Embracing Smart Parking – The Gurugram Story

By Dr. Gaurav Antil, Joint Commissioner, MCG
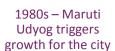
Gurugram: A Journey

1966 – State of Haryana Formed, Gurgaon designated district

1980s – Maruti Udyog triggers growth for the city

1990s – Second wave of growth with real estate and IT boom

2008 – Municipal Corporation of Gurgaon created

2016 – Gurgaon renamed Gurugram

2017 – Formation of Gurugram Metropolitan Development Authority

Most densely populated region by working professionals in India

Global Hub – More than half of Global Fortune 500 companies are in Gurugram

Accounts for the highest share of revenues in Haryana

1.5mn population 2011 census, 75% jump over 2001

Mobility Profile: Gurugram

Rapid Metro -11.7Km, 11 Stations and 80,000 passengers per day; nearly 2 lakh daily commuters from Delhi Metro.
Gurugram Railway station with connectivity to key cities in the country

Launch of 1000 e-rickshaws for last mile connectivity, additional 24000 regular autos plying the roads

Currently 200 city buses, Proposed launch of 500 CNG low floor buses with DIMTS as the knowledge partner

3.5 lakh cars and 4 lakh two-wheelers in Gurugram plus 2.5 lakh vehicles from Delhi enter everyday

Proposed project with driverless pods between Delhi and Gurugram

Proximity to Indira Gandhi International Airport adding to increased traffic towards Gurugram

Depending on the needs of the citizens, there are many foot-over bridges. Flyovers are being constructed at specific locations to address the growing traffic requirements of the city.

DID YOU KNOW? – Gurugram has 200 + cars per 1,000 people compared with 88 cars per 1,000 people in Delhi and the number is increasing

Challenges to Mobility

- Limited usable footpaths
- Limited dedicated cycle tracks in the city.
- Explosive Motorisation - In Gurugram 43 per cent of households own two-wheelers, 33 per cent of household own cars. In Delhi 20 per cent of households own cars.
- In 2004, personal transport trips were 39 per cent that increased to as much as 60 per cent in 2010.
- The share of public transport, walk and cycle has dropped from 58 per cent to 40 per cent.
- Gurugram being the millennium city, with the rapid socio – economic development, the traffic has mounted multi-fold

Rapid Metro Network

Rapid Metro Total Length - 11.7Km

Rapid Metro is a fully elevated rapid metro transit system for the commuters and citizens of Gurugram

Provides a transport solution for areas in and around Cyber City, DLF Phase 2,DLF Phase 3, NH-8 & Golf Course Road up to Sector 55-56 Gurugram and provides connectivity to Delhi Metro from Sikanderpur Station

Smooth movement of commuters without clogging the roads of Gurugram

Planning for Future - Gurugram Metropolitan Development Authority

"The GMDA will secure co-ordinated and integrated infrastructure development and provision of urban amenities including mobility management."

MCG and GMDA signed MOU with Delhi Integrated Multimodal Transit System Limited as the knowledge partner to roll-out city modern bus service for the city

Metro rail connectivity between Gurugram and Dwarka being pursued to reduce congestion and enhance mobility

Preparing a mobility management plan to resolve congestion and transportation issues with Gurugram Police and MCG

Parking infrastructure and management is a challenging issue, especially in urban areas where an estimated 30% of all traffic congestion is caused by drivers circling to find a space.
Source - *International Parking Institute 2012 Emerging Trends in Parking Study*

Importance of Smart Parking in Smart City

Parking in urban areas is a constant struggle, beset with challenges like:

- Time waste
- Pollution
- Inefficient monitoring and enforcement
- Mounting pressure on the roads is hindering seamless traffic regulation

Smart Parking holds the key to remove congestion and having efficient mobility in a Smart City.

Top-line Benefits of Smart Parking

- **Parking Guidance -** Integration with real-time parking availability, providing visualization on mobile phones or digital signs, Searching for parking spaces

- **Parking Enforcement -** Detection and reporting no-parking zone and loading zone violations using video analytics enabling enforcement officers

- **Parking Administration –** Policy Management, Regulating parking occupancy, notifications, policies, and health of sensors

- **Parking Analytics** - Parking occupancy, revenue, enforcement reports and analytics driven assistance to pricing decisions.

Emergence of Smart Parking Solutions

Smart and connected Parking Solutions - Simplifying and automating the search for parking spaces

Parking challenges in urban areas is fuelling a technologically enabled app and website ecosystem.

Start-ups are working in areas of parking infrastructure, parking solutions and parking management that help users save time, fuel and energy by paying a small convenience fee

Commuters—both four-wheelers and two-wheelers—can book parking spaces through mobile apps and websites
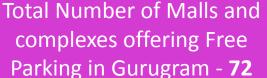
Free Parking in Malls – A Gurugram Case Study

MCG waived off property tax for several malls in Gurugram in lieu of them providing free basement parking.

Benefits:
- Optimum utilization of idle parking space
- De-congestion of roads as majority of vehicles are parked for less than an hour.
- Significant help in reducing traffic congestion and aiding parking in busy areas including M.G. Road

> Total Number of Malls and complexes offering Free Parking in Gurugram - **72**

Free Parking in Malls –
A Gurugram Case Study

MCG MUNICIPAL CORPORATION *of* GURUGRAM

NURTURING GURUGRAM

Public Sensitization through digital mediums

Social Media was effectively used to create awareness amongst the citizens about the initiative. Interestingly, it emerged as a citizen reporting and grievance redressal medium.

MCG took required action against the defaulters

Municipal Corporation Gurugram added 2 new photos.
Published by Anindita Mukherjee [?] · July 31 · 🌐

Now you don't have to pay parking charges in several MG Road malls! Look out for an MCG banner which says 'Free Parking': http://bit.ly/2f11Z8C

Free Parking in Malls – A Gurugram Case Study

Public Sensitization through conventional mediums

- 168802 SMSes were sent to citizens
- Extensive 'Free Parking' signboards displayed outside these malls
- Email bursts to registered email ids.

Smart Parking Systems

Smart Highways and Roads – Some best practices

- Segregated space on roads – for pedestrians, cyclists and motorists
- Reorganised street activities - Removing encroachments
- Earmarked Street - Vending Zones

Technological Enablers

- Autonomous Cars
- Smart Traffic Lights (Sensor-enabled)
- High speed internet connectivity
- App-Ecosystem

Total Number of Vending Zone in Gurugram so far - **34**

Challenges to automated parking

– Learnings from Kamla Nagar multi-level parking

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- Automated parking lies wasted with more than half of the parking lying unutilized
- Citizens expect free parking
- Strict enforcement and penalization for parking on No – parking zone can be helpful
- Public awareness needs to improve – Significant time saving with automated parking taking only 90 seconds to 3 minutes as compared to 10 – 15 minutes in no parking areas

Future Roadmap

- MCG is working on smart parking solutions using sensors, smartphone apps and Wi-Fi infrastructure to provide real – time parking to citizens
- Integrating with enforcement applications and providing violation notices to parking offenders
- Providing greater visibility through parking analytics, such as parking usage and vacancy so city administration can make better informed decisions and long term plans
- Parking Apps ecosystem and start up community in the country and especially in the NCR region is aiding Smart Parking. Various parking spots in the NCR region are already mapped on parking apps.
- Steps towards restricting free parking to reduce high surge in personal vehicles
- Sustaining thrust on cycling focused initiatives, including Raahgiri and Car-Free days.

Thank you.