21ST CENTURY CE ENGINEERING

HCL IN **AERONAUTICAL INDUSTRY**

Dedicated team of 1600+ engineers, 10000+ person years of experience

HCL has been ranked a leader in consumer electronics by Zinnov for the maturity and relevance of its services in this industry

Strong presence in Europe and **APAC apart from America**

Investments in Android CoE, **$1.5 Mn on DTV platform and $15 Mn+** investment in Test Labs, Prototyping and manufacturing infrastructure

Customers include 2 major mobile and digital lifestyle **OEMs, top 3** white goods manufacturers, 4 major platform vendors and 2 network operators

50+ projects executed on digital lifestyle, multiple projects underway in retail, healthcare, hi-tech and BFSI

THE CONSUMER ELECTRONICS
INDUSTRY TODAY

The consumer electronics industry rests on the pillars of continuous innovation and accelerated technology adoption. With shrinking product cycles, decreasing margins, and constantly increasing customer expectations, the only way to outdo competition and remain profitable is to stay ahead of the curve in providing next-generation customer experiences.

VAVE (Value Analysis, Value Engineering) - Teardown Analysis, Benchmarking, Cost Modeling, Re-Engineering for a Vacuum Cleaner manufacturer in USA

For a leading global lighting major, an IOT solution for smart lighting was developed by giving complete automation solution using drag and drop

For a leading mining company, HCL developed a solution using camera application and firmware, generating information of the workers' whereabouts thereby preventing loss of life during emergency situation by an automated headcount

EXPERIENCES WE ENGINEER **FOR OUR CUSTOMERS**

CONSUMER ELECTRONICS **CAPABILITIES**

Mobility

- 1000+ Engineers, 9000+ person years experience
- Capabilities across android, windows, iOS and upcoming platforms Tizen, Firefox.
- Mobile software apps - Native, Hybrid, Mobile web
- Product design/ Hardware design, VLSI design
- Firmware BIOS/ Diagnostics/ BSP
- Verification and Validation
- New product realization & certifications

White Goods

- 10+ years old practice, 500+ Engineers
- Home appliance domain expertise across mechanical, controls & sensors design, electronics (hw / sw), system engineering and testing
- Certifications: ISO9001, ISO17025, IEC 61508
- In-house capabilities include EMI/EMC lab, prototyping, CE certification and embedded software labs
- $15M+ investment in test labs, protyping/manu. infra

Digital Lifestyle

- 1200+ Engineers, 3000 person years, 30+ customers, 50+ projects executed
- 12+ years experience in project execution
- Expertise across all service layers- system integration, system validation
- Core development services, middleware stack, region specific customization, audio/video codecs, platform dev. And customization, Testing, end customer support

SERVICES AND **SOLUTIONS**

Accelerated Product Launch

• Feasibility analysis and rapid prototyping
• Concept to prototype
• OS version upgrade
• Application Migration
• Localization

Platform Build and Acceleration

• Software Framework Development
• Middleware Enablement
• Open source support
• Platform Customization/ Sustenance

Digital Lifestyle

• Device and application testing
• Conformance and pre certification
• Release testing
• Certification support

Digital Lifestyle

• Cloud and connectivity enablement
• UxD services
• Application development
• 3rd party app support

Development of Testing tool so as to enable Remote Device Testing for a leading White Goods Manufacturer resulting in substantial cost saving

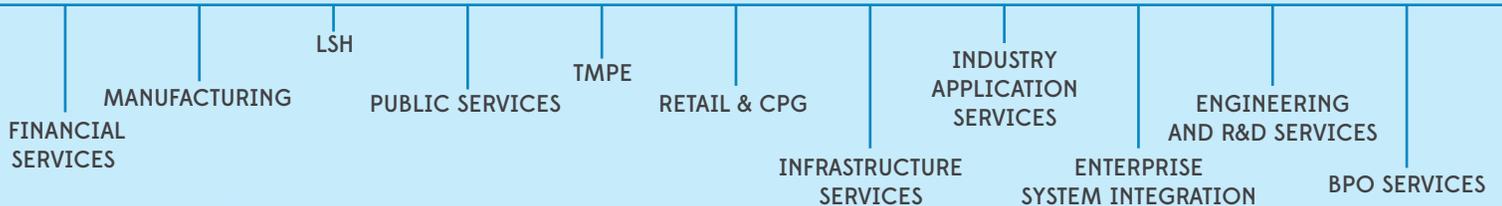Complete Development, Testing , Release and Maintenance for a high end Camera with a highly Modular SW design

Responsible for Platform Customization, Software Development, Product Maintenance & Sustenance for a leading mobile OEM for last 9 years. Worked on approximately 30+ models for the company

Ownership for software development and testing for a full range of HDTVs consisting of all TV ranges from 19" to 65" models for world-wide regions. Contributed significantly to the development and testing of high-end models up to 84" size

EXPERIENCES
WE ENGINEER
FOR OUR CUSTOMERS

HCL - A $7 BILLION
GLOBAL ENTERPRISE

HCL Technologies brings IT and engineering services expertise under one roof to solve complex business problems for its clients. Leveraging our extensive global offshore infrastructure, network of offices in 31 countries and 110,000 employee base, provide holistic, multi-service delivery in industries such as financial services, manufacturing, consumer services, public services and healthcare. HCL's 38 year journey has been truly transformational.

FINANCIAL SERVICES

MANUFACTURING

LSH

PUBLIC SERVICES

TMPE

RETAIL & CPG

INDUSTRY APPLICATION SERVICES

INFRASTRUCTURE SERVICES

ENTERPRISE SYSTEM INTEGRATION

ENGINEERING AND R&D SERVICES

BPO SERVICES

$7 BILLION

31 COUNTRIES

110,000 MINDS

$1 BILLION IN NET PROFIT

$5 BILLION IN REVENUE

$15 BILLION IN MARKET CAPITALIZATION

WE ARE AMONGST THE ONLY EIGHT
21st CENTURY COMPANIES TO ACHIEVE ▲

HCL ENGINEERING AND R&DSERVICES IS BUILDING
21ST CENTURY TECHNOLOGIES

Organizations today are experiencing an unprecedented phenomenon. In the previous century, a company would remain listed as a Fortune 500 company for about 60 years. Today, they stay in that list for less than 18 years! Corporate profits are shifting to asset-light idea-intensive sectors. Emerging-market giants are gaining global scale; with the share of US and Western European companies in the Fortune 500 falling. Asset light technologies are creating more incremental value creating the need to pivot to service R&D. Firms with large legacy product R&D organizations will have to transition in a non-disruptive way. Kick starting Service R&D organization will need extensive collaboration. Thus, engineering spend is going to change drastically in the coming decade.

HCL with its engineering heritage, global presence, cumulative revenue impact and being the largest and fastest growing engineering services provider from India is ideally placed to transform your enterprise.

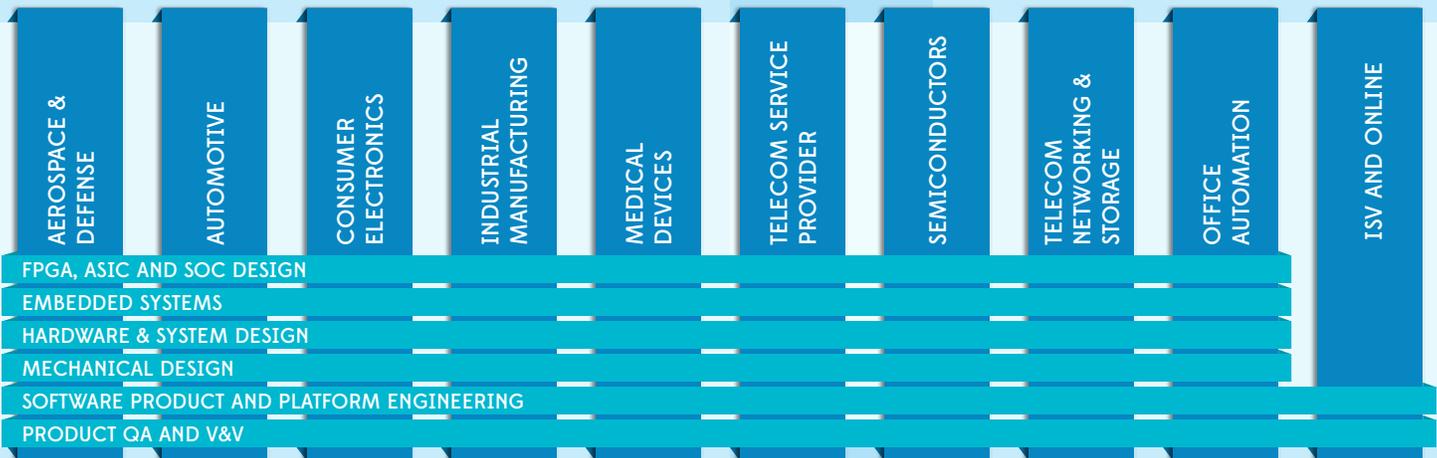**CUSTOMER CENTRIC**
Design Centric, Accessible, Innovative

AGILE
Platformized, Continuously Released, Data Driven

EFFICIENT
Automated, Frugal, Sustained

The face of 21st century technologies will be **Customer Centric** - in terms of design centricity for industrial and UX design, accessibility & innovation as a service ; **Agile** - in terms of e-business platforms, DevOps framework and engineering analytics; **And Efficient** - in terms of Support & test automation, Value engineering and intelligent sustenance.

HCL ERS has been instrumental in engineering multiple products for 300+ customers across 10 industry verticals. Our engineering services straddle the entire product development lifecycle from new product introduction to end of lifecycle.

	AEROSPACE & DEFENSE	AUTOMOTIVE	CONSUMER ELECTRONICS	INDUSTRIAL MANUFACTURING	MEDICAL DEVICES	TELECOM SERVICE PROVIDER	SEMICONDUCTORS	TELECOM NETWORKING & STORAGE	OFFICE AUTOMATION	ISV AND ONLINE
FPGA, ASIC AND SOC DESIGN										
EMBEDDED SYSTEMS										
HARDWARE & SYSTEM DESIGN										
MECHANICAL DESIGN										
SOFTWARE PRODUCT AND PLATFORM ENGINEERING										
PRODUCT QA AND V&V										

~$ 50 Billion product revenue enabled over last ten years for our customers

Industry leading recognition by Gartner, Forrester, IDC, TBR and Frost & Sullivan

1250+ patents filed, $20M invested in own labs, 35+ customer labs

Work with 55 of the top 100 R&D spenders globally

#1 ESO provider from India, fastest growing, 600+ basis point market share gain in 4 years

Relationship™
BEYOND THE CONTRACT

Gartner
Endo selected HCL as one of its partners not only for its technical depth and expertise, but more importantly because it was able to secure HCL's commitment to a long term R&D partnership.

endo Pharmaceuticals

TBR
TECHNOLOGY BUSINESS RESEARCH

The HCL-Rockwell Collins relationship is a model case study in technology services outsourcing best practices.

Rockwell Collins

IDC
Analyse the Future

Meggitt sees HCL's role not only in executing to statements of work but also in contributing and adding value such as suggesting ideas for design improvements.

MEGGiTT

FROST & SULLIVAN

We have used HCL all the way from testing, specification engineering, software engineering and areas in media as well.

THALES

FROST & SULLIVAN

We have given HCL not only development responsibilities, but product management responsibilities and technical engineering responsibilities.

CISCO

Hello, I'm from HCL's Engineering and R&D Services. We enable technology led organizations to go to market with innovative products and solutions. We partner with our customers in building world class products and creating associated solution delivery ecosystems to help bring market leadership. We develop engineering products, solutions and platforms across Aerospace and Defense, Automotive, Consumer Electronics, Software, Online, Industrial Manufacturing, Medical Devices, Networking & Telecom, Office Automation, Semiconductor and Servers & Storage for our customers.

For more details contact: ims.orchestration@hcl.com
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