

**GE**  
**SMART**  
**ASIA 2018**



**Locate**  
#Locate18



WHEN

**9 – 11 APRIL 2018**

WHERE

**ADELAIDE, AUSTRALIA**

[CLICK HERE TO KNOW MORE](#)

# **METRO MANILA MOVING FORWARD TOWARDS A “SMART” METROPOLIS**

**GEOSMART ASIA 2017**

**Putrajaya, Malaysia/23 August 2017**



**Dir. Ma. Josefina J. Faulan**

**Metropolitan Manila Development Authority**

**PHILIPPINES**



# Outline of Presentation

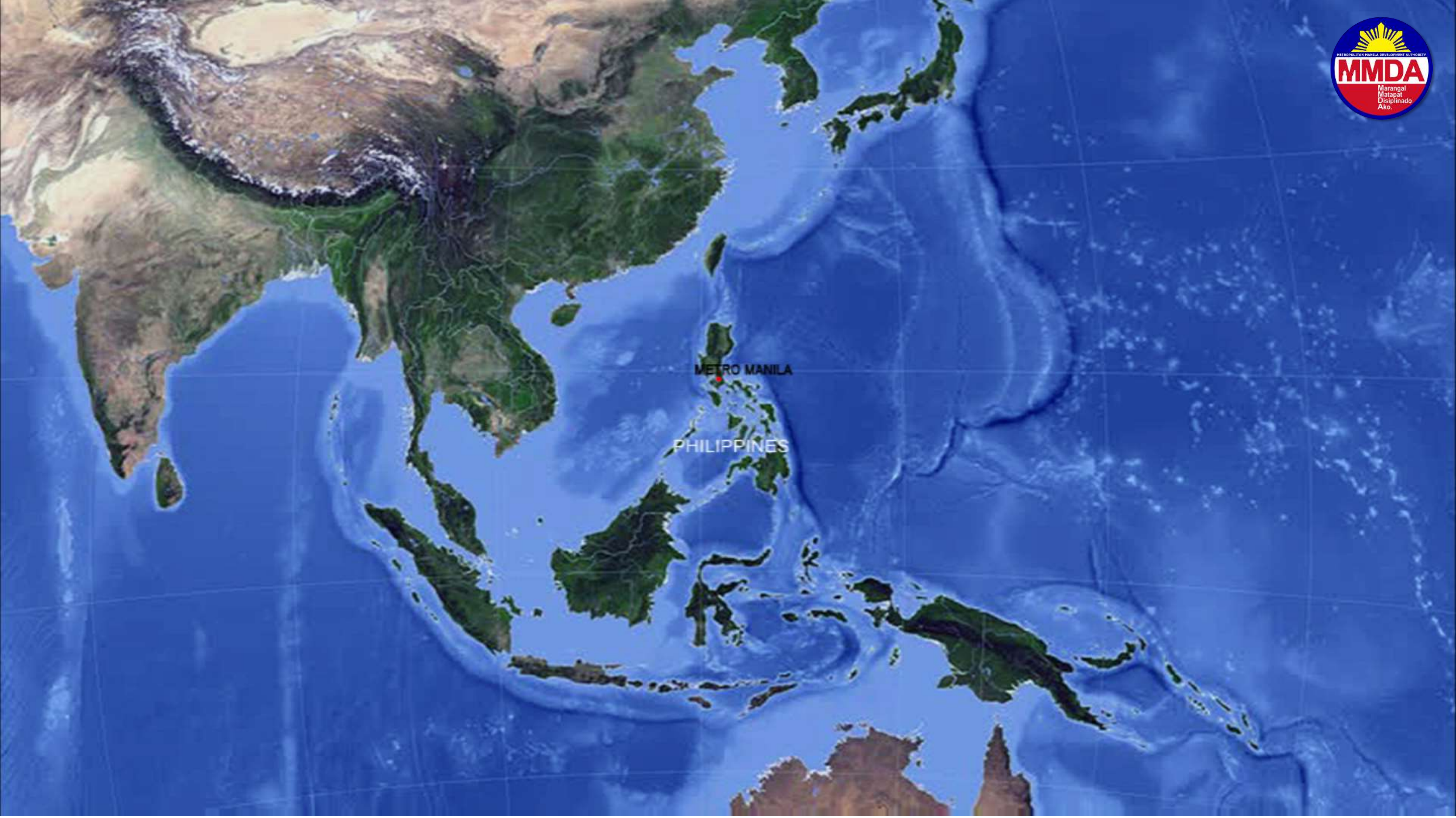
- ❑ Profile of Metro Manila
- ❑ Background on Metropolitan Manila Development Authority (MMDA)
- ❑ “SMART” Metropolis Framework
- ❑ Application of Geospatial Analysis in Planning and Policy Formulation in Traffic Management, Flood Control and Management and Public Safety
- ❑ Mandated Functions of MMDA
- ❑ “Smart “Communication
- ❑ Conclusions



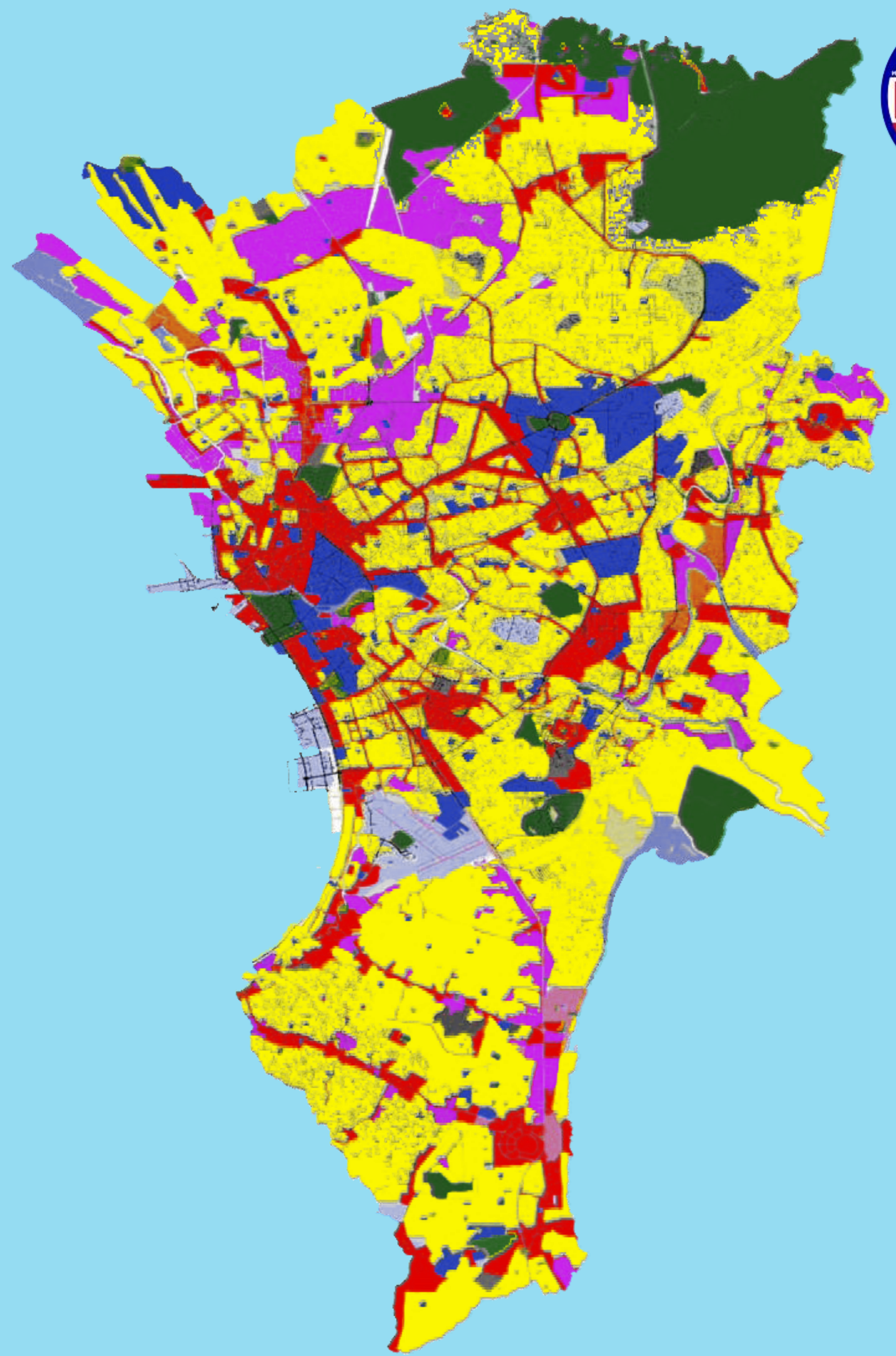


METRO MANILA

PHILIPPINES







<b>METRO MANILA LAND USE PATTERN</b>	
<b>Institutional</b>	<b>6.90%</b>
<b>Industrial</b>	<b>7.62%</b>
<b>Commercial</b>	<b>12.22%</b>
<b>Open Space, Parks, and Roads</b>	<b>28.43%</b>
<b>Residential</b>	<b>44.83%</b>

Source : 2006 METRO MANILA LAND USE FROM MMEIRS STUDY





# Metropolitan Manila Development Authority

## (Republic Act 7924)

MMDA shall perform **planning, monitoring, coordinating, and implementing functions, and exercise regulatory and supervisory authority over delivery of metro-wide services**

Metropolitan Manila is treated as a **special development and administrative region subject to the direct supervision of the President**





# “Smart” Metropolis Framework





# MMDA Command, Control and Communications Center (METROBASE)



**TRAFFIC MANAGEMENT CENTER**



**CRISIS MONITORING AND MANAGEMENT CENTER**

**HIGH DEFINITION CCTV CAMERAS**

**TRAFFIC SIGNALIZATION SYSTEM**



**400 CCTV CAMERAS LINKED TO THE METROBASE**

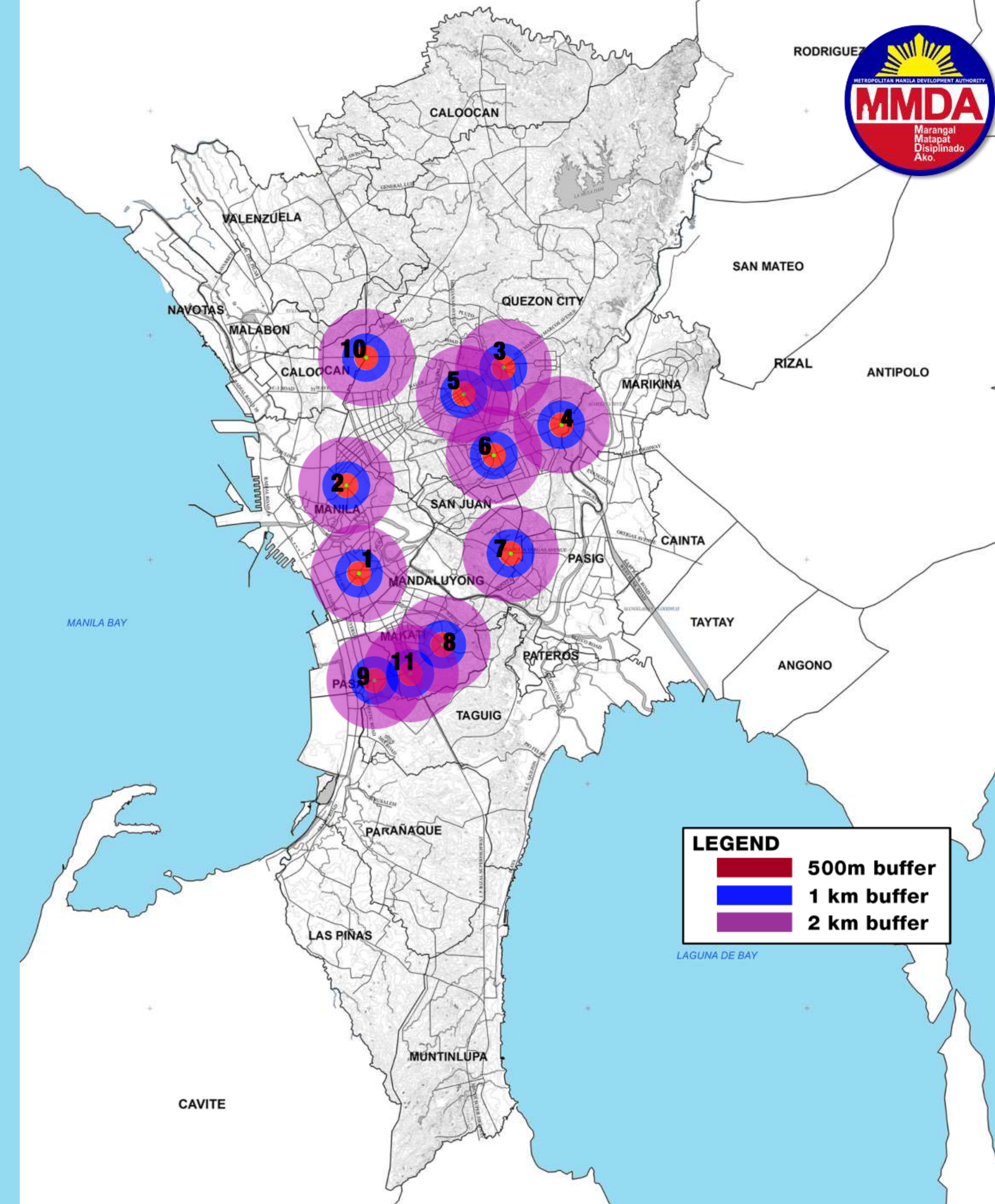


**423 UPGRADED TO DIGITAL PLATFORM-BASED SYSTEM OUT OF 441 ANALOG TRAFFIC SIGNAL SYSTEM BEING MONITORED AT THE METROBASE**



# Metro Manila Traffic Crisis Management Protocol

- ▶ Using geospatial analysis, eleven (11) Traffic Zones were identified:
  - critical areas in times of calamity
  - common areas for special events/ occasions
  - areas prone to road users' conflicts
- ▶ Traffic is Code RED, BLUE or VIOLET - if 500 m, 1 km and 2 km radius from the incident point is affected, respectively





# PROJECT/POLICY TRAFFIC IMPACT EVALUATION USING VISUAL SIMULATION SOFTWARE (VISSIM): A traffic pattern simulation tool which shows possible traffic impact of a project or a policy in terms of travel time, travel speed and level of service.



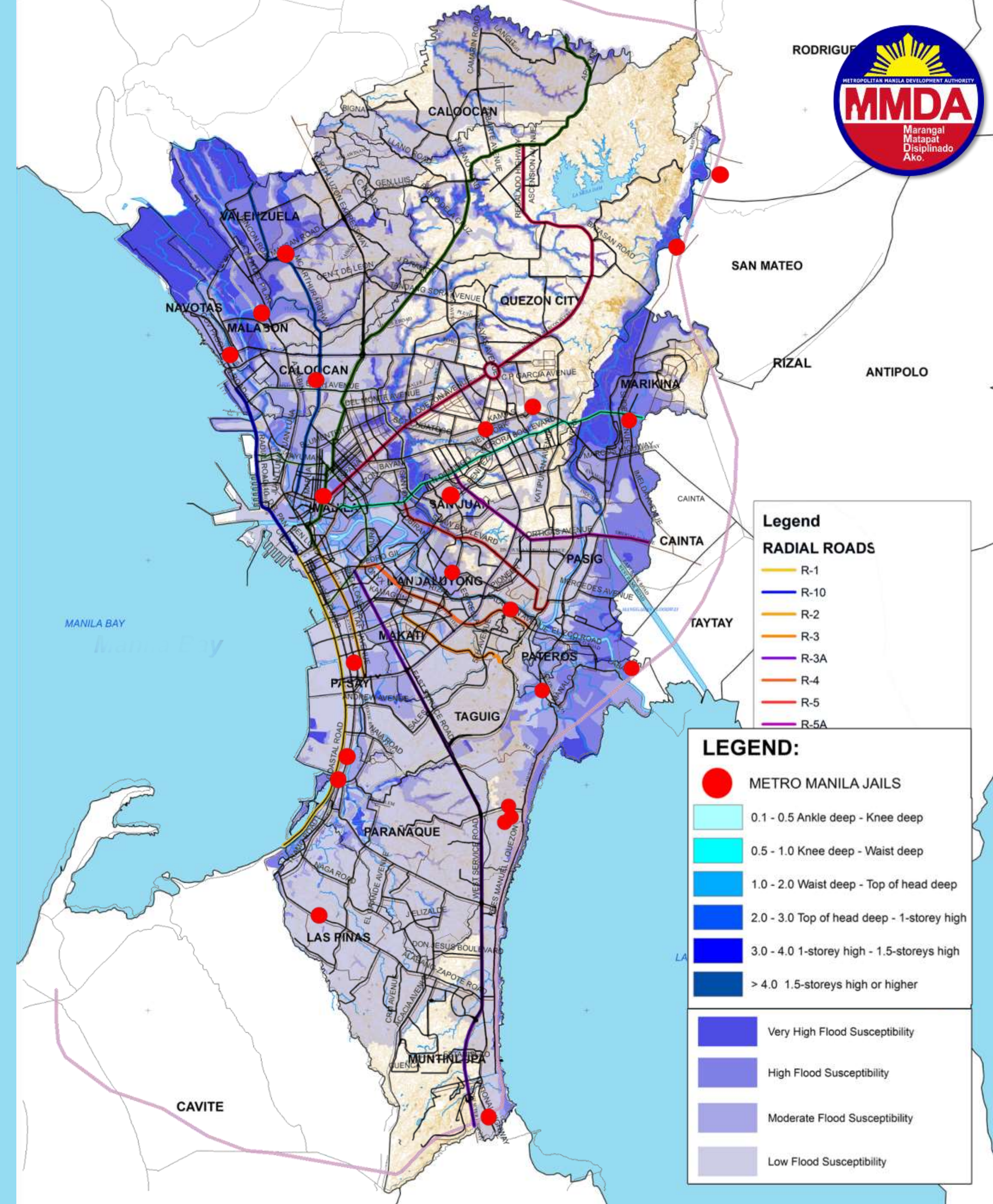


# HAZARD MAPS

- ▶ GROUND SHAKING
- ▶ LIQUEFACTION
- ▶ STORM SURGE
- ▶ TSUNAMI
- ▶ RAIN-INDUCED LANDSLIDE
- ▶ FLOOD

## OVERLAY OF HAZARD MAPS TO IDENTIFY VULNERABILITY AND POTENTIAL DAMAGE

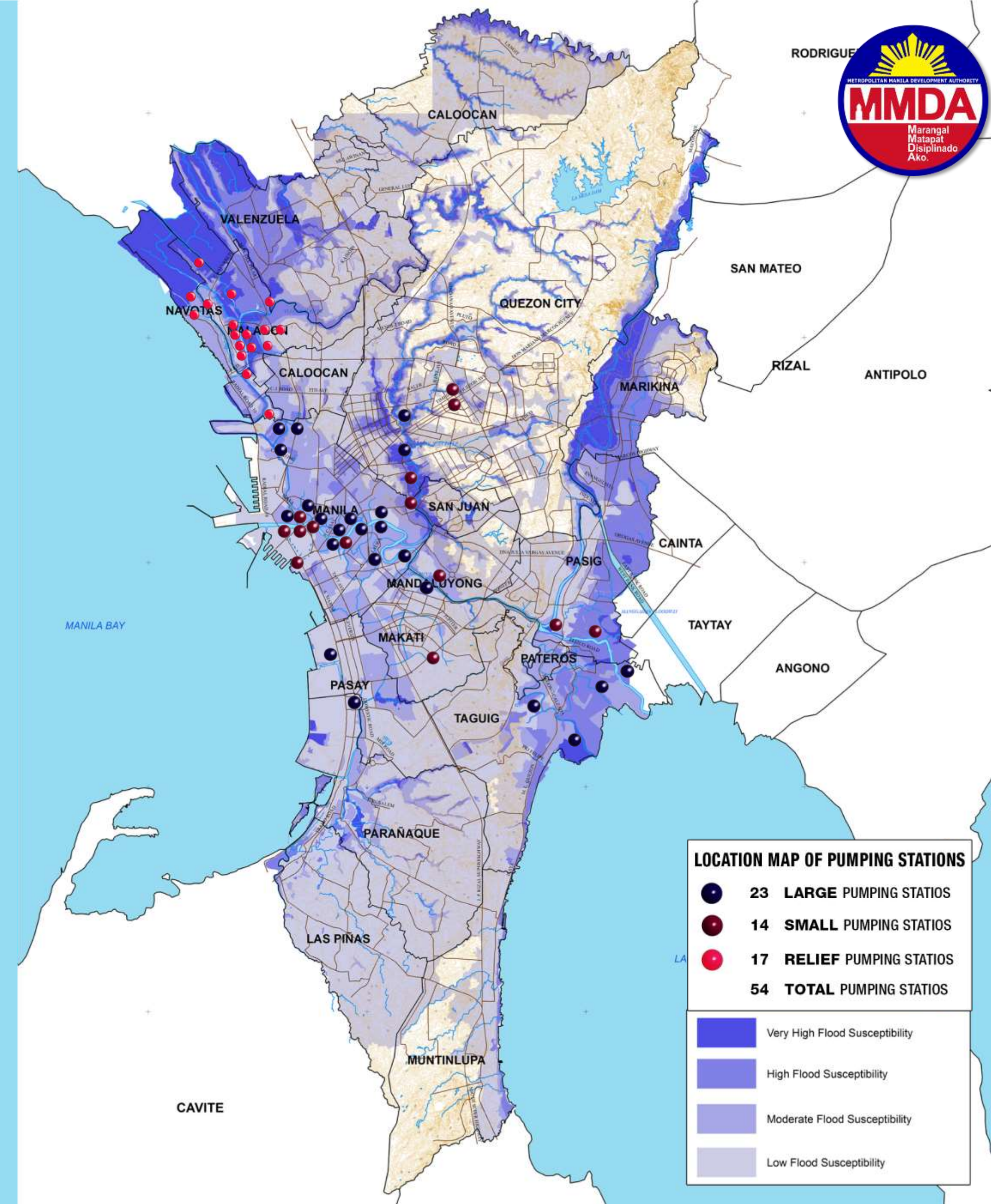
- ▶ Road Network
- ▶ Critical Support Facilities
  - Basis for the preparation of Operational Plans (OPLAN)
  - Aids/guides decision making on the appropriate intervention in terms of identifying the required resources and their locations in the most strategic and less vulnerable sites.





# PUMPING STATION

Flood facilities that facilitate the draining of flood waters when the water elevation at Manila Bay or Pasig River is high due to high tide and/or excessive rains.



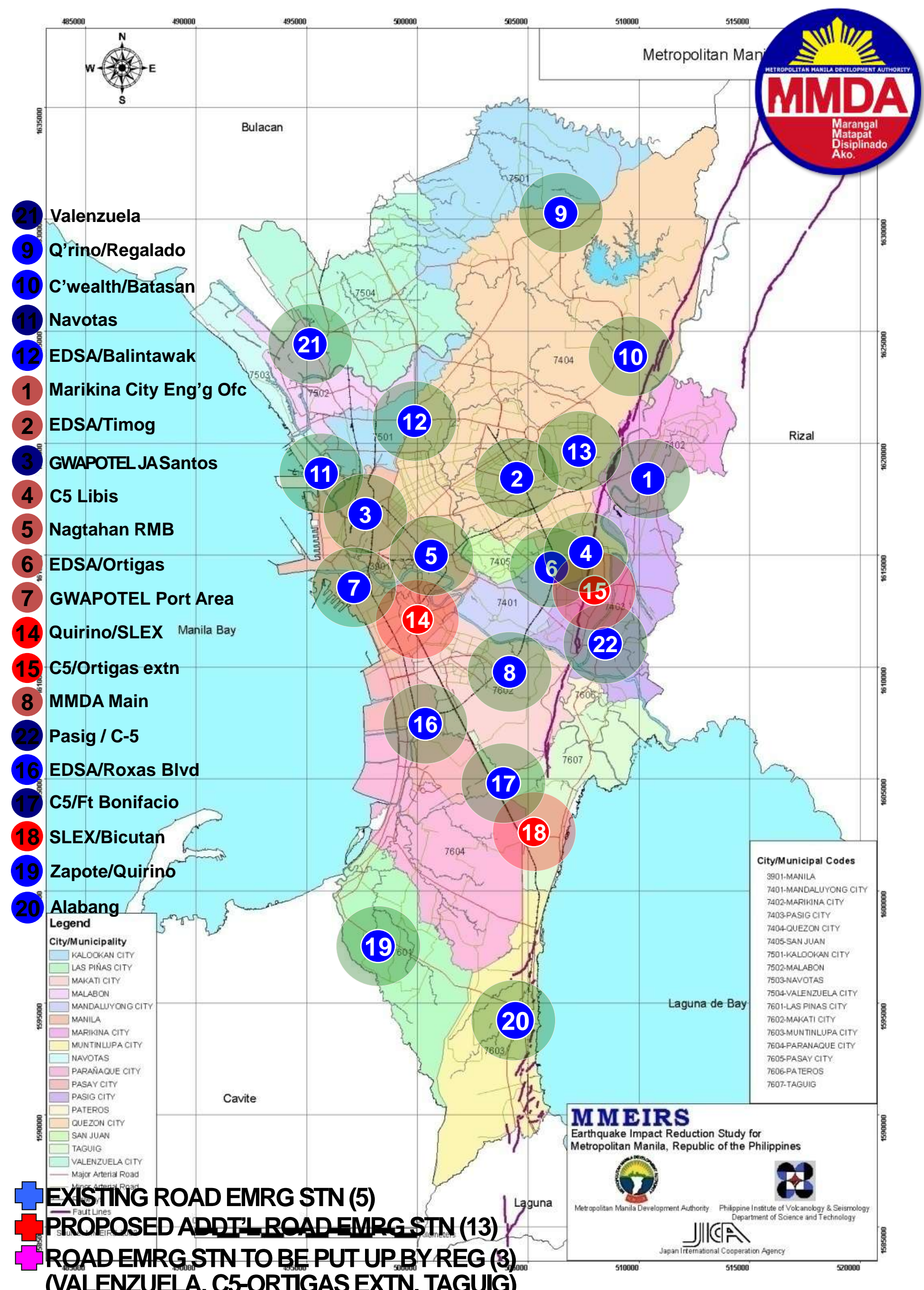


# DRETFSUs

THE DISASTER RESPONSE EQUIPMENT AND TOOLS FIELD STORAGE UNITS OR DRETFSUS ARE DEPLOYED NEAR THE HIGH RISK AREAS TO MAKE THEM ACCESSIBLE TO COMMUNITIES.



**CONTENTS:**  
 Hand Tools  
 Digging Tools  
 Lifting Tools  
 Cutting Tools  
 Lighting Tools  
 Shelter Materials





# **SOCIAL MEDIA FOR PUBLIC INTERACTION AND ONLINE PLATFORMS TO PROMOTE PUBLIC INFORMATION DISSEMINATION**



- ▶ **Facebook and Twitter**
- ▶ **Metro Manila Traffic Navigator + WAZE**
- ▶ **Road Accident Alert Application**
- ▶ **Pasig Ferry Applications**
- ▶ **Friendtrip Applications**
- ▶ **[www.mayhuli.com](http://www.mayhuli.com) (traffic apprehension check)**



# CONCLUSIONS

- CREATING A 'SMART' CITY IN A **HIGHLY BUILT-UP ENVIRONMENT IS CHALLENGING BUT EVEN MORE CHALLENGING** IF WE ARE TRANSFORMING THE ENTIRE METROPOLIS INVOLVING SEVERAL LOCAL GOVERNMENT UNITS, THIS IS IMPERATIVE TO SUSTAIN DEVELOPMENT GAINS.
- MMDA IS GRADUALLY LEADING THE TRANSFORMATION OF METRO MANILA TOWARDS A **'SMART' METROPOLIS** :
  - ✓ THAT WILL ALLOW THE LINKAGES AND CONNECTION OF SMART URBAN SPACES OF 17 LOCAL GOVERNMENT UNITS THROUGH COHESIVE AND INTEGRATED INFRASTRUCTURES THAT WILL PROMOTE PROCESSING, ACCESS, AND DELIVERY OF SERVICE EXPECTED IN A 'SMART METROPOLIS'.
  - ✓ THAT WILL UTILIZE GEOSPATIAL ANALYSIS THAT WILL CREATE **ENABLING ENVIRONMENT TO ESTABLISH AN OPEN AND INTER-OPERABLE NETWORKS THAT WILL BE ACCEPTABLE, ACCESSIBLE AND AKIN TO THE REQUIREMENTS OF MEMBER LGUS AND THE PUBLIC THROUGH INNOVATIVE SOLUTIONS** THAT WILL ALLOW DATA CAPTURE, STORAGE, MANAGEMENT AND PROCESSING WITH THE USE OF MOST APPROPRIATE AND COST-EFFECTIVE SMART TECHNOLOGY PLATFORMS FOR PLANNING, POLICY FORMULATION AND OVERALL SERVICE DELIVERY AND MANAGEMENT TO ENSURE **SUSTAINABLE, INCLUSIVE AND RESILIENT TYPE OF DEVELOPMENT**





*Thank You*

**METRO MANILA MOVING FORWARD TOWARDS  
A "SMART" METROPOLIS**

**GEOSMART ASIA 2017**

Putrajaya, Malaysia/23 August 2017