Inovalon Recognized as the

2021

Company of the Year

North American Healthcare and Life
Sciences Analytics Cloud Solutions Industry
Excellence in Best Practices

Strategic Imperatives

Frost & Sullivan identifies three key strategic imperatives that impact the life sciences industry: geopolitical chaos, disruptive technologies, and internal challenges. Every company that is competing in the life sciences 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 Inovalon is a reflection of how well the company is performing against the backdrop of these imperatives.
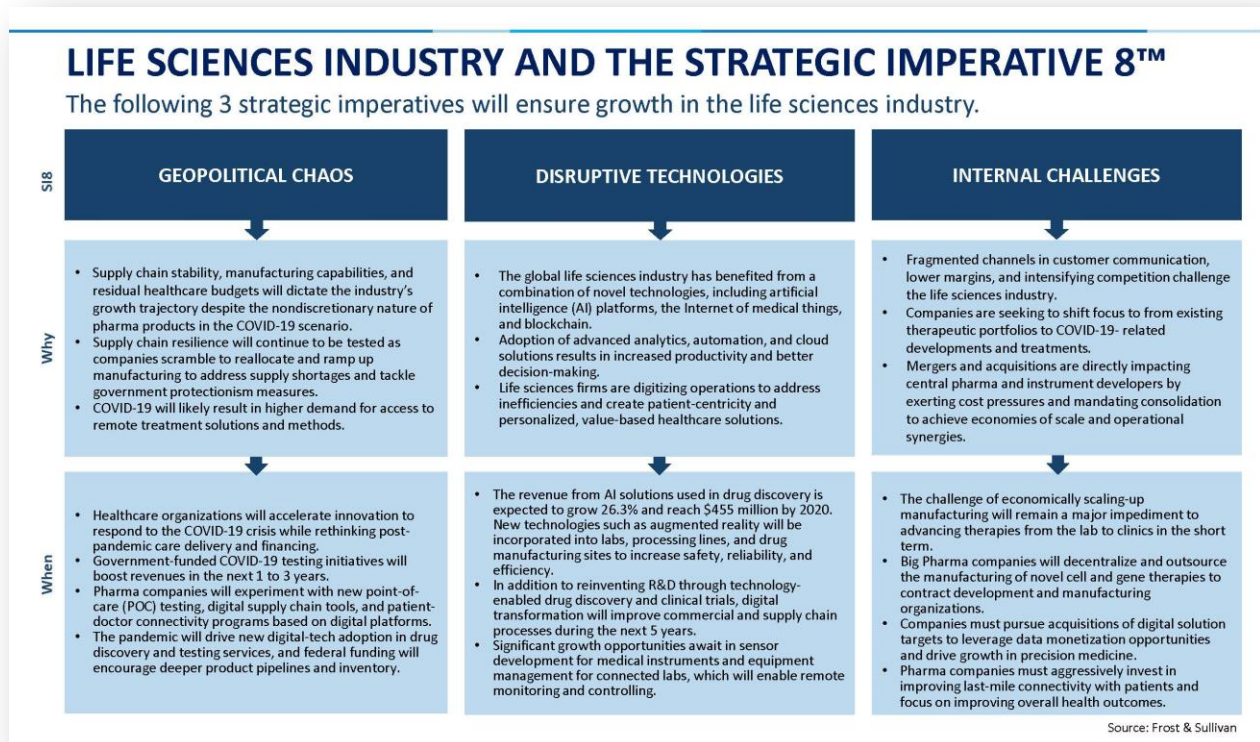
Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each Award category before determining the final Award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for nominated companies. Inovalon excels in many of the criteria in the healthcare and life sciences analytics cloud solutions space.

AWARD CRITERIA

Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Founded in 1998 and headquartered in Maryland, United States (US), Inovalon offers a best-of-breed cloud-based solution, the Inovalon ONE® Platform. It allows a broad customer group comprising health plans, providers, life science organizations, and pharmacies to save costs, increase revenue, and improve care outcomes. Due to its comprehensive service offerings that provide data-driven insights to advance the healthcare industry, Frost & Sullivan previously highlighted Inovalon in 2019 with the best practices recognition. The following year, the company continued its rapid expansion in data assets, connectivity, and client base with new solutions.

Inovalon continues to support thousands of clients across the US, serving a broad client base that includes all 25 of the top 25 US payers and 22 of the top 25 global pharmaceutical companies, one million provider systems, and several leading pharmacy organizations.

Augmenting Data-driven Healthcare through Cloud-based Technologies to Improve Care, Efficiencies, and Lower Costs

U.S.-based providers suffer nearly $260 billion to $270 billion in financial loss annually due to improper financial risk management and inadequate infrastructure to advance data-driven business decisions.[1] As such, the need to aggregate and analyze large amounts of diverse data (healthcare Big Data), garner significant actionable insights from the results to propel positive outcomes, and mitigate healthcare economics is quite urgent. Large integrated hospitals incur operating expenses of between $200 million and $700 million annually to embrace value-based payment programs.[2] Such programs require an interoperable information technology (IT) ecosystem consisting of integrated electronic health records (EHR), payer-agnostic revenue cycle management, and cross-functional supply chain management solutions. As a strategic partner, Inovalon augments data-driven healthcare by helping clients devise, deploy, and optimize data analytics capabilities across all business verticals.

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[1] *Frost Radar in the US Healthcare Data Analytics Market*, (Frost & Sullivan, October 2019)
[2] *ibid*

The platform empowers customers to harness comprehensive industry connectivity, massive primary-source real-world datasets, healthcare data analytics, and robust cloud-based technologies to meet their end-goals successfully.

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> ***- Supriya Lala, Best Practice Research Analyst***

For example, the platform enables health plan providers to enhance their process transparency, clinical quality and revenue-metrics, risk-score accuracy, and patient engagement. Simultaneously, providers harness real-time data analytics to streamline procedures and medical complexity for decision-support at the point-of-care. In addition, the platform empowers life-science organizations to execute health economics and outcomes research analytics to substantiate value propositions, find optimal treatment protocols, draft ideal commercialization strategies, and enable outcomes-based contracting. Pharmacy organizations, another significant Inovalon customer base, benefit from improved efficiencies and referrals, allowing enhanced patient care delivery, quickened treatment times, and reduced operational costs.

With an extensive reach across the healthcare spectrum and driven by the Medical Outcomes Research for Effectiveness and Economics Registry (MORE[2] Registry®), the company's flagship Inovalon ONE® Platform integrates medical data of more than a million physicians, 574,000 unique clinical enterprises, and over 332 million patients, covering 61 billion medical events. The robust platform offers more than 100 custom healthcare analytics modules to payers, providers, and biopharmaceutical firms to drive large-scale and enterprise-wide business intelligence assessment, visualization, and benchmarking.

Extensively interoperable, Inovalon can flexibly integrate its underlying data sets with clients' in-house or third-party solutions to accelerate data-driven decisions across the care continuum in near real-time.

For example, the company recently introduced its Inovalon DataStream API Marketplace™. This module within the Inovalon ONE® Platform allows cloud-based conventional electronic health records, hospital information systems, decision-support platforms, and mobile app software systems to harness comprehensive patient-specific clinical data (e.g., diagnosis, laboratory results, medications, allergies, and surgical procedures) in many cases leveraging Fast Healthcare Interoperability Resources (FHIR)-based exchanges. These capabilities empower clinicians to access a patient's entire medication status and clinical history within seconds. Providers derive analytical insights in real-time for informed decision making to support optimized treatment protocols. The solution notifies pharmacists of newly added medicines and drug allergies (otherwise not updated in their systems). The DataStream API Marketplace™ provides capabilities that enhance care delivery, quickens treatment, limits medical errors to improve outcomes, enables risk management, promotes medication adherence, and reduces hospital readmissions.

The Role in the Digital Transformation of Life Sciences: Propelling Successful Drug Launches and Value-based Care

Inovalon supports rapid coronavirus (COVID-19) vaccine development and commercialization through novel clinical trial recruitment strategies, enabling pharmaceutical companies to understand where patients eligible for clinical trials are located and which providers they see, thereby enabling provider-level intervention to support quick recruitment; this is especially relevant in the current pandemic. The company advances successful drug launches via a new digital, customer-centric environment. It enables customers to shift to a virtual setting using novel approaches and solutions to overcome site of care restrictions with remote monitoring and connecting launch teams to their new customers. Furthermore, Frost & Sullivan appreciates how Inovalon nicely supports its life science clients by expanding their products' performance from an outcomes-based perspective in the real world.

Successful commercialization of drugs and other therapeutics requires demonstration of unmet needs, value delivered to patients, and a clear path to payment without undue burden on patients from a premium or cost-sharing perspective. For example, although novel curative treatments such as gene therapies have immense clinical value, these interventions are expensive for health plans. Inovalon supports these commercialization imperatives and challenges by harnessing a diverse array of data for relevant patient types and provides insights to develop value-based care simulation models and financing arrangements to demonstrate the economic feasibility and outcomes benefit of making such treatments readily available to patients.

Inovalon's Healthcare Data Lake offering provides for a potent mix of both analytics and data interconnectivity that provides life sciences clients visibility into their product's real-world market performance leveraging a number of internal and external data sources including patient-centric indicators that may reflect barriers to care and other key social determinants of health. Such analytics enable life science organizations to design strategies targeting the right provider and patient groups to derive clinical value from their products and rapidly and nimbly deploy strategies as appropriate.

AI-based Offering Churning Measurable Growth for Customers

An ever-increasing portion of Inovalon's annual innovation investments is dedicated to develop, deploy, and optimize artificial intelligence (AI)-enabled healthcare data analytics solutions. Natural language processing as a service (NLPaaS®) and the MORE[2] Registry® are at the forefront of applied AI innovation to solve real-world administrative and clinical challenges for the company's customers. The company's AI solutions digitize clinical review, automate quality outcomes reporting, personalize clinical gap analysis, and produce patient-specific risk profiles that can be leveraged to mitigate medical emergencies. In addition, its population health analytics for comorbidity forecasts patient volume in a provider setting in near-real-time.

Inovalon has been reporting strong growth for offering best-in-class analytics solutions that deliver real-world results for its customers. The company's NLPaaS® technology can analyze 35,000 patient records a day with the ability to rapidly scale up to support operational surge, reducing the aggregate spend on clinical review by 25% for providers and payers.

Inovalon's AI platform is trained from billions of clinical and administrative events as well as consumer real-world data partnered with social determinants of health factors. Inovalon's AI technology predicts medical encounters based on a rules engine that incorporates evidence from 70,000 ICD codes and patient-level data from hundreds of thousands of claims. The technology flags clinical risks automatically four times faster than through manual methods. Frost & Sullivan applauds Inovalon's leadership in the North American AI-enabled analytics market due to its agile, tailored, and plug-in based tools and its focus on expanding artificial intelligence applications within the platform. The company is consistently one of the top three pure-play healthcare data analytics companies using AI comprehensively across its product lines in market-ready capacity*.*

Responding to COVID-19 with Population Health Insights Dashboard and Telehealth for Preventive Care

Inovalon launched its Population Health Insights: COVID-19 Compass dashboard to ensure patient and public safety, responding to the healthcare industry's elevated challenge of handling massive Big Data created by the COVID-19 pandemic.

Whether at the state and county levels or worldwide, the solution provides data-driven insights enabling healthcare stakeholders, employers, municipalities, and the common public to surveil COVID-19 prevalence and evaluate high-risk populations to plan response efforts and preventive care strategies.

The dashboard displays a near real-time prevalence of COVID-19 cases coupled with a risk exposure score. The information leverages the analysis of every geographical region's de-identified patient groups', with earlier recognized disease conditions, demographics traits and social determinants of health (SDOH).

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The dashboard adheres to guidelines on COVID-19-related medical health, demographics, and SDOH prescribed by the World Health Organization and the Centers for Disease Control and Prevention. The platform's data visualization and reporting modules share comprehensive micro- and macro-level insights to a broad set of stakeholders. By accessing clinical and non-clinical data analytics, stakeholders apply their risk models (such as the Johns Hopkins ACG model) to effectively stratify risks and handle the drivers that adequately affect population health. The insights help deploy targeted strategies and resources to members who need them the most, improve care outcomes, and lower healthcare costs.

Beyond the needs for dynamic dashboards brought about due to COVID-19, telehealth also became a critical technology during the pandemic. The demands of social distancing created an unanticipated vital application for telehealth to enable providers to evaluate, manage, and track COVID-19 patients without requiring an in-person exam. Frost & Sullivan's initial re-forecast of the telehealth market indicates a massive spike in usage in 2020. The U.S. telehealth market projects to display a 2019 to 2025 compound annual growth rate (CAGR) of 38.2%.[3] The pre-COVID-19 CAGR was 28.2%; riding the growth, machine-

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[3] *Telehealth—A Technology-Based Weapon in the War Against the Coronavirus, 2020*, (Frost & Sullivan, April 2019*)*

generated and managed clinical trials will emerge as the AI-driven solution to develop a faster - yet safe - clinical trial process.[4]

To meet this critical market demand, Inovalon recently introduced telehealth capabilities as part of its Inovalon ONE® Platform to support the needs of its client base. Their solution enables remote patient encounters, improves patient access to clinicians, lowers costs to the healthcare ecosystem, and limits the COVID-19 virus' risk of exposure and spread.

By facilitating virtual patient encounters, the platform reduces the healthcare facilities' and emergency departments' burden to handle the surge in COVID-19 urgent care in-person cases. Unlike similar commercial offerings that provide limited information on patients' inherent determinants leading to their condition and needs, Inovalon's telehealth offering is informed by patient-specific analytical insights. These insights improve call time efficiency and each engagement's value impact - thereby significantly heightening the patient experience.

 Recently expanding its solution even further, the company is providing additional capabilities for patients (e.g., seniors) that may not have smart technology access in their hands to receive appropriate care. To that end, Inovalon plans to provide a device with an on-demand capability that overcomes the barriers for patients that may not have the right technology to facilitate a virtual encounter.

Finally, the company gains near real-time access to specific data sets on provider service utilization and physician-administered drugs. The data feeds provide visibility into utilization changes throughout the pandemic compared to prior periods and applies predictive analytics to measure the pandemic's impact of non-performed preventive services (for acute health conditions) and long-term health outcomes. For instance, Inovalon studied the pandemic's effect on oncology screening types and other cancer care.

Apart from evaluating weekly trends, such insights support stakeholders (providers, life science companies, and health plans), by predicting the future impact on adversely affected outcomes and interventions various stakeholders can provide to prevent such negative consequences.

ScriptMed® Specialty Pharmacy Solution Catering to Improved Pharmacological Care for Complex and Rare Diseases

The ScriptMed® Cloud solution, provides for an innovative specialty pharmacy logistics and administration capability. The platform caters to rare, complex, and chronic diseases that need enhanced pharmacological care due to the massive costs, high clinical impact on patients, and logistical complexity involved in adequately administering those drugs.

The healthcare ecosystem (payers, pharmaceutical companies, and patients) depends on the specialty pharmacies' capabilities to deliver quality care while also meeting aggressive economic goals. To that end, ScriptMed®'s capabilities are configured to positively impact pharmacy customers and patients through improved operational flexibility, scalability, and increased cost efficiencies highlighted by improved clinical and quality outcomes. The platform enables cost-efficient and quicker time-to-fill, reduced error rates, and faster time-to-therapy performance.

Fueled by DataStream, ScriptMed® allows pharmacists to search for patient data and insights (e.g., medications diagnosis codes), potentially not available in their database, while communicating with

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[4] *ibid*

patients. Similarly, it provides insights to the nurse on the other line while administering and conducting a phone call with a patient new to the given drug treatment or suggesting a medication refill by providing real-time critical patient history.

Frost & Sullivan notes that such unique capabilities are truly vital to improving patient care while leading to developing strategic synergies with global businesses. For instance, Walmart is leveraging the ScriptMed® platform for its specialty pharmacy business, and Cardinal Health, Inc., an integrated healthcare services and products vendor, uses ScriptMed® to support its durable medical equipment and medical supplies business for homecare.

Riding a Double-digit Revenue Growth Curve Propelled by Continued Focus On Novel Data-driven Solutions

Inovalon reported preliminary 2020 revenue of $667 million to $668 million, with preliminary fourth quarter 2020 revenue growing sequentially at 17%. For 2021, Inovalon provided initial revenue guidance of $741 million to $768 million, an expected year-over-year increase of 11% to 15%, driven by strong demand for its cloud-based platform capabilities.

In 2019, Inovalon transitioned to producing fast healthcare interoperability resources-enabled (FHIR) application programming interface (API) toolsets enabling data and data derivatives on-demand for cloud-based applications and analytics. For example, the company introduced the Inovalon Consumer Health Gateway™, an HL7 FHIR® v4.0.1 solution allowing health plan members a secured healthcare data access (Patient Access APIs) to comply with the 21st Century Cures Act guidelines.

By enabling the availability of Patient Access APIs, the company supports adopting patient-focused personal healthcare apps (such as personalized diabetes management apps, mobile health coaches, and clinical trial recruitment tools) leveraging consumer-authorized patient-level data. These types of apps and other provider and payer initiatives leverage a new solution introduced in 2020, the Healthcare Data Lake solution, which empowers companies to derive more value from their datasets with a market-leading single-source-of-truth aggregation of clients' disparate datasets with the goal to create a timely patient longitudinal patient record.

In a similar vein, the newly introduced EASE® All-Payer solution for providers couples a cloud-based workflow engine with market-leading connectivity and analytics to manage the entire revenue cycle process efficiently. Another notable initiative is the new platform configuration supporting multiple national vaccine adherence programs to propel public health programs. These initiatives include global pharmaceutical organizations, patient engagement service companies, and health plans linked through the Inovalon ONE® Platform.

Forward-looking, the company plans to use AI machine and deep learning models to further promulgate high-precision patient predictions, leveraging its unmatched data sets and deep subject matter expertise across care providers, pharmacy, and life sciences and plans. Furthermore, Inovalon ensures that it is backing up large-scale, real-world, comprehensive data assets and interconnectivity alongside subject matter expertise to support current clients strategically, build repeat business, and acquire new customers to bolster its leadership position in the market.

Conclusion

Inovalon advances data-driven healthcare by continuously building on its cloud-based Inovalon ONE® Platform capabilities with several new modules. With extensive connectivity, data asset breadth, and data flow, its newly introduced cloud-based offerings support the entire healthcare ecosystem. Notable offerings include DataStream™, Data Lake, ScriptMed® Cloud, and artificial intelligence (AI)-driven solutions such as natural language processing (NLPaaS®).

ScriptMed® supports pharmacy customers by improving operational flexibility, scalability, cost efficiencies, meaningfully impacting rare and complex disease patients to heighten clinical outcomes. Inovalon also accelerates pharmaceutical product launches successfully and in a manner that reflects a rapidly evolving healthcare environment. It supports life science clients by promoting virtual clinical trials, demonstrating real-world value of therapeutics, and targeting engagements with health plans and providers to eliminate unneeded barriers to patient access to life changing therapies.

In response to the global pandemic, the company incorporated strategic telehealth platform capabilities to limit patients' COVID-19 exposure risk. Furthermore, its Population Health Insights: COVID-19 Compass dashboard tracks disease prevalence, assesses at-risk populations, and supports designing preventive care strategies.

Utilizing its platform, unmatched proprietary datasets and analytics, and backed by market-leading subject matter expertise, Inovalon improves care, propels efficiencies, and lowers healthcare costs spanning the ecosystem. With its strong overall performance, Inovalon earns the 2021 Frost & Sullivan Company of the Year Award.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first to market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

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

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

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)**