



TATA PROJECTS

Simplify.Create

Our offerings in IoT and Smart Cities





DRIVEN BY
VALUES

In a free enterprise, the community is not just another stakeholder in business, but is in fact the very purpose of its existence.

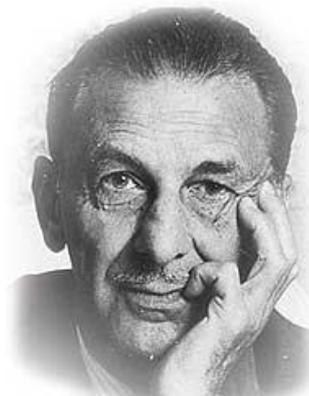
— Jamsetji Tata, founder of the Tata group



A **GLOBAL**
ENTERPRISE

Nothing worthwhile is every achieved without deep thought and hard work.

— J.R.D. Tata, Chairman Tata Sons



IN PARTNERSHIP
WITH **SOCIETY**

1903	1907	1911	1932	1968	1983	1998	2000	2006	2007	2009	2012
India's 1 st luxury hotel – Taj Hotels Resorts and Palaces	India's 1 st integrated steel plant – Tata Steel	Hydro power – Tata Power	India's entry into civil aviation – Tata Airlines	India's 1 st software services company – Tata Consultancy Services	India's 1 st iodised branded salt to address iodine deficiency	India's 1 st fully indigenous car – Tata Indica	1 st major acquisition of international brand by an Indian business group	India's 1 st national chain of multi-brand outlets for electronics & durables	India's 1 st supercomputer in the private sector – Eka	Smart city car – Tata Nano	World's 1 st wholly-owned cable network ring around the world – Tata Communications

1877	1895	1901	1912	1915	1917	1921	1934	1979	2008
Pension and Gratuity	Workmen's Accident Compensation scheme	Worker's Provident Fund scheme	8 hour working day	Free medical aid	Schooling facilities for children	Maternity benefits for working women	Profit sharing bonus	Ex-Gratia payments for road accidents	Tata Second Career Internship Programme



*Tata Projects Ltd. Is the MSI
(Master Systems Integrator)*

Master System Integration & Project Management



PUBLIC SAFETY

- Command & Control
- Disaster Management
- Integrated Emergency Response
- City Surveillance



SMART ENERGY

- LED light replacement
- EV Charging
- Industrial & Enterprise
- Metering & Monitoring



SMART CITIES

- Smart Parking
- Public Wifi
- ICCC (Integrated Command & Control Centre)
- Multi-Mode Transport
- Environment sensors

Supported by Products and Services of TCS, TCL & TASEC & OEMS

- ‘One Tata Alliance Formed to combine Group company strengths.
- TCS and TCL form backbone of the offering.
- TASEC, TAMO, TITAN & others come in as needed.
- TPL is the MSI: front-ends the government

- *Smart City BU formed as part of Urban Infrastructure by TPL in Sep 2015.*
- *First organized, cohesive response from Tata Group to the massive smart city opportunity*

Objective

To penetrate & establish Tata Group's footprint in smart city business area

Target Segments



Public Safety



LED Lights & EV Charging



Smart Enterprise



Data Centre & fibre

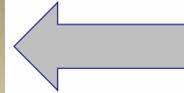


Multi-Track Smart City

1. In less than 3 years, 5 projects achieved. 6th is on the way (hopefully..)
2. LED has 3 projects: Pune, Ludhiana & Noida. TPL is the dominant private player in this space.
3. In public safety first project secured (CG Dial 112). In Fibre we have the CG Bharat Net II



1. Our led CCC is based on LoRa.
2. LoRa is ideal for IoT – uses low power and has high signal penetration.
3. Over 40% life-cycle savings compared with 3G/4G.
4. Currently deployed in Noida project.



1. Solutions we can offer on top of LED:
 1. Public safety – panic button on LoRa that triangulates to nearest street light.
 2. Pollution sensors
 3. Sound sensors (car crash, screams..)





PUNE SMART CITY



Feeling quite safe and secure while driving on the streets of Pune due to well illuminated and reliable lighting system.

- Anamika Tandon

- Upgrading 70000+ street lights to energy efficient LEDs
- Higher illumination & a safe environment
- Optimum & effective light distribution
- Energy saving equivalent to 2000 tons coal per annum

STREET LIGHTING

#SmartPune



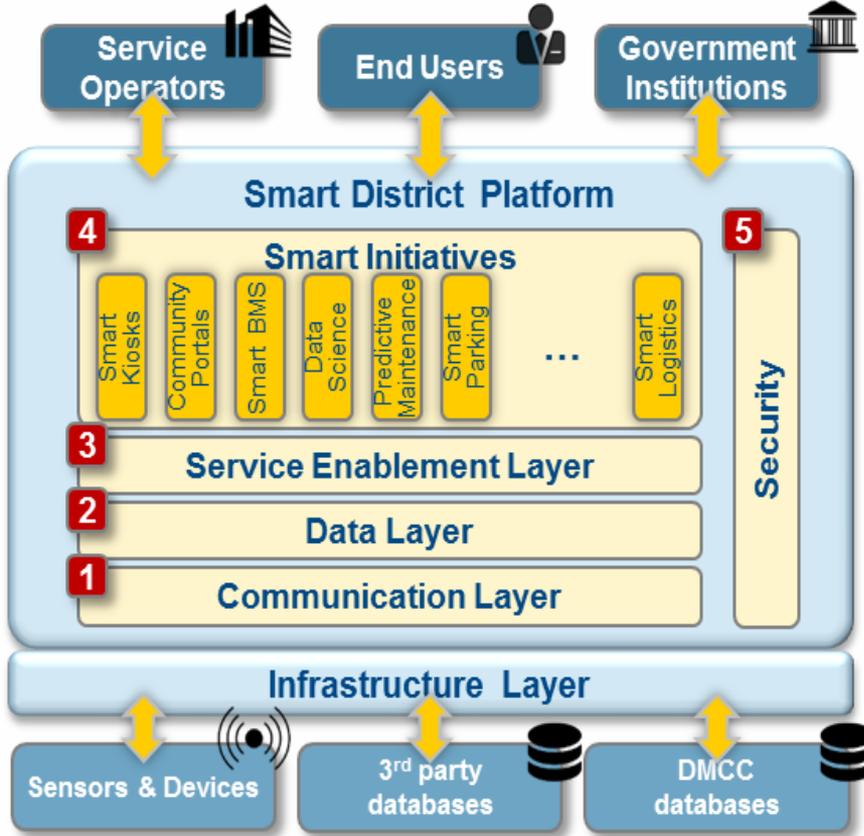
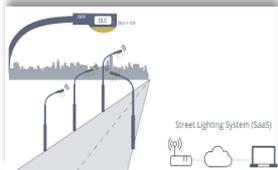
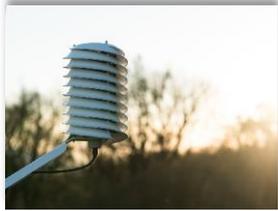
1. The proof is in the voice of the resident – LED lights transform the city.
2. Increases safety immediately as higher lux levels are associated with lower crime globally.
3. Pune has won several national and global awards for their efforts.



1. Electric buses with fast charging stations will gain traction.
2. We are working with several transport corporations to have this discussion.
3. TCS does fleet management and telematics for many TC's.
4. The buses themselves will have IoT telemetry and on-board stations for wearables.
5. People with health conditions, differently abled will be recognised and served.



1. Electric buses with fast charging stations will gain traction.
2. Tata already has the lead with win of 10,000 vehicle order.
3. The EV and ride sharing Eco-system is ripe for IOT disruption:
 1. Already Uber and Lyft are piloting ride share based on analytics.
 2. Google already does predictive guidance - at the next level it can arrange resources for the user.



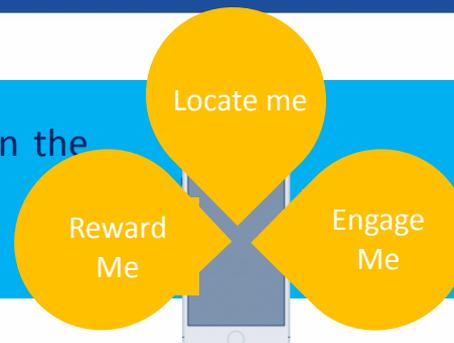
The new paradigm is open & inclusive

IoT use cases can be added or removed on the fly

Data travels seamlessly across devices, services and users

Secure & safe cloud based

The solution is based on what the Smart passenger today is looking for in the environment around him becoming smart including his travel



The solution will be using the following enablers



*Location Based
Technology*



*Beacon
Technology*

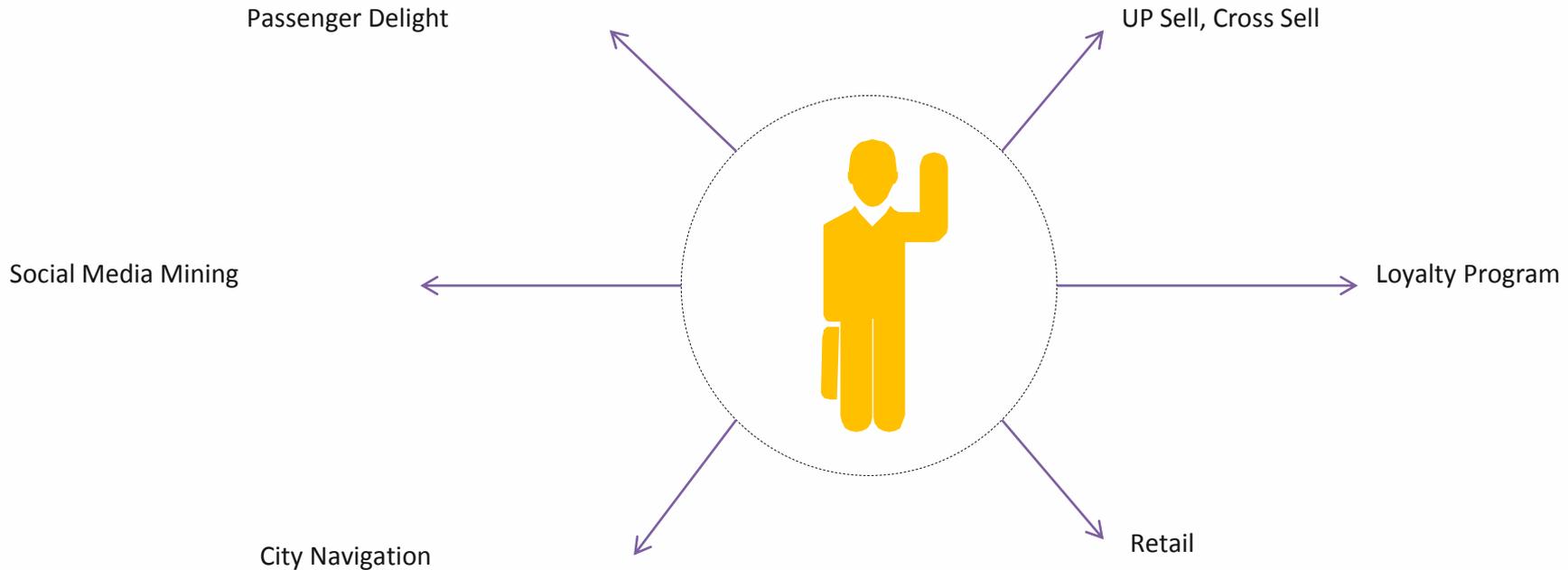


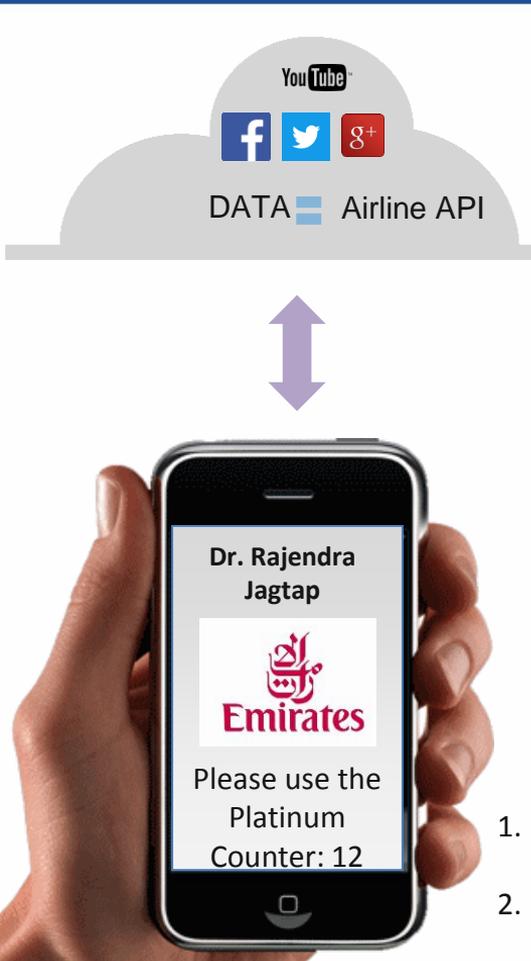
DATA Analytics

The Solution will work on a smart phone application. The application will have separate interface for passengers and staff. Application will be available for all platforms



1. Location specific IOT makes a huge difference to cost and convenience.
2. Uses hyper-location to locate, engage and delight the resident.
3. Generates revenue, enhances experience and personalizes the journey.
4. Treats the resident as a 'customer' and tries to enhance his/her user experience.



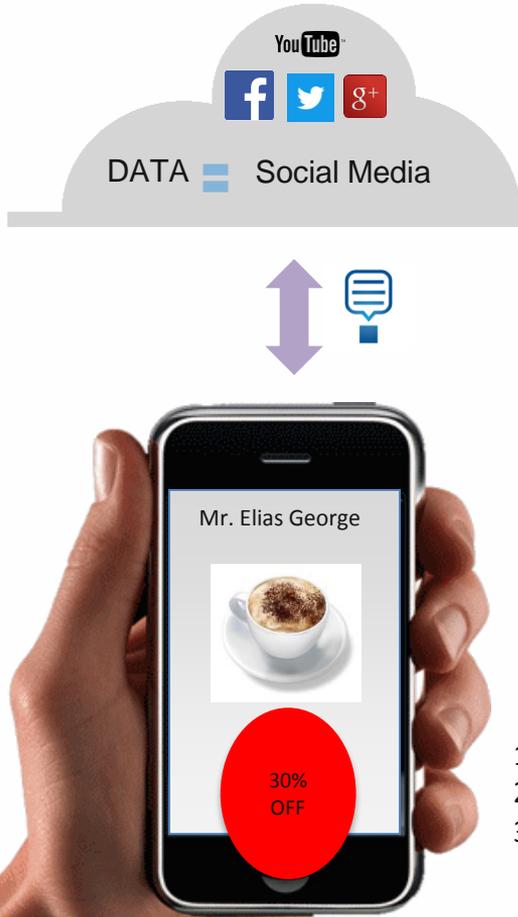


The smart city database becomes the master for all enterprises

Value can be mined across usage and spend

Rewards programs to encourage usage

1. Based on the beacon hyper-location residents can be given priority treatment.
2. Staff can be pro-active in meeting and serving high value customers based on overall data mined from city interaction



1. Discounts and promotions along the way displayed- click to avail.
2. High degree of personal touch and customisation through social media mining.
3. Diversity leads to unity – since everyone uses the same platform, everyone gets on the same page

Can we help?

Gautam Balakrishnan: +91-9167051100

Sumit Kumar : +91-9717792931

Arpana Gaurav: +91-9899120712



Thank you

