

TATA COMMUNICATIONS



CONNECTED VEHICLES 2017 THE IMPORTANCE OF LOW POWER WANS

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IOT DEVICES SUPPORTING M2M

- Low Bandwidth.....70% Devices transmit < 50 Kbps
- Pre Installed and Pre Configured
- Low price
- Long battery life



LOW BANDWIDTH APPLICATIONS IN CONNECTED CARS....

✓ Oil & Fluids

- Oil pressure and warning light
- Hot oil warning message
- Oil Change Due

✓ Brakes and Suspension

- Antilock brake suspension (ABS) warning light
- Brake warning light

✓ Powertrain

- Malfunction indicator light
- Charging system warning light
- Electronic throttle control warning light
- Transmission temperature warning light

✓ Safety

- Airbag warning light
- Tire pressure monitoring system (TPMS) warning light

USE CASES IN CONNECTED CARS....

Pay as you drive (pay as you drive /and pay per use)

- Longer battery lifetime (with Lora a device can exceed requirement of 30 days which is min requirement from car OEMs)
- LoRa as beacon



Car rental fleet:








- Collect the mileage every time the rental car is returned
- Locate where the car is parked
- Track the stolen car



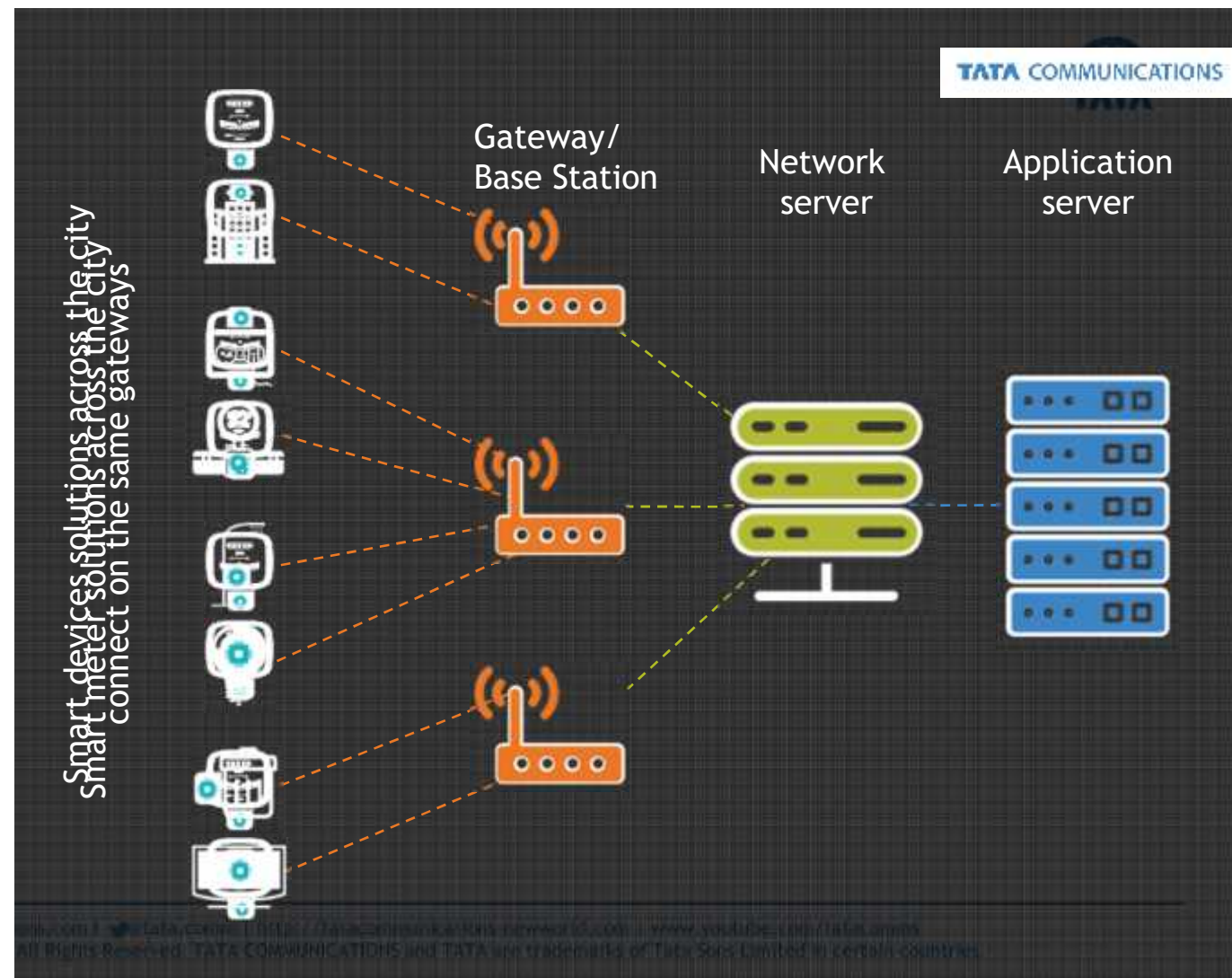
The benefits of LoRa:

- Deep Coverage esp. basement parking
- Secure as it is more difficult to jam/disconnect
- Low Power consumption (a cellular device can deplete a car battery in 3 weeks if it is not used)

INDIA Customer ENGAGEMENTS ...

Use Case	Details		
ASSET TRACKING	<ul style="list-style-type: none"> • High value asset tracking • Vehicle movement • Geo-fencing applications 		
HUMAN SAFETY	<ul style="list-style-type: none"> • Safety in manufacturing plants • Location based tracking 		
ENERGY MANAGEMENT & SECURITY	<ul style="list-style-type: none"> • Building Energy management – A/C, Lighting, • Door Opening & Closing 		
SMART CITY	<ul style="list-style-type: none"> • Electric Meters / Water meters • Waste Bin Management • Traffic Management 		

Understanding the LoRa Network in an IoT Ecosystem



LoRa enabled IoT network deployed by Tata Communications

The backbone of IoT in India

LoRa is a

- Low power
- Highly Secured
- Long Range

Wide area network

Tata Communications is the only company deploying the LoRa network In India

The graphic features a dark background with a grid of data visualizations including pie charts, bar graphs, and line charts. The text is white and green, with icons for power, security, and range.



Mumbai



Delhi



Bengaluru

Going National by 2018

We already cover a population of 25 Mn

THANK YOU

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