Tech Mahindra: Driving exponential GROWTH
Revenue: $18.9 Billion | 18 industries | Market Capitalization: $27.6 billion
Our Journey in Indonesia

- 2005: TechM started Operations
- 2006: PT Tech Mahindra got established
- 2007: 170+ Associates
- 2008: 250+ Associates
- 2009: 300+ Associates
- 2018: 450+ Associates

- Over 11+ years in Indonesia
- Business Spread
  - Telecom: 70%
  - Energy & Retail: 20%
  - Financial Services: 10%
- Services
  - Managed Services and IT Outsourcing
  - Application Development
  - Maintenance & Support
  - Infrastructure Support
  - SI
  - BI
  - Consultancy
  - SAP Support

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The “Smart” features of Industry 4.0 platform

**Digital End-to-End Engineering**
Data and information available at all stages of a product lifecycle

**Smart Supply Network**
Collaboration network, sophisticated marketplace offerings, Fully connected supply chains and logistic

**End-to-End data flow**

**Smart Factories**
Decentralized production control, Data-Driven operational excellence

**Horizontal Integration**

*Smart* - beyond connectivity & interoperability is the **distribution of intelligence** between industrial objects, networks and information systems, together with **making sense out of that complexity**
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Smart City Solutions
SMART ADVANCE METERING INFRASTRUCTURE (AMI)

SMART AMI SOLUTION

- Real time monitoring on faults, leakage, abnormal consumption
- Preventive maintenance scheduling
- MD (Max Demand) trending
- Rest of Life Predictions
- Seamless integration of Sensors, cloud analytics providing reporting and actionable analytics
- Alerts on Power Losses (basis PF); Power Supply condition (basis Frequency)

BUSINESS BENEFITS

- Optimize energy consumption by selective phase Switching
- Possibility of providing prepaid metering
- Ease of operation for the O&M team
- Reduced manpower due to system automation
- Preventive Costly Breakdown
 SMART STREET LIGHTING

- Dashboard showing the location of lights on the map
- Status of the lights (On/Off) by color indication (Alternate Lights)
- Control of light operation
- Configuration page
- Configuring the Luminosity level (for LED lights)
- Naming of the light point

 SMART LIGHTING SOLUTION

 BUSINESS BENEFITS

- Energy Savings of up to 20% - 30%
- Light lamps life increased to 200% - 300%
- Reduction in replacement, hardware and installation
- Optimizing the electricity usage in the Campus
- Ensuring the uptime of the lights in the city
- Easy and speedy rectification of faulty light points
- Real time inventory management & prediction
SMART PARKING SOLUTION

- Identification of Authorized vehicles / Elimination of Manual Intervention
- Enhanced security / Monitoring of Parking bay using live camera feeds
- Eliminate wait time for authorized users
- Message / Email notification guiding the way towards the Parking
- Current hourly occupancy vs. historic average
- “Hot Spots” where occupancy is the highest
- Real time status of Parking slots
- Road Safety
- Vehicle & Transit Licensing
- Traffic Management reducing congestion

SMART PARKING & TRANSPORTATION MANAGEMENT
SMART BUILDING ENERGY MANAGEMENT

BUILDING ENERGY MANAGEMENT SOLUTION

- Real time monitoring of Diesel Generator (DG) Status
- Monitoring of fuel tank and its usage
- Temperature of the DG Room
- Real Time alerts on the level of Water Tanks

BUSINESS BENEFITS

- Reduction in carbon emission by 50% - 60% for indoor lights
- Optimize cost and reduced OPEX
- Real time alerts to prevent fuel pilferage
- Increased Productivity
- Preventive maintenance & increased asset life
Section 1
Smart City Overview
Smart City - Experience so far...

**Lucknow**
- Design & Implementation of Surveillance network comprising of IP CCTVs, ANPR, Video Analytics, Mobile Surveillance system, Command & Control Centre & Data Centre
- 280 High resolution cameras installed at 70 strategic locations. 40 of these are with ANPR technology
- Command & Control centre implanted with a capacity of 6 operators & 2 supervisors on 24X7 basis with provision for scalability till 20 operators

**Mumbai**
- Citizen centric governance for Smart Cities –
  - Mobile App & Web Portal development
  - Provide Single touch point to citizens for multiple services of Smart Governance
  - Multiple channels supported – Mobile App/ Web App/ IVR/SMS/ Email/ USSD
  - Unified approach to G2C/ G2G/ G2B services
- Provide Single window for managing SLA
- 33000 man-days saving due to ease of access of information
- Improves Citizen Communication
- Improved Emergency Alert and Response
- 6.5 lakhs Employees Covered

**Delhi**
- Developed Enterprise Management System consisting 70 applications for various MCD Departments, Citizen Services Bureaus and Citizens. The applications are integrated with existing legacy Applications, Payment Gateway, SMS Gateway and Biometric data
- Provide Single Window services” to citizens on any time, anywhere basis
- Increase the efficiency and productivity of organization and “better monitoring and transparency”
- Develop a “single and integrated view of MCD information system” across all departments and offices in the MCD
- Provide “timely & reliable management information” relating to municipal administration for effective decision making

**Singapore**
- Enabled 70 govt. agencies to discover, share & analyze 360+ layers of Geospatial data provided by 34 Govt. dept.
- Saved US$9 million in application development costs and US$2.5 million in annual maintenance costs, by deploying SOA to take advantage of reusable data
- Enabled Agencies to make changes to applications 30% faster than before due to GeoSpace’ s robust SOA framework
- Ensured Up-to-date geospatial information is always available for agency staff to analyze, by updating it daily rather than quarterly
Tech Mahindra’s Vision of Smart City
The Connected Components

DIGITAL TECHNOLOGY FOUNDATION

Networks  Mobility  Analytics  Cloud  Social  Security  Sensors

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Section 1
Public Sector – Case Studies
Accounting Corporate and Regulatory Authority (AMS, Tech Refresh & BPCS)

Client Overview

The Accounting and Corporate Regulatory Authority (ACRA) is the national regulator of business entities and public accountants in Singapore. The mission of ACRA is to provide a responsive and trusted regulatory environment for businesses and public accountants.

Solutions and Technology Stack

- Annual Maintenance and Support, Infrastructure Upgrade, testing and migration of Data and Documents) and BPCS (Business Process Consultancy Services)
- Fusion Middleware (Business Process Management for work flows & Content Management)
- Oracle Weblogic Server 11g, BPM 10.3g, UCM 11g, Crystal Report Server 2008, Oracle DB 11g (with RAC, Diagnostic, Tuning pack), VERITAS NetBackup, iPlanet Web Server NimSoft, CA Workload Management)
- IMS services for environment setup to host the application developed by TechM in GDC (Government Data Center)
SLA (Singapore Land Authority)

Client Overview

- The Singapore Land Authority (SLA) is a statutory board under the Ministry of Law in Singapore. Their main focus is on land resource optimisation. This is a critical role in Singapore, where land is used for a wide range of activities.
- SLA is responsible for the management of State land and buildings, land sales, leases, acquisitions and allocation.

Mission - "Limited Land • Unlimited Space"

Solution and Key Highlights

- Development → New GeoApps built on GeoSpace application
- Maintenance and Support → GeoSpace (Clearinghouse for SG-SPACE) and INLIS (Integrated Land Information System)
- Engaged in development/maintenance of several marquee projects such as CGS, GDMS, Wireless@SG, LandNet, INLIS and GeoSpace
- Active implementers of GIS technology and mobility solutions
- Winner of most prestigious GIS awards across the globe

Technology Stack

- ESRI ArcGIS Suite 9.3, Java J2EE
- Oracle WebCenter 11g, Oracle DB and SOA 11g
- Google Search Appliance
- Safe FME Suite 11, Adobe FLEX, VMware
- Dot Net, ADABAS, Natural Programs, VC++ DayCMS
Land Transport Authority

Client Overview

The Land Transport Authority (LTA) is a statutory board under the Ministry of Transport, that spearheads land transport developments in Singapore. LTA plans the long-term transport needs of Singapore, taking care of those who drive as well as those who take public transport. The ultimate goal - a smooth and seamless journey for all.

Solution and Technology

- SAP project - Support & Maintenance → 40 applications
- Eight years and continuing with huge SAP implementation
- Core business [Engineering, Innovation & InfoComm Technology, Policy & Planning, Rail, Road Projects, Road Operations & Community Partnership, Safety & Contracts, Vehicle & Transit Licensing, Transportation & Ticketing, Technology]
- Corporate Planning and Research, Internal business [HR & Finance]
- Corporate communication

Technology

- Key Technologies and Skills involved
- J2EE, .NET, SAP, SharePoint, Documententum / FileNet, Oracle BPM, DayCMS, GIS
Municipal Corporation of Delhi

Client Overview

The Municipal Corporation of Delhi (MCD) is amongst the largest municipal bodies in the world providing civic services to more than estimated population of 13.78 million citizens in the capital city.

Mission

MCD intends to enrich citizens' life by providing them development opportunities and maintaining & developing civic infrastructure, through services like: Urban Planning, Public Heath Services, Civil Construction Works, Maintenance of Buildings & Roads.

Technology

- Turnkey project which includes
- Web Based Portal
- Application Development & Integration
- Content Management
- Document Management
- Application Support and Maintenance
- Capacity Building & Change Management
- Data Centre Setup and Management
- Helpdesk & Training
Application Users

MCD Portal

Hospital Information System
- Hospital Management Functions
- Data Synchronization & Integration with new applications
- Engineering department functions; Zonal office operations

School Users
- School operations; Content Access
- Content access on portal; Retrieve or submit forms, docs for various services; online payments; Request information

School Staff

Hospital Operations

Citizens
- E- Tendering, Content Access, Payments

Vendors/ Agencies

Banks/ Gateways
- Online Payments

Backend Departmental Users

Engineering Division Users
- Zonal Offices
- Other Offices

Hospital Staff

Hospital Management Functions

Content access on portal; Retrieve or submit forms, docs for various services; online payments; Request information

Engineering department functions; Zonal office operations

For processing incoming and outgoing requests for application services to and from external and internal entities

ERP operations, Dashboards, MIS, Rules Management, Content Access

Gateway Services

Head Office Users

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# Delhi Crime and Criminal Tracking & Network System

## Client Overview

The Ministry of Home Affairs has conceptualized the Crime & Criminals Tracking Network and Systems (CCTNS) project as a Mission Mode Project under the National e-Governance Plan (NeGP).

## Solution Coverage

- CAS (Core Application Software) Implementation, Customization, Integration with Legacy Systems & Maintenance
- Design, Supply, Installation, Commissioning, Operations & Maintenance of IT Infrastructure, DC/ DRC set up, Network connectivity (LAN Setup at Client Site)
- Setting up Helpdesk Services
- Development of Training centers & Capacity building
- Data Migration & Digitization
- Technology: Java/J2EE based technologies, MySQL, Jasper, Solaris, Windows
- Execution methodology: Water Fall, Agile methodology
- Type of project: System Integrator

## Target

- CCTNS will enable end-to-end Crime and Criminal tracking.
- Enable online registration of Complaints, FIR Registration, Investigation and Prosecution.
- Enables connectivity at:
  - 182 Police Stations
  - 276 Highers Offices, Units including 16 Training centres
- CCTNS will enable sharing of data between states through central database maintained at NCRB.

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**Client Overview**

- AOT operates Suvarnabhumi Airport (Bangkok) which was a Greenfield Airport and commenced operations in Sep 2007 with a capacity of 45 Million Passengers per annum.

**Project Overview**

- TechM part was the largest SI to develop multiple applications for AOT
- Contract worth 55 Million USD in entirety TechM delivered 3 critical areas of the total solution valued at 10 Million USD

**Business Need**

- An Airport Information Management System (AIMS) with
  - A State of the art data operations
  - Data and system monitoring
  - Transparent and flexible airport billing system

**TechM Scope**

- Integration Infrastructure
- Information Kiosks
- Portal
Integration - Solution Overview

- **webMethods Integration Platform**
- **260+ interfaces of various types**
  - State of the art web services
  - Scheduled / dynamic FT
  - Direct database access
  - Applications running
    - TCP/IP
    - OPC standards.
- **Major Sub systems integrated**
  - Passenger Terminal Complex
  - Roadside Traffic Control
  - Aeronautical System
  - Airline Host Systems
  - Government and other systems
Thank you

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