Lumeon Recognized for

2021

Customer Value Leadership

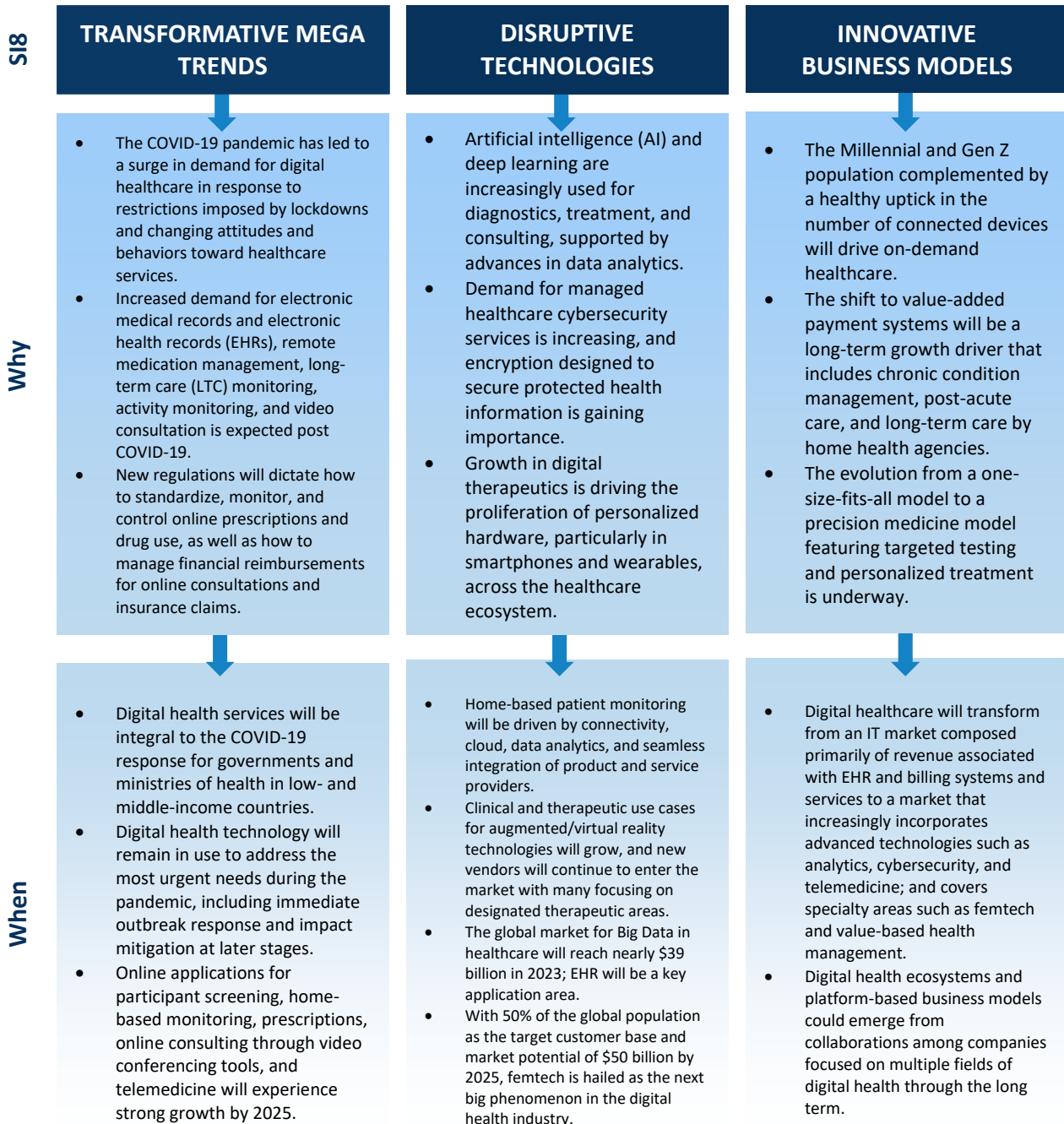North American Care Journey
Orchestration Industry
Excellence in Best Practices

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

Strategic Imperatives

Frost & Sullivan identifies three key strategic imperatives that impact the digital health industry: transformative Mega Trends, disruptive technologies, and innovative business models. Every company competing in the digital health 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 Lumeon is a reflection of how well it is performing against the backdrop of these imperatives.

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TRANSFORMATIVE MEGA TRENDS	DISRUPTIVE TECHNOLOGIES	INNOVATIVE BUSINESS MODELS

Why

TRANSFORMATIVE MEGA TRENDS
- The COVID-19 pandemic has led to a surge in demand for digital healthcare in response to restrictions imposed by lockdowns and changing attitudes and behaviors toward healthcare services.
- Increased demand for electronic medical records and electronic health records (EHRs), remote medication management, long-term care (LTC) monitoring, activity monitoring, and video consultation is expected post COVID-19.
- New regulations will dictate how to standardize, monitor, and control online prescriptions and drug use, as well as how to manage financial reimbursements for online consultations and insurance claims.

DISRUPTIVE TECHNOLOGIES
- Artificial intelligence (AI) and deep learning are increasingly used for diagnostics, treatment, and consulting, supported by advances in data analytics.
- Demand for managed healthcare cybersecurity services is increasing, and encryption designed to secure protected health information is gaining importance.
- Growth in digital therapeutics is driving the proliferation of personalized hardware, particularly in smartphones and wearables, across the healthcare ecosystem.

INNOVATIVE BUSINESS MODELS
- The Millennial and Gen Z population complemented by a healthy uptick in the number of connected devices will drive on-demand healthcare.
- The shift to value-added payment systems will be a long-term growth driver that includes chronic condition management, post-acute care, and long-term care by home health agencies.
- The evolution from a one-size-fits-all model to a precision medicine model featuring targeted testing and personalized treatment is underway.

When

TRANSFORMATIVE MEGA TRENDS
- Digital health services will be integral to the COVID-19 response for governments and ministries of health in low- and middle-income countries.
- Digital health technology will remain in use to address the most urgent needs during the pandemic, including immediate outbreak response and impact mitigation at later stages.
- Online applications for participant screening, home-based monitoring, prescriptions, online consulting through video conferencing tools, and telemedicine will experience strong growth by 2025.

DISRUPTIVE TECHNOLOGIES
- Home-based patient monitoring will be driven by connectivity, cloud, data analytics, and seamless integration of product and service providers.
- Clinical and therapeutic use cases for augmented/virtual reality technologies will grow, and new vendors will continue to enter the market with many focusing on designated therapeutic areas.
- The global market for Big Data in healthcare will reach nearly $39 billion in 2023; EHR will be a key application area.
- With 50% of the global population as the target customer base and market potential of $50 billion by 2025, femtech is hailed as the next big phenomenon in the digital health industry.

INNOVATIVE BUSINESS MODELS
- Digital healthcare will transform from an IT market composed primarily of revenue associated with EHR and billing systems and services to a market that increasingly incorporates advanced technologies such as analytics, cybersecurity, and telemedicine; and covers specialty areas such as femtech and value-based health management.
- Digital health ecosystems and platform-based business models could emerge from collaborations among companies focused on multiple fields of digital health through the long term.

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 each nominated company. Lumeon excels in many of the criteria in the care journey orchestration space.

AWARD CRITERIA

Business Impact	Customer Impact
Financial Performance	Price/Performance Value
Customer Acquisition	Customer Purchase Experience
Operational Efficiency	Customer Ownership Experience
Growth Potential	Customer Service Experience
Human Capital	Brand Equity

Background

A value-based care approach involves 4 goals: improving population health, reducing costs, enhancing patient outcomes, and improving the caregiver experience. Ensuring a delivery model in which providers are paid based on patient health outcomes has accelerated the need for agile operational processes that improve upstream and downstream care coordination and lead to customer satisfaction. Providers increasingly realize the importance of care coordination as it impacts patient outcomes and physician satisfaction and engagement. A 2020 survey by the American Medical Association found that 42% of physicians are experiencing burnout[1]. Factors such as improving workflows and decreasing the administrative burden can help address such burnout. Increasingly**,** hospital leaders identify care process fragmentation as a major roadblock for physicians and health systems seeking to deliver a superior patient experience.

Improving the Workflow Experience of Health Systems and Providers

In the new era of value-based care, providers need the right tools to coordinate care within and beyond the four walls of the hospital, based on factors such as the disease, amount of risk, compliance considerations, and social determinants of health. Care orchestration tools can automate care coordination tasks and enable providers to scale personalized care delivery while improving physician experience by reducing the administrative burden. The rise of consumerization in healthcare has also

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[1] https://www.ama-assn.org/practice-management/physician-health/physician-burnout-which-medical-specialties-feel-most-stress

led to new expectations from patients and payers, necessitating the adoption of care orchestration tools that will improve the patient experience and improve care quality metrics. These metrics impact patient-reported quality data and enable providers to close care gaps. Care journey orchestration can also help eliminate care process fragmentation by reducing the gap between silos, enabling health systems to improve quality, reduce costs, and personalize the care journey.

Founded in 2005 and headquartered in Boston, Massachusetts, Lumeon helps health systems and providers manage the end-to-end care journey through its orchestration platform. The company's cloud platform acts as an agility layer for electronic health record (EHR) applications and automates tasks, interactions, and activities, leading to seamless and consumer-centric care coordination. Unlike competitors' offerings, Lumeon's cloud-based orchestration platform integrates with EHRs, allowing it to be deployed across hospitals, health systems, payers, ambulatory care centers, and population health providers. The platform actively engages patients while coordinating with the care team to address patient needs throughout time. This optimizes the care journey for convenience, compliance, and the achievement of defined patient goals, enabling care teams to deliver the right care, in the right way, at the right time.

Lumeon also addresses long-standing market gaps; specifically, the fragmented patient engagement tools often offered to providers. Previous offerings required a significant amount of effort from patients to engage with providers, hindering healthcare access. These tools do not drive the care process forward because they rely on the patient to take the next step, leading to patient churn or inappropriate care.

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> *- Srinath Venkatasubramanian, Industry Analyst, Transformational Health*

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The company's versatile platform is powered by its orchestration engine, making the solution unique. Specifically, it ensures cohesion by defining the workflow and automating patient engagement, care coordination, and clinical intelligence and then integrating them into the EHRs and workflow applications.

Rather than providing a discrete patient engagement solution that can only address specific use cases, Lumeon's orchestration solution is designed for the entire care journey and transforms insights into actions. It achieves this through its configurable orchestration engine, which automates tasks such as sending email and text messages, requesting information from the patient or data source, processing forms, assigning tasks, and entering orders into the EHR. Frost & Sullivan finds such capabilities are core to any care journey because they provide patient context, optimize care, and prioritize deteriorating conditions.

Agile and Customer-centric Operational Processes

Lumeon launched its care transition management solution in 2019, and with the emergence of COVID-19, it rapidly pivoted to address other needs arising from the pandemic. As a result, Lumeon launched rapid response solutions such as vaccine management tools, remote patient monitoring, and features such as the instantaneous communication of test results and virtual check-in. Lumeon's vaccine management solution enabled automated patient outreach and self-scheduling for vaccination campaigns, along with tools such as patient education, reminders, and side-effect monitoring.
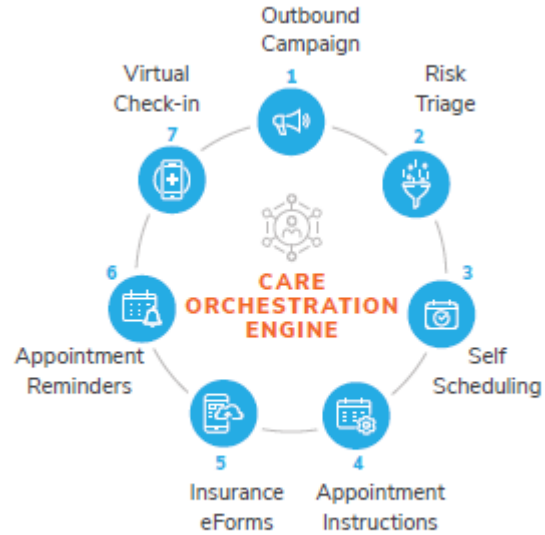
Source: Frost & Sullivan, Lumeon

> *"Lumeon's orchestration engine leverages an agility layer to extend the reach of the EHR, making it dynamic and able to act as a care coordination and delivery tool."*
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The company's remote monitoring solution allowed hospitals to digitally screen and enroll symptomatic patients into an SMS home monitoring program, reducing pressure on emergency departments (EDs) and enabling clinicians to focus on those most in need.

Features such as contactless virtual check-in enable patients to safely wait to be seen and obtain their appointment status through SMS. Lumeon's COVID-19 response solutions were developed and deployed in an agile and accelerated manner. In one instance, the company created and launched a remote home monitoring service for New York City Health + Hospital (NYCH+H), the largest public healthcare system in the US, within a week. The company's versatile orchestration engine has allowed it to quickly develop and deploy solutions to support patient and care engagement, care coordination, intelligent automation, and integration with EHR applications (Cerner, Epic).

Lumeon's orchestration platform also ushers in a new era of efficiency and effectiveness to care operations by acting as a system of action that automatically drives the care plan forward. As well as supporting providers by managing tasks and automating communications, the platform provides decision support to improve the customer experience. Lumeon has also made numerous upgrades to the platform, including creating a new version of the patient portal. Its refreshed interface and capabilities improve user experience. For example, the company's self-scheduling solution, which integrates with Epic and other EHRs, allows patients to schedule appointments conveniently.

Lumeon is doubling focus on its orchestration engine because of its ability to quickly realize benefits for clients, reducing workload and staff burnout. With the ability to integrate personalized care plans into EHRs (including CSV, HL7, or FHIR API integrations), the company can efficiently coordinate care. Frost & Sullivan notes that while the EHR can support documentation and billing, it fails as a system of action for coordinating care delivery. Lumeon's orchestration engine leverages an agility layer to extend the reach

of the EHR, making it dynamic and able to act as a care coordination and delivery tool. Moreover, unlike competing offerings, the engine's programmable capability allows users to configure different care delivery processes to create new solutions. Such a capability is highly rated by providers as it drives the care delivery process per their protocols. As a result of such an industry-leading approach, Lumeon has managed to retain its existing clients during the pandemic while continually gaining a higher net promoter score from clients who appreciate the company's robust support.

Delivering a Differentiated and Uniquely Cost-effective Solution to Enhance Value

Lumeon's solutions enable health systems to automate tasks, improving patient access and clinical efficiency while reducing cost. Lumeon can often deploy solutions within a month, and offer a subscription based pricing model. Customers can therefore start with minimal investment and scale-up based on need. Clients typically realize their return on investment (ROI) within 3 months.

Lumeon's platform uniquely integrates with the EHR to supplement its limited orchestration capabilities, significantly reducing care delivery cost, increasing productivity, and improving patient engagement. The company also helps providers unlock value by creating an appropriate infrastructure to develop new care models that address healthcare's quadruple aim. For instance, the company has supported large health systems in launching new digital solutions centered on virtual care and remote patient monitoring. It has also linked health assessments to virtual wellness coaching services, allowing clients to create new revenue streams without incurring significant overhead.

Lumeon successfully targets key organizational personnel (e.g., hospital systems' decision-makers, including the C-suite) who understand the need to optimize patients' digital experience. The company engages in a 360-degree marketing and promotions strategy, including direct marketing to clients and prospects. Lumeon's emphasis on customer segmentation and persona-based value drivers allows providers to benefit from the transition to seamless care delivery, including reduced care costs and the ability to deliver more appropriate care.

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Lumeon's team solves customers' emerging needs by working closely with clients to identify bottlenecks. Such an approach results in an enhanced patient experience beyond the walls of hospitals or clinics. The company's experienced team can quickly integrate Lumeon's platform with providers' existing systems, resulting in hassle-free deployment. Moreover, Lumeon constantly works with clients to build new use cases and extract maximum gain from the platform. Lumeon transforms patient experiences, both administrative and clinical, into simple, powerful patient journeys.

It works closely with clients to help them enhance the overall digital experience by automating various elements of the care journey while remaining flexible to address providers' evolving needs. By continually soliciting and incorporating feedback from clients and prospects via customer surveys, Lumeon can deliver solutions focused on providers' protocols, care plans, and workflows, allowing users to meet targets and achieve ROI. The company has received several industry accolades for its differentiated value proposition, namely providing an integrated, automated, and hybrid care experience.

A Continuous Improvement and Quality Focus

Lumeon continuously leverages client insights and feedback to build new value propositions and deploy solutions for a library of use cases, subsequently scaling up for more widespread deployment. By having an integrated product development and marketing team that works in partnership with customers to co-create solutions, Lumeon can develop superior solutions. The company's product management efforts include soliciting client feedback, linking that to the product roadmap, and creating new value propositions that support current needs and address customers' evolving requirements. Such an approach enables Lumeon to offer a wide range of capabilities to support the care delivery process, paving the way for customer retention and acquisition.

To meet stringent quality standards, Lumeon undertakes regular quality benchmarking of its technical and operational processes. The company works to continually optimize such processes, subsequently documenting them per ISO 9001 standards. While remaining agile, innovative, and entrepreneurial, Lumeon adheres to stringent operational standards that underlie its products' quality and maturity.

Lumeon is currently expanding its presence in the US and European markets by licensing its software platform. While COVID-19 has disrupted the market, hindering providers' capacity, it acted as a growth accelerant for Lumeon. Existing clients have implemented its pandemic-oriented new solutions such as contactless check-in, remote patient monitoring, and COVID-19 rehabilitation programs. With its ability to quickly pivot based on evolving customer needs, Lumeon builds strong client relationships that will contribute to its sustainable, long-term growth. Lumeon's solutions are deployed with more than 70 US and Europe-based providers, and it is growing its footprint in the United States by continuous brand building and marketing campaigns. Frost & Sullivan notes that US-based clients include several large integrated delivery networks and university hospitals, each increasing the number of use cases deployed on the company's platform. Moreover, in 2020, the company doubled in size. It delivered more solutions to existing clients while acquiring new clients eager to modernize the customer experience, a top priority for 72% of providers.[2]

Conclusion

With an increasing emphasis on value-based care, digital transformation, and patient experience, health systems must avoid the digital fragmentation of their care processes. Lumeon's innovative care orchestration platform and a suite of solutions enable providers to transform the electronic health record with an agile care delivery platform. By automating communication, tasks, decisions, and activity across the patient journey, Lumeon helps health systems reduce variation in care and lower the overall cost of care delivery. Moreover, Lumeon's team with 15 years of healthcare experience ensures that clients receive robust, reliable, and effective solutions that address their ever-evolving needs. With its strong overall performance, Lumeon earns Frost & Sullivan's 2021 Customer Value Leadership Award in the North American region for its care journey orchestration solutions.

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[2] *BDO's 2020 Healthcare Digital Transformation Survey. https://www.bdo.com/insights/industries/healthcare/2020-healthcare-digital-transformation-survey*

What You Need to Know about the Customer Value Leadership Recognition

Frost & Sullivan's Customer Value Leadership Award recognizes the company that offers products or services customers find superior for the overall price, performance, and quality.

Best Practices Award Analysis

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

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

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)**