

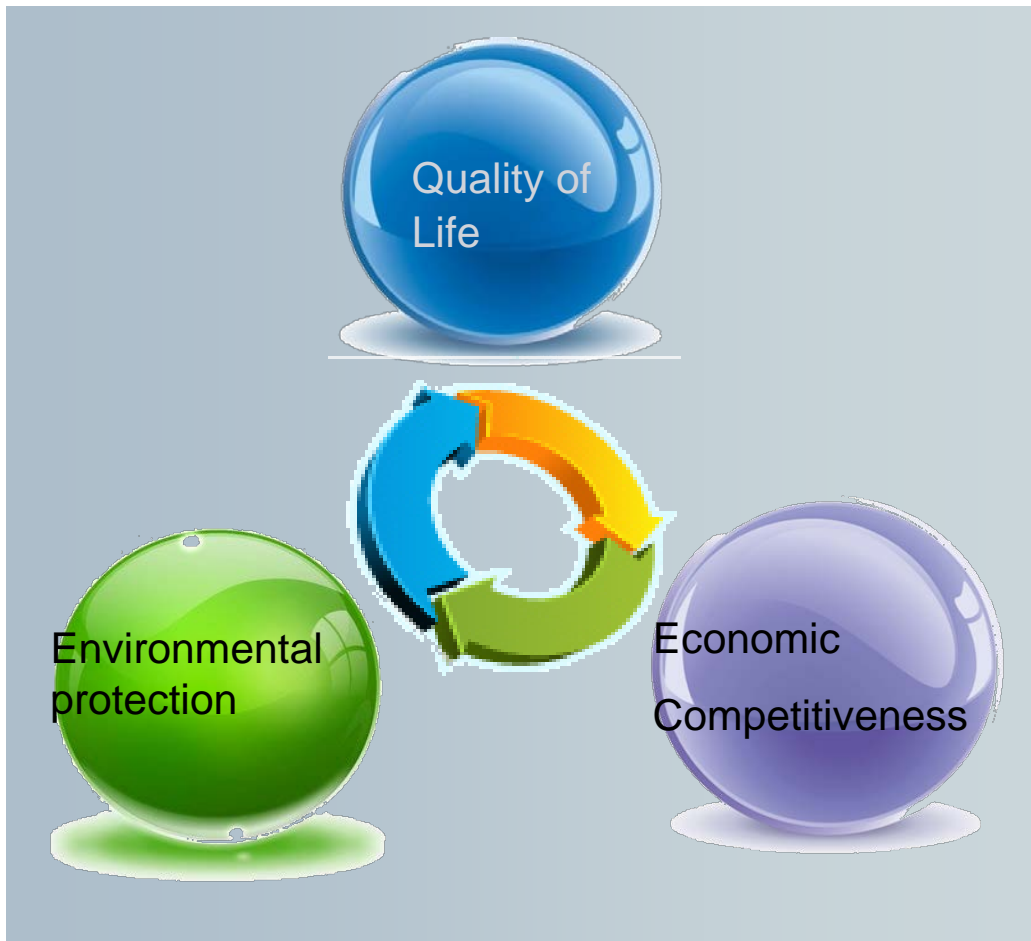


Delivering India's Smart Cities

Translating the Vision into Delivery

Deepak Goray, Head City Account Management – South Asia
Peter Daw, Cities project Developer - Global COC Cities

Sustainable Cities



Continuous balance between three fundamental elements, will enable cities to address the challenges they face, to become sustainable.

Cities which reach this equilibrium will be fit to address the challenges they face and can look forward to a more sustainable future.

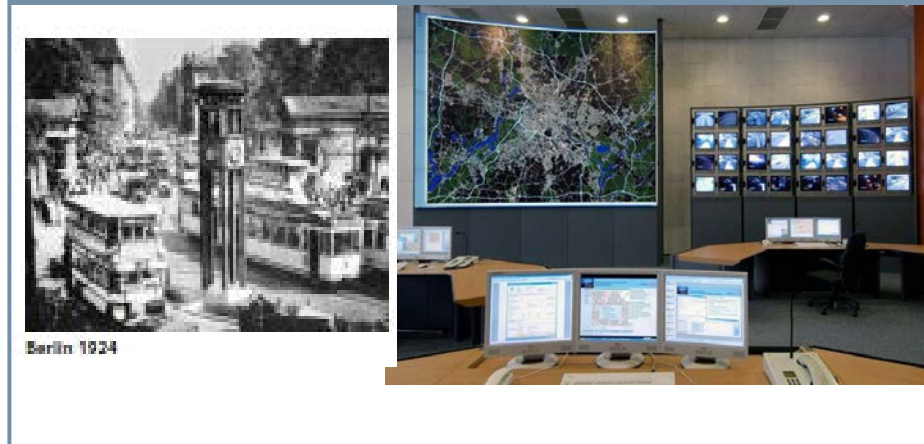
Berlin embarked on its “SMART” journey with Siemens more than 100 years back!



1879 -- First electrical train at the trade exhibition
Today – Integrated Mobility Solutions



1924 - First Traffic Signal at Potsdamer Platz
Today - Traffic Control Center – 2000+ junctions, Parking



1890- First electric taxi
1882- First electric Trolley bus



Berlin Cube - Integrated Energy & Building Management



Unrestricted © Siemens Ltd 2016

Our COC is geared up to support cities globally to leverage technology meet their unique challenges

SIEMENS

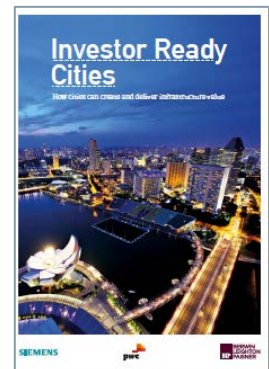
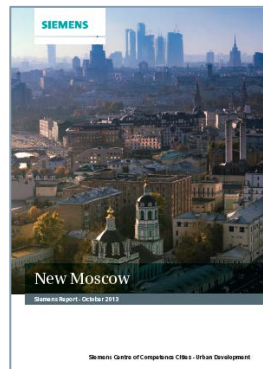
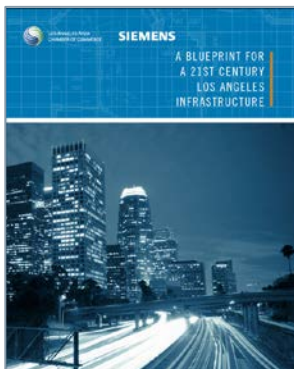
London is on its vision 2050 path

The Crystal – COC Cities



LEED Platinum, BREEM outstanding

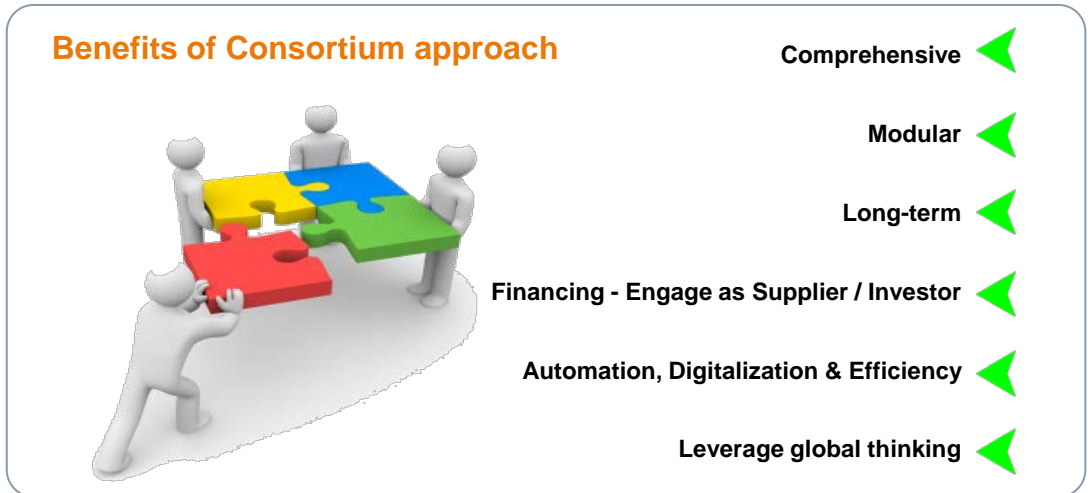
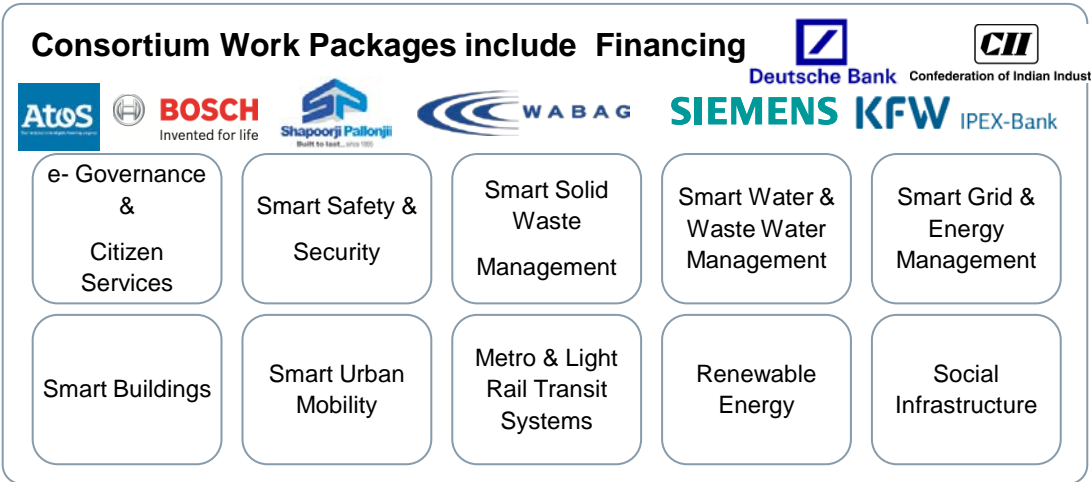
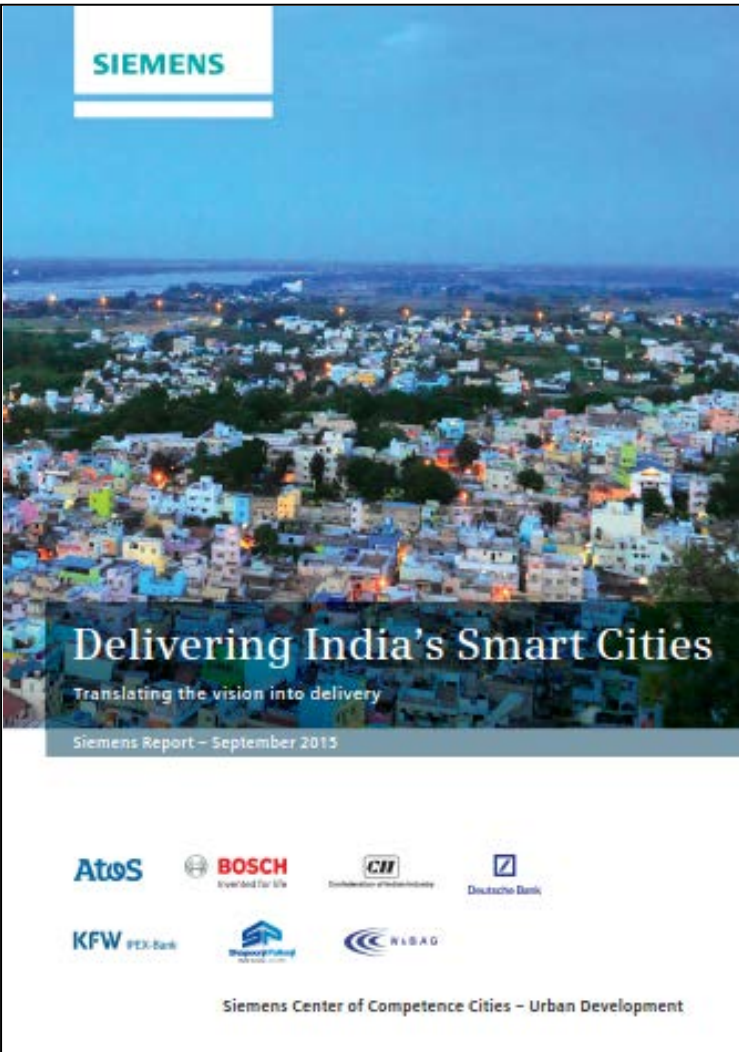
- **Interurban mobility:** 1,200 vehicles for regional trains
- **Automated video surveillance:** Comprehensive CCTV services to improve community safety
- **Hybrid Buses:** Consume ~40% less fuel and emissions
- **Toll System:** City congestion charging system and enforcement of low-emission zone
- **E-mobility project:** Supply of software solutions, related services and charging stations
- **Smart Grid:** Collaboration with UK Power Networks to develop a power distribution concept for 2020



Siemens has signed a MoU with CII to be the Lead Industry Partner in a consortium, for the conceptualization and development of Smart Cities



The Siemens led consortium is engaging through CII NSMC to support city to realise its vision of SMART



Smart Cities must be about the benefits to cities and citizens not just technology



Smart City Concepts	Standard	What is possible?
E-Governance and Citizen services	<ul style="list-style-type: none"> • Long waiting and processing times for receipt and processing of documents / payments 	<ul style="list-style-type: none"> • 30% improvement in turn around time for service delivery
Smart Safety and Security	<ul style="list-style-type: none"> • Disjointed approach to security 	<ul style="list-style-type: none"> • 15% decrease in the crime rate
Smart Solid Waste Management	<ul style="list-style-type: none"> • Waste to landfill 	<ul style="list-style-type: none"> • Value captured from up to 95% of municipal waste through energy recovery and materials reclamation
Smart Water & Wastewater Management	<ul style="list-style-type: none"> • High degree of water leakage across network and an energy intensive pumping infrastructure 	<ul style="list-style-type: none"> • 30% reduction in water loss through leakage detection
Smart Grid & Energy Management	<ul style="list-style-type: none"> • Transmission losses along linear networks with undetected hotspots 	<ul style="list-style-type: none"> • Up to 99% power availability
Smart Buildings	<ul style="list-style-type: none"> • Fossil fuel based electricity mix and inefficient buildings 	<ul style="list-style-type: none"> • Minimum reduction of 20% energy, water and embodied energy in materials
Smart Urban Mobility	<ul style="list-style-type: none"> • Road based congestion and a lack of information on available parking and transit 	<ul style="list-style-type: none"> • 20% improvement in traffic speeds
Metro and Light Rail Transit Systems	<ul style="list-style-type: none"> • Inefficient metro and light rail services 	<ul style="list-style-type: none"> • Fast, reliable, safe and comfortable service with 30% energy savings through automation
Renewable energy	<ul style="list-style-type: none"> • Centralized fossil fuel power production 	<ul style="list-style-type: none"> • 10% energy requirements through solar energy

To Realize Sustainable Cities, the Authorities and Stakeholders have to mesh their competencies together

SIEMENS

▪ *How to get enough electric power, ... how to bring enough goods into the city?*

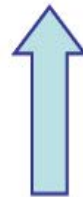
▪ *How to manage the ever increasing traffic?*

▪ *How to reduce the energy consumption and emissions?*

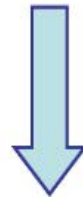
▪ *How to ensure security and safety of people?*

▪ *How to finance all this?*

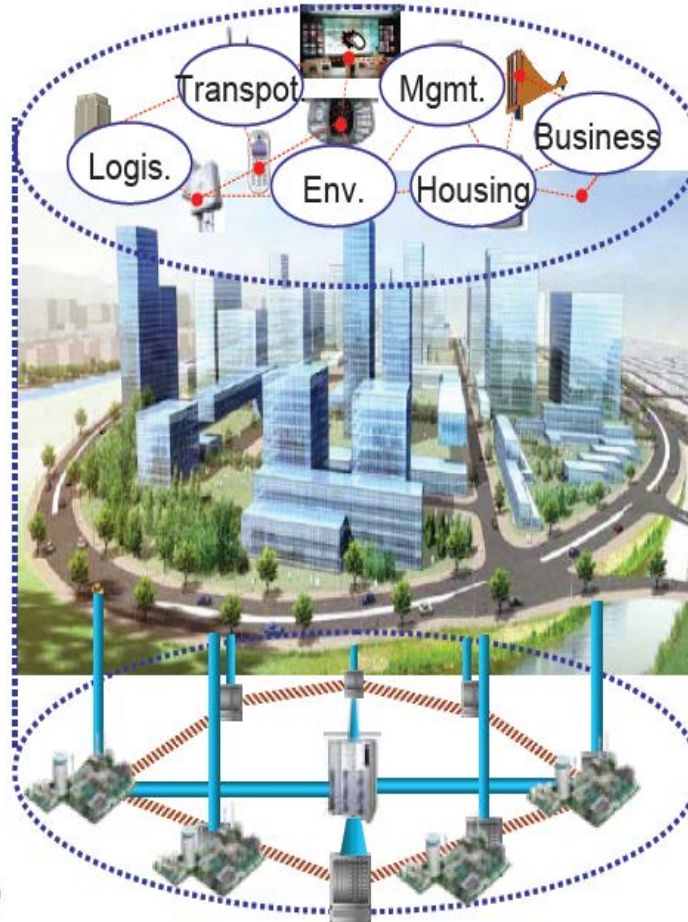
Ubiquitous City Service



Intelligent City Space



Ubiquitous City Infrastructure



City Developers, ULBs

Pioneering solutions are needed to address the challenges of cities

- Master Planners
- ICT Master Planners
- Program Managers
- Engineering Consultants
- ICT Consultants
- Technology providers
- EPCs, LSTKK contractors, OEMs
- IT service providers
- Communication service providers
- Other service providers

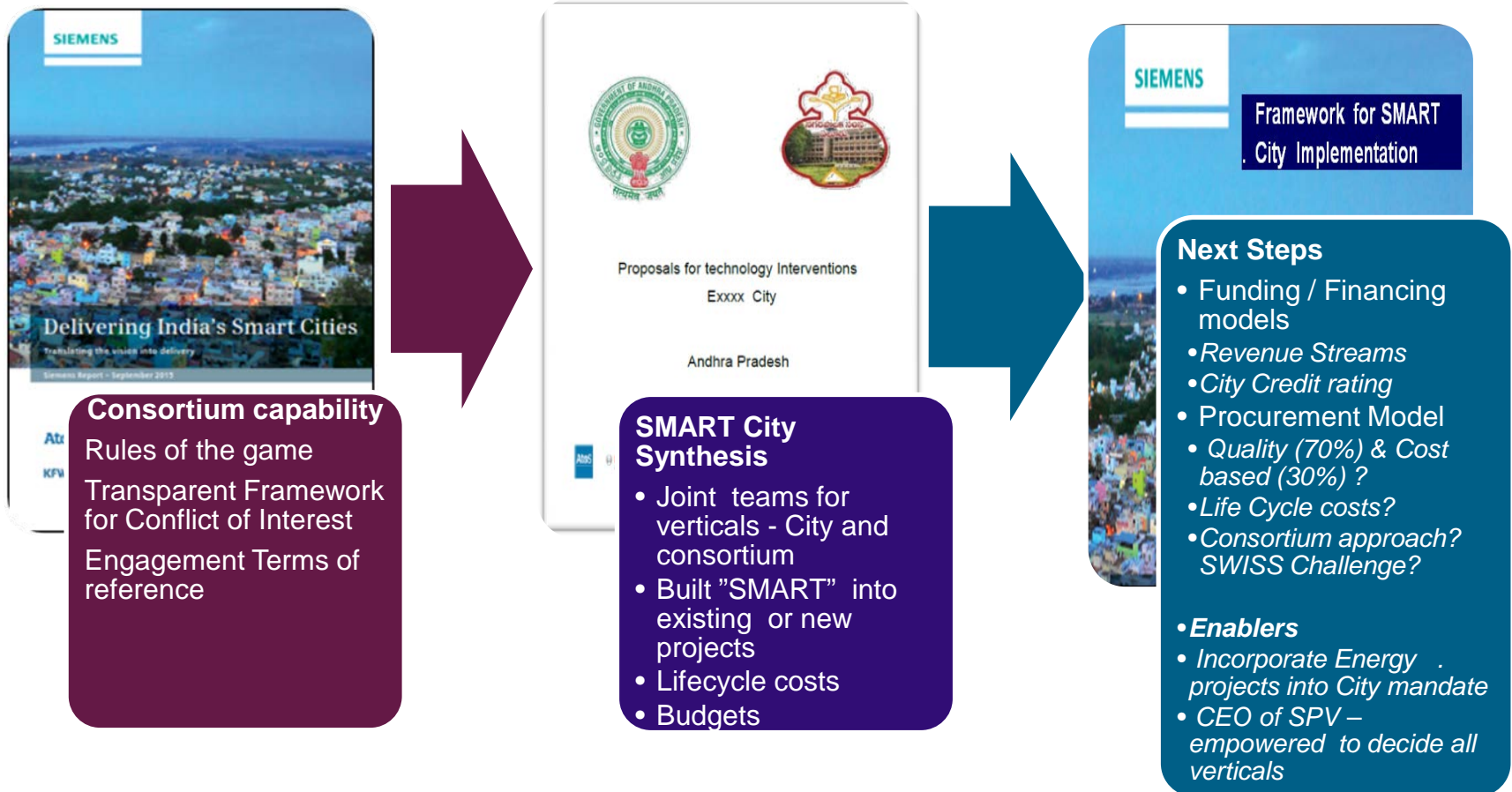
People make Cities what they are !

We have a very pragmatic, positive engagement with the city fully supported by the State Chief Minister

SIEMENS

City engagement case study

The Siemens led consortium has engaged with a mid sized city to support its vision of SMART



Our solutions support the development of New Delhi

Key Siemens solutions

- Airport : Baggage Handling System at T3 & Power Supply System for runway lighting at Delhi airport
- Metro : Signaling on 58 km Delhi Metro Line - 3
- Airport Express Link : Signaling, Electrification, Baggage Handling System on 22km Metro Express line connecting airport to city center
- Traffic Management : Intelligent Traffic Signaling on 19km route from Delhi gate to Ambedkar Nagar
- Postal automation : Automated mail processing center for Department of Post
- Logistics solution : Automated Cargo Handling at Delhi International airport
- Building Solutions : Building Management System & Solutions at Hotel Leela, CBI HQ, Delhi Metro HQ & IOCL corporate office.
- Power Distribution : 33KV GIS system replacing existing AIS system to feed important buildings in South Delhi (incl. high security zones)
- Urban mobility : Signaling, electrification & rolling stock for 6.1 km Gurgaon metro line



Realizing Cities is about meshing competencies in a structured approach

SIEMENS

Decision makers have to respond to a complex 21st century sustainable environment.



The consortium has the portfolio, the know-how, and the expertise to help cities become more livable, more competitive and more sustainable.

For more information on approach or the work packages, please contact the lead partner Siemens Ltd.