



# Standards Alliance Workshop Accra, Ghana

March 31, 2017

# A DIGITAL INDUSTRIAL COMPANY

**\$124B** Revenue **350,000+** people **>180** countries

2015 Revenues



**POWER**

**\$30B**



**ENERGY  
CONNECTIONS**

**\$8B**



**RENEWABLE  
ENERGY**

**\$6B**



**OIL & GAS**

**\$16B**



**AVIATION**

**\$25B**



**TRANS.**

**\$6B**



**HEALTH  
CARE**

**\$18B**

Leading the Digital Transformation of All Industries, Including Power





# GE POWER

~\$30B revenue ~100,000 employees >150 countries

## GAS POWER SYSTEMS



Schenectady,  
NY, USA

## POWER SERVICES



Baden,  
Switzerland

## STEAM POWER SYSTEMS



Baden,  
Switzerland

## WATER & DISTRIBUTED POWER



Trevose,  
PA, USA

## GE HITACHI NUCLEAR ENERGY



Wilmington,  
NC, USA

## POWER DIGITAL SOLUTIONS



San Ramon,  
CA, USA

FUNCTIONAL  
EXPERTISE

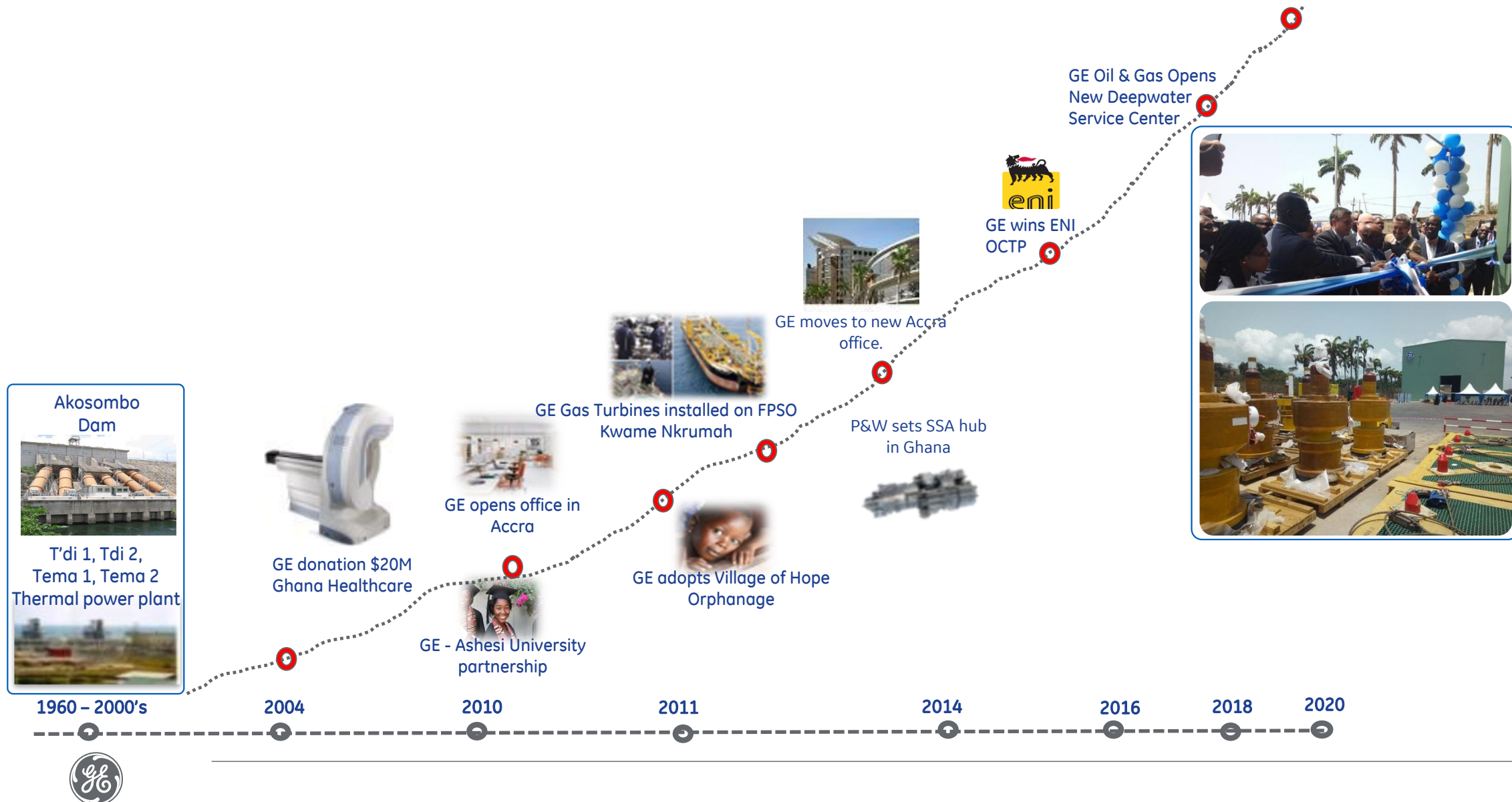
OPERATIONAL  
EXCELLENCE

DIGITAL  
CAPABILITY



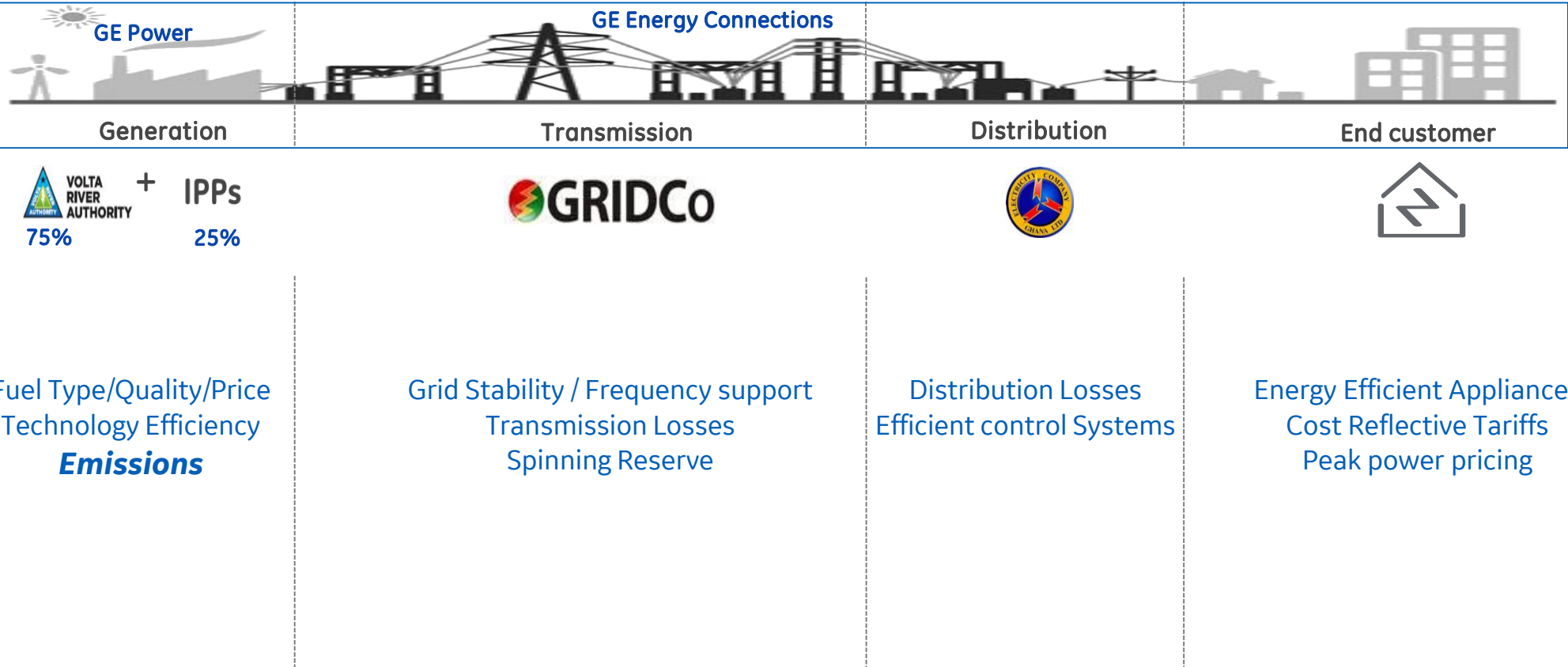


# GE Ghana ... Our growth story so far



# Ghana Power Landscape

## Electricity Supply Value Chain



Relevant Industry Standards

Min of Energy



**Safety is the ultimate standard: “Nothing is so important that it cannot be done safely”**



# Typically regulated pollutants

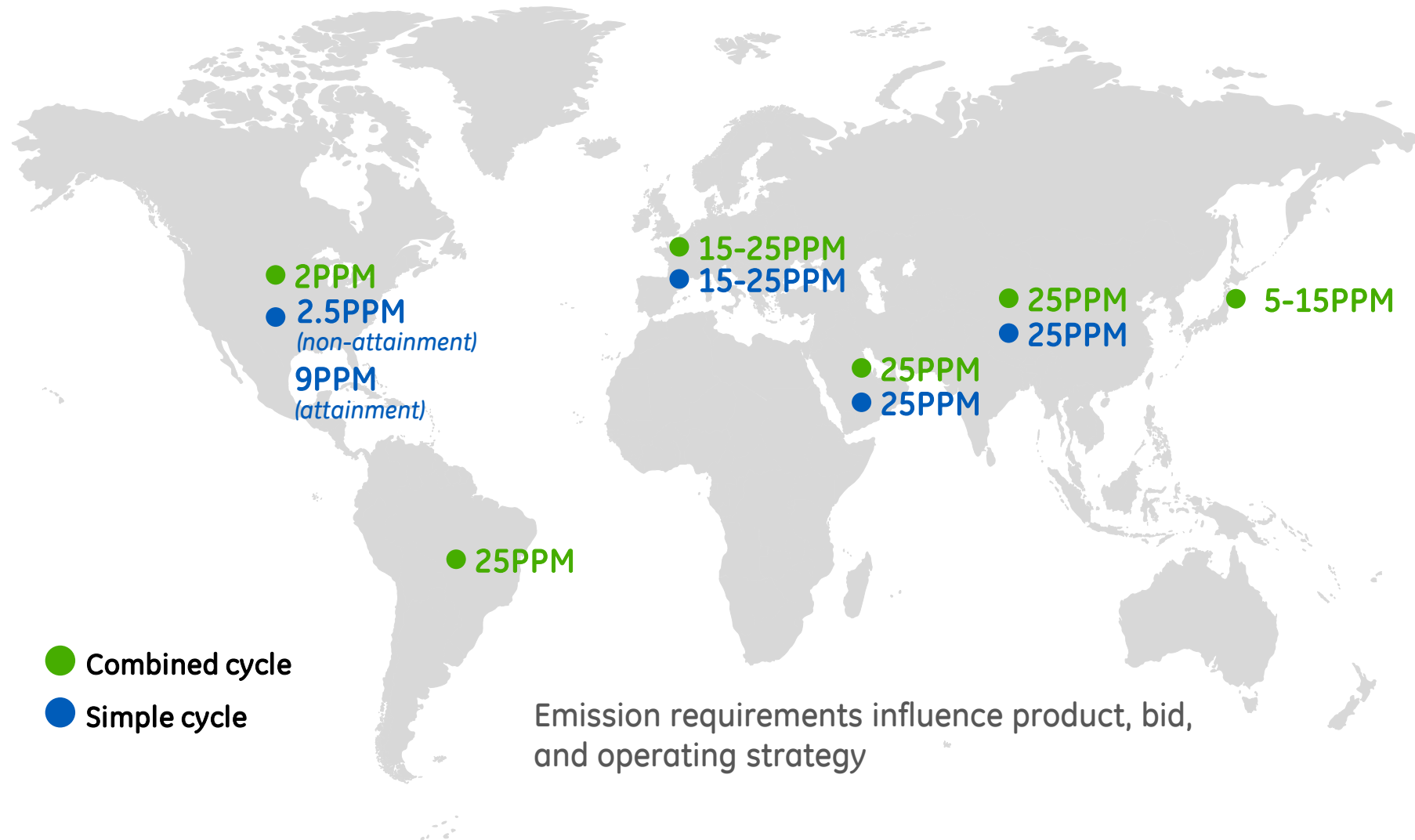
Pollutant	Health Concerns	Gas Turbine Control Technology	Plant Control Technology
Nitrogen Oxides ( <i>NOx</i> )	Respiratory Effects	Dry Low NOx Water Injection	Selective Catalytic Reduction (SCR)
Carbon Monoxide ( <i>CO</i> )	Reduce Oxygen Absorption	Complete Combustion	Oxidation Catalyst
Volatile Organic Compounds ( <i>VOC</i> )	NOx and VOC form Smog	Complete Combustion	Oxidation Catalyst
Particulate Matter ( <i>PM</i> )	Respiratory Effects		N/A
Sulfur Oxides ( <i>SOx</i> )	Respiratory Effects/Acid Rain		Low Sulfur Fuels
Carbon Dioxide ( <i>CO2</i> )	Greenhouse Gas Climate Change		Efficient operation



# Global NOx Emission Requirements\*

## World Bank Standard

Natural gas: 25 PPM  
Liquid Fuel: 74 PPM



\*Emission values for natural gas firing, differing levels are established for other fuels.

# Questions?





