

# BUSINESS UPDATE: ACQUISITION

January 2023



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# Transaction Overview

On 12<sup>th</sup> January 2023, the Board of Directors & Audit Committee of L&T Technology Services Ltd. (LTTS) approved the acquisition of Smart World & Communication (SWC) business of Larsen & Toubro Limited subject to approval of shareholders



## Transaction Summary

- **Transaction consideration** of INR 8 Bn
- LTTS to fund transaction using internal cash reserves
- Completion is subject to approval from shareholders
- Closing is expected to be achieved within 3 months



## Strategic Rationale

- **Revenue:** INR 10.98 Bn (FY22)
- **700+ Employees** across India
- SWC is a leading connected intelligence solution provider operating in 3 segments – Communications (74%), Safe & Smart Solutions (25%), Cybersecurity (1%)
- Aligns with 3 of the 6 Big Bets of LTTS – 5G, Sustainability & Digital Products & AI
- Acquisition will enhance LTTS' end-to-end offerings playbook across Next-Gen Communications, Sustainable Spaces & Cybersecurity

# About SWC



## COMMUNICATIONS



## SAFE & SMART SOLUTIONS



## CYBERSECURITY

### Business Overview

- Solutions for Wired & Wireless networks (including OFC, GPON, Wi-Fi, 5G) covering design, implementation, monitoring, modernization & cloud-based network management
- Integrated NOC/SOC/DCO capability to implement converged solutions around Data Centre, Multi-Cloud and Virtualisation

- Solving challenges of rapid urbanization with tech platforms for citizen safety, crowd management, intelligent traffic and transit management
- Offerings across themes of Safety, Security, Integrated Operations, and Intelligent Automation

- Advisory, Implementation and Managed services for Threat Monitoring, Vulnerability Assessment, SOC design, implementation, management, and governance
- Full Life Cycle Cyber Security strategies

### Successes

- Mega Communications Projects connecting 30k+ Gram Panchayats
- Manage, Support & Operate the country-wide Network of an Indian Govt. Entity

- Implemented 27 Smart Cities with Integrated Command Control Centers (ICCCs)
- Integrated 125K+ IoT Devices & 30+ Data Centers and a leader in the metro communication space in India

- Security Assessment, Network & Security Architecture for OT network monitoring & secure remote access solution for an Indian Bank

### Assets

**650+  
Engineering  
Talent**

Solution Architects  
Network Architects  
IoT Experts

Cybersecurity Experts  
O-RAN, NMS Experts  
DC & Cloud Experts

**Solutions &  
Platforms**

Fusion™ platform  
gEdge Data Centre

**Labs &  
CoEs**

5G Experience Centre, Chennai  
NOC/SOC, Chennai  
Software Foundry, Hyd.



# The Market

## Next-Gen Communications



### Global Communications market:

5G Total Impact on worldwide GDP by 2030: US\$1.3 Tn (PWC)

- NOC
- NextGen Networks
- Data Centers & Pvt. Cloud
- Telecom & Pvt. 5G

## Sustainable Spaces



### Global Sustainable Spaces market:

ITES TAM for Sustainable spaces by 2025 – US\$241 Bn (Statista 2022)

- Infra & Spaces
- Public Safety & Traffic
- Smart Cities and Utilities
- Integrated Command and Control Center (IC3)

## Cybersecure



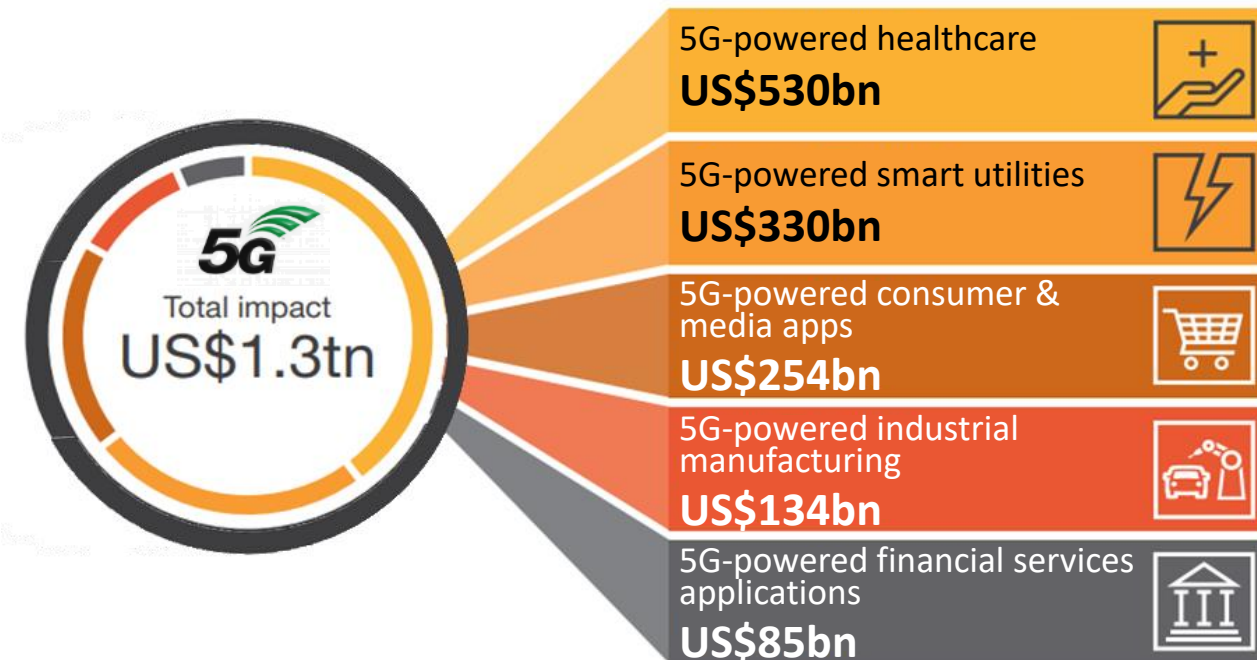
### Global Cybersecurity market:

US\$376 Bn by 2029 growing at CAGR of 13.4% (Fortune Business Insights)

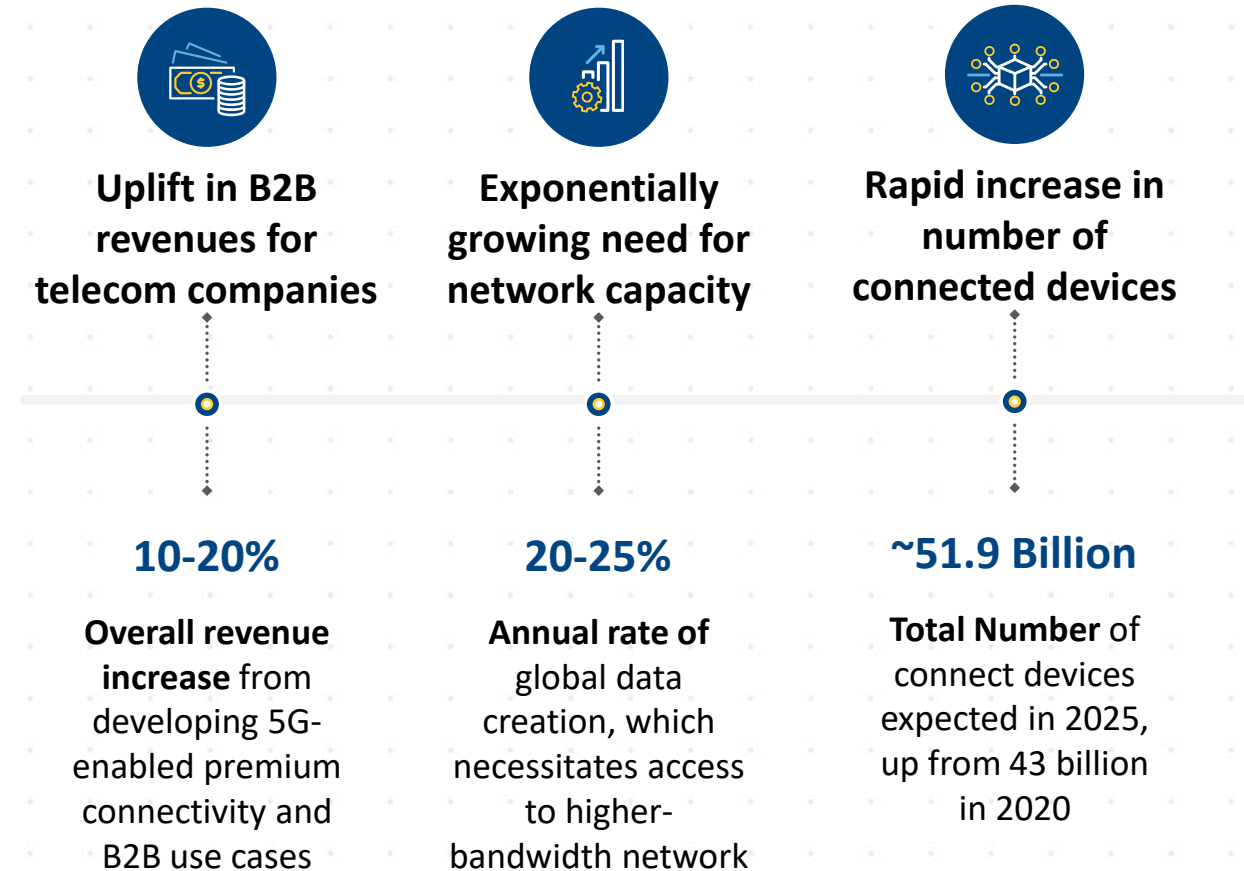
- SOC
- Cyber Defense
- Cyber Physical Security
- Platform Security

# Next-Gen Communications has Innovative use cases across Segments

## 5G boost to global GDP by industry by 2030



## Monetization opportunities for technology and telecom companies



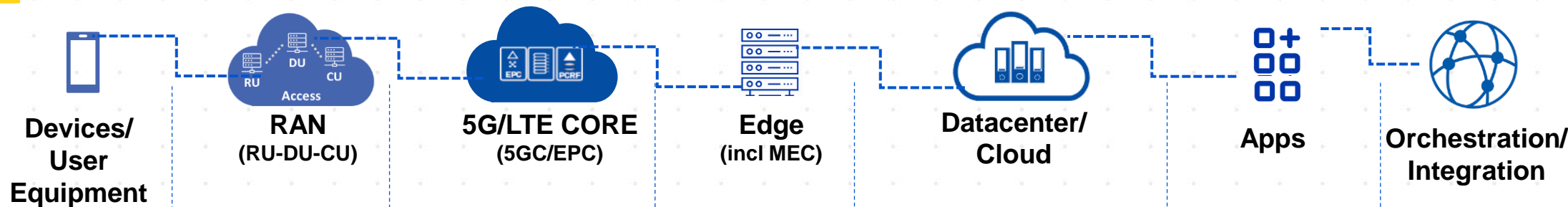
Source: PWC, McKinsey

# Next-Gen Communications: Full Spectrum of Offerings, Together

LTTS  
SWC

Practice ▶

Services ▼



Consulting	LTTS	LTTS	LTTS + SWC		SWC	SWC/LTTS	SWC/LTTS
Network Arch., Planning & Design			Network & Edge Services		SDN, DR, VMWare CoE		Survey, Design
Deployment	Field testing		OSS, Controllers, Orchestrators, Tools, EdgyNeer™		DC-Setup	Cloudification	Network Rollout
Managed Services & Testing	Devices, Lab-as-a-Service, Test & Automation	IntelliAgent™	E2E Lab as a Service, Test & Automation		DC and Multi-cloud Ops	Industry Specific App Dev & Test, IntelliAgent™	
Automation / Orchestration	FOTA management		Service Assurance, Service Fulfilment, Analytics				
Applications/Use cases	Coverage & SLA Monitoring (IA)		MEC Apps Development			Auto, Mining, Agri, Medical, Safety, Industrial	App Dev, Platforms
Product Development	ASIC, New Product Dev. & Val.	RAN Dev & Validation	Core Dev & Validation	gEDGE		Domain specific apps./ App Store	-
NOC & SOC							

# Next-Gen Communications: Case Studies

## Private LTE Rollout

SWC



- Campus network for digital manufacturing
- Predictable coverage through LTE
- Machine vision for weld quality
- Partnership with Nokia and Vodafone Idea

## State Wide Area Network (SWAN) Implementations

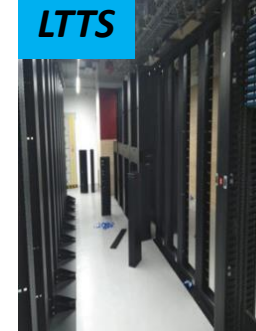
SWC



- **TANFINET:** End-to-end IP-MPLS network connectivity for 3,326 Gram Panchayats & 110 blocks across 9 districts of Tamil Nadu
- **Telangana Fiber Grid:** Establishment of T-NOC include complete IT & Non-IT infrastructure, NMS, EMS, BSS & related infrastructure for integration of EMS

## 5G Lab-as-a-Service

LTTS



- 15 to 20% cost saving
- 3000 Sq. Feet LAB Space with AHU, 250KVA Power UPS Power
- 32 Radio Racks, 24 Server Racks
- Automation of 5G SA and NSA System Testing test cases

## National Informatics Center DC

SWC



- Uptime Certified Data Center
- Private Cloud Infrastructure
- IaaS Services
- Compute Services
- Storage as Services
- DR / BCP
- Backup
- Automation and Orchestration
- 24x7 Operations and Management

## Connectivity for Mobility

SWC



- Telecom systems implementation, including, CCTV, Public Address, Displays, Radio, Fiber Optics, Intrusion Detection, and SOC.
- **Bengaluru Metro:** IC3 2, 29 metro stations, and 4 depots in scope
  - **Gandhinagar (Ahmedabad) Metro:** IC3 2, 33 metro stations, and 2 depots in scope
  - **Nagpur Metro:** IC3 2, 37 metro stations, and 2 depots in scope

## Proprietary : gEDGE Data Center

SWC

Revolutionary Software defined Edge DC powered by Immersion Cooling Technology.



- Up to 30% saving in Capex
- 55% reduction on physical space
- ~40% reduction in power consumption Opex
- 91% reduction in water consumption





# Plan to Expand and Grow: Next-Gen Communications

## Proposed Market Expansion



**NextGen  
Networks**



**Data Center &  
Private Cloud**



**Telecom &  
Private 5G**

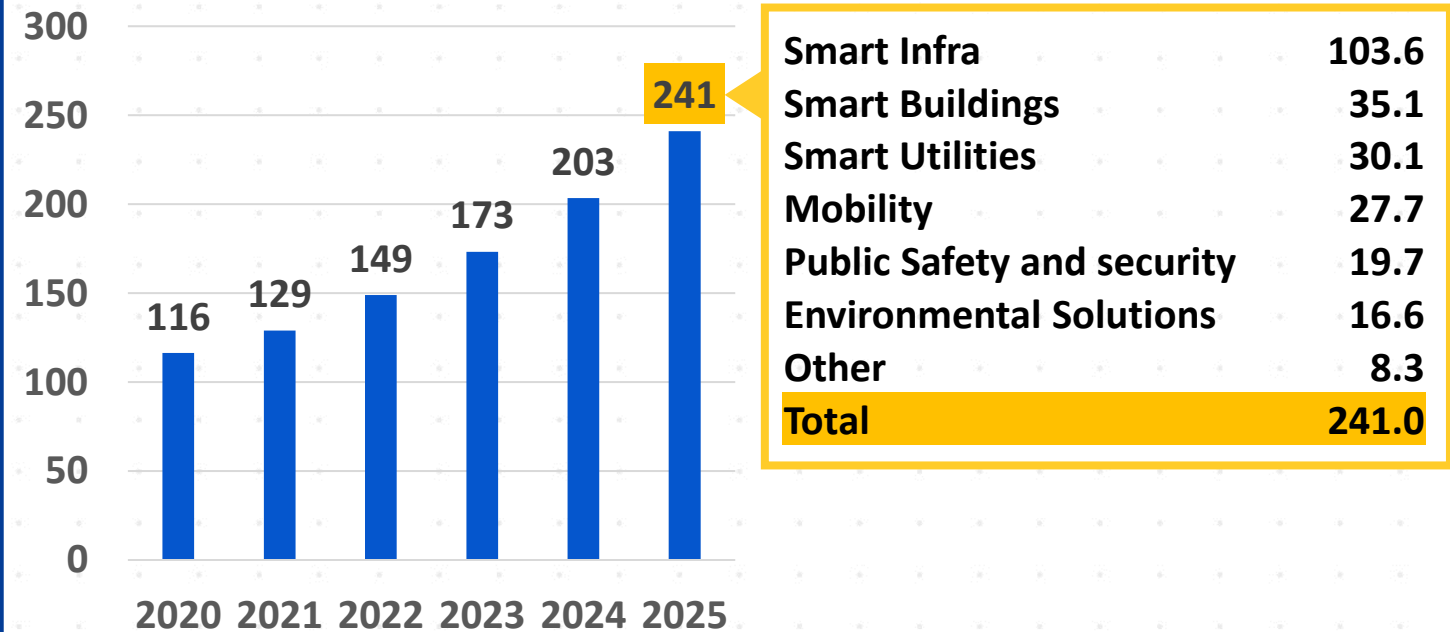
- // Expand in US | Europe | Apac | Middle East
- // Architect, Rollout and manage Private 5G for Enterprise Clients
- // Connect Labs globally for client experience
- // GTM with OEM's and Hyperscalers

# Sustainable Spaces Market is Growing

With Rapid Urbanization, The World is moving towards Sustainable Spaces



ITES SERVICES: Sustainable Spaces Revenue worldwide 2020-2025 in \$Bn



Source: Statista 2022

# Sustainable Spaces: Complementary Offerings

## How we Move



Mobility   Parking   Transport   Airports   Surveillance   Crowd Mgmt.   Traffic

Green  
Corridor

Smart  
Infrastructure

Crowd/Event  
Mgmt.

Emergency  
Mgmt

Smart  
Parking

Smart  
Surveillance

Traffic Mgmt. &  
Enforcement

## How we Live



Govt.   Hospitals   Campus   Buildings   Homes

Multi-Agency  
Operation  
Platform

## How we Utilize



Safety   Water   Utilities   Energy

AI based  
Patrol Mgmt.

Smart  
Metering

Smart Water  
Mgmt.

Smart Waste  
Mgmt.

Smart Energy  
Mgmt.

SWC Offerings >

LTTS Offerings >

Offboard  
Charging

Flyboard  
Digital Signage

ELV Digital SI

iBEMS™ Light for  
Hospitals

iBEMS™ Building  
Exp. Mgmt.

Energy  
Manager

Smart space  
Experiences

Lighting/Fire/  
HVAC/BMS

Renewable  
Energy

# Sustainable Spaces: Case Studies

## Hyderabad: City Surveillance

SWC



- AI based insights – Crime Prev. & Response
- 12K cameras, 100K community cameras
- Improved Multi-Agency operations
- Public Information Dissemination
- Improved Situational Awareness
- Efficient City Ops. & Public Service Delivery

## Prayagraj: Crowd Management & Security

SWC



- Crowd Management of more than 250 million
- 1 Data Center
- Unified Smart City Platform
- City-wide Surveillance
- Crowd Management
- AI Based Video Analytics
- Unified IP Communication
- GPS based for SWM Collection

## Israel: Smart Building

LTTS



- 14,000 sensors generating over 50 TB of data per day across 800,000 square feet of physical floor space and nearly 3,000 employees
- Digital twin of the building's physical space and operations with Microsoft Azure and LTTS i-BEMSTM



## Mumbai: City Safety & Surveillance

SWC



- 10K Surveillance Cameras
- 2 Data Centers
- Improved Situational awareness
- Faster incident response
- Disaster preparedness
- Public Information Dissemination
- Real-time insights to field officer

## Proprietary : L&T Fusion platform

SWC

An integrated data visualization platform with pre-built domain-specific data ingestion tool, analytics, and customized user experiences

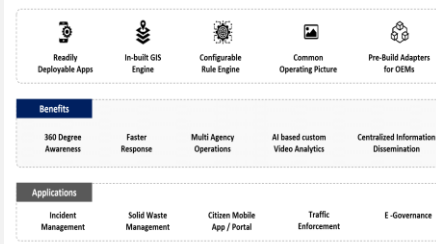
### Fusion SafeOS Platform

Fusion SafeOS is a pre-integrated Platform to solve Public Safety problems through context based real time AI Insights with focus on Field Officer empowerment



### Fusion CitiOS Platform

Fusion CitiOS is a domain centric Platform for integrated operations and Real Time Insights



## Proprietary : Smart Metering

SWC



- **UP Smart Meter** Installation of 4 million meters with data management, billing systems and mobile Citizen app
- **Haryana** 1 million meters
- **New Delhi** 68,000 meters including energy analytics

Advanced Metering Infrastructure (AMI) solutions regulating power consumption pattern & analytics dashboards, promoting online billing, infusing transparency and reducing line losses.



# Plan to Expand and Grow: Sustainable Spaces

## Proposed Market Expansion



**Smart Spaces &  
Critical Infra**



**Public Safety &  
Traffic**



**Smart Utilities**



**L&T Fusion™:  
CityOS & SafeOS  
Platform**

### // Additional Markets:

- // **Middle East:** KSA | Qatar | UAE
- // **Europe:** UK | France | Nordics | DACH
- // **US**
- // **APAC**

// Extend to Spaces (buildings/ campus), Airports & Communities

// LTTS Enterprise Customers including Oil & Gas and CPG customers Globally

## Joint Solutioning

- // Leverage Fusion™ + iBEMS + UBIQWeise
- // GTM with LTTS Enterprise Customers
- // Build-out own connectors & Apps

# Cybersecurity will continue to be a critical investment area

## Cyberattacks and cyber regulations are accelerating...

**1 out of 3**

Global organizations experienced a cyberattack in 2019 (+36% vs prior year)



Increasing complexity and frequency of cyberattacks

**220x**

Increase in spam from Feb-Mar 2022 due to COVID-19 outbreak vulnerabilities



Rising costs and losses from cyberattacks

**~\$10.5 Trillion**

Forecast costs and losses related to cybercrime by 2025, representing a 15% annual increase



Growing regulation in the US and globally

**+31**

New national cyber policies in the US in the past 5 years, with greater number globally

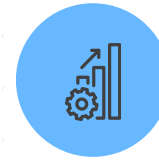


## ...so technology must keep up



**~\$376.3 Billion**

Global Cybersecurity Market by 2029



**3-13%**

Predicted economic benefit of digital identity by 2030 expressed as a share of GDP



**85%**

Share of small and midsize enterprises that intend to increase IT security spending until 2023




**~85%**

Share of companies that are victims of digital-identity-related fraud each year

# Cybersecure: Comprehensive Offerings

 SWC Offerings

 LTTS Offerings

## Device Security

- Device Security Assessment
- Threat Modeling
- Standard Compliance (IEC-62443, GB/T30976,32919 NIST)
- Secure Boot

## OT Security

- OT Security Architecture & Process Definition
- Standard Compliance (IEC-62443, NIST)
- Automated Inventory Management and Visibility

## IoT & App Security

- Security assessment of IoT landscape
- Penetration testing
- Security Standards Compliance
- Dev Sec Ops
- Web and Mobile app threat modeling

## Full Life Cycle Security

- Security Strategy and Roadmap
- Maturity Assessment
- Security Architecture & Blueprint
- Third Party Risk Assessment
- Endpoint Security (EDR, CWPP)
- 24x7 Security & Threat Monitoring
- Automation Engineering

## Security Operations Centre (SOC)

# Cybersecure: Case Studies

## Tyre manufacturer in India



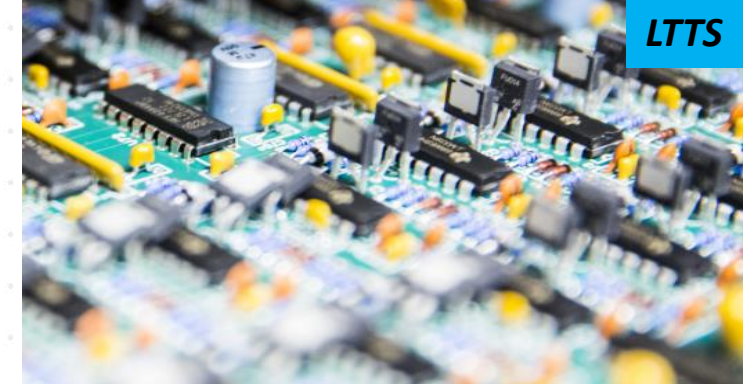
- Security assessment of Plant environment including the processes and the related components.
- Detailed discovery of all the assets in process networks, machine networks and MES network
- **Gap Assessment Report**
- Network and Security Architecture for OT **network monitoring** and **secure remote access solution**.

## Security Solution :Freight rail network



- Developed a **Security Control Framework** based on global Standards
- Designed and implemented cyber security requirements for IT and OT Network
- **Network Visibility & Monitoring Solution**, Firewall, **Remote Access Solution**, Domain Controller, **Industrial DMZ**, patch management, Workstations with Antivirus, End point, etc.

## Security for 5G network in Mfg. plant



- Developed security test cases for each component of 5G network (Core, RAN, 5G Client, NMS and User Management)
- Review overall architecture inline with Cyber security requirements
- Review firewall requirements for a manufacturing setup & Independent review of maintenance and service contract
- Recommended End to End threat monitoring solution



# Plan to Expand and Grow: Cybersecure

## Proposed Market Expansion



**Cyber Defense**



**Cyber Physical  
systems**



**Platform Security**

- // Treat Cybersecure as a Horizontal with Digital Products & AI
- // Leverage existing relationships to expand
- // Create SOC's as a service
- // Cyber advisory
- // Partnerships and Alliances

# LTTS + SWC Synergies

## Business Segments:



### Communications

**Global Communications market:**  
5G Total Impact on worldwide GDP by 2030: US\$1.3 Tn (PWC)



### Safe & Smart Cities

**Global Sustainable Spaces market:**  
ITES TAM for Sustainable spaces by 2025 – US\$241 Bn (Statista 2022)



### Cybersecurity

**Global cyber security market:**  
\$155.8 Bn in 2022; \$376.32 Bn by 2029  
CAGR of 13.4% (Fortune Business Insights)

## SWC Offerings

- Network Operations Center (NOC)
- OSS, Network Architecture, Planning & Roll Out
- Datacenter, Private 5G & Cloud
- Revenue: ~\$100M

- Safety & Surveillance
- Traffic Management
- Waste Management
- Smart Metering
- Fusion™ Platform & IC3
- Revenue: ~\$30M

- Security Operating Centers (SOC)
- Full Lifecycle Threat Management
- Revenue: ~\$1M

## LTTS Offerings

- Operator Network mgmt. and assurance, RAN
- 5G Lab-as-a-Service
- OEM NPD/Sustenance
- Revenue: ~\$60M

- Building Automation
- Energy & Sustainability
- iBEMS™ | UBIQWeise™
- Revenue: ~\$10M

- OT Cybersecurity
- Product security
- Revenue: ~\$9M



## Synergies to Expand & Grow



### Next-Gen Communications

**Full stack offerings** with added capabilities in 5G for Operators, OEMs and enterprises  
Revenue: ~\$160M



### Sustainable Spaces

**End to End solutions across** Efficient Campuses and Cities, Utilities, Mobility, Public Safety and Environment;  
Revenue: ~\$40M



### Cybersecure

Cybersecurity playbook for End-to-end **Security Lifecycle Management**;  
Revenue: ~\$10M

Opportunities in: **NA | Europe | Middle East | APAC | India**

# Aligns with 3 of LTTS' 6 Big Bets

## LTTS Big Bets



**5G**



**Sustainability**



**Digital Products**

## LTTS + SWC

- Telecom Operator play strengthened with full stack offering and NOC
  - Global Enterprise Private 5G market can be addressed better
  - Lab-as-a-Service across products and telecom equipment
  - 5G capability to enhance overall offerings in V2X, Edge computing and Vehicle analytics
- 
- Current offerings directly addresses multiple aspects sustainability for Safety & Surveillance | Traffic Mgmt. | Waste Management | Smart Metering
  - Integrated Control and Command Center
- 
- Extend cyber security to Products, OT, IT and Cloud
  - Extend Apps for Safe OS and City OS across domains
  - Enhanced IIOT capabilities
  - SOC



## ABOUT L&T TECHNOLOGY SERVICES

L&T Technology Services Limited (LTTS) is a listed subsidiary of Larsen & Toubro Limited focused on Engineering and R&D (ER&D) services. We offer consultancy, design, development and testing services across the product and process development life cycle. Our customer base includes 69 Fortune 500 companies and 57 of the world's top ER&D companies, across industrial products, medical devices, transportation, telecom & hi-tech, and the process industries. Headquartered in India, we have over 21,600 employees spread across 22 global design centers, 28 global sales offices and 91 innovation labs as of December 31, 2022.

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