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WTO Regional Workshop - Engaging Business - a Round Table Discussion, 13 Nov 2014

# Green Technologies: Generation & Diffusion

Mr. Eric Chong  
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# Our Businesses



**Power & Gas**



**Wind Power and Renewables**



**Power Generation Services**



**Energy Management**



**Building Technologies**



**Mobility**



**Process Industries & Drives**



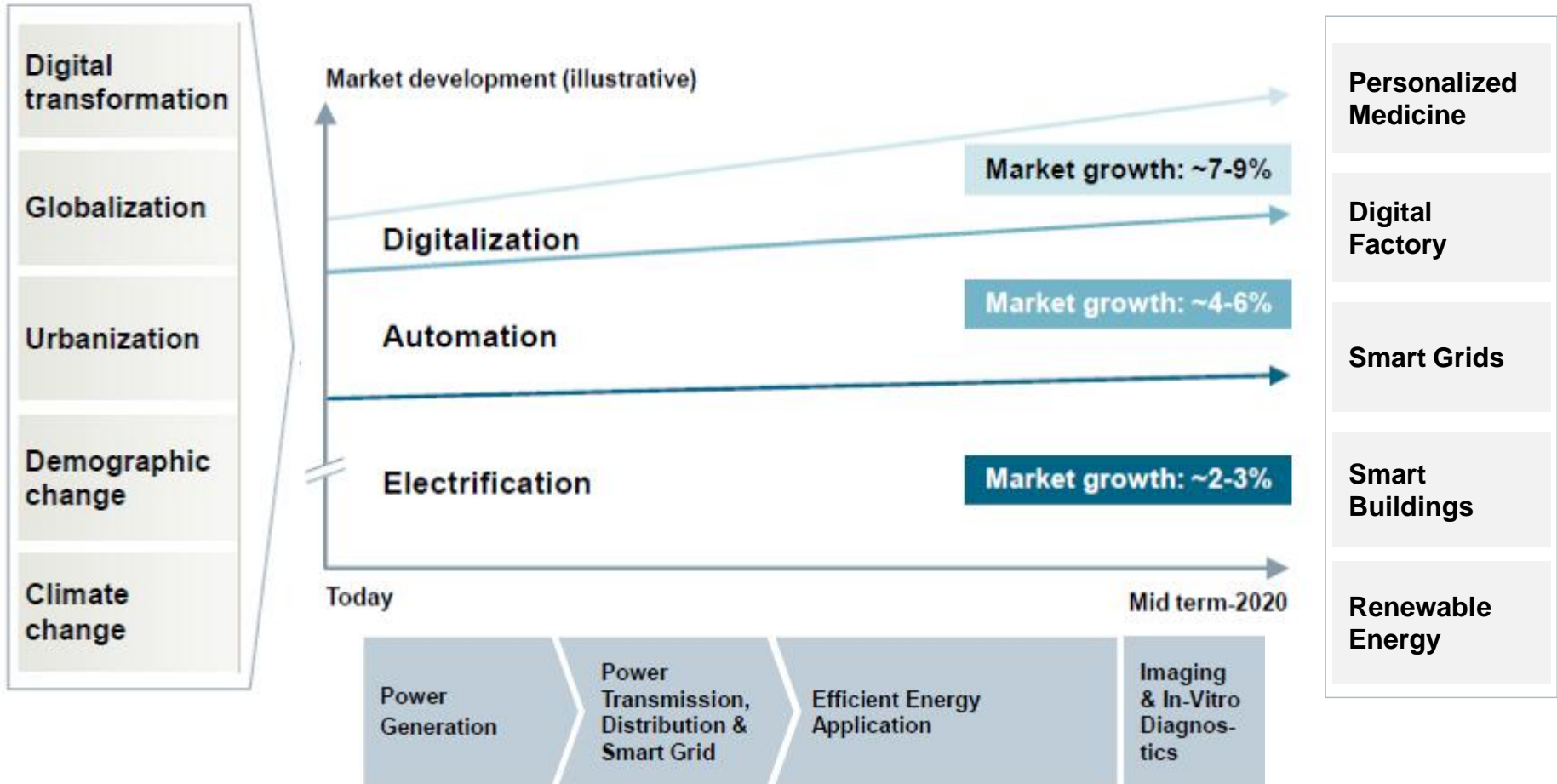
**Digital Factory**



**Healthcare**

# Innovations Mitigate Effects of Megatrends

Global trends



# Green Technologies for Relieving Climate Change

## Sustainable power generation

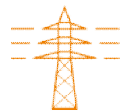


**Renewable energies**  
→ Wind Power



**Fossil power generation**  
→ Combined cycle power plants (CCPP)

## Low-loss power transmission



**Power transmission and distribution**  
→ High-voltage direct-current (HVDC) transmission



## Intelligent distribution and storage



**Smart grids**  
→ Smart metering data management and services

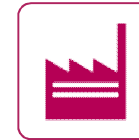


**Energy storage**

## Efficient energy use



**Mobility**  
→ Urban Traffic Systems and Services



**Industry solutions**  
→ ELFA Hybrid Drive



**Building technologies**  
→ Energy Performance Optimization  
→ Demand Flow™

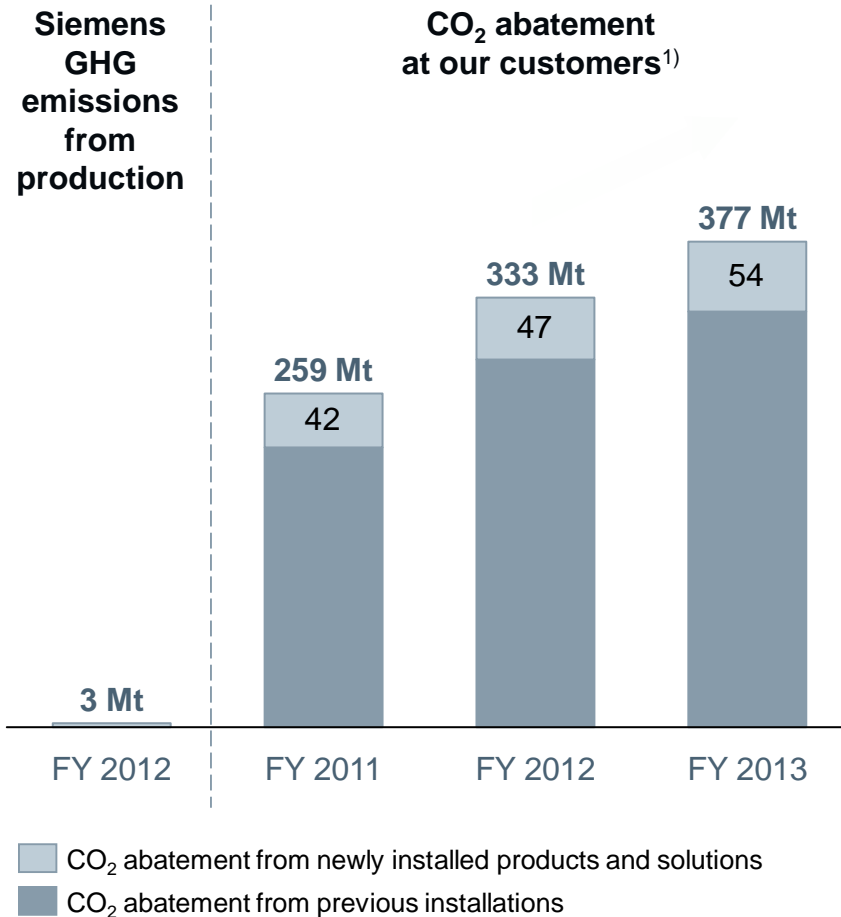


**Healthcare**  
→ Biograph™ mCT



**Water**  
→ Water distribution & control service  
Eric Chong / Siemens

# Green Technologies Abate CO<sub>2</sub> Emissions



Berlin		Cape Town	
London		Los Angeles	
Melbourne		Mexico City	
Moscow		New York City	
São Paulo		Seoul	
Singapore		Tokyo	

**Total emissions  $\Sigma$  ~377 Mt (CO<sub>2</sub>-equivalent)**

1) On a comparable basis

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Case Study

# Demand Flow™

## Case Study: Demand Flow™

Energy cost savings application for water-cooled, central chilled water plants. With specialized control algorithms together with variable frequency drives, it helps to maintain optimal differential system pressure, reduce excessive pumping energy as well as equipment runtime for the chiller plants

### Benefits:

- Reduce energy consumption
- Simplified system operation
- Extended equipment life
- Less maintenance



Over 150 applications worldwide:

- Aquarium of the Pacific in Long Beach, California
- Point Loma Nazarene University in San Diego, California

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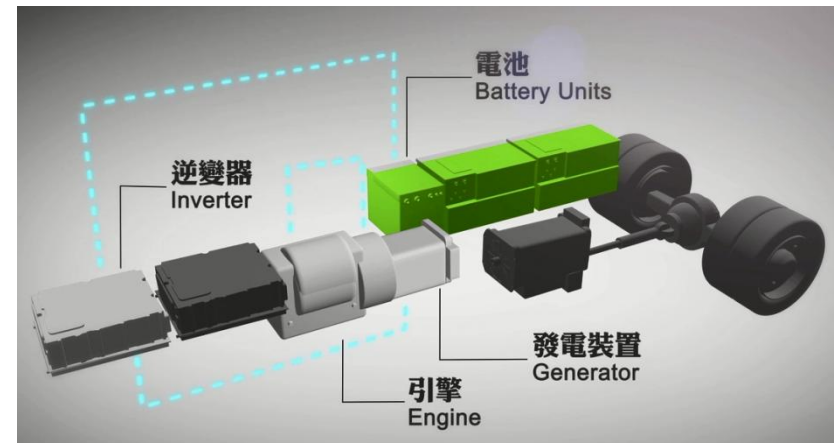
Case Study

# Range Extended Electric Light Bus



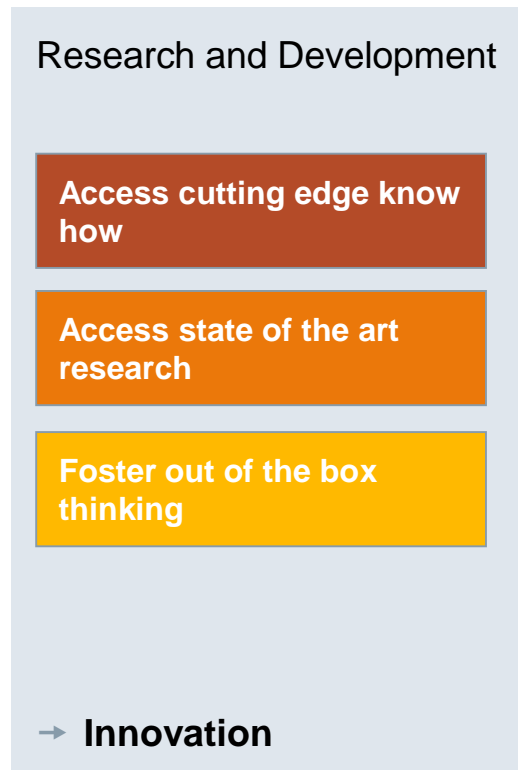
# Partner with Green Mobility Innovations Ltd (GMI) Developed 'Electric Light Bus'

- Local R&D and manufactured
- Equipped with Siemens ELFA® Traction Drive System
- Improves fuel efficiency by more than 50% compared to conventional diesel buses  
(reduces up to 160,000 tonnes of GHG emission per year if 4,350 conventional diesel buses will be replaced)

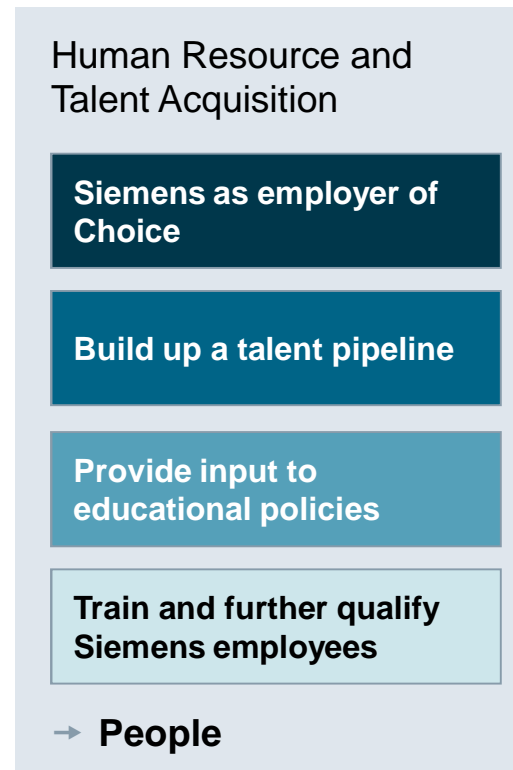


# Industry & University Collaboration

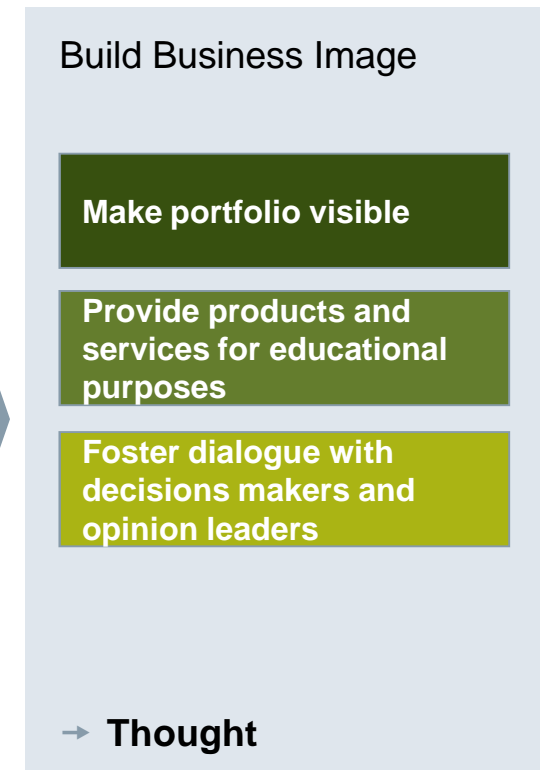
**Diffuse knowledge and innovations through joint research projects**



**Build up people resources which is key to future innovations**



**Achieve industry leadership to have sustainable success in driving innovations**



THANK YOU



**Eric Chong**  
President & CEO  
Siemens Limited