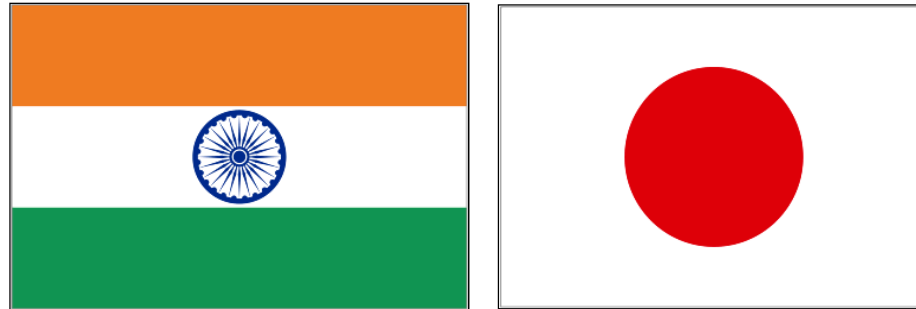


For a Growing Future
-INDIA & TOSHIBA-
11th Feb. 2013



Shinichiro Ogawa

Railway Systems Div.
Social Infrastructure Company
Toshiba Corporation

TOSHIBA's Contribution in INDIA

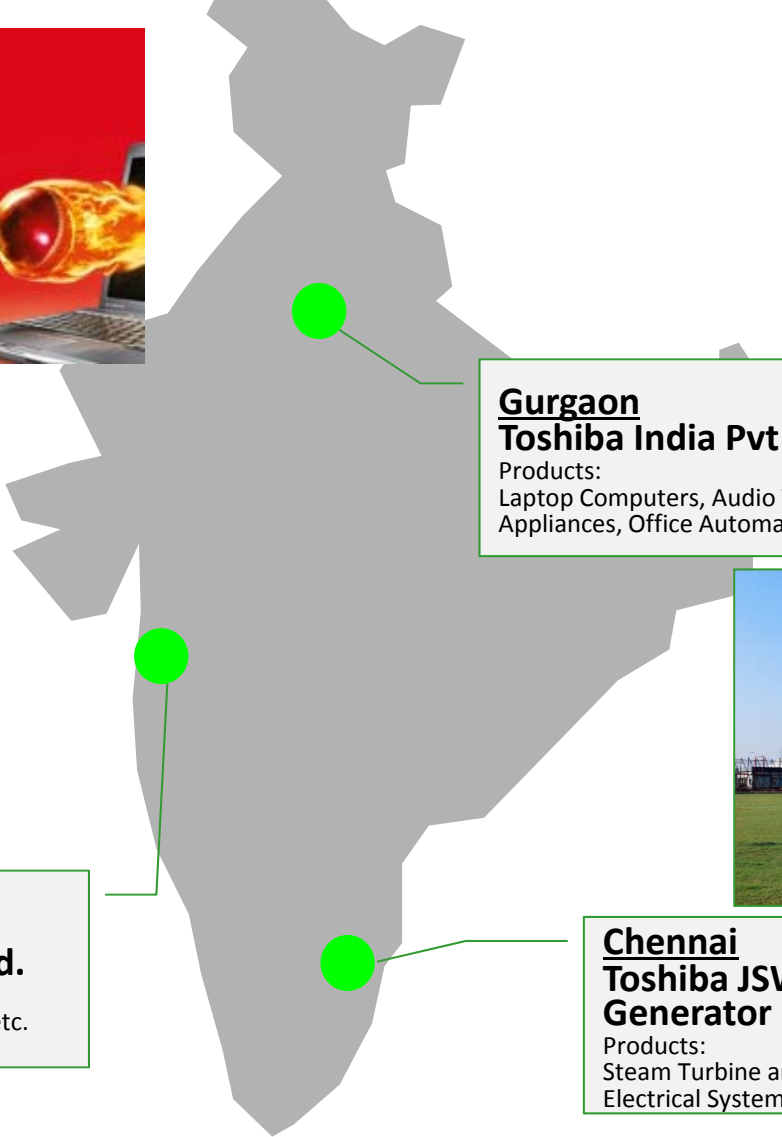
Generating power, building smart community and running railway

 TOSHIBA's Solutions

in High Speed Rail and Railway Business

Toshiba's business bases in India

Entire Toshiba group is committed to growing future of India.



Gurgaon
Toshiba India Pvt Ltd.
Products:
Laptop Computers, Audio Visual Products, Home Appliances, Office Automation, etc.



Mumbai
Toshiba Elevator India Pvt Ltd.
Products:
Elevators, Industrial Elevators , Escalators, etc.

Chennai
Toshiba JSW Turbine and Generator Pvt Ltd.
Products:
Steam Turbine and Auxiliaries, Generators and Electrical Systems, etc.

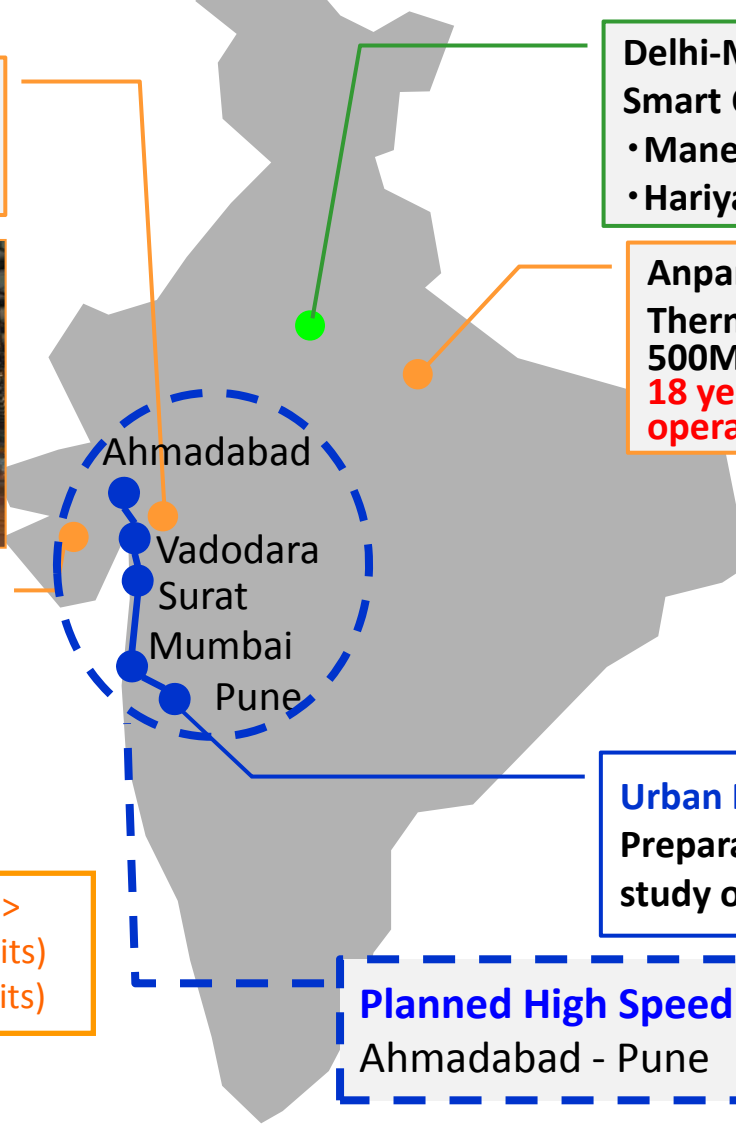
Generating power, running railway and building smart community

SSNNL, Gujarat
Hydro Power Plant
200MW×6 unit



Mundra, Gujarat
TATA Mundra
Thermal Power Plant
800MW×5 unit
The first Ultra Mega Power Plant (UMPP) in India

<Total Installed Capacity in India>
 Thermal Power 5,778MW (14units)
 Hydro Power 2,548MW (17units)



Delhi-Mumbai Industrial Corridor PJ
Smart Community
 • Manesar PJ
 • Hariyana PJ

Anpara B, UP
Thermal Power Plant
500MW×2 unit
18 years continuous commercial operation



Urban Railway Project
Preparatory survey for feasibility study of in Pune City

Planned High Speed Rail
Ahmadabad - Pune

TOSHIBA's Contribution in INDIA

Generating power, building smart community and running railway

TOSHIBA's Solution

in High Speed Rail and Railway Business

Realizing Our Vision of Enhanced Quality of Life in Harmony with the Earth



Committed to a better environment,
a better world, for people everywhere

Three Approaches at the Heart of Toshiba “eco style”

Greening of Process



**Minimizing
the environmental impacts**

Greening of Products



**Aim to the highest level of
environmental performance**

Greening of Technology



**Greening of the planet with
low-carbon technology**

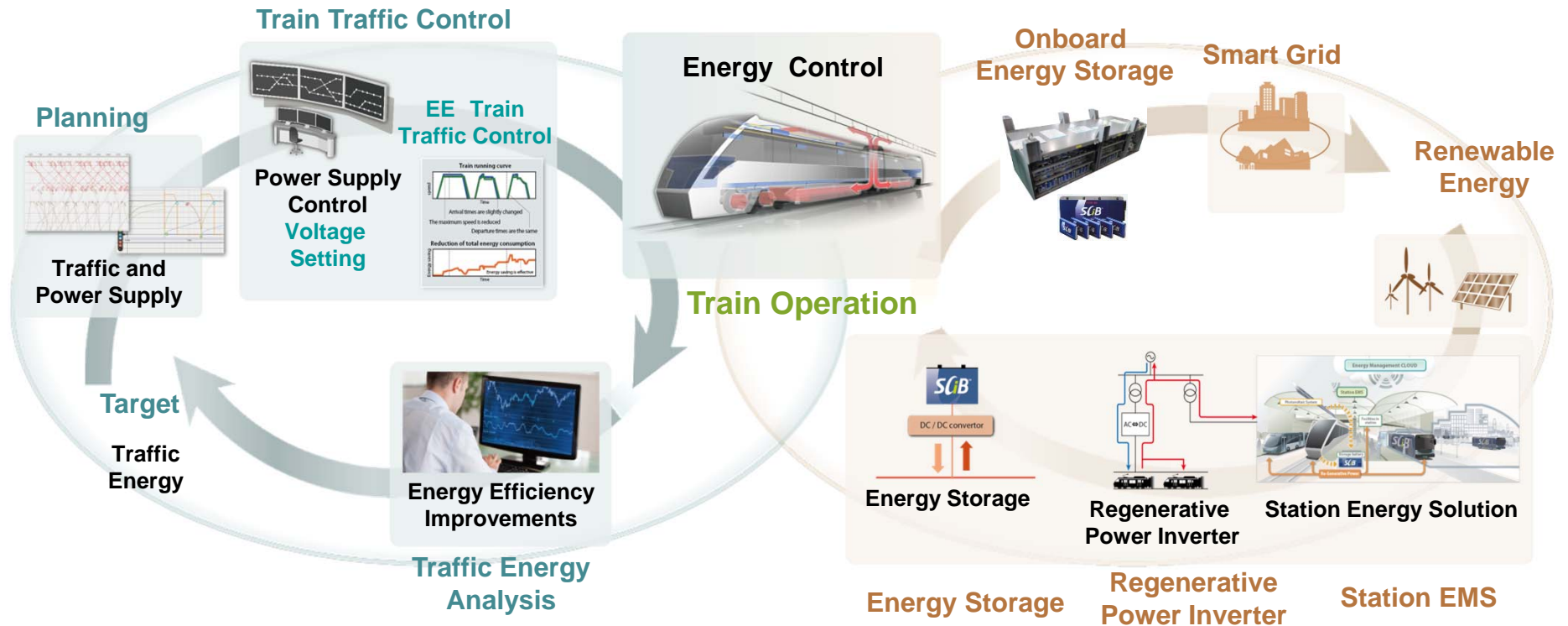
Control and Energy Solutions for Green Railway

Operation & Control

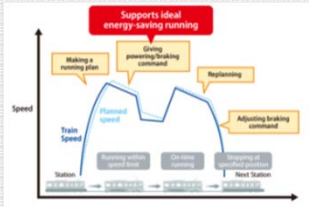
Energy System

Energy-conscious operation planning and control

Total Planning of regenerative energy and energy storage



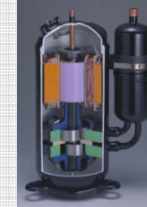
Control and Energy Solutions for Green Train



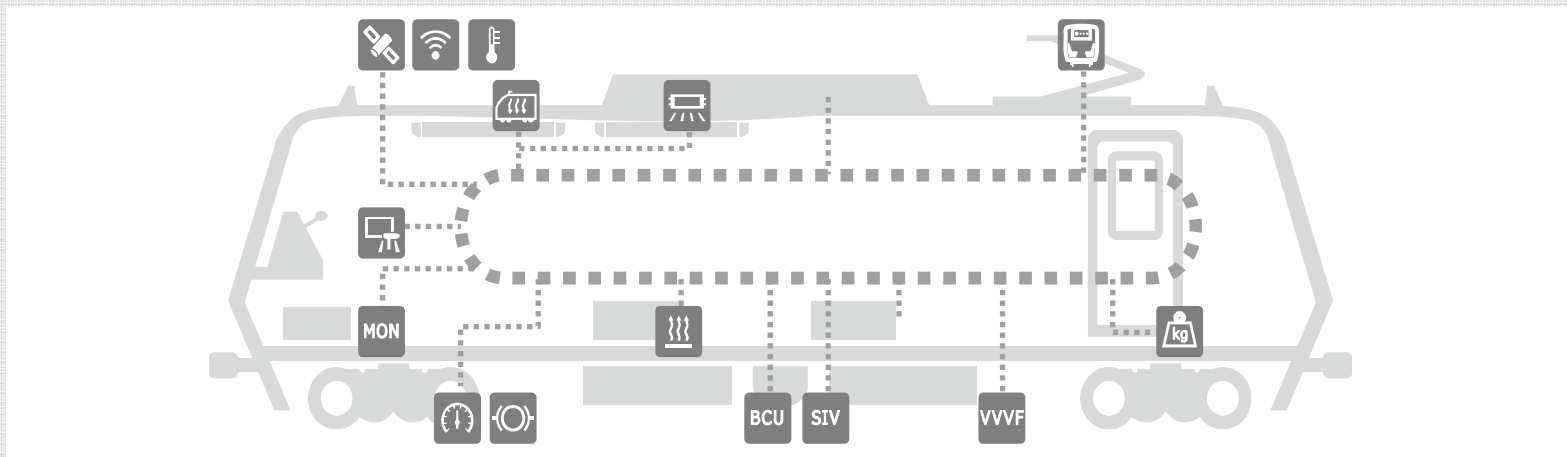
Eco-driving Assistance



LED illumination



Energy Efficient Air Conditioning



Energy saving propulsion system

Onboard power storage

Battery

Application of Energy and Environment Conscious Equipment



Series E5



Series E6



Main Transformer

Compact and lightweight.
Reducing noise by adopting anti-vibration rubber.



Converter Inverter

Compact, lightweight and light maintenance.
High-reliability with a three-level main circuit.



Traction Motor

High performance motor which is light weight and low noise



Air conditioner

Energy saving air conditioner which is highly efficient and low noise

Integration of Japanese Technology for Taiwan High Speed Rail



Driving Cab



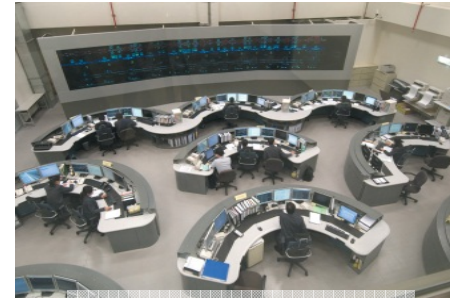
Training Simulator



Radio Communication



Electric Power Supply



Operation Control Center



Station Control Room



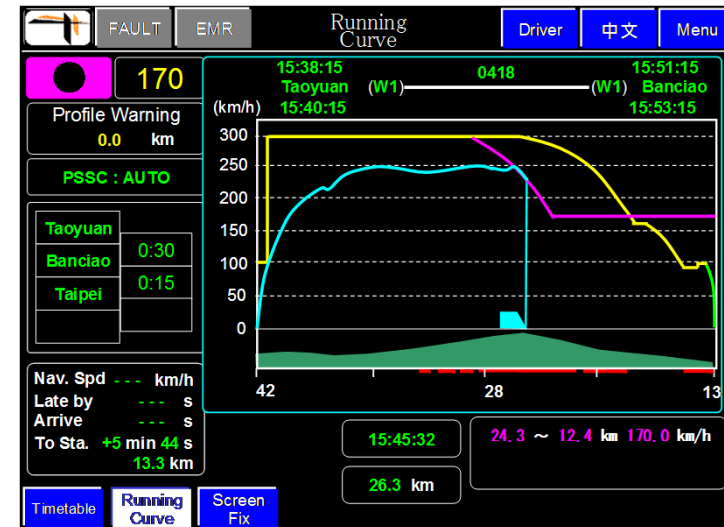
Passenger Information

Smart Facilities for Reliable and Punctual Train Operation



Series 700T runs on 300km/h with;

- Navigation System
- Programmed Station Stop Control



Navigation System



Driving Cab

Environmental-friendly Power Supply System for Trains



Control Panel



Gas Insulated Switchgear

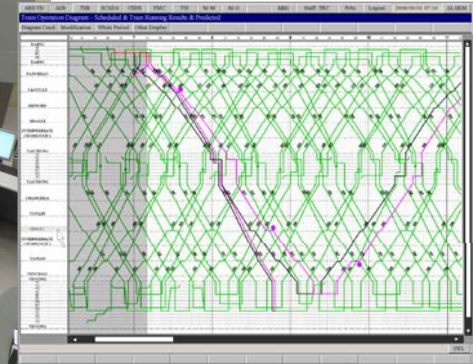


Main Transformer

Intelligent Control System for Operation and Maintenance



Operation Control Center



Train Diagram



Station Control Room



Maintenance Depot



Servers

Achievement of Reliable and Punctual Operation bring Steady Ridership

Five Years in Review

THSRC commenced operations in January 2007, and since that time, we have focused our efforts on steadily increasing ridership. THSRC has carried approximately 175 million passengers through May 2012.

Over our five-year history, we have achieved the following milestones:

- Provided a total of 231,613 train services, with an average service reliability of 99.94%
- Achieved 36.1 billion passenger-kilometers and a loading factor of 47.86%
- Achieved 75.5 billion seat-kilometers and an average service punctuality of 99.36%

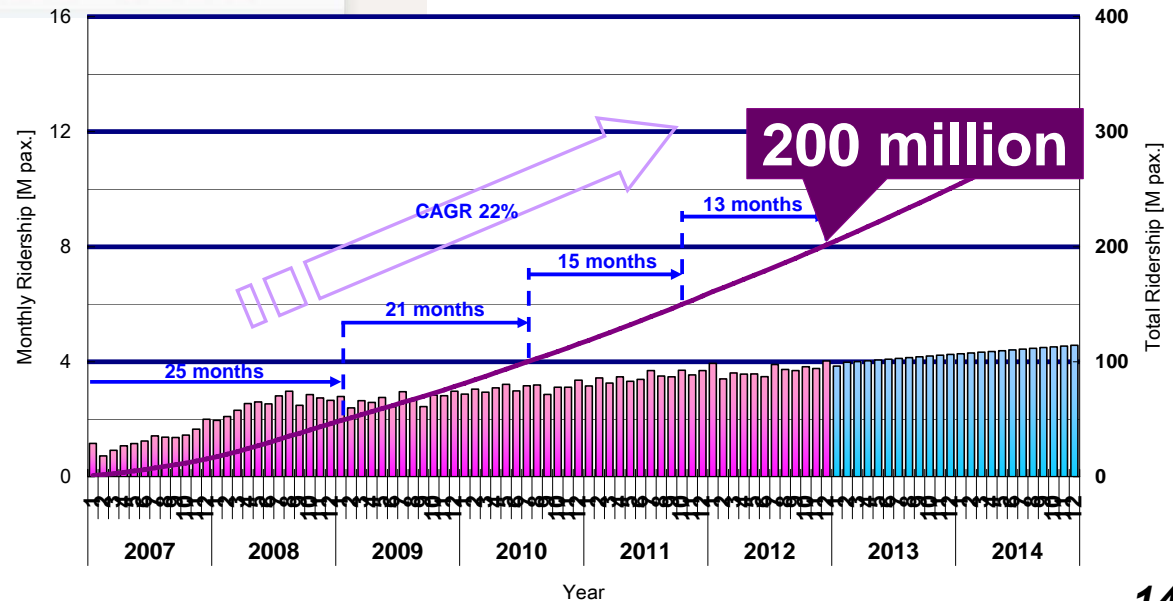
Average Service Reliability, 2007–2012

99.94%

Average Service Punctuality, 2007–2012

99.36%

Ridership of Taiwan High Speed Rail



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TOSHIBA

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Leading Innovation >>>