



HCL Technologies Recognized for

2021

Technology Innovation Leadership

North American Disruptive

Aerospace Technologies Industry

Excellence in Best Practices

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. HCL Technologies excels in many of the criteria in the disruptive aerospace technologies 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

Implementing Model-based Enterprise 2.0 for the New Era of Digital Innovation

Several players in the aerospace and defense (A&D) industry have been left behind by those that have leveraged digital advancements in this space. The COVID-19 global pandemic has further amplified difficulties due to the steep decline in air travel, leading to a snowball effect throughout the industry.

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- Elizabeth Whyntott, Best Practices Research Analyst

Frost & Sullivan points out that the effect includes a sharp decline of the industry's original equipment manufacturers’ production side, adding pressure to an already delayed supply chain. Production delays result in long lead times to parts production, thereby grounding many aircraft outside of the air travel industry. Lack of air travel and grounding of aircraft has, in turn, led to revenue loss and a reduction in capital spending by the industry overall. If others in the industry do not wish to fall behind their technologically advanced peers, Frost & Sullivan analysts point out that they must look towards the advancements and benefits of Model-based Enterprise 2.0 (MBE 2.0). MBE 2.0 is a digitally-focused technology model quickly overtaking Model-based

Enterprise, the traditional manufacturing strategy for three-dimension product modeling.

HCL Technologies (HCL) is a global technology company guiding enterprises through their respective industry's digital advancements. As of 2020, the company surpassed \$10 billion in revenue, has a worldwide network spanning 50 countries, employs more than 159,000 personnel ('Ideapreneurs,' as the company refers to them), and consults with half of the Fortune 500 and 650 of the Global 2000 enterprises. HCL has three business units: Information Technology and Business Services, Engineering and Research and Development (R&D) Services, and Products and Platforms. The company's enterprise portfolio comprises 19 industries including, A&D, banking, consumer goods, healthcare, manufacturing, media and entertainment, oil and gas, and telecommunications, to name a few. HCL's A&D division is well-established and a highly reputable area amongst those in the A&D industry. The division enables companies for proper future growth by providing them with a robust knowledge base and action plan for the industry's next generation of technology innovation - MBE 2.0.

Enabling Technology Readiness with a Robust Catalogue of Solutions and Services

HCL identified MBE 2.0 as the next step towards technology implementation for A&D enterprises. MBE 2.0 leverages digital technology to capitalize on advancements in automation, machine learning, artificial intelligence (AI), and digital twins. Whereas the traditional manufacturing method, MBE, focused on product design, MBE 2.0 provides a more robust picture for all product components. MBE 2.0 methods allow an organization to record, maintain, and monitor components (such as product costs, supply chain elements, and material sourcing). HCL's A&D division utilizes the MBE 2.0 decision-making framework to help clients strategize on how these trending technologies fit into their existing infrastructure and which solutions are most pertinent for their future success. By assisting clients in adapting and integrating to the rapid change in the technology landscape, HCL ensures clients' systems are more efficient and can manage the high volume of complex data.

While MBE 2.0 is a tool HCL uses to guide clients through the digital technology changes within the A&D manufacturing industry, the company also provides solutions for hyper-automation, shop floor intelligence, enterprise asset management, additive manufacturing, supply chain analytics, and blockchain. Nicely highlighting HCL's success of the tools and solutions it offers are its maintenance repair and overhaul (MRO) solution, iMRO, and Base90 for the A&D industries. HCL's iMRO is a SAP add-on that provides several processes and functionalities for asset maintenance and implementation purposes. iMRO provides insight into aircraft, fleet, and line maintenance and has individual or multiple functionalities, which integrate depending on clients' needs. Base90 is HCL's preconfigured SAP S/4HANA A&D solution that integrates to help A&D manufacturing companies with supply chain, manufacturing, production planning, procurement, sales, distribution, and project systems.

During the introduction and implementation of all of its frameworks, systems, and tools, HCL ensures that clients properly understand the technology and the true value it can bring. Providing this understanding is especially important when many products and programs have overlap in their functionality, and it can be difficult to determine data ownership within a company. Furthermore, many clients find it challenging to navigate newer tools and determine the appropriate application of the tools. HCL engages in beneficial decision-making and selection processes - so clients do not get caught up in the frustration and intricacies of integrating new and old tools and technologies.

Creating High Value for Clients with Employee-focused Programs that Optimize Efficiency and Output

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provides excellent value to clients. HCL's commitment to an innovative culture comes from its ideation enablers, the Value Portal, MAD Jam, the Good Practices Conference (GPC), and Intellectual Property Monetization (IPM). The Value Portal allows the company's Ideapreneurs the opportunity to share, facilitate, and manage client-focused innovations, generating more than 60,000 ideas for value-added client-facing solutions. MAD Jam is the company's platform that recognizes successfully implemented employee-led initiatives, with more than 2,700 unique contributors to date. HCL's GPC is an annual conference platform that recognizes employees for their business improvement ideas within HCL. Finally, the company's

IPM platform is a true innovative driver for employees that allows them to submit ideas they believe can be patented and helps them through the patent process; the platform supported filing more than 200 patents since 2015.

The company's culture plays a large part in creating high client satisfaction, or "client delight," as the company refers to it. Over the years, HCL consistently improves on critical measures of customer satisfaction, including loyalty, advocacy, satisfaction, and business value, and continually scores above industry averages. Also contributing to client delight is HCL's commitment to solid delivery governance and quality control measures that permeate every step of service and solution implementation.

Frost & Sullivan analysts recognize that HCL's ideation enablers are only part of the company's commitment to operational efficiency and delivering great value to clients. HCL follows a management framework that drives service efficiency and effectiveness. Within the company, HCL creates industry-specific divisions (e.g., A&D, energy and utilities) that ensure business processes and frameworks align with its given industries. By using site reliability engineering approaches to manage systems, solve problems, and automate operational tasks, HCL improves employee output in quantity and quality. The company also employs AI-powered automation tools and business-aware operations further to increase efficiency and key performance indicators (KPIs). The company also utilizes digital technologies to optimize efficiency by building a more personal user interface depending on an employee's role and an AI-based knowledge management platform. HCL's modernization of tools and technologies enables employees to simplify their environment for optimal proficiency, leading to even higher value for clients.

A Market Strategy to Build HCL's Reputation and Establish Client Trust

HCL has a strong reputation in all industries it services, as shown with its revenue surpassing \$10 billion in 2020, allowing it to retain and acquire clients. The company's Mode 1-2-3 Strategy largely contributes to its reputation, retention, and acquisition of new clients. The Mode 1-2-3 Strategy is a method HCL employs to guide clients through their journey of technological transformation. Mode 1 of the company's strategy focuses on core services (i.e., Application, Infrastructure, Engineering and R&D, and Digital Process Operations) that enable clients to become more efficient and agile. Mode 2 leverages next-generation technology to accelerate new services (i.e., Digital & Analytics, Internet of Things WoRKS™, Cloud Native services, and cybersecurity, governance, risk management, and compliance) for experience-centric and insight services. Finally, Mode 3 focuses on implementing innovative products and platforms that enable clients for next-generation technology readiness. Frost & Sullivan recognizes how HCL's Mode 1-2-3 market strategy nicely leverages future-ready technology and solutions, ensuring that the company remains highly reputable as a growth driver for the industries it services.

HCL's continuous success is partly due to its substantial acquisitions, which also contribute to its ability to provide high-value and quality solutions and services. For HCL's A&D division, many acquisitions have brought a lot of strength and modernization to its clients. For example, the acquisition of AXON has brought tremendous value to HCL by strengthening its SAP practices (e.g., benefits realization, industry-specific product, strategy, and consulting). Furthermore, the acquisitions of Strong Bridge Envision brought robust organization change management solutions; the Geometric acquisition provides sound engineering capabilities and knowledge. PowerObjects allows for dynamic customer relationship management practices and the acquisition of Butler Aerospace for pure engineering and design services. All of HCL's acquisitions significantly contribute to the company's go-to-market strategy to provide leading-edge solutions and services for all clients.

Conclusion

Disruptive technologies within the aerospace industry play a vital role in keeping companies at top performance. Organizations must find a way to stay up to speed with the rapid roll-out of digital technologies. Yet maintaining a digital edge can prove quite challenging when the global aerospace industry faces part production issues - such as long lead times from original equipment manufacturers.

By properly utilizing digital technologies, HCL Technologies (HCL) has built an international reputation as a leading provider for value-added client solutions. The company employs its Mode 1-2-3 Strategy to lead clients through their technological transformation. Additionally, HCL highly values its employees (i.e., Ideapreneurs) and company culture and has numerous programs to drive employee success and optimization, and "client delight."

With its strong overall performance, HCL Technologies earns Frost & Sullivan's 2021 Technology Innovation Leadership Award in the North American disruptive aerospace technologies industry.

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

