

FROST & SULLIVAN

L&T TECHNOLOGY SERVICES

2022 PRODUCT LEADER

*GLOBAL ENERGY
OPTIMIZATION AND SUSTAINABILITY
MANAGEMENT INDUSTRY*

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. L&T Technical Services Limited excels in many of the criteria in the energy optimization and sustainability management space.

AWARD CRITERIA	
<i>Product Portfolio Attributes</i>	<i>Business Impact</i>
Match to Needs	Financial Performance
Reliability and Quality	Customer Acquisition
Product/Service Value	Operational Efficiency
Positioning	Growth Potential
Design	Human Capital

Market Snapshot

The increasing need to optimize operational costs, escalating environment, social and governance (ESG) investor pressure, regulatory penalties for non-compliance, and lucrative Green Financing opportunities

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**- Anirudh Bhaskaran,
Industry Principal, Enerav and Environment**

drive the demand for energy optimization and sustainability management solutions. This demand is particularly strong in the industrial sector, where manufacturers continually strive to expand operations and extend market reach. Companies look towards smart and efficient utility management tools to optimize energy consumption, reduce waste, and decrease operational costs, thereby routing any savings to revenue-generating channels. At the same time, sustainability compliance enables companies to differentiate themselves through ‘green’ branding and allows them to reap the associated benefits.

However, most contemporary solution providers follow a reactive approach to energy optimization and sustainability management with retrospective auditing of energy consumption performance and delayed identification of corrective actions. As a result, customers do not benefit from timely gap identification

(inadequate energy metering and infrastructure monitoring), impact analysis (of facility performance on energy costs), and targeted data analytics to inform their organizations' energy and sustainability strategy and regulate operational activities. Moreover, these insufficient monitoring and reporting capabilities hamper the enterprises' progress towards achieving their ESG goals.

Founded in 2012 and headquartered in Vadodara, India, L&T Technology Services Limited (LTTS), a publically listed subsidiary of Larson & Turbo Limited, is a leading provider of engineering, research, and development services. The company offers comprehensive consultancy, design, development, and testing solutions across the product and process development life cycle. Currently, LTTS serves 324 global clients with 20,800+ employees across 25 countries in the medical devices, transportation, telecommunications, industrial products, and process industries.¹

ESM: Differentiated Energy Optimization and Sustainability Management

A pioneer and transformational leader, LTTS' corporate culture revolves around using purpose to drive innovation. Its product roadmap, i.e., planning, development, and implementation strategies, incorporates customer feedback, ensuring its offerings align with customers' dynamic needs. The company leverages its multi-sectorial, cross-functional engineering and manufacturing expertise, continually blending and integrating ideas and technologies to deliver differentiated digital engineering solutions designed to address complex business challenges. LTTS further bolsters this 'Cross-Poll!novation' strategy through its research and development capabilities across 17 global design centers and 72 innovation labs, continually augmenting its portfolio of 868 patents across multiple industries.²

Backed by its extensive industry-leading expertise, the company's product offering takes energy optimization and sustainability management one step further than any competing solution. LTTS' Energy and Sustainability Manager (ESM) is its compliance-driven, holistic energy management solution. Developed by the company's experienced digital manufacturing solutions team, the ESM offering remedies several challenges associated with its contemporaries' passive and manual approach to energy optimization and sustainability management. To this end, the solution enables proactive audit-driven initiative tracking, real-time actionable insight generation, timely closure of non-compliances, and immediate control over the customers' energy management activities. Currently, LTTS deploys its ESM solution to serve customers in the packaged goods, oil and gas, pharmaceuticals, chemical, transportation, and industrial and commercial products verticals. Despite this predominant focus on the industrial sector, customers can implement the solution in the buildings and facility management space, depending on a project's data availability and specific requirements.

Through its ESM product, LTTS offers digital solutions, technology consulting services, and renewable energy digital solutions to customers. The digital solutions offering, the most prominent among the three capabilities, accompanies customers throughout their energy optimization and sustainability management journeys, starting from the thorough assessment of their infrastructure, solution roadmap, and return-on-investment requirements. After understanding the customers' unique needs, the ESM product team assists them in solution design (including architecture, specifications, and advanced

¹ https://www.ltts.com/system/files/2022-06/LTTS_AR_2021_22.pdf, accessed June 2022.

² Ibid.

solutions) and implementation (including solution configuration/ development, validation, and rollout). The solution implementation is followed by device and operational technology connectivity integration and post-deployment support (including application, upgrade, and functional support).

Overall, the ESM solution renders the following capabilities:

- Statutory compliance through audit capture, compliance tracking, and accomplishment board
- Sustainability target management (facilitates alignment with greenhouse gas scope 1, 2, and 3 emissions, science-based technology initiative, water conservation, and other targets)
- Holistic monitoring of energy/resource consumption, cost, and other key performance indicators (KPIs)
- Deep-dive analysis, including balancing, comparison/benchmarking, and reconciliation modules
- Repository library storing statutory documents, reports, and bills/notes
- Real-time acquisition of metering and asset model data

To drive these differentiated capabilities, LTTS' state-of-the-art ESM solution draws and contextualizes data from its customers' supervisory tools (such as supervisory control and data acquisition systems, distributed control systems, and Historian) and manufacturing operation systems. In addition to a rich history of working with supervisory and manufacturing operation service providers (such as AVEVA, Rockwell Automation, and Siemens), the company maintains long-term alliances with PTC Inc. and Microsoft Azure. LTTS ESM is available in both PTC and Azure's market place as "Ready-to-deploy" solution. These collaborative relationships with participants across the customers' technology stack ecosystems establish LTTS as a one-stop, cloud-agnostic solution partner, augmenting its competitive edge in the market.

Furthermore, LTTS' ESM product employs market-leading data and dashboard solutions to track and visualize on-floor situations to a wider audience. To this end, the company specifically designs its cloud-based utility usage monitoring system to visualize the collected data as KPIs on a unified dashboard, enabling customers to access this information anywhere, anytime, and on any device. Additionally, customers can customize the dashboard features to facilitate forecasting and load profiling. As a result, the ESM solution adequately addresses the growing market need for greater flexibility in accessibility, enhanced user experiences, and improved collaboration.

The ESM solution's impressive statutory compliance, best practices implementation, advanced analytics, and information integrity deliver the following benefits;

- 10% to 15% reduction in unit cost (energy cost per unit, energy cost/product output)
- 3% to 4% decrease in energy losses depending upon energy resource type
- Reducing cost leakage from analysis and reconciliation to <1%

LTTS' purpose-built ESM solution sets it apart from its competitors, with superior design, reliability, and quality as its central pillars. Moreover, the company's demonstrated ability to consistently address

evolving customer needs places it at the forefront of the energy optimization and sustainability management space.

Customer-focused Growth Strategy

With its product-led customer-focused strategy, LTTS consistently brings best-in-class products and services to the market. The company leverages its extensive cross-vertical industry exposure, multi-site

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**- Sama Suwal,
Best Practices Research Analyst**

project management experience, and unmatched technical expertise to deliver customized solutions that address a broad spectrum of unique customer needs. The ESM solution’s modularity further bolsters the company’s abilities to personalize its offerings for every sector, location, and customer. Moreover, LTTS’ continual product development efforts ensure that best practices are immediately incorporated and ingrained into the EMS solution, guaranteeing every customer benefits from any new updates. Furthermore, LTTS actively partners with customers

through multiple flexible engagement models to help them meet their business’s specific KPIs.

Case Study Example 1: United States-based Consumer Packaged Goods Company

A global CPG company utilized LTTS’ ESM solution across multiple plants to achieve its energy efficiency and sustainability targets (such as net-zero emissions across its value chain by 2040 and net water positive impact). LTTS enabled metering (at essential data points), water line balancing activities, a reconciliation module to address unaccounted energy, scenario analysis, and configurable KPIs across the customer’s various sites. As a result, the customer successfully reduced its electricity intensity, natural gas intensity, and unaccounted electricity and water costs by 5%, 14%, and to <1%, respectively. Most impressively, the CPG company decreased its water intensity by 12% fast-tracking its 2025 goal.

Case Study Example 2: Leading Paint Manufacturer in the Asia-Pacific Region

A leading regional paint manufacturer leveraged LTTS’ Energy & Sustainability Manager solution to achieve its energy management KPIs and optimize energy reporting across its organization. The company implemented real-time monitoring and automated reporting (at the plant, department, and asset levels), interactive dashboards, and configurable notifications/alerts across the customer’s manufacturing plant. The ESM solution enabled the customer to reduce its energy reporting efforts by a remarkable 70%, in addition to other operational improvements.

LTTS’ customer-centric approach differentiated technology offerings, and innovation-led strategy help it deliver exceptional customer experiences. As a result, the company consistently reports optimal customer satisfaction, with impressive customer satisfaction and Net Promoter Scores of 90+%. Similarly, over 99% of LTTS’ customers rate the company very favorably on its product development initiatives. Moreover,

the company's high percentage of repeat orders (with 90% repeat business) further corroborates customer satisfaction and confidence in its solutions and services.³

Solid Financial Performance Spurs Growth Momentum

LTTS demonstrates high-growth potential. The company is well-positioned in the market, with an industry-leading solution that provides tremendous value in high-demand sectors. LTTS consistently achieves above-market growth, fueled by its differentiated product and customer-led innovation approach, to deliver a robust financial performance. The company reported impressive revenue growth of 20%, registering \$880 million in revenues in Financial Year 2021/22.⁴ Moreover, LTTS' ability to customize its ESM solutions' capabilities, complemented by its thought leadership (i.e., leveraging insights and in-depth knowledge at conferences, events, and webinars), places the company at the forefront of the industry. Moving forward, the company anticipates an increasing demand for its ESM solution from stricter ESG compliance requirements across industries. As a result, LTTS expects to double its growth in the next five years.

While evolving from a product standpoint, LTTS never loses sight of its customers' perspective. Its brand maintains its global presence while meeting customer-specific needs. Given today's landscape, Frost & Sullivan believes the company is in a prime position to increase its market share in the highly competitive energy optimization and sustainability management market.

Conclusion

To be a product leader, a company needs to understand the market's needs and deliver an unmatched solution designed and embedded with high quality and reliable performance. Frost & Sullivan finds that L&T Technology Services Limited (LTTS) embodies this concept and exemplifies it with best practice implementation. The Energy and Sustainability Manager (ESM), the company's compliance-driven, holistic energy management solution, remedies several challenges associated with its contemporaries' passive and manual approach to energy optimization and sustainability management. To this end, the solution enables proactive audit-driven initiative tracking, real-time actionable insight generation, timely closure of non-compliances, and immediate control over the customers' energy management activities. Moreover, the ESM solution's impressive statutory compliance, best practices implementation, advanced analytics, and information integrity deliver impressive benefits, such as a 10% to 15% reduction in energy cost and a 3% to 4% decrease in energy losses.

With its strong overall performance, L&T Technology Services Limited earns Frost & Sullivan's 2022 Global Product Leadership Award in the energy optimization and sustainability management market.

³ https://www.ltts.com/system/files/2022-06/LTTS_AR_2021_22.pdf, accessed June 2022.

⁴ Ibid.

What You Need to Know about the Product Leadership Recognition

Frost & Sullivan's Product Leadership Award recognizes the company that offers a product or solution with attributes that deliver the best quality, reliability, and performance in the industry.

Best Practices Award Analysis

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

Product Portfolio Attributes

Match to Needs: Customer needs directly influence and inspire the product portfolio's design and positioning

Reliability and Quality: Products consistently meet or exceed customer expectations for performance and length of service

Product/Service Value: Products or services offer the best value for the price compared to similar market offerings

Positioning: Products serve a unique, unmet need that competitors cannot easily replicate

Design: Products feature innovative designs, enhancing both visual appeal and ease of use

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

