



L&T Technology Services



ENGINEERING THE CHANGE

www.LTTS.com

LTTS IN A SNAPSHOT

L&T Technology Services is a leading global pure play
ER&D services company



318

Global Clients



20,100

Employees



816

Patents



57

Of Global 100 R&D
Spenders as clients



79 R&D

Innovation Labs



17 Global

Design
Centers



TOP 25

Best Employers
Globally



25+

Countries



*Data as of December 31, 2021

WHAT WE DO

LTTS lives and breathes engineering

ER&D Services for



PRODUCTS

- ◆ Mechanical Design
- ◆ Security
- ◆ Cloud & Analytics
- ◆ DevOps
- ◆ Immersive Experiences
- ◆ Embedded Systems
- ◆ VLSI
- ◆ Testing & Validation
- ◆ Wearables Engineering



MANUFACTURING

- ◆ Plant Engineering
- ◆ Digital Factory
- ◆ Line Expansion & Transfer
- ◆ Asset Care
- ◆ Accelerated Operations
- ◆ Manufacturing Automation
- ◆ Agile Supply Chain
- ◆ Smart PLM



OPERATIONS

- ◆ Sourcing
- ◆ Robotic Process Automation
- ◆ Intelligent Building Management
- ◆ Integrated Content Management
- ◆ Connected Service Support



CONSULTANCY

- ◆ Industry 4.0
- ◆ Smart Factory
- ◆ Product Strategy
- ◆ Security



OUR UNIQUE DIFFERENTIATORS



INFRASTRUCTURE

79 Innovation Labs for product design, engineering, tear-down, compliance, power electronics & digital



CROSS-POLLINNOVATION

Our multi-vertical expertise enables us to take best practices from adjacent industries and adapt them to your business



SOLUTIONS & ACCELERATORS

Ready-to-use solutions & accelerators for product design, analytics, cybersecurity, AI, test automation, and smart workplaces



DIGITAL ENGINEERING

Cloud	Microservices
DevOps	AR/VR
Analytics	Industry 4.0
Cybersecurity	



ACROSS MULTIPLE INDUSTRIES

7 of top 10



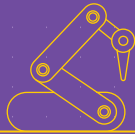
Plant Engineering

8 of top 10



Hi-Tech

7 of top 10



Industrial Products

8 of top 10



Transportation

4 of top 5



Media & Entertainment

3 of top 5



Medical & Lifesciences



OUR PROVEN PLATFORMS & SOLUTIONS



INTEGRATED SMART BUILDING EXPERIENCE PLATFORM



DEVICE TO CLOUD CONNECTIVITY



INDUSTRIAL ENGINEERING AI TOOL



MULTI PLATFORM, MULTI DEVICE REMOTE TEST AUTOMATION



PREDICTIVE ANALYTICS & CONDITION MONITORING OF ROTATORY EQUIPMENT



LTTS has developed a broad portfolio of proprietary technologies & platforms, including UBIQWEISE, VISIT, WAGES, InspectAR, etc., to help clients accelerate implementations and realize the benefits of Industry 4.0.

HFS Research



IoT Platforms Leadership Award Integrated MCare



COMBINED WITH OUR ABILITY TO COLLABORATE

What LTTS did?	Embedded System Mechanical Design Software Testing	Intelligent Building Platform Connectivity System Integration	Sensorization Device to Cloud Connectivity
What we achieved together	 Ruggedized Tablet	 Smartest Campus in the World	 Remote Asset Monitoring
What partners did?	Certification Proto Manufacturing Procurement PCB Fabrication	Sensors Cloud Platforms Machine Learning Building Facility	Monitoring Software & Dashboard Data Analytics
	   	    	 



AND BUILD PARTNERSHIPS

Continuously keeping ourselves abreast on technology, standards & industry trends to provide **cutting edge solutions to our customers**

Creating End to End Business solutions by leveraging the **ecosystem of partners**

R&D PARTNERSHIP

CERTIFICATION & STANDARDS



PRODUCTS PARTNERSHIP

TECHNOLOGY & SOLUTIONS

HELPS US ENGINEER PARADIGM SHIFTS

World's 1st
Commercial
Mesh Network
for Grids

Architecting
the **Smartest**
Campus in
the world

World's 1st 40
atm rated
Angioplasty
Device

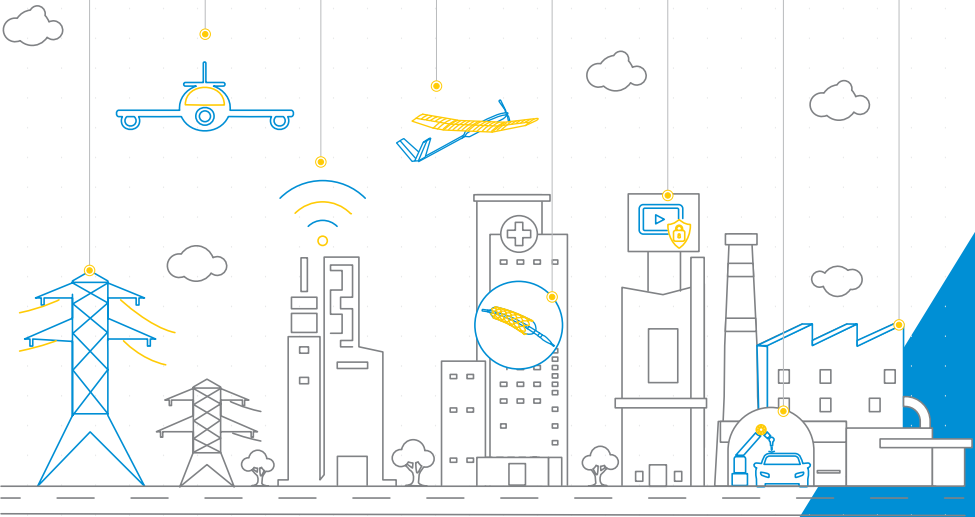
World's 1st
Autonomous
Welding
Robot

Electric
Aircraft of
the Future

Solar
Connectivity
Drone - low
cost mass
connectivity
to rural areas

DRM for
content
security across
multiple
domains –
\$100 M
revenue
protection

Digital Twin of
Manufacturing
Plant - \$4M
savings per
plant





WE CATER TO THE ENGINEERING NEEDS OF THE ENTIRE SPECTRUM



DISRUPTIVE

- ◆ Vendor Developed IP
- ◆ Minimalistic Development Cycle
- ◆ Guarded Development



ADAPTIVE TECHNOLOGY

- ◆ Reduce time for development



CONVENTIONAL TECHNOLOGY

- ◆ Complete Program Ownership
- ◆ Sustain & Maintain

AND BRING THE BEST OF A START-UP & LARGE ORGANIZATION

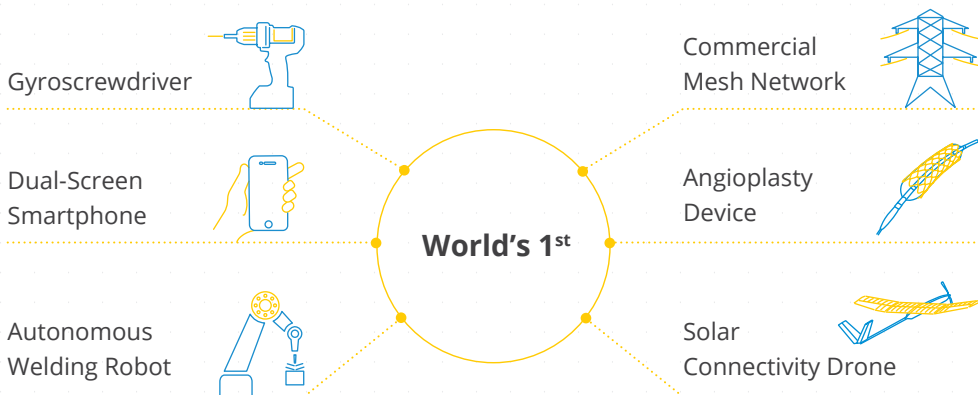
LONGEVITY

Decade Long Engineering Engagements

- ◆ 10 Year Engagements with 32 of the Global Top 100 ER&D Spenders
- ◆ Engineered 100 Patents & delivered >\$100M cost savings
- ◆ 42% of our revenue comes from 10+ year engagements
- ◆ 60% of our Top 25 largest customers have been with us for 10+ years
- ◆ Long term engagements across all industries

SPEED & INNOVATION

816 Patents & Counting



MATURE PROCESSES



R&D LABS AS A SERVICE



EMI/EMC LAB



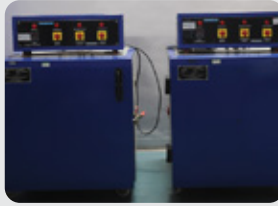
RADIO FREQUENCY LAB



OPTICS LAB



ACOUSTICS LAB



ENVIRONMENTAL TESTING



DRY LAB



WET LAB



MICROSCOPY LAB



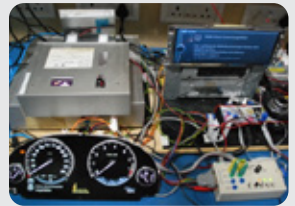
**5G TELCO CLOUD
ENGINEERING**



5G TESTING AS A SERVICE



ELECTRICAL VEHICLES



**TRANSPORT INSTRUMENT
CLUSTER**



THINK STUDIO



**POWER ELECTRONICS
DESIGN CENTER**



**POWER EQUIPMENT
TEST FACILITY**



MATERIAL TESTING CENTER



TEAR DOWN LAB



**HARDWARE & TEST
EQUIPMENT ENGINEERING**



WELDING STUDIO



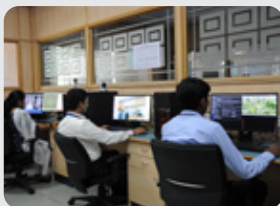
IoT INNOVATION HUB



AR/VR INNOVATION HUB



**DIGITAL PLM
DESIGN CENTER**



**MACHINE VISION
& IMAGING**



**INTEGRATED VIDEO
PROCESSING LAB**



HOW THE INDUSTRY RECOGNIZES US



NASSCOM Engineering and Innovation Excellence
Awards 2021 for Robotic Endo-Trainer Kit



BW Businessworld CFO Finance Strategy
Awards 2021 for Excellence in Consistent
Liquidity Management



LTTS' Chest rAI™ & i-BEMS recognized
with the 2021 BIG Innovation Award



LTTS' SafeX DevOps framework was the
winner in the Achievement in Product
Innovation Category at the Stevie's
International Business Award



Association of National Advertisers (ANA),
USA, honored LTTS with the B2 Award 2021
in the Podcast Category for
#EngineersFromTheHomeDesk Series



Association for Talent Development (ATD) Best Award 2021
and ranked No. 1 for Talent Development practices

AND HOW WE GIVE BACK



EDUCATION & SKILL DEVELOPMENT



WATER CONSERVATION



HEALTHCARE FOR THE NEEDY



ENVIRONMENTAL RESTORATION

Food & Health



Awareness



10k Charity Run

TeachFirst





WHAT ANALYTS SAY

Rated as **expansive & established leaders** by all engineering rating studies

zinnov

Industry 4.0
Connected Worker
Connected Logistics
Connected Assets
Connected Products
IoT- Public Infra
IoT- Energy & Utilities
Content Security
OTT Video
IoT Telecom

 **HfS Research**
The Services Research Company™

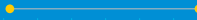
Manufacturing IoT
Plant Cybersecurity
Augmented Reality
Visual Analytics
Plant Engineering
Industry 4.0

 **NelsonHall**
Success through insight

Digital Manufacturing Services



Chemical and O&G Engineering
Lifesciences & CPG Engineering
Automotive Product Engineering
Automotive Mfg Engineering
Aerospace – Product & Mfg Engineering
Digital Oil Field



Business & Industrial IoT Engineering



Automotive Engineering
Embedded Engineering



Consumer IoT
Industrial IoT
Control Systems
PLM O&G





A CLOSER LOOK AT OUR INDUSTRY OFFERINGS

INDUSTRIAL PRODUCTS

WHO WE SERVE

- ◆ Industrial Machinery
- ◆ Oil & Gas
- ◆ Renewable Energy
- ◆ Power Electronics
- ◆ Building Solutions
- ◆ Automation
- ◆ Test & Measurement
- ◆ Special Machine Tools
- ◆ Lighting Engineering

AWARD WINNING PRODUCTS



EMERGENCY LUMINAIRE

Best of Category
Design Excellence
Awards in LIGHTFAIR®
International 2018



VIBRATION METER

Danaher Golden
Innovative
Award



GRID TIED SOLAR INVERTER

Solar Industry
Award



POWER DRIVE

Plant Engineering
Product of the
Year Gold Award

SUCCESS STORIES

- ◆ World's 1st Motion Activated Screwdriver
- ◆ World's 1st Autonomous Welding Robot
- ◆ Smartest Campus in the World
- ◆ Patented Multi-voltage Booster Technology for Welding Power Source
- ◆ Patented Portable Vibration Analyser
- ◆ High Power DC-DC Converter
- ◆ Grid Tied Solar Inverter
- ◆ Machine Vision System with Patented Technology for Leak Detection



GROUND TRANSPORT

AUTOMOTIVE

- ◆ Infotainment & Driver Information Systems
- ◆ Connected Cars
- ◆ Body Electronics & Comfort Systems
- ◆ ADAS & Autonomous Drive
- ◆ Powertrain and Alternate Propulsion Systems
- ◆ Body Engineering & Safety Restraints

TRUCK & OFF HIGHWAY

Product Engineering, Manufacturing Engineering & Digital Engineering across all product lines



SUCCESS STORIES

- ◆ Android Based Infotainment Cluster for Automotive OEMs
- ◆ Integrated Radar & Camera Development for Automotive Tier-1 Supplier
- ◆ Remote Tracking & Monitoring for Heavy Construction Equipment & Mixed Fleet
- ◆ Optimizing Cost of Lifting System of Lawn Tractor Through Redesign
- ◆ 3D Modeling & Simulation of Automotive Manufacturing Plant
- ◆ Competitive Benchmarking of Tower Crane for the India Market

AEROSPACE & RAIL

AEROSPACE - WHAT WE DO

Aero
Structures



Aero
Systems



Avionics



Aero
Engines



In-flight
Entertainment



Drone Solutions
and Services



Test
Equipment



Air Traffic
Mgmt.



RAIL - WHAT WE DO



Train Design & Controls



Rail Signaling



Safety & Reliability (RAMS)

SUCCESS STORIES

- ◆ Next-gen Aircraft Propulsion System
- ◆ Advanced Seatback IFEC System
- ◆ Optimization of Horizontal Stabilizer for an Aerospace Major
- ◆ Model Based Engineering for Aircraft Heater Module
- ◆ Parabolic Aluminized Reflector (PAR) Lighting
- ◆ Development of a Safe & Reliable Railway Brake Controller
- ◆ Foolproof independent checking & standard setting for a Light Rail Transit System



MEDICAL DEVICES & LIFESCIENCES



WHO WE SERVE

- ◆ Surgical
- ◆ Therapeutic
- ◆ Diagnostic
- ◆ Patient Monitoring
- ◆ Wearables
- ◆ Supplies

WHAT WE DO



Digital
Engineering



Product
Engineering



Manufacturing
Services



Field
Services

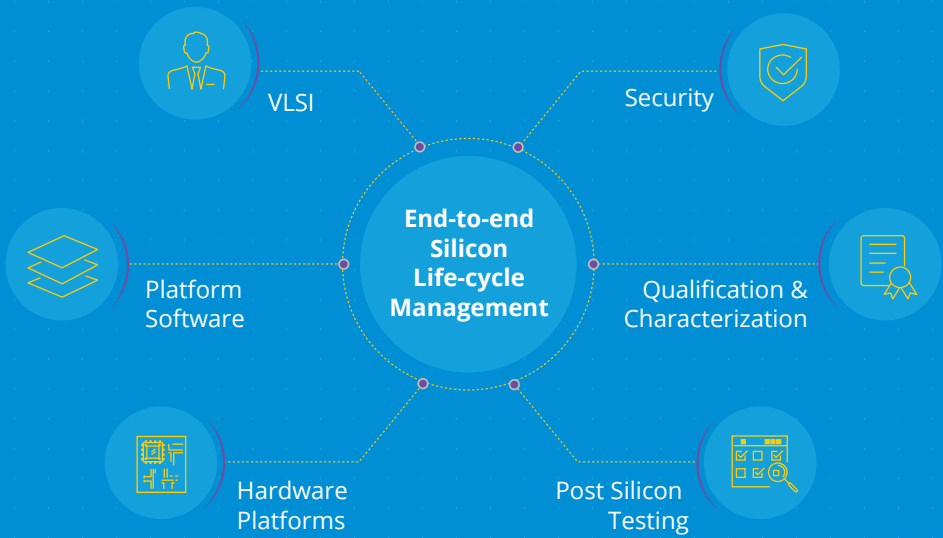


Quality Assurance &
Regulatory Assurance

SUCCESS STORIES

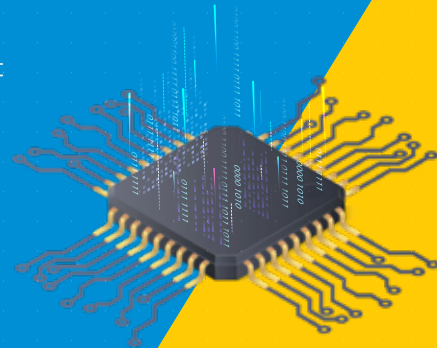
- ◆ Disposable and Single Hand Operated World's 1st Drug Patch Applicator
- ◆ World's Leading Smart Inhaler
- ◆ 3D Printing for Customized Knee Implants
- ◆ World's 1st Medical Device to Produce 40 atm Pressure
- ◆ World's 1st Airway Clearance System with Bluetooth® Connectivity
- ◆ Integrated Reusable Vessel Sealing & Cutting Device for Emerging Markets
- ◆ Automated Blood Cell Counter with Precision of >99% and Consumption of 2% Less Blood

SEMICONDUCTORS



SUCCESS STORIES

- ◆ World's 1st Solar Connectivity Drone
- ◆ Image Processing SoC
5 Million Gates, 40+ Image Processing Algorithms
- ◆ Chips with 3D Imaging Capability for Home Automation
- ◆ Touchless Interactions
Advanced Sensing Using Miniature Radar to Detect
Touchless Gesture Interactions
- ◆ Ruggedized SBCs
Industrial Grade Operation from -40C to +85C



CONSUMER ELECTRONICS

WHO WE SERVE



Consumer IoT & Retail



Enterprise Devices



Personal Devices

SUCCESS STORIES

- ◆ World's 1st Dual Touch-Screen Smartphone
- ◆ The Smartest & Safest Beginner Phone in the World!
- ◆ Ruggedized, Smart Public Safety Device
- ◆ Body Camera for Public Safety Personnel
- ◆ World's 1st Wearable Support Network
- ◆ Smart Thermostats for Home Automation
- ◆ Smart Welding Using Wearable Technology
- ◆ High-end Luxury Smart Watch

TELECOMMUNICATIONS

WHO WE SERVE



Communication
Service Providers



Networking & Technology
System Providers

WHAT WE DO



SDN/NFV



IoT Service &
Platform
Enablement



Telco Cloud &
Network
Analytics



Simulations &
Automated
Testing



Global Field
Testing



NB IoT Chips



5G - Orchestration
& Virtualization

KEY DIFFERENTIATORS

- ◆ End-to-End Product Design & Development
- ◆ Private LTE Network in Lab
- ◆ 5G Automation Framework
- ◆ Acceleration-as-a-Service & Monetization Solutions
- ◆ Migration Tools – Legacy to Web Technologies
- ◆ Test Factory - Tools, IP & Frameworks



MEDIA & ENTERTAINMENT



WHO WE SERVE



Operators
(Cable, DTH, IPTV)



OEMs



OTT
Players



Software
Players

WHAT WE DO



Product
Engineering



Product
Conceptualization



Design &
Development



Testing &
Certification



Manufacturing
Support



Product
Maintenance



Value
Engineering



PROPRIETARY SOLUTIONS

- ◆ Cogmation Test Automation Framework
- ◆ RDK Emulator Tool
- ◆ Cloud EPG & Recommendation Engine
- ◆ STB Log Analytics
- ◆ FlyBoard - Next-gen Digital Signage Solution

PLANT ENGINEERING

WHO WE SERVE

- ◆ Energy & Utilities
- ◆ Chemicals
- ◆ Home & Personal Care
- ◆ Food, Beverages & Dairy
- ◆ Pharmaceuticals
- ◆ Discrete Manufacturing

WHAT WE DO



EPCM & PMC



Operation & Maintenance



Engineering Design



Decommissioning Support



Consulting Services



Asset Management Services

SUCCESS STORIES

- ◆ Dedicated Design Center for a Chemical Major, USA
- ◆ Global Standards Harmonization Program for a Chemical Major, EU
- ◆ Energy Audit Resulting in Considerable Savings for a Major CPG Customer
- ◆ Engineering a Greenfield Facility for a Leading Specialty Chemicals Company in the Middle East
- ◆ 3D Solutions for Digitalization of a Manufacturing Plant
- ◆ Greenfield Solutions for a Metals & Minerals Major
- ◆ EPCM Services for a Globally Leading F&B Manufacturer





ENGINEERING THE CHANGE

India | USA | Canada | Germany | Belgium | Denmark | Finland | France | Italy | Israel
 Netherlands | Norway | Poland | Sweden | United Kingdom | UAE | Japan | South Korea
 Singapore | Malaysia | South Africa | Australia | Switzerland | China | Taiwan