

# AMARAVATI DEEP DIVE WORKSHOP

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14, 15 DECEMBER 2017

THE GATEWAY HOTEL, VIJAYAWADA

Liveability | Economic Powerhouse  
Infrastructure | Governance



ICT and Smart Cities



- What are the smart components that have been incorporated in Infrastructure, and are they state-of-the art? How are they integrated?

*.....What best world class ICT infrastructure*

- What is strategy for Total Lifecycle Digital Asset Management?

*..... What other platforms and services*

- What are popular e-services under Smart city? How are we making our way there?

*.....What other Smart City Components*

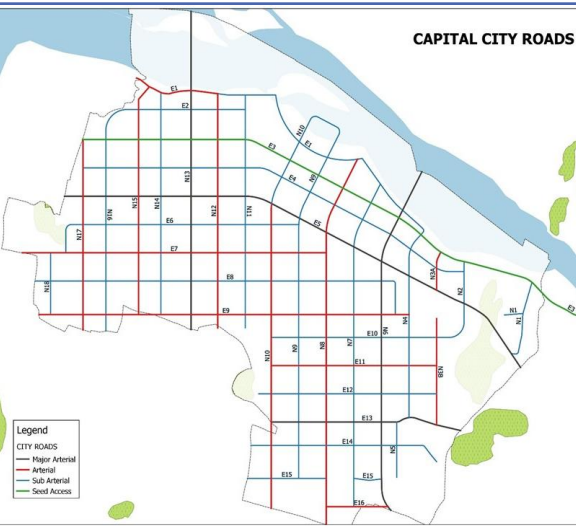


## What best world class ICT infrastructure

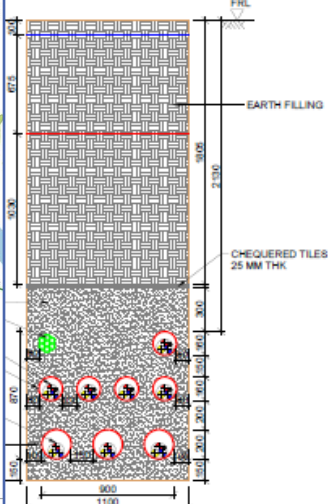
- High Speed Network
- Wired and Wireless Communication Systems
- Data Centres and Disaster Recovery Centres
- Integrated Operations Centre



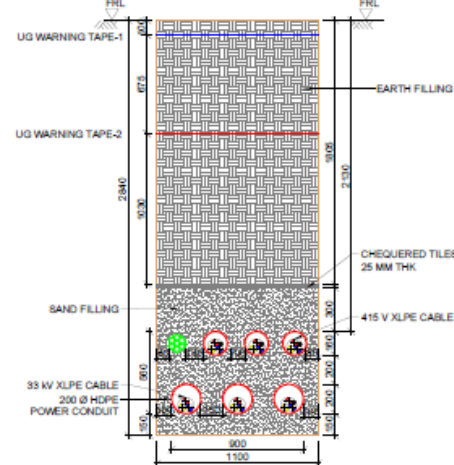
# ICT Infrastructure provisions under implementation



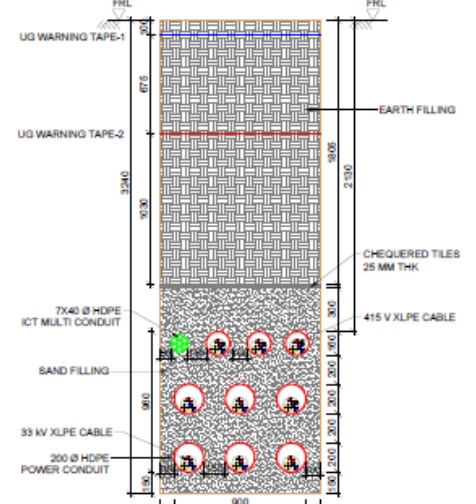
CAPITAL CITY ROADS



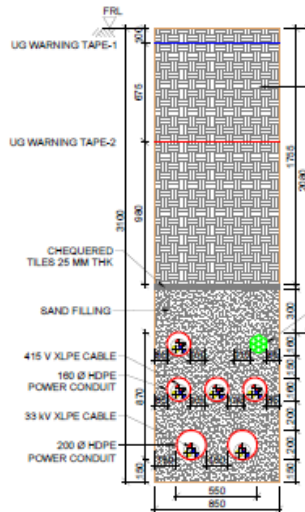
A1-CONFIGURATION  
SCALE - 1:16



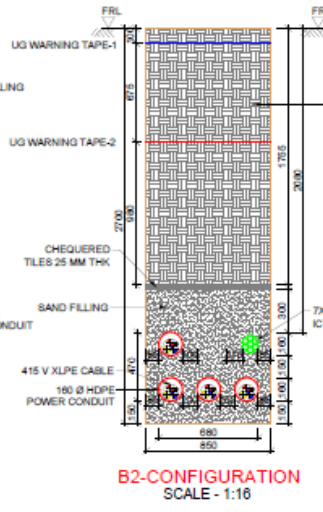
A2-CONFIGURATION  
SCALE - 1:16



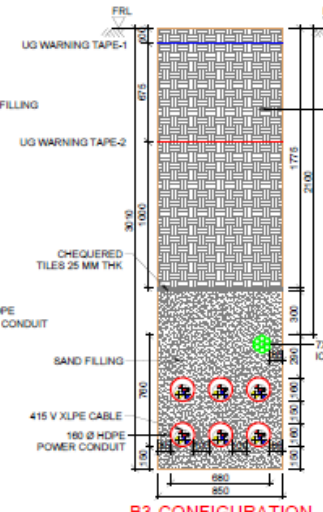
A3-CONFIGURATION  
SCALE - 1:16



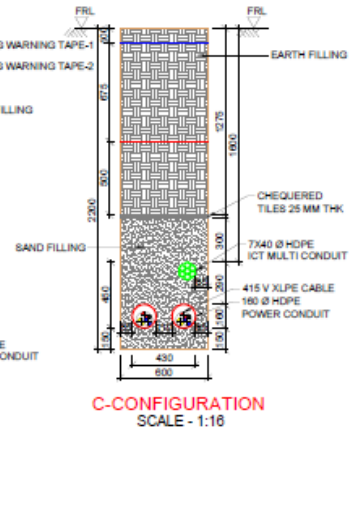
B1-CONFIGURATION  
SCALE - 1:16



B2-CONFIGURATION  
SCALE - 1:16



B3-CONFIGURATION  
SCALE - 1:16



C-CONFIGURATION  
SCALE - 1:16



## What Platforms and Services

- City E-portal
- Customer Relationship Management
- Sector specific – Transportation/parking, Security/Surveillance, Emergency Services, Health, Waste Management.....
- Asset Management
- ..... many more



## URBAN ASSET AND INFRASTRUCTURE MANAGEMENT SYSTEM (UAIMS)

- Urban Spatial Data Management System
- Development Control Regulations System
- Infrastructure planning and Maintenance System
- Asset Management System
- Tax Management System
- Estate Management System
- Citizen-centric Services
- GIS Integration



## What Smart City Components

- **SHARED LIFE**
  - Modular Data Centers
  - City Dashboard
  - GIS
- **CONVENIENT LIFE**
  - Smart Transportation - ITMS, Smart Parking, Integrated Public Transit, VMS, Traffic enforcement
  - Smart Power - Intelligent Inspection Management System, Intelligent O&M systems, SCADA enabled systems
  - Smart Energy Management
- **SAFE LIFE**
  - Video Monitoring - Smart Poles, Video enforcement (PTZ/Fixed cameras)
  - Urban Emergency Command – Surveillance systems, Emergency call buttons, Smart Poles, Incident Management Systems
- **HEALTHY LIFE**
  - Smart Healthcare Project
  - Smart Water Resource Management with SCADA enabled system
  - Smart Gas, Smart Solid Waste Management
- **HAPPY LIFE**
  - Smart e-government
  - Smart education



# e-Governance services – Citizen Connect



## MUNICIPAL

- ➔ Pay Property Tax Online
- ➔ Building Sanctions/Registration
- ➔ Geoportal (Land Records)
- ➔ Pay Utility Bills
- ➔ Birth/Death Certificate
- ➔ Digital Locker
- ➔ e-Court
- ➔ Waste Management
- ➔ Water & Power
- ➔ Grievances/Complain Redressal

## LIVE

- ➔ City Information
- ➔ Digital Community Centers
- ➔ Public Transportation
- ➔ Emergency Helplines
- ➔ Real-Time Information
- ➔ Community
- ➔ Healthcare
- ➔ Education

## WORK

- ➔ Job Search/Postings
- ➔ Starting a Business
- ➔ New Trade License
- ➔ Street Vendors  
Licensing & Management

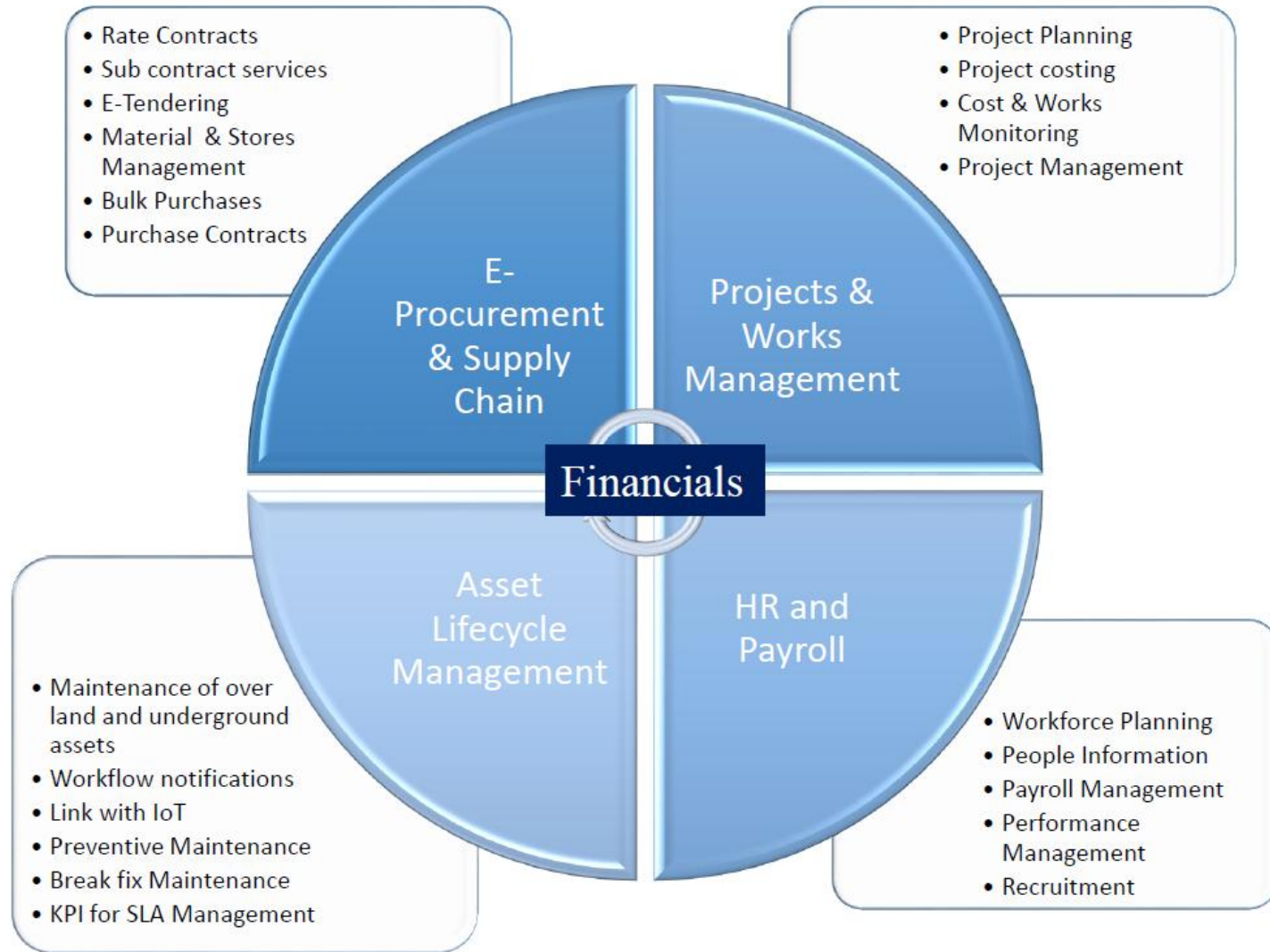
## ENJOY

- ➔ Events
- ➔ Dining-Out
- ➔ Things to do



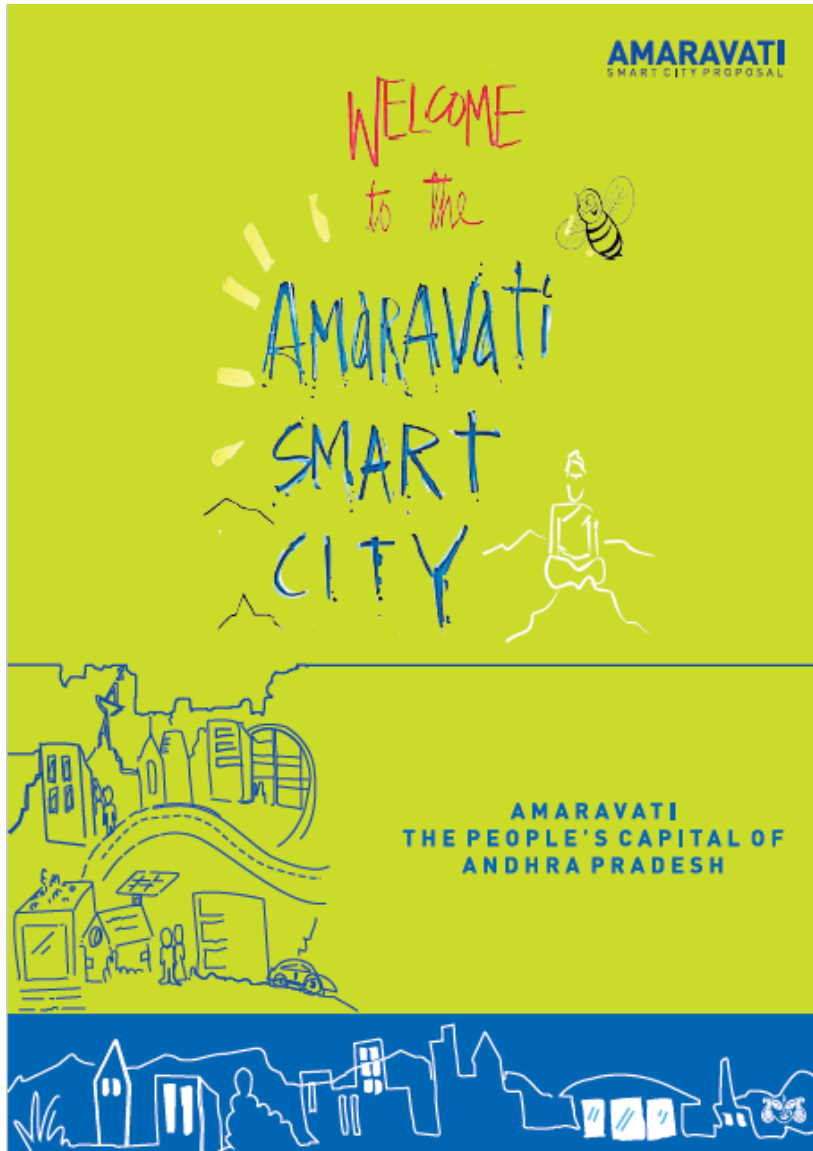


# e-Governance services - Internal





# Smart City Implementation – SCM Proposal



## **AREA BASED PROPOSAL – INR 1419 Cr**

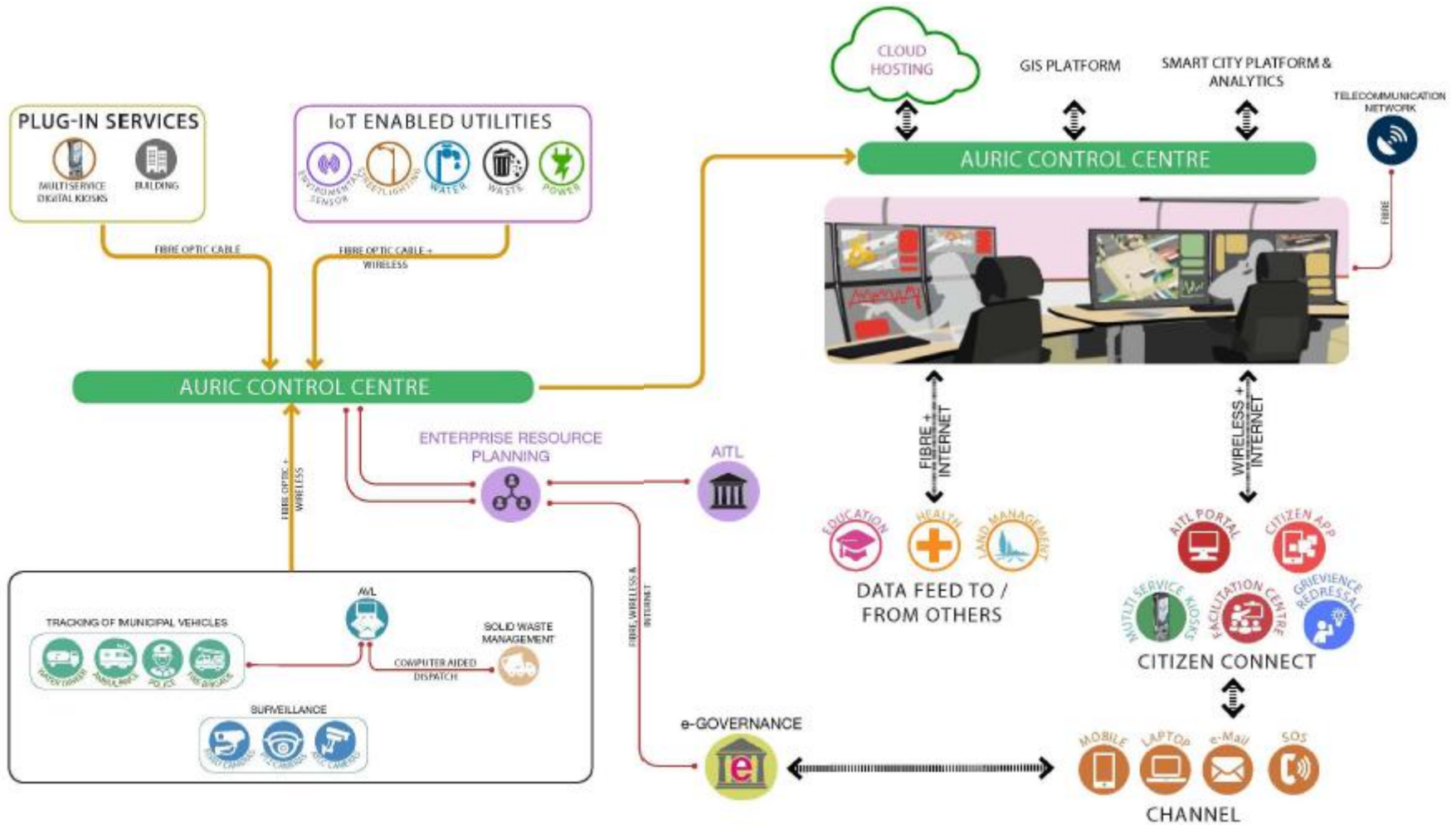
- (A) Micro-climate Management measures
- (B) Urban mobility with emphasis on TOD
- (C) Blue-Green
- (D) Social inclusion & Economic Development
- (E) Basic services
- (F) Improved governance

## **PAN CITY – INR 393 Cr**

- (A) Smart solar light pole with CCTV
- (B) Smart electric buses
- (C) Household smart meter connections
- (D) Commercial and industrial smart meters
- (E) Customer Survey
- (F) Digitisation of distribution network
- (G) Bulk Metering at each zone (DMA)
- (H) SCADA
- (I) Mobile app
- (J) Consumer Awareness
- (K) Leak Detection sensors
- (L) Flood Detection sensors



# Amaravati – Need for an overall ICT Architecture



Note – example of another project



# ICT Implementation PLAN

## Phase 1:

### Master Plan+Design Phase

- Requirements Gathering and Visioning;
- Detailed Engineering;
- **Development of RFP & Bid Process Management;**
- Award of Contract for MSI & MSI Mobilization.

## Phase 2:

### Implementation Phase

- System Implementation;
- Integration, Testing & Commissioning

## Phase 3:

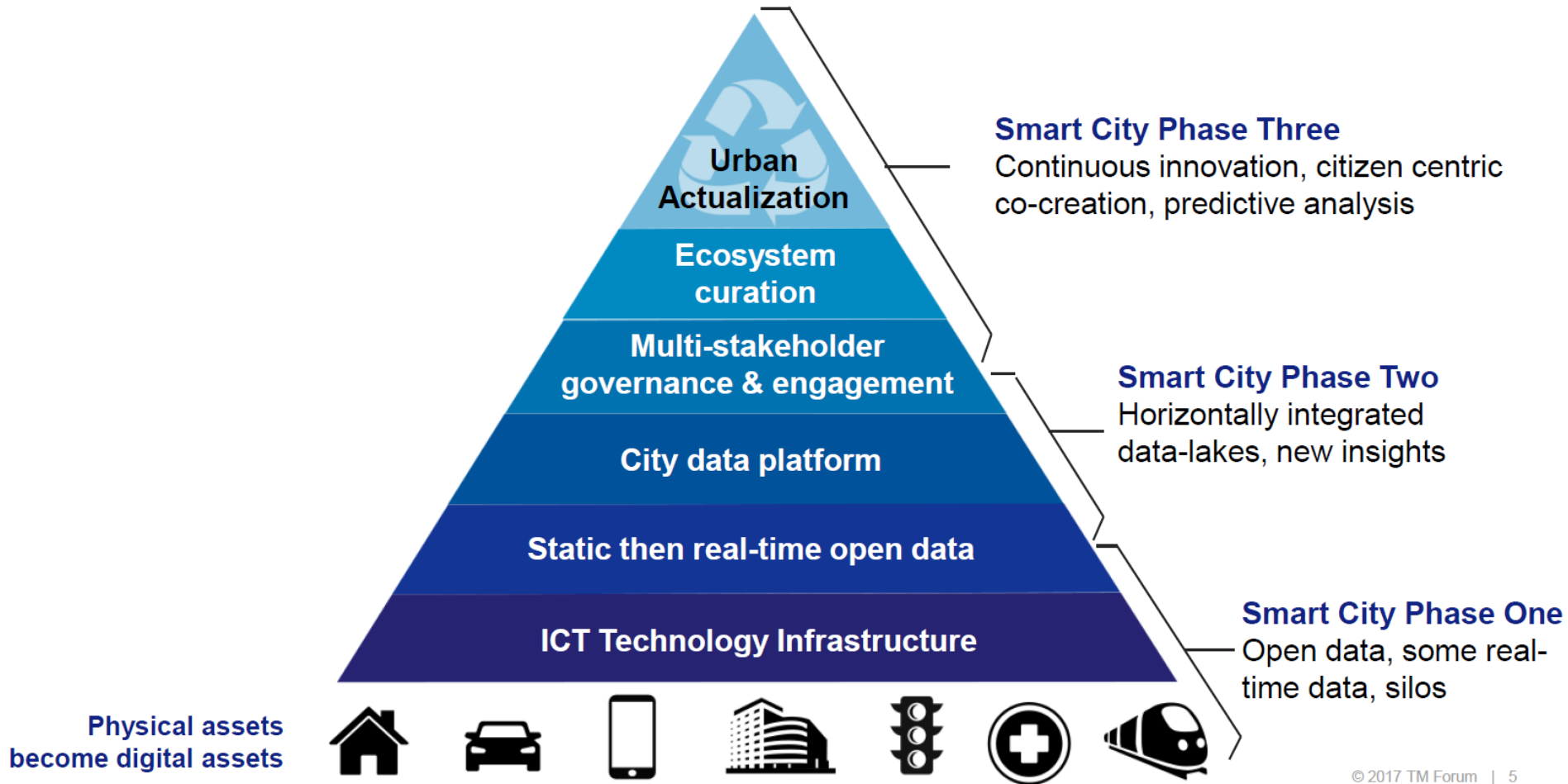
### Operations Phase

- Operations & Maintenance

Monitoring and Oversight



# The Smart City Hierarchy of Needs





**Rajeev Vijay, Director, Ch2M**

Over 25 years' experience in across multiple infrastructure sectors, leading planning and implementation of large scale Greenfield townships and smart cities



**Raghunath Babu, Surbana Jurong**

Key in setting urban systems for URA, Singapore and For last 13 years he has been actively pioneering urban systems setting up in various countries in Asia and Africa



**J. Satyanarayana, IAS (R),  
Advisor to Hon'ble CM**

Founder of e-Seva, and leading formulation of e-Governance and Capacity Building Roadmaps for states



**Purushottam Kaushik, Former MD,  
Cisco**

Experienced expert, advisor and trusted consultant across Smart cities, IOT, Digital India



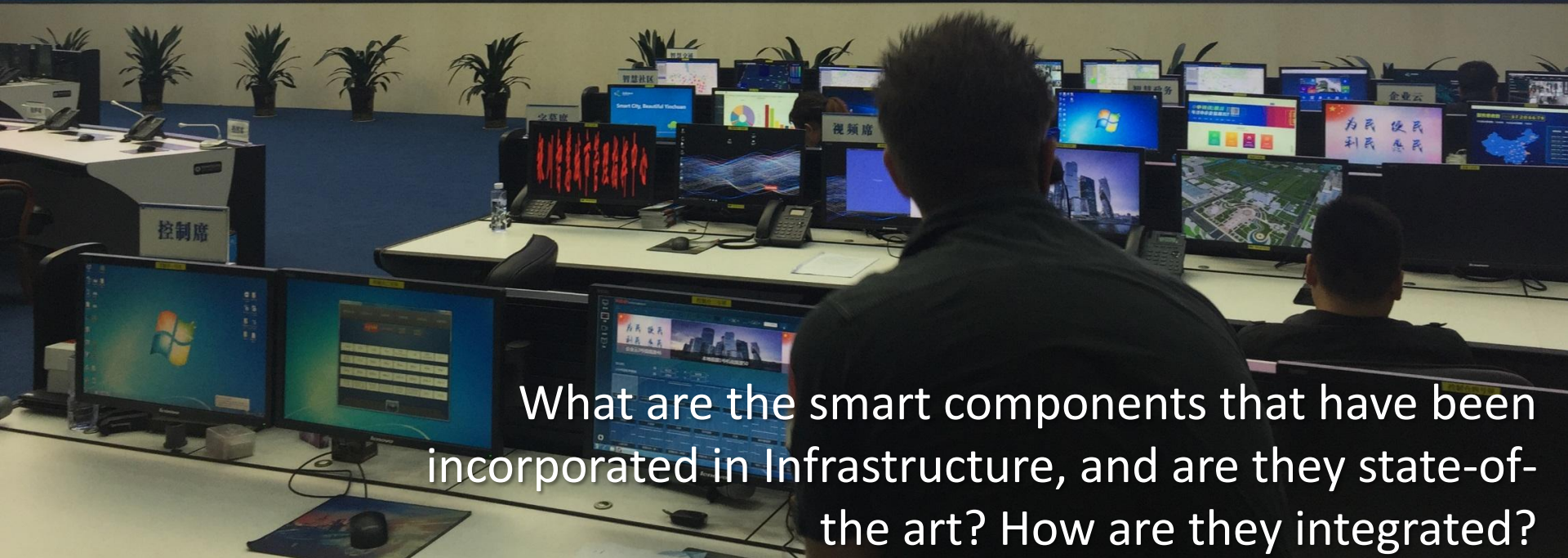
**NSN Murthy, Partner & Leader,  
Smart Cities, PwC**

Leader on smart cities, designed several projects in the area of Smart Cities, Public Safety, Urban Transportation and Sanitation





# Smart Infrastructure - key questions



What are the smart components that have been incorporated in Infrastructure, and are they state-of-the art? How are they integrated?



1. What are the best models and technology to provide High Speed Network?
2. What type of Data Centre?
3. What are best practices in the architecture for the Integrated Operations Centre?
4. How to bring in wholistic thought and integration with multiple stakeholders?





# Asset Management - key questions



What is strategy for Total Lifecycle Digital Asset Management?



1. What are the successful examples – integrated or with line departments?
2. How its architecture is important in the context of integrated and total lifecycle digital asset management?
3. What institutional structure to implement it?





# Smart Governance- key questions



What are popular e-services under Smart city?  
How are we making our way there?



1. What are popular e-services being implemented?
2. What more expectations from citizen's that is still to be adequately addressed?
3. How best to bring these under a common platform.

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# Questions welcome!!

