios are identifying failure modes with causal maps, creating customized data exports, and implementing root-cause analysis with clustering. Moreover, if customers have a corporate standard for an ML toolkit, Seeq works within these parameters as well. To this end, in addition to Seeq Data Lab, the company supports AWS Sagemaker, Azure Machine Learning, and ANACONDA.

Seeq Flexibility: Engineers have connectivity to data and a number of tools that Seeq has created for them. For instance, in Seeq Workbench they can use Formula, which is a rich scripting environment that allows them to see the results from the display plane. Frost & Sullivan finds that Seeq resists drawing stark boundaries around what its tools are capable of achieving. Instead, Seeq strives to maintain a gradual and continual expansion of its technological ability. The company now includes features so that third-party independent software vendors (ISVs), Seeq partners, and Seeq customers can customize or add value to the Seeq user experience. Specifically, this means that from the Workbench tools panel,

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users can access additional external point and click tools that Seeq does not ship; users will be able to build their own custom tool and have a user-defined library of functions. Seeq is already seeing that its customers are adding specific modules and capabilities for their corporate users. In addition, Seeq is using this extensibility feature internally as a way to test new ideas and other features to rapidly build pieces, test them, and then bake them fully into the product.

Seeq’s Position with AWS and Azure: The COVID-19 pandemic has forced companies to rapidly move to the cloud for faster deployments than ever before. While

Seeq started with 100% of deployments on premise, now about a half (50%) of its customers run Seeq in the cloud whereas the rest are on premise. Seeq expects more customers to run its applications in the cloud in 2021 and beyond.

Microsoft and AWS are both investing in manufacturing, driving software transactions to their cloud marketplaces and winning manufacturing customers and manufacturing software business. A key part of Seeq’s success is its high-level partnerships with both AWS and Azure clouds. For instance, Seeq is available in the AWS Marketplace and is an Amazon Partner Network (APN) Industrial Software Competency and Advanced Technology Partner. Available in the Azure Marketplace since 2018, Seeq was recently recognized as a 2020 Microsoft Energy Partner of the Year Finalist.

Seeq has deep technical integration/engagements, co-marketing/shared marketing programs, and executive relationships with these two companies. In addition, both Microsoft and AWS are investing in Seeq to build features specific to their offerings, and many joint efforts are underway. Seeq has expanded its cloud support with new connectors to Snowflake, AWS Timestream, and MSFT ADX (Azure Data Explorer).

Frost & Sullivan is impressed by the fact that if AWS and Microsoft are somewhere in a process manufacturing plant, then Seeq is probably not far from them.

IT Governance Landing: The number of users for Seeq's applications has continually grown. And as Seeq expands into big enterprise deployments, it must support administration, security, and governance. In 2020, therefore, to support the growing number of users and deployments, Seeq focused on enabling IT discussions around data security (support for IT data governance), data sources, user administration, and IT support. In addition, Seeq now supports GMP, 21 CFR Part 11 for regulated industries, and SOC 2 Type 1 audit security reviews.

Overall, Frost & Sullivan finds that Seeq Workbench, Seeq Organizer, Seeq Data Lab, and Seeq's extensibility features form the comprehensive and differentiated offering process manufacturing customers desire. Seeq outperforms its top competitors who offer stand-alone, point solutions and applications that add complexity and cost. In addition, competing solutions limit customers in terms of what they can or cannot do whereas Seeq allows them the flexibility to expand their technological ability without limit.

Customer Acquisition, Financial Performance, & Growth Potential

Although the COVID-19 pandemic has impacted nearly every market, Seeq's business has accelerated because all of its customers are in critical process industries such as oil and gas, chemicals, power generation, food & beverage, and pharmaceuticals. Consequently, Seeq doubled its average annual revenue (ARR) in 2019 and 2020; it expects to double its ARR in 2021 as well.

The company added 100 customers in 2020 and now has more than 200 in total across process manufacturing verticals around the world. In addition to acquiring new customers, Seeq's growth is driven by its current customers collecting new users for its applications. For instance, one of Seeq's largest customers has more than 10,000 users, and another customer uses Seeq at more than 60 sites. Seeq also signed its first-ever deals in Korea, Nigeria, and India in 2020.

Seeq started 2020 by raising \$30 million in a series B expansion round and more recently has announced in 2021 a series C expansion of \$50 million, led by Insight Partners of New York City, that brings its total investment to \$115 million. Leading investors include Altira Group, Cisco Investments, Chevron Technology Ventures, Saudi Aramco Energy Ventures, Siemens (Next47), and Second Avenue Partners. Frost & Sullivan expects the funding to enhance Seeq's product development, customer engagement, and international presence and expansion.

One critical element of surviving the COVID-19 pandemic and getting through 2020 is Seeq's worldwide partner channel that attracts new customers. Seeq's partners in 25 countries fuel its growth, particularly internationally. These partners have helped both Seeq and its customers succeed. In fact, AWS and

Microsoft are attracted to Seeq's global footprint whereby its partner channels can execute from anywhere in the world.

Seeq's COVID-19 Response: The COVID-19 pandemic caused a spike in users working remotely, a population for which Seeq enabled use of its data analytics applications on any browser from any desktop or laptop. Seeq has helped process engineers make the transition seamless and keep close oversight of their processes, even when working from home.

Moreover, Seeq switched its customers over to full virtual training. The company had in-person training sessions scheduled, but instead of canceling them, it immediately switched and offered the virtual version, which enabled it to reach more people. In 2020, Seeq held over 340 virtual training sessions.

In addition, Seeq switched to virtual user groups where customers from different verticals discuss specific use cases within their company, enabling rich interactions with and between customers. Seeq's monthly virtual user group meetings average 400 registrants each. The user groups rotate through the different verticals. For instance, Seeq held a pharma virtual user group in May and a chemicals group in September 2020.

Conclusion

Process manufacturing organizations need a comprehensive solution to derive insights from their massive volumes of data, quickly take action on insights, and improve their production and business metrics. Seeq's applications address this need and outperform competitors' limited, stand-alone or point solutions by enabling analytics-driven process manufacturing companies to tap their employees' expertise by democratizing machine learning. Seeq's continual growth is fueled by its strong partnerships with Microsoft and AWS and its commitment to cloud-based computing. In 2020, Seeq increased its customers by 100 and doubled its ARR; it expects to double the ARR again in 2021. To serve an increasing number of users and customers, Seeq is fully ready to support all aspects of enterprise deployments. For its strong overall performance, Seeq earns Frost & Sullivan's 2021 Technology Innovation Leadership Award.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation Award recognizes the company that has introduced the best underlying technology for achieving remarkable product and customer success while driving future business value.

Best Practices Award Analysis

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Business Impact

Financial Performance: Strong overall financial performance is achieved in terms of revenues, revenue growth, operating margin, and other key financial metrics

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

About Frost & Sullivan

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The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create on-going growth opportunities and strategies for our clients is fuelled by the Innovation Generator™. [Learn more.](#)

Key Impacts:

- **Growth Pipeline:** Continuous flow of Growth opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our six analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

