



# Three Trends of the Grid Edge Transformation

### **ELECTRIFICATION**

Critical to long-term carbon goals and will be a relevant distributed resource

#### Key technologies:

Electric vehicles, vehicle to grid/home, smart charging, heat pumps



#### **DIGITALIZATION**

Allows for open, real-time, automated communication and operation of the system

### **DECENTRALIZATION**

Makes customers active elements of the system, though requires significant coordination

#### Key technologies:

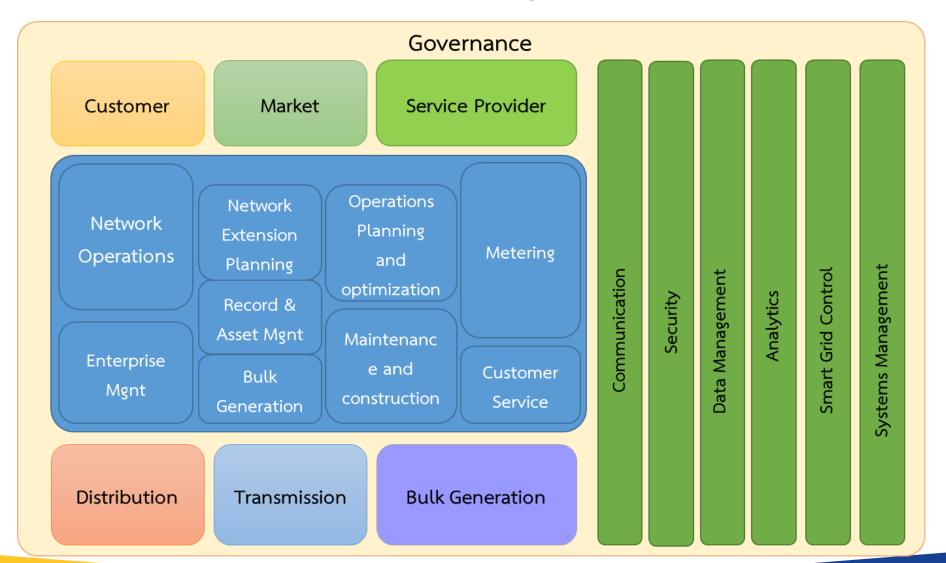
energy efficiency, solar PV, distributed storage, microgrids, demand response,

#### Key technologies:

Network technologies (smart metering, remote control and automation systems, smart sensrs) and beyond the meter (optimization and aggregation platforms, smart appliances and devices, IoT)

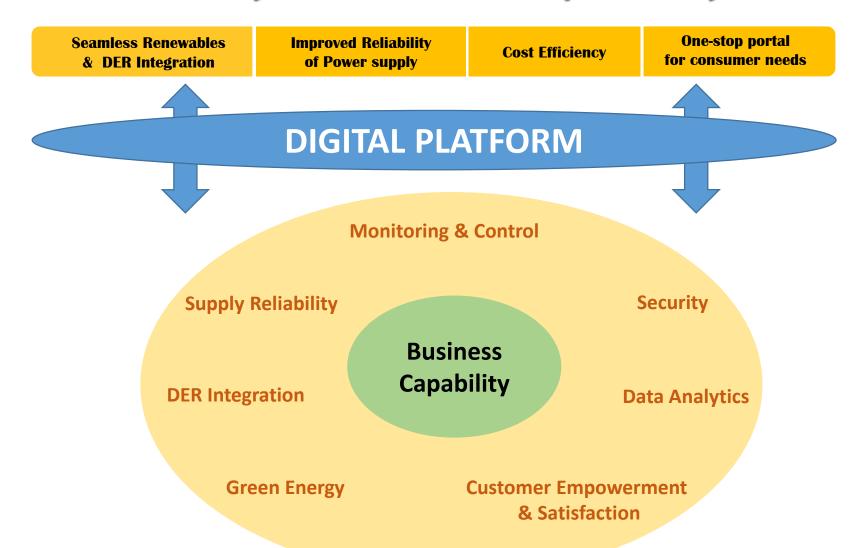


### Smart Grid Conceptual Model



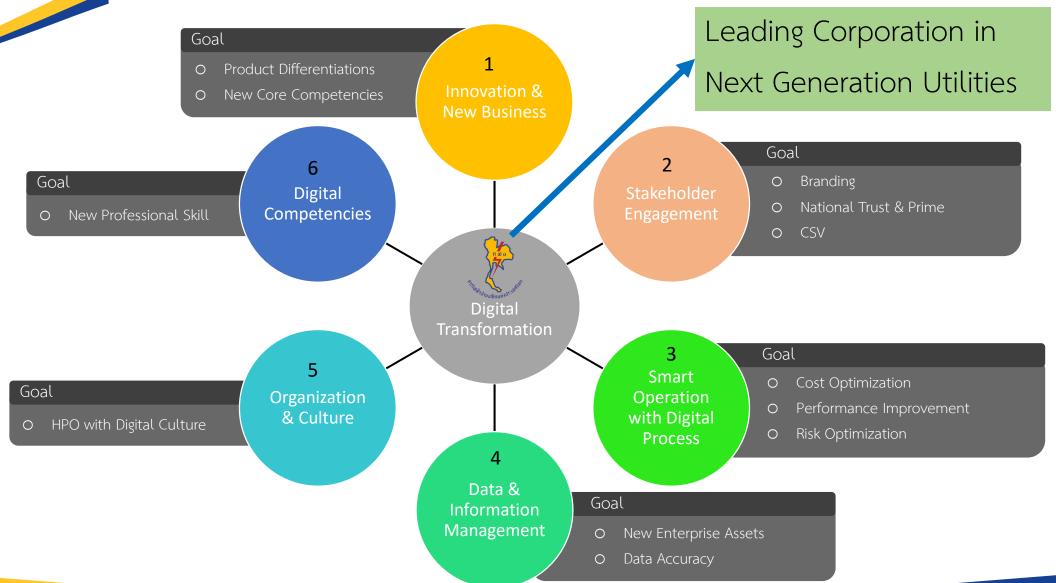


### **Utility Business Capability**





### Digital Transformation Mind map





## Digital Technology Landscape



Value Unlocked

#### Digital Themes Digital Initiatives

Asset Lifecycle Management	Asset performance management  Digital field worker				Increased asset life     Improved productivity     Optimized site decisions
Grid Optimization & Aggregation	Smart asset pla Energy aggregation platforms	Real-time supply & demand platform  Real-time network controls		Connected & interoperable devices	Real-time optimization Demand aggregation System flexibility Reduction of loss Real-time pricing
Integrated Customer Services			Energy storage integration	Energy management  Digital customer model  Energy solution integration	Trust & transparency     Enhanced experience     Hyper-personalization
Beyond the Electron				Living services Industrial services Municipal services	Data monetization     Gateway to other services



## Transformation Strategy

