



L&T Technology Services



ENGINEERING THE CHANGE

www.LTTS.com

OUR VISION



Engineering a
**sustainable
tomorrow** through
technology and
innovation

With innovation at our core, we challenge the status quo and continuously leverage technology for scaling the future and inspiring new possibilities for our customers.

As we constantly strive for multi-dimensional growth, we hold ourselves accountable for creating a sustainable world and delivering positive outcomes that transcend business boundaries.

With the ability to engineer change, and with the effective use of technology, we are committed to achieving environmental stewardship, social development, and economic progress for all our stakeholders.

OUR MISSION

Be the **engineering partner of choice** by enabling innovation with world-class technologies, processes, and people – delivering inclusive growth for all stakeholders

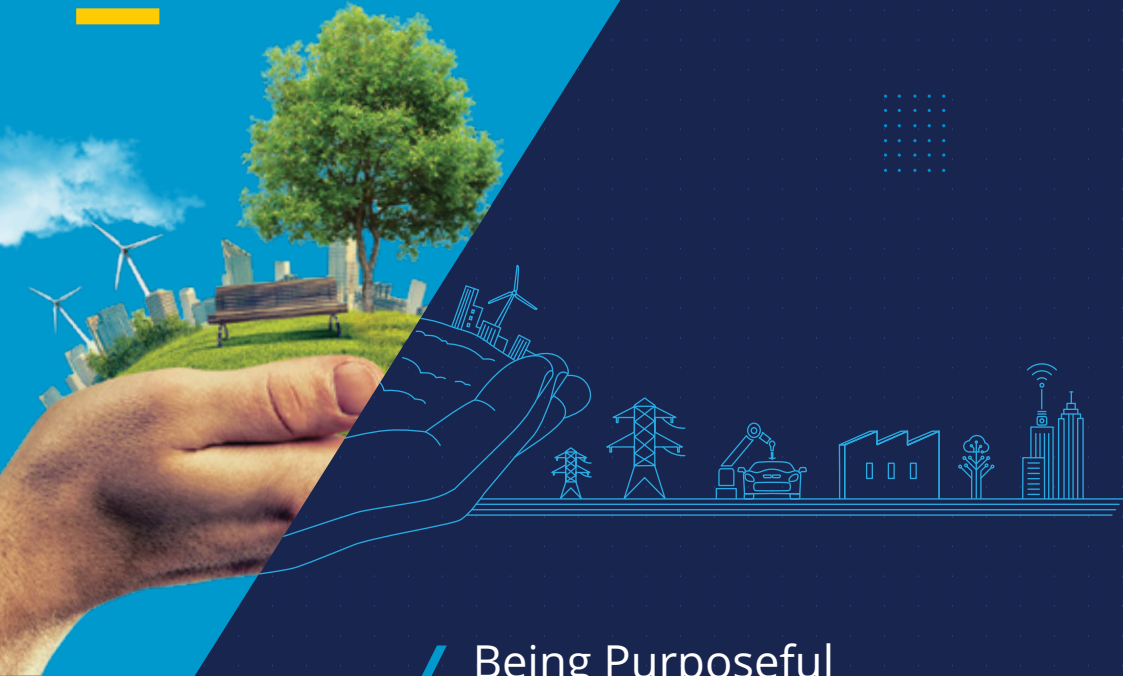
At LTTS, we are passionate about creating a better and sustainable world for the future of our customers, people, and communities.

As a technology-led engineering company, we encourage a culture of collaboration and learning. Our innovation DNA and a 'can-do attitude' enable us to engineer the change.

With our people as the driving force, integrity, and fairness as our bedrock, we are committed to constantly innovating to strive for the best solution and customer experience. It is this unyielding passion and unfaltering commitment to excellence that ensures inclusive and sustainable growth.



OUR VALUES



- Being Purposeful
- Ethics & Integrity
- Caring
- A Culture of Learning
- Results with Accountability

At LTTS, everyone is an Engineer at Heart ❤️

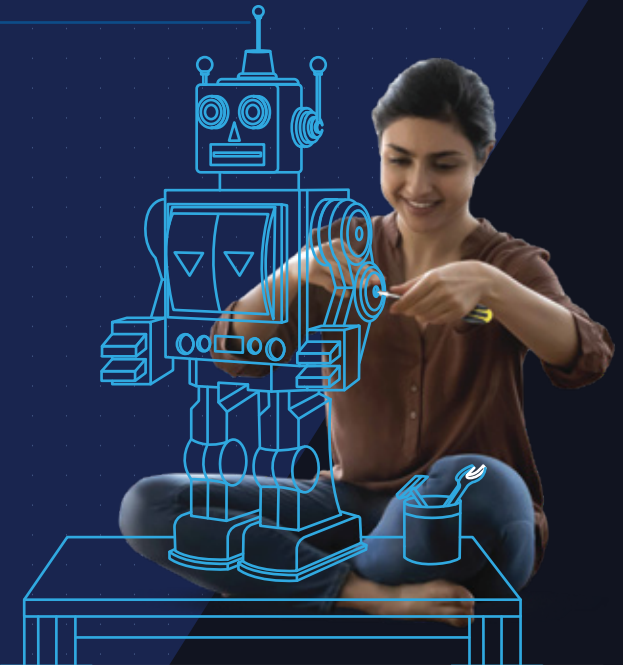
Passion For Engineering

Curious About Everything

Fearlessly Creative

Frugal Mindset

Collaborative



LTTS IN A SNAPSHOT

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



341

Global Clients



22,200

Employees



1090

Patents



57

Of Global 100 R&D
Spenders as clients



99 R&D

Innovation Labs



22 Global

Design
Centers



TOP 25

Best Employers
Globally



25+

Countries



*Data as of March 31, 2023.

WHAT WE DO

Technology Partner For Sustainable Tomorrow



OUR DIFFERENTIATORS



INFRASTRUCTURE

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



CROSS-POLLINNOVATION

Our multi-domain & 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

Nex-Gen Comms.
Analytics/ AI/ ML
Cloud Engineering
DevOps

IIoT
Security
UX



ACROSS MULTIPLE INDUSTRIES

8 of top 10



Transportation

8 of top 10



Hi-Tech and Telecom

7 of top 10



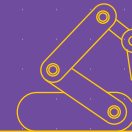
Plant Engineering

3 of top 5



Medical & Lifesciences

7 of top 10



Industrial Products



OUR PROVEN PLATFORMS & SOLUTIONS

**E-MOBILITY PLATFORM
FOR NEXT-GEN
ELECTRIC VEHICLES**

eVOLTTS

**AI BASED CHEST
X-RAY RADIOLOGY
SUITE**

Chest-rAi™

**INDUSTRIAL
ENGINEERING
AI TOOL**



**INTEGRATED
SMART BUILDING
EXPERIENCE
PLATFORM**



**DIGITAL SIGNAGE
SOLUTION FOR
IMMERSIVE VISUAL
EXPERIENCES**



**MULTI PLATFORM,
MULTI DEVICE
REMOTE TEST
AUTOMATION**



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



**Big Innovation
Awards, USA for
Chest rAi™ and
i-BEMS**



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



NEXT-GEN PARTNERSHIPS FOR NEXT-GEN SOLUTIONS



R&D PARTNERSHIP



PRODUCTS PARTNERSHIP



CERTIFICATION & STANDARDS



TECHNOLOGY & SOLUTIONS



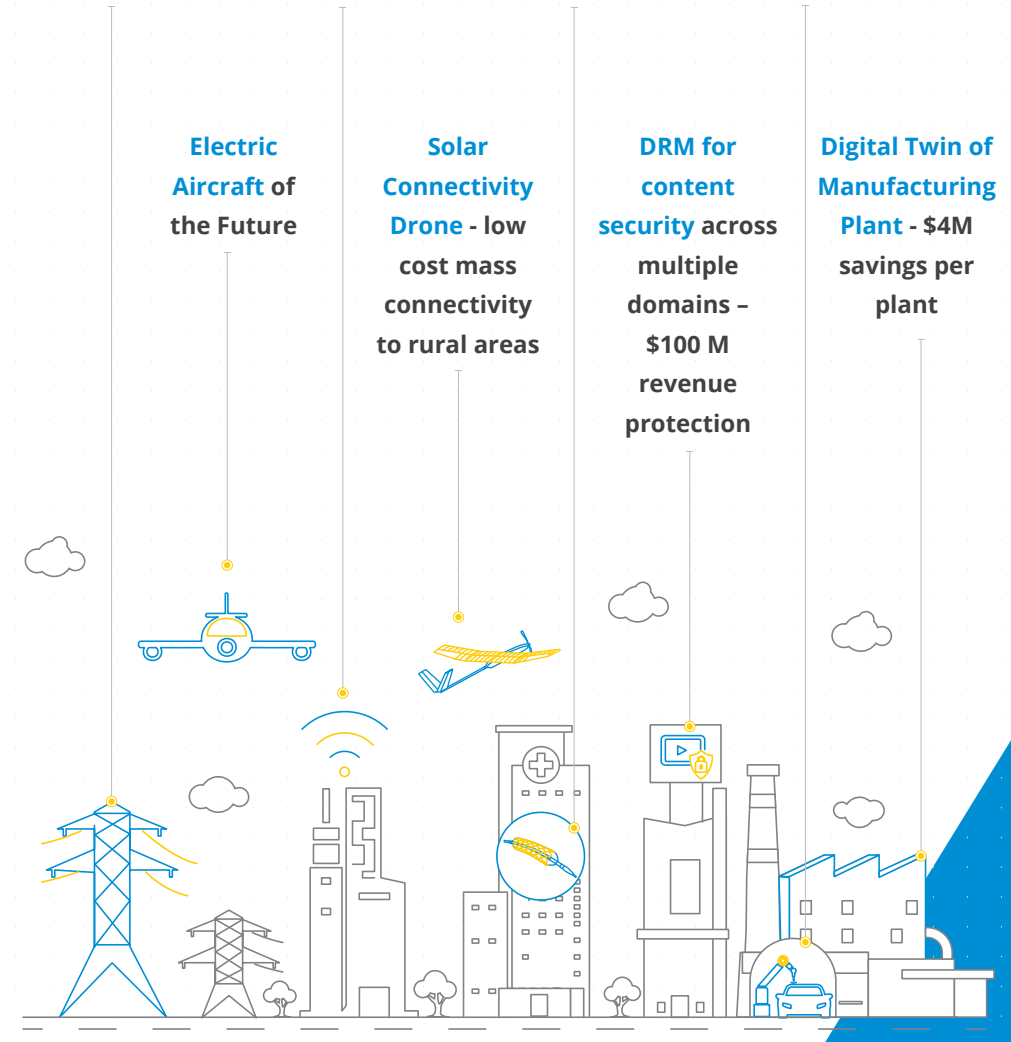
HELPS US ENGINEER PARADIGM SHIFTS

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





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

1090 Patents & Counting

Mesh Network
For Grids



Dual Touchscreen
Android Smartphone



Electrified Off
Highway Vehicle

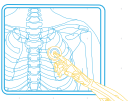


World's 1st

Most Intelligent
Campus



Most Efficient Ai
Based Radiology
Assist Solution



MATURE PROCESSES



R&D LABS AS A SERVICE



EMI/EMC LAB



RADIO FREQUENCY LAB



OPTICS LAB



THINK STUDIO



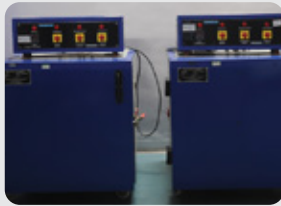
POWER ELECTRONICS
DESIGN CENTER



POWER EQUIPMENT
TEST FACILITY



ACOUSTICS LAB



ENVIRONMENTAL TESTING



DRY LAB



MATERIAL TESTING CENTER



TEAR DOWN LAB



HARDWARE & TEST
EQUIPMENT ENGINEERING



WET LAB



MICROSCOPY LAB



NEXSENS LAB



WELDING STUDIO



IoT INNOVATION HUB



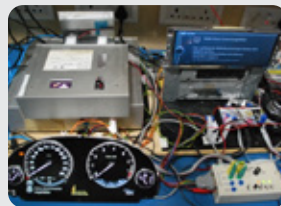
AR/VR INNOVATION HUB



5G LAB



ELECTRIC VEHICLE (EV) LAB



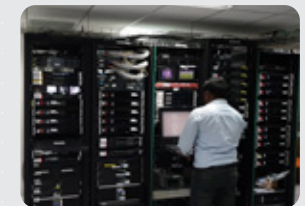
TRANSPORT INSTRUMENT
CLUSTER



DIGITAL PLM
DESIGN CENTER



MACHINE VISION
& IMAGING



INTEGRATED VIDEO
PROCESSING LAB



HOW THE INDUSTRY RECOGNIZES US



Recognized as a
Great Place to Work®
for its best practices
across India



NASSCOM
'Engineered-In-India
Product Of The Year'
Award For Robotic
Endo-trainer Kit



13th Aegis Graham Bell Award for
**Innovation in EV Charging
Infrastructure**



Recognized By BW Recycling For
Recycling Plastic Waste To Create
Useful Products



TOP 25 **Innovative Companies**
In India



Big Innovation Award For Innovation in
**IoT for Edge Management Framework
(EDGYneer)**



Recognized with ASSOCHAM CSR &
Sustainability Excellence Award 2022 in
the **Healthcare category**



LTTS wins **Golden Peacock Corporate
Social Responsibility Award**

AND HOW WE GIVE BACK



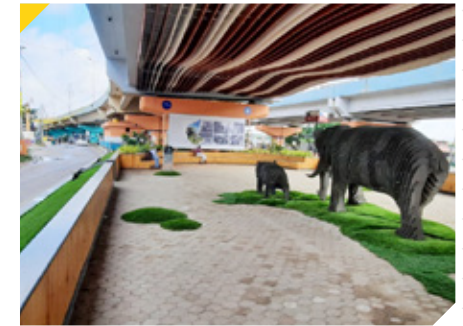
EDUCATION & SKILL DEVELOPMENT



WATER CONSERVATION



HEALTHCARE FOR THE NEEDY



ENVIRONMENTAL RESTORATION

Food & Health



Awareness



10k Charity Run

TeachFirst



WHAT ANALYSTS SAY

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

ER&D Services

ER&D Services Rating 2021
Digital Engineering Services Rating 2021
AI Engineering Ratings 2021
Aerospace ER&D Ratings 2021
ER&D Services-US Ratings 2021
ER&D Services-Germany Ratings 2021
Automotive Ratings 2021
ADAS Ratings 2021
Telematics Ratings 2021
Medical Devices Ratings 2021
Telehealth Ratings 2021
Semiconductor ER&D Ratings 2021
Telecommunication ER&D Ratings 2021
OTT Ratings 2021
Industrial Rating 2021
Digital Thread Ratings 2021

IoT Services

IoT Services Ratings 2021
Public Infrastructure Ratings 2021
Telehealth Ratings 2021
Digital Thread Ratings 2021

Digital Manufacturing Services

Overall
Next-Gen Services Capability
Monitoring and Security Capability



zinnov

NelsonHall
ANALYTICS & CONSULTING

***ISG**

Life Science Digital Services

MedTech Digital Transformation Services - Europe
MedTech Digital Transformation Services - US

Manufacturing Industry Services

Digital Engineering – Transportation, US
Digital Engineering – Hi-Tech, US
Digital Engineering – Industrial, US
Digital Engineering – Transportation, Europe
Digital Engineering – Industrial, Europe

Internet of Things- Services & Solutions

IT/OT Tech Data Convergence
IoT Consulting and Services
AI on the Edge
IoT Endpoint Security
IoT Consulting and Services US
Managed IoT Services US
Connected Mobility Consulting and Services US

 Everest Group

ACES

Services

Semiconductor

Semiconductor Engineering Services
PEAK Matrix® Assessment 2021





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

- Therapeutic
- Diagnostic
- IVD & Lifesciences
- Musculoskeletal & Surgical
- Pharmaceutical

WHAT WE DO



Device Engineering



Digital Health Solutions



Manufacturing Services



Field Services

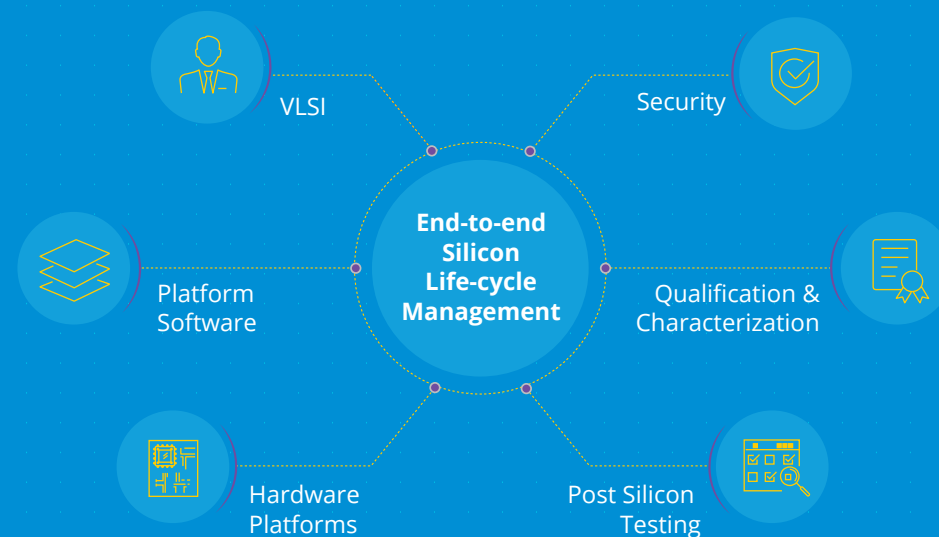


Quality Assurance & Regulatory Assurance

SUCCESS STORIES

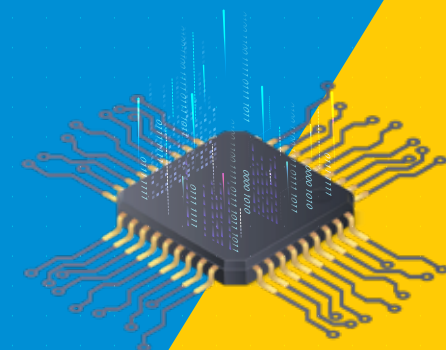
- Disposable and Single Hand Operated World's 1st Drug Patch Applicator
- World's Leading Smart Inhaler
- 3D Printing for Customized Knee Implants
- World's 1st Medical Device to Produce 40 atm Pressure
- World's 1st Airway Clearance System with Bluetooth® Connectivity
- Integrated Reusable Vessel Sealing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

SEMICONDUCTORS



SUCCESS STORIES

- Turnkey System on Chip / ASIC Design:**
Image Processing Chip for Industrial Camera Applications
Laptop/PC AI SoC – Ultra Low Power Companion Chip
Mobile Phone Application Chips – SSD Controller
Low Power AR/VR SoC for Media & Entertainment Applications
- System Design and Validation:**
Data Center Products – Design and Validation
Automotive Infotainment Products
Networking Products
IoT Products



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 (CSP)



Mobile Network Operators (MNO)



Original Equipment Manufacturer (OEM)

WHAT WE DO



Network Orchestration & Virtualization (SDN/NFV)



IoT Service & Platform Enablement



Telco Cloud Engineering



Global Field Testing and Automation



5G - Chip to Cloud Deployment



5G - Lab as a Service

KEY DIFFERENTIATORS

- ◆ End-to-End Product Design & Development
- ◆ Private LTE/5G Network in Lab
- ◆ 5G Automation Framework
- ◆ Acceleration-as-a-Service & Monetization Solutions
- ◆ ORAN based Open Sourced 5G Lab
- ◆ Test Factory - Tools, IP & Frameworks



MEDIA & ENTERTAINMENT

WHO WE SERVE



WHAT WE DO



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

- ◆ Oil & Gas
- ◆ Chemicals
- ◆ Home & Personal Care
- ◆ Food, Beverages & Dairy
- ◆ Pharmaceuticals
- ◆ Discrete Manufacturing

WHAT WE DO



SUCCESS STORIES

- ◆ Turnkey Wastewater Management services for global F&B major in USA
- ◆ Enabled expansion project for global polymer major during pandemic
- ◆ EPCM Services for Chemical Major in Europe
- ◆ EPCM services for tire plant in India
- ◆ Engineering for Edible oil refinery in South Africa
- ◆ Engineering plant safety with machine guarding solutions for HPC major in US
- ◆ OPEX reduction using ZLD concept enabling 42% recycled water reuse for tire manufacturer
- ◆ Engineering for Greenfield projects in India for global F&B major





ENGINEERING THE CHANGE