



**ENABLING BUSINESS  
TRANSFORMATION FOR  
AEROSPACE & DEFENSE**

# Prelude

“In today’s rapidly changing business environment, leaders are being asked to solve complex problems at a record pace. Demand, competition, and insistence on higher productivity are increasing, creating pressure to think differently and driving the need for innovation. This requires a strong understanding of the business, the challenges being faced and creative solutions through process and technology.

HCL is uniquely positioned to help our clients meet this need to think differently and innovate. We have a deep understanding of our client’s industry processes, the challenges they face and comprehensive technology solutions that drive transformation and measurable business value. Through these capabilities HCL is able to create a significant impact towards the bottom line for our clients.

This booklet is a collection of our success stories driven by our unique capabilities”

## **Paul van Deventer**

Vice President - Aerospace & Defense /  
Travel, Transportation & Logistics

# HCL IMPLEMENTS **AGILE** **BPM TO DRIVE BUSINESS TRANSFORMATION** FOR THE WORLD'S LARGEST **AIRCRAFT MANUFACTURER**

## About the Customer

---

World's largest aircraft design and manufacturing company





## Business Challenges

---

### The client was adversely impacted by:

- High turnaround times impacting schedule by over 100%
- The inability to measure and identify the bottlenecks in flight test processes
- Difficulties in ascertaining the percentage of test completions
- Using emails and spreadsheets to manage over 10,000+ requests

## HCL comes into play

---

HCL replaced legacy applications with modernized platforms by implementing solutions to automate the business processes for the design, procurement, and manufacturing of an aircraft using a BPM framework. We developed over 20 systems to certify modular avionics and implemented dynamic and automatic systems around power management, air management and crew alert systems.

## IMPACT DELIVERED

---



**US \$275M** of cost savings over 5 years



**33% reduction** in the procurement lifecycle



**Effort for monitoring** performance reduced by 25%



System consolidation reduced application **footprint by 85%**

# HCL SOLIDIFIES, STABILIZES AND ENHANCED AN **ERP PLATFORM** ON **MS DYNAMICS** FOR A LEADING **DISTRIBUTOR OF PARTS AND CONSUMABLES** FOR AEROSPACE & DEFENCE AIRCRAFTS

## About the Customer

---

Leading distributor of aircraft parts and consumables for the commercial, business jet, and military aircrafts



## Business Challenges

---

- Difficulty in managing customer catalogues due to multiple brands and financial processes across geographies
- Disparate and disjointed systems leading to complex business operations and poor user experience
- Difficulty in complying with global audit requirements due to manual writing and recording of journals
- Poor decision making due to lack of real time information and manual, time consuming approval workflows

## HCL comes into play

---

HCL provided end-to-end managed services on MS Dynamics AX covering financials, and budget control systems to transform existing ERP platform through-

- o Simplification and standardization of financials across different geographies (regulations and currencies) to roll out single global solution with minimal modifications
- o Enhanced experience in global statutory & regulatory compliances including tax processing, which provided consistent information and data across group companies.
- o Quick and real-time financial data retrieval mechanism to provide business insights for better financial business decision making



## IMPACT DELIVERED

---



20% improvement in user efficiency and productivity from **single global solution**



80% reduction in financial reporting time through **automation**



85% improvement in user experiences through **global standardization**



10% improvement in **operational efficiencies**



80% reduction in **data retrieval time** for quick business decisions

# HCL HELPS **REDUCE OPERATIONAL COSTS** FOR A **GLOBAL AEROSPACE AND DEFENSE** **CONGLOMERATE** THROUGH PROCESS STANDARDIZATION

## About the Customer

---

US based global aerospace, defence,  
security and advanced technologies  
industrial conglomerate



## Business Challenges

---

- High operations cost and turnaround time due to multi-vendor outsourcing
- High outage and system downtime impacting productivity and revenues
- Non standardized business processes across different business units
- High number of false and duplicate system alerts
- Increasing threats from competition leveraging newer technologies

## HCL comes into play

---

- HCL helped the client move away from a multi-vendor outsourcing model to improve on its operations cost in a managed services model
- Replaced unstable systems with a new platform to improve productivity, overcome outages and reduce system downtime
- Standardized processes across client's business units
- Reduction of false and duplicate systems alerts through real-time monitoring and automation
- Conducted workshops to develop future roadmap for moving to newer technologies on Azure Cloud, SAP HANA Enterprise Databases, SAP iMRO 7.0 and SAP S/4HANA finance



## IMPACT DELIVERED

---



80% reduction in **system downtime**



10% improvement in **system response time**



50% reduction in **system alerts**



# HCL HELPED A **LEADING MANUFACTURER OF AIRCRAFT AND AEROSPACE PRODUCTS** TO MOVE ON A **AZURE CLOUD PLATFORM**

## About the Customer

---

An American conglomerate that develops and manufactures aircraft and aerospace products including aircraft engines, HVAC, elevators and escalators, and industrial products



## Business Challenges

---

- The current customer facing applications lacked scalability and visibility was limited to a 3 month data window
- High data processing times due to manual processes and data spread in disparate data sources.
- Data privacy challenges with financial data due to lack of security features in the current applications.
- Inability to perform historical analysis hampered business decision making

## HCL comes into play

---

- HCL helped the client move to a cloud based platform which provided scalability and enabled analysis to be performed on larger volumes of data
- The new cloud based platform integrated directly with other applications to help reduce data processing time significantly
- New enterprise grade encryption features provided the security needed to managed such critical data
- HCL implemented BI visualization tools to help the customer develop financial and engineering dashboards for enhanced decision making



## IMPACT DELIVERED

---



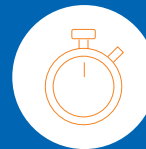
5x improvement in data processing through new **cloud based platform**



94% improvement in **data processing** times



Access to historical data and **unencumbered analytics capabilities**



**Real time** processing of data

HCL PROVIDED **BIG DATA ANALYTICS SOLUTION** FOR PERFORMANCE IMPROVEMENTS IN COMMERCIAL AIRCRAFTS FOR A **LEADING GLOBAL AIRCRAFT MANUFACTURER**

### About the Customer

---

US based leading global aircraft design and manufacturing company operating in more than 65 countries.



## Business Challenges

---

- High Lag time and long delays to analyze unstructured data from aircraft log books, maintenance notes, and other files due to manual processes and disparate sources
- Unable to acquire, cleanse and analyze the enormous volume of aircraft sensor data across multiple fleets on existing data platform

## HCL comes into play

---

HCL provided a unified 'Big Data and Agile' Analytics solution to enhance business and engineering data handling processes for performance improvements in commercial aircrafts.

- Enabled seamless information integration across multiple sources
- Enabled processes for data correlation, grouping service event data, and text mining

The solution helped in proactive and predictive diagnostics for immediate detection of potential failures and in mapping of maintenance schedules.

HCL's business consulting also helped to produce rich visual designs, mock-ups, and interactive visualizations for improved performance in commercial aircrafts.

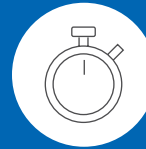


## IMPACT DELIVERED

---



Reduced time to process high volume of unstructured data from **3 months to a single day**



Brought defect identification down from **weeks to hours**



Reduced time to create new **engineering tickets** by 75%



Established advanced analytics processes to continuously improve **reliability rating** to over 98%

# HCL HELPS A **LEADING AIRCRAFT MANUFACTURER** IN **FLIGHT TEST CONSOLIDATION** FOR **FASTER** **LAUNCH OF THE AIRCRAFT**

## About the Customer

---

US based leading aircraft design and manufacturing company





## Business Challenges

---

- High number of flight tests necessary to certify an aircraft delaying its launch
- Difficulty in integrating flight test characteristics and sensor data to standard reference data points
- Difficulty in determining compatibility of test conditions that were needed to be executed in a single flight

## HCL comes into play

---

HCL developed a unique solution to consolidate the flight tests for faster launch of the aircraft.

- Designed a new solution for merging high dimensional vector domains in order to consolidate the number of flight tests from a physical perspective
- Devised a series of progressive tests to autonomously extract the meaning of unknown terms for faster execution of flight testing
- Constructed a model that integrates the physical knowledge and SME knowledge to make the flight condition concurrent & compatible with the reference data inputs

## IMPACT DELIVERED

---



Cost savings in excess of **US \$1M/ aircraft**



**20% reduction of time** to bring the plane sooner to the market by accelerating the certification schedule

# HCL PROVIDED **AN INTELLIGENT REPORTING SOLUTION** FOR A **LEADING AIRCRAFT MANUFACTURER** TO HELP THEM TAKE **SMARTER BUSINESS DECISIONS**

## About the Customer

---

US based leading aircraft manufacturer





## Business Challenges

---

- Complex reporting mechanism to generate aircraft MRO reports for users
- Non-availability of a centralized reporting tool to provide a holistic view of the company's performance hampering business decision making
- Delays in reporting due to performance issues in the current reporting system
- Non-availability of 24x7 MRO data to service centre technicians

## HCL comes into play

---

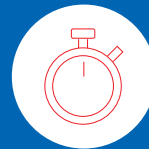
- HCL built an intelligent 'Big Data' advanced analytics reporting solution based on SAP HANA to provide greater insights into key MRO processes using its iMRO solution.
- The solution enabled business agility in data discovery along with self-service and integrated reporting. It also provided refreshed set of reports and dashboards with drill down capability for ease of getting business insights.
- Availability of 24x7 data and corresponding reports was consistent with business needs of service center including real-time (or near real-time) availability of data

## IMPACT DELIVERED

---



50% productivity gains through **intelligent reporting solution**



**100% real time** data availability, accuracy and consistency



# HCL HELPED A LEADING AIRLINE **TRANSFORM** **INVENTORY MANAGEMENT** IN ITS MAINTENANCE DIVISION

## About the Customer

---

World's largest global airline with an extensive international and domestic network



## Business Challenges

---

- Finding, expediting and part status processes relied on manual processes
- Inventory accuracy 30 pts below industry standards
- Disjointed processes and multiple systems vastly limited change in business processes
- Limited data in current systems impeded business functions
- Inflexibility of legacy parts management systems and high support costs

## HCL comes into play

---

HCL's experience with global airlines and aircraft manufacturers for transforming their Maintenance & Engineering divisions helped our client in streamlining their operations. HCL implemented a new inventory management system for the client which completely eliminated the potential to order/install the wrong part on any aircraft as the mobile enabled real time inventory platform enables the airline to "Get the right part, to the right place, at the right time"!



## IMPACT DELIVERED

---



Real time inventory visibility drove annual savings of over **US \$25M**



Potential to reduce excess Aircraft inventory by upwards of **US \$100M**

HCL IS IMPLEMENTING A **SAP DRIVEN MATERIAL MANAGEMENT OPERATIONS PLATFORM** TO SUPPORT THE AVIATION INDUSTRY'S **MOST COMPREHENSIVE SPARE-PART SALES AND DISTRIBUTION NETWORK** FOR THE WORLD'S LARGEST AIRCRAFT MANUFACTURER

### About the Customer

---

US based leading global aircraft design and manufacturing company.





## Business Challenges

---

- Implement industry standard best practices and business processes
- Inability to achieve operational efficiency and productivity hampering business growth
- High IT support costs due to maintenance of existing complex legacy systems.
- Risk and reliance on aging technologies.
- Realize opportunities to better integrate with customers and suppliers

## HCL comes into play

---

HCL is implementing a SAP transformation program for customer's Material Management Operations to support a very comprehensive spare-part sales and distribution network. This includes maintaining inventory of approximately 500,000 different types of parts, and services to support the worldwide fleet for the customer. This Enterprise Resource Planning (ERP) integrated solution aims to provide industry standard capabilities to meet customer's current and evolving Material Management business needs.

## IMPACT DELIVERED

---

At project Go Live, the following will be delivered:



Global **ERP deployment**



Implemented across **10 aircraft parts distribution centres**  
(7 customer owned and 3 third party)



An **improved system** for 2000 internal and 46,000 external users



An improved spare-parts distribution network **maintaining 500,000** parts and services

HCL IMPLEMENTED A COMPREHENSIVE **SAP TRANSFORMATION PROGRAM** TO IMPROVE BUSINESS PERFORMANCE FOR A LEADING MANUFACTURER OF BUSINESS JET AIRCRAFT.

### About the Customer

---

US-based Fortune 500 Aerospace Corporation that designs, develops, manufactures, markets, and services business jet aircraft.



## Business Challenges

---

- Redundant, disparate, non-agile legacy systems and processes hindering enterprise wide business transformation and growth
- Cumbersome reporting in current analytics tools due to largely-manual collection of data from outdated/diverse systems
- Lack of real-time visibility to material movement, usage, cost and quality in all stages of supply chain and production

## HCL comes into play

---

HCL successfully implemented a comprehensive SAP transformation program by integrating an Enterprise Resource Planning (ERP) system across all business units and functions. HCL helped the client to standardize business processes and improve business performance through a single, modern, automated and flexible technology platform based on open standards with long term future sustainability. The company also provided the ability to support new and evolving business processes and functions for the future.



## IMPACT DELIVERED

---



**Single integrated system** for uniform business processes across the enterprise landscape



Enterprise-wide data solution for self-service reporting and **business intelligence**



Up to date, **real time availability** of information on products, materials, and pricing



Decreased support cost and licensing fees on outdated **applications and software**



Availability of **mobile CRM platform** to generate and revise quotes on the fly

Please visit [hcltech.com](http://hcltech.com) or send an email to [ci@hcl.com](mailto:ci@hcl.com) to schedule a meeting with our subject matter expert.

FOLLOW US



[www.hcltech.com](http://www.hcltech.com)

**Hello there! I am an Ideapreneur.** I believe that sustainable business outcomes are driven by relationships nurtured through values like trust, transparency and flexibility. I respect the contract, but believe in going beyond through collaboration, applied innovation and new generation partnership models that put your interest above everything else. Right now 110,000 Ideapreneurs are in a Relationship Beyond the Contract™ with 500 customers in 32 countries. **How can I help you?**

*Relationship*<sup>™</sup>  
BEYOND THE CONTRACT

**HCL**