



# CARILEC

**An Association of Electric Utilities**



# CARILEC Services

- ✓ **Training & Development**
- ✓ **Networking and Knowledge Sharing: Conferences & CAREC**
- ✓ **Technical Studies and Surveys**
- ✓ **Disaster Restoration Coordination (CDAP)**
- ✓ **Advocacy**



# CDAP: Post Irma & Maria

- Anguilla: **11** line crews totaling **55** linemen from **10** utilities to assist ANGLEC.
- British Virgin Islands: **13** line crews totaling **68** linemen from **9** utilities to assist BVIEC.

# CDAP: Post Irma & Maria

- Dominica: CARILEC deployed **8** line crews totaling **45** linemen, **1** transformer technician, **1** Hydraulic Tool Technician, and **1** Mechanic from **8** utilities to assist DOMLEC.
- Total: **171** from **14** Electric Utilities

# **CARILEC: Current Vision**

**To be the Premier Association of Electric Utilities and Industry partners; facilitating the development of world class electric energy services for all peoples of the Caribbean**

## **Renewed Vision**

**To be the Premier Association of Energy Service Providers and their partners, facilitating the development of world class sustainable electric energy solutions for all peoples of the Caribbean Region**

# **Renewed Mission**

**CARILEC will enhance the effectiveness of its members by providing industry related services, creating regular networking, training and knowledge sharing opportunities; supporting mutual assistance programs and accelerating the Caribbean Region's energy sector transition, through innovation and advocacy**

# CARILEC: Current Values

Perseverance, Professional Standards,  
High Ethical Standards, Socially Responsible

## **Renewed Values**

**Collaboration**

**Innovation & Agility**

High Ethical & Professional Standards

Social & **Environmental** Responsibility







A photograph of a bundle of dry, light-colored sticks and branches tied together with a bright green rope. The bundle is resting on a dark, mossy rock. In the background, the ocean waves are visible under a blue sky with white clouds.

**Sticks in a  
bundle are  
unbreakable.**

~ Kenyan Proverb

# Resilience through Collaboration

- **CARILEC**
- **CANTO**
- **CARICOM**
- **CDEMA**
- **Association of Caribbean States**
- **CHTA**



# CANTO and CARILEC MOU Supports Sustainable Energy and ICT Goals of the Caribbean

## CANTO and CARILEC MOU Supports Sustainable Energy and ICT Goals of the Caribbean



*Dr. Cletus Bertin (CARILEC) Teresa Wankin (CANTO)*

**Port of Spain, 25th November, 2017** – From May 2017, discussions have been ongoing between CARILEC and CANTO in the formulation of a Memorandum of Understanding (MOU), which included, inter alia, agreement on the joint promotion of the current CARILEC Smart Grid Symposium in Trinidad, October 23-26, 2017.

The MOU articulates the agreement between the parties to explore and implement initiatives focused on the following areas of common interest and priorities in the energy and information and communications technology (ICT) sectors: Training and Capacity Building; Conferences and Networking; Smart Grid Infrastructure and Applications, Business Development and Consulting opportunities.



Association of Caribbean States  
Asociación de Estados del Caribe  
Association des Etats de la Caraïbe

"Promoting the sustainable development of the Greater Caribbean"

HOME

ABOUT THE ACS

MEDIA CENTER

EVENTS

PROJECTS

RESOURCE CENTER

OPPORTUNITIES

## ACS AEC

About the ACS

Summits

Ministerial Council

Structure and Organisation

Members and Associate

Members

Observers and Partners

Official Meetings Calendar

FAQ

## Office of the Secretary General

Legal Affairs

Political Affairs

Communications Unit

Special Fund

## Focal Areas

Disaster Risk Reduction

Sustainable Tourism

Trade

Transport

Home » Resources » » 2018 » The MoU between the ACS & CARILEC commits to work toward improving regional resilience of electrical systems after disasters.

## The MoU between the ACS & CARILEC commits to work toward improving regional resilience of electrical systems after disasters.





# Digitalization & Energy

## INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its primary mandate was – and is – two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply, and provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy for its 29 member countries and beyond. The IEA carries out a comprehensive programme of energy co-operation among its member countries, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency's aims include the following objectives:

- Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.
- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
- Improve transparency of international markets through collection and analysis of energy data.
- Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
- Find solutions to global energy challenges through engagement and dialogue with non-member countries, industry, international organisations and other stakeholders.

IEA member countries:

Australia  
Austria  
Belgium  
Canada  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Italy  
Japan  
Korea  
Luxembourg  
Netherlands  
New Zealand  
Norway  
Poland  
Portugal  
Slovak Republic  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom  
United States



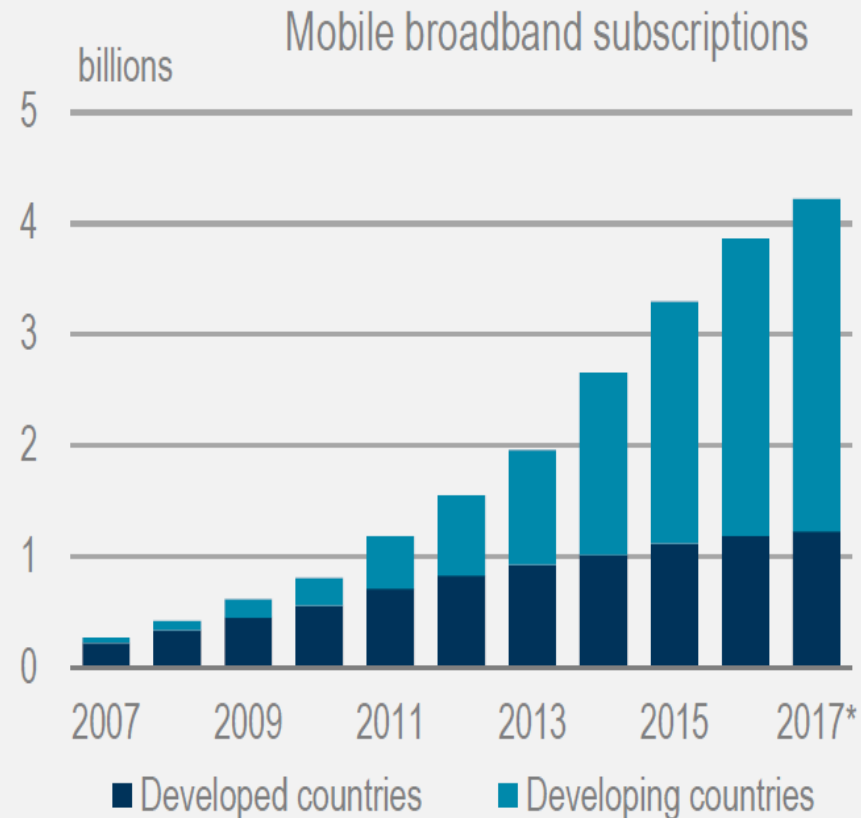
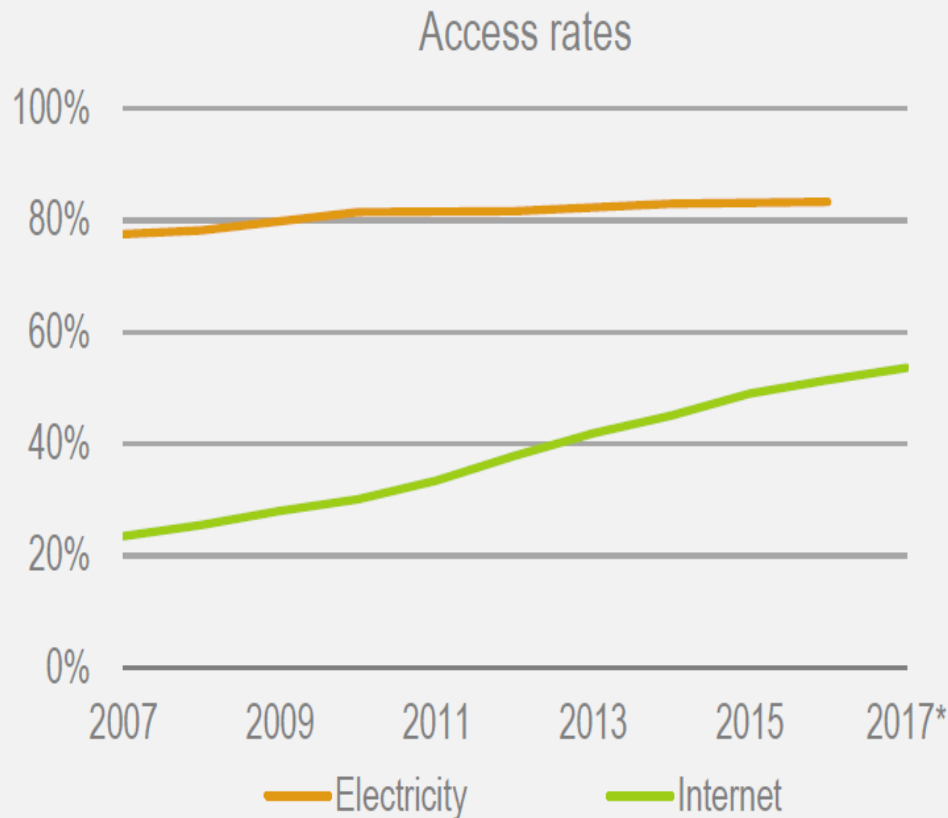
International  
Energy Agency  
Secure  
Sustainable  
Together

© OECD/IEA, 2017  
International Energy Agency  
Website: [www.iea.org](http://www.iea.org)

Please note that this publication  
is subject to specific restrictions  
that limit its use and distribution.  
The terms and conditions are  
available online at [www.iea.org/t&C/](http://www.iea.org/t&C/)

The European Commission  
also participates in  
the work of the IEA.

# Global Trends in Connectivity



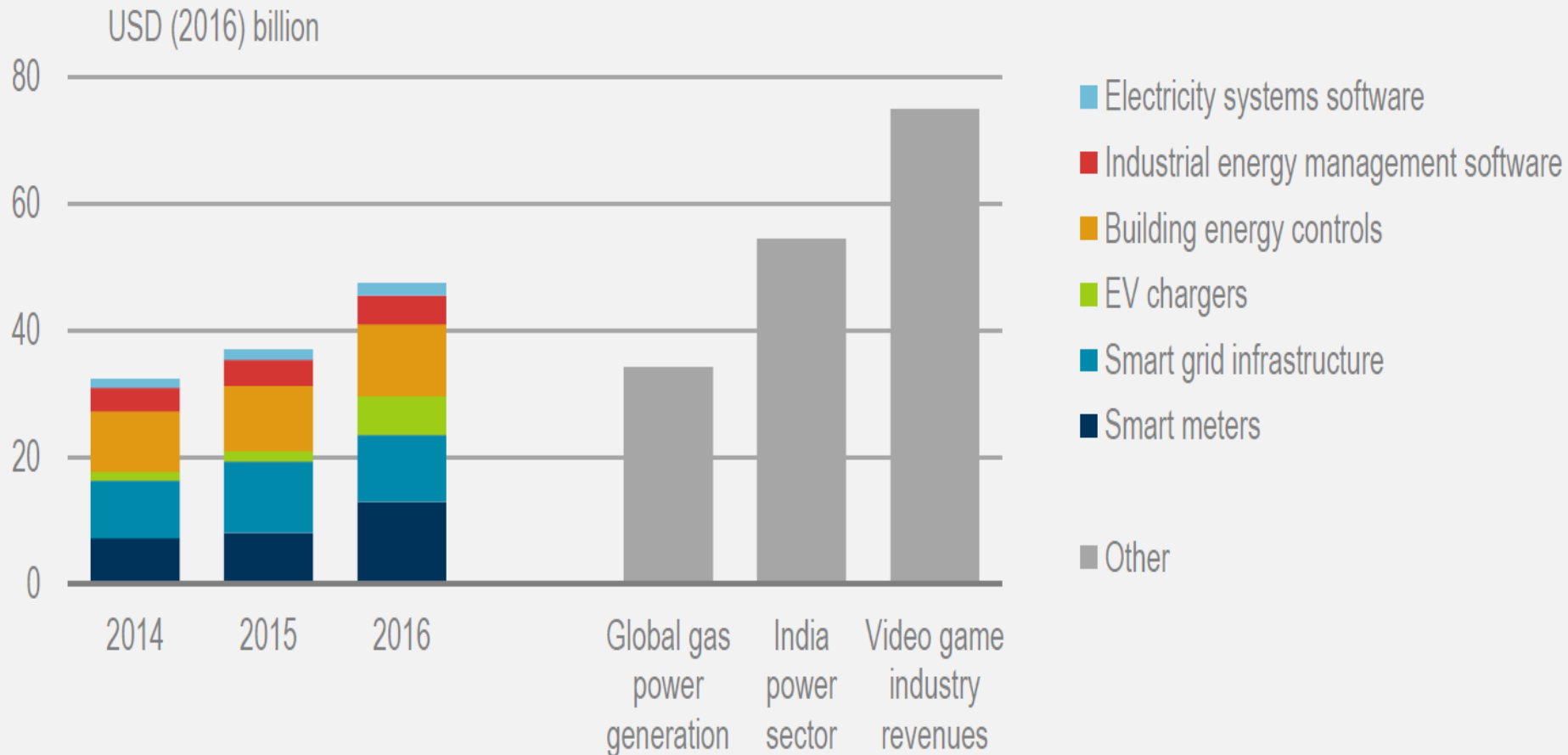
**Key message:** Connectivity is increasing rapidly, particularly in the developing world.

Notes: \* denotes estimate for 2017; “Internet access” is defined as households with internet access at home; developed/developing country classifications are based on the UN M49.

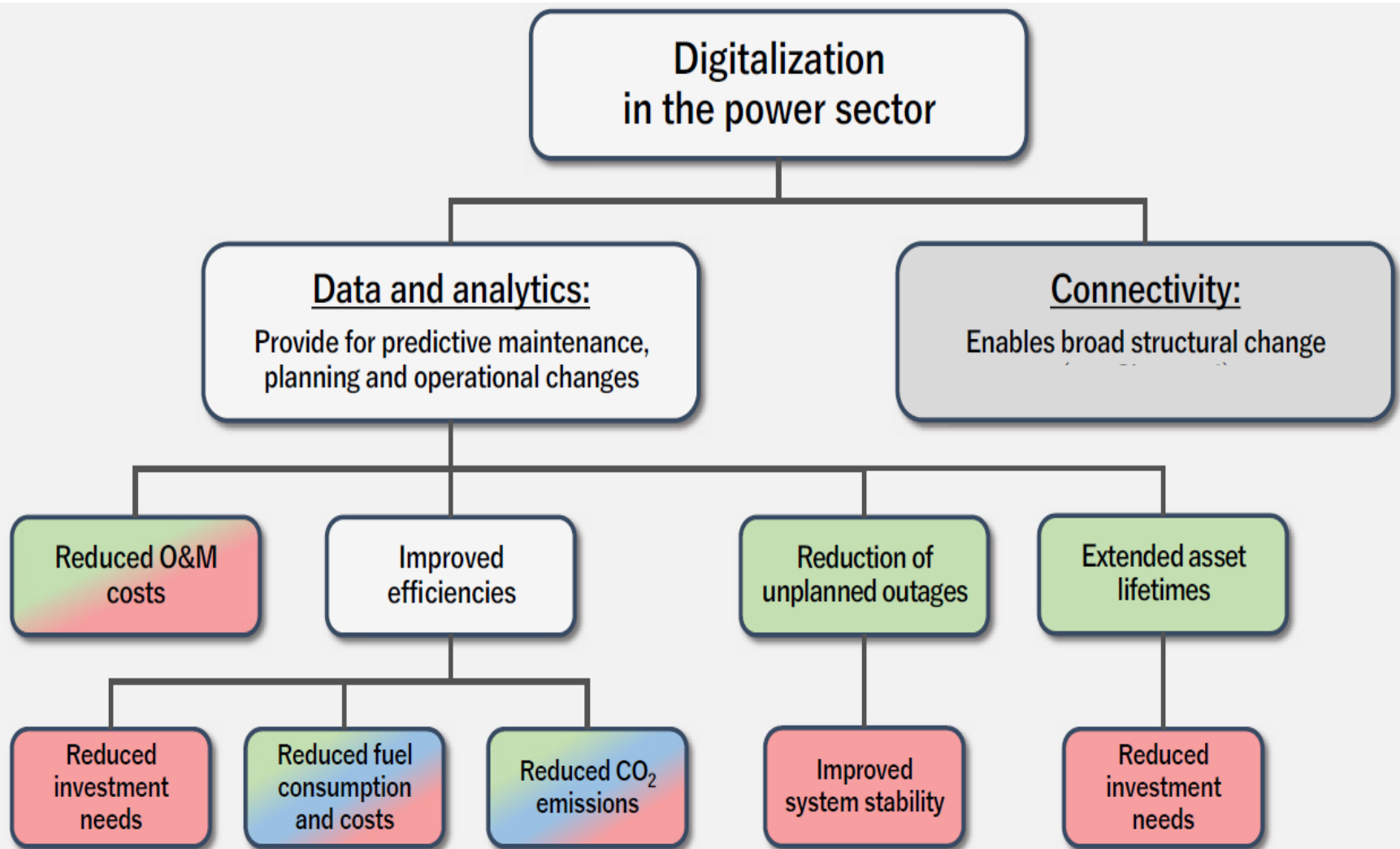
Sources: ITU (2017), *ICT Facts and Figures 2017*; IEA (2017), *Energy Access Outlook: From Poverty to Prosperity*.



# Investment in Digital Electricity Infrastructure & Software



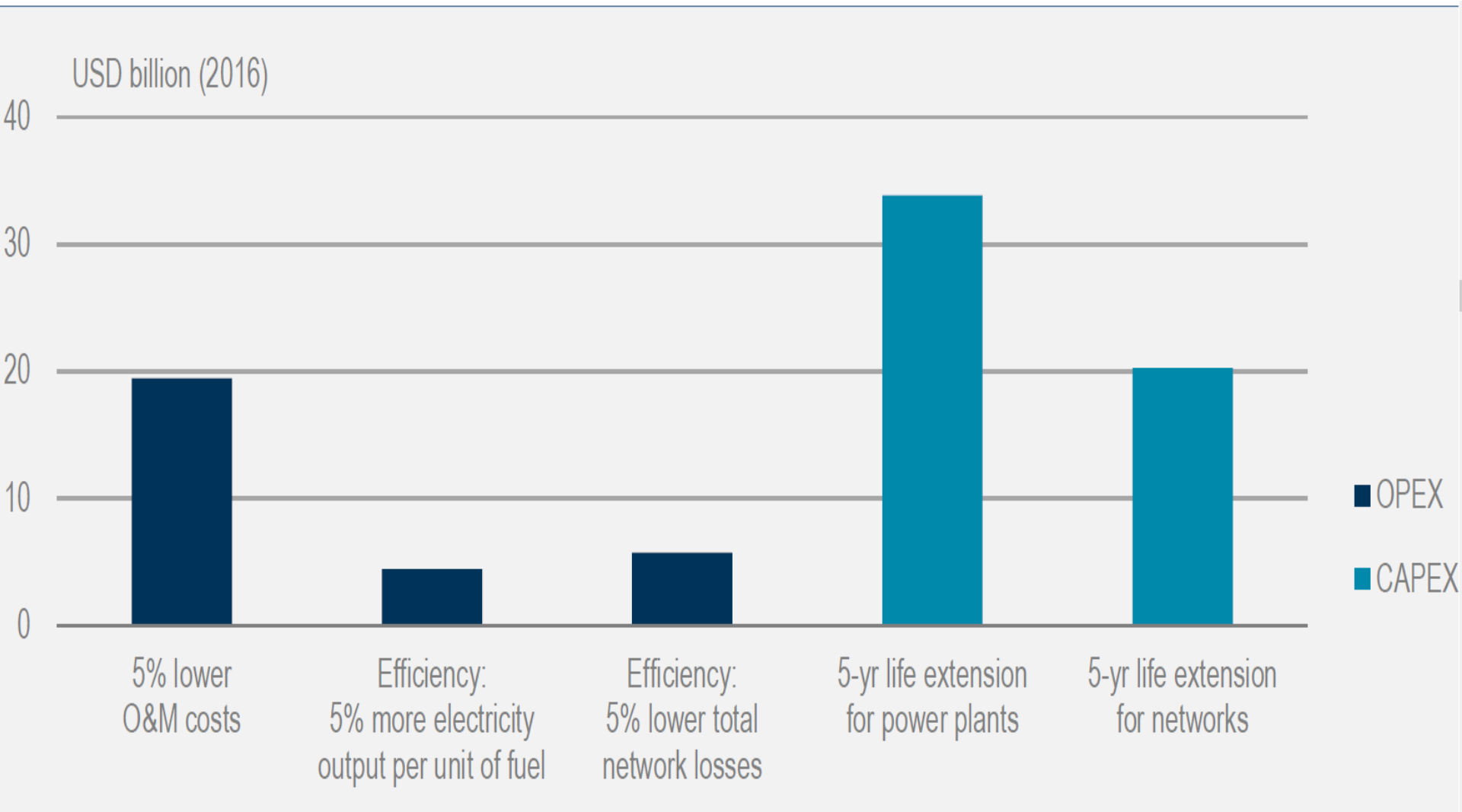
**Key message:** Investment in digital electricity infrastructure and software grew over 20% annually between 2014 and 2016, overtaking global investment in gas-fired power generation.



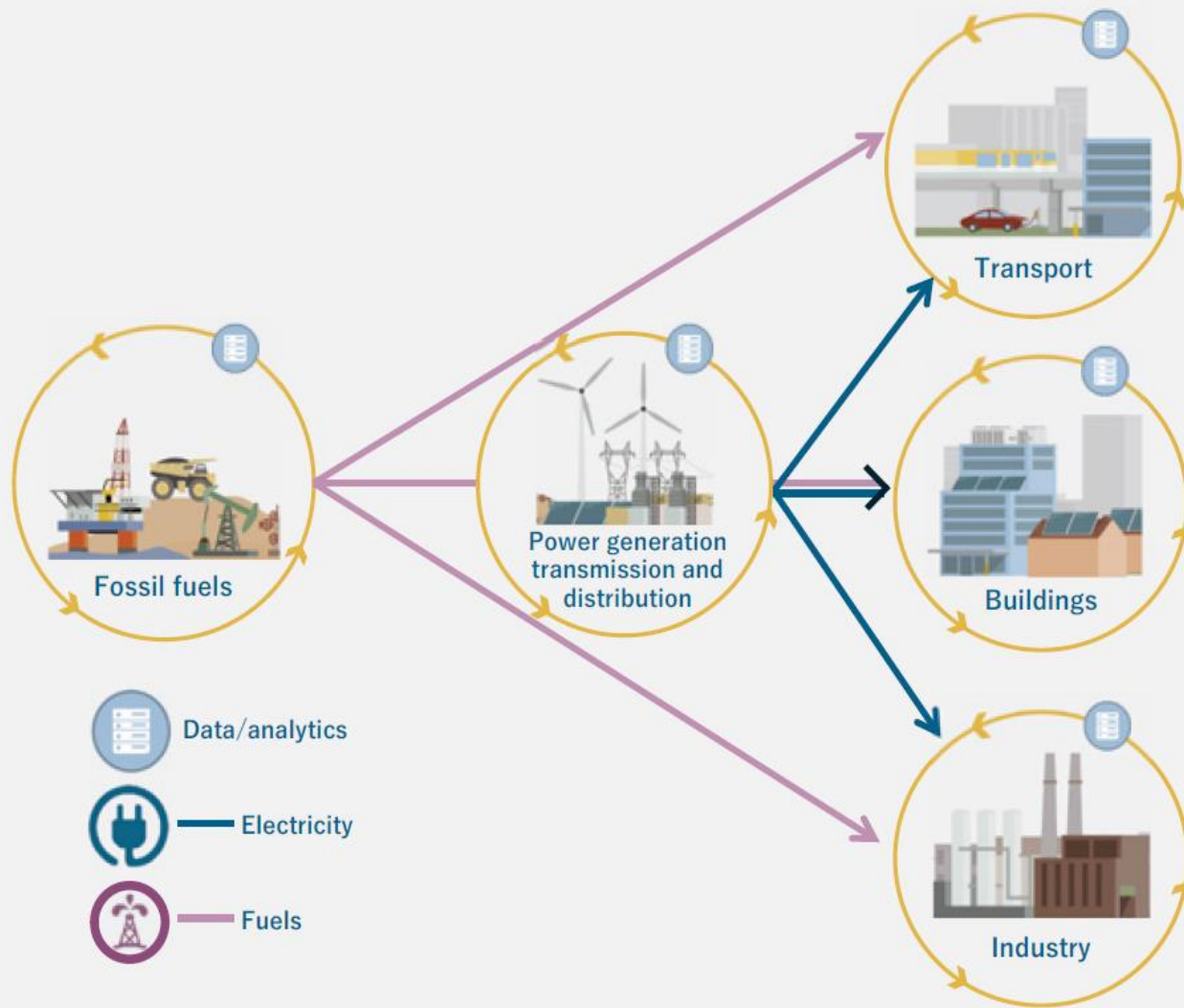
**Key message:** Digitalization in the power sector has the potential to bring benefits to the owners of power sector assets, the wider electricity system, consumers and the environment.

Notes: **green**: financial benefits for asset owner; **red**: system benefits, consumer benefits; **blue**: global environmental benefits; CO<sub>2</sub> = carbon dioxide.

# Potential Worldwide **Cost Savings** from **Enhanced Digitalization** in Power Plants & Electricity Networks: 2016-2040

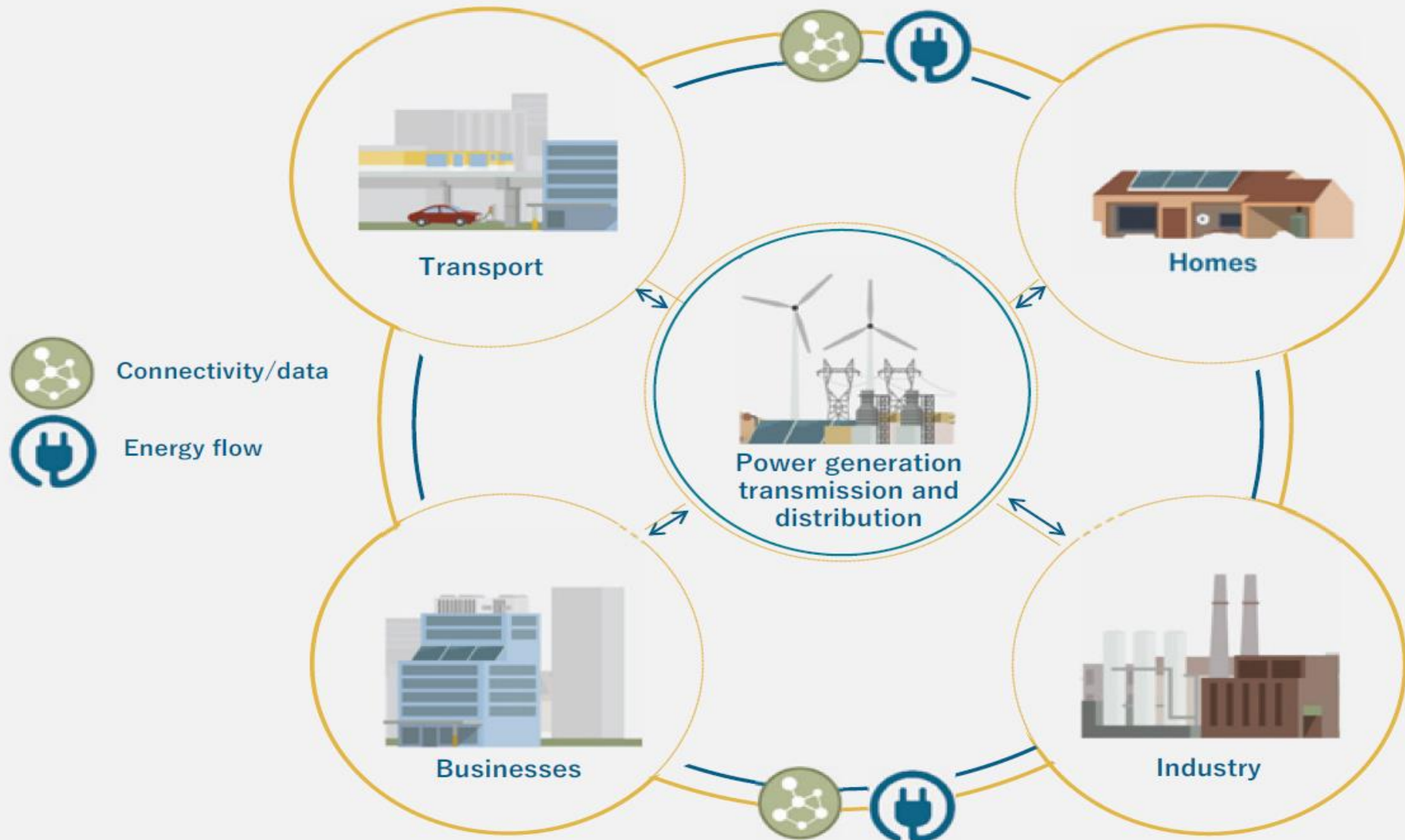


# Traditional Structure of Electricity Sector

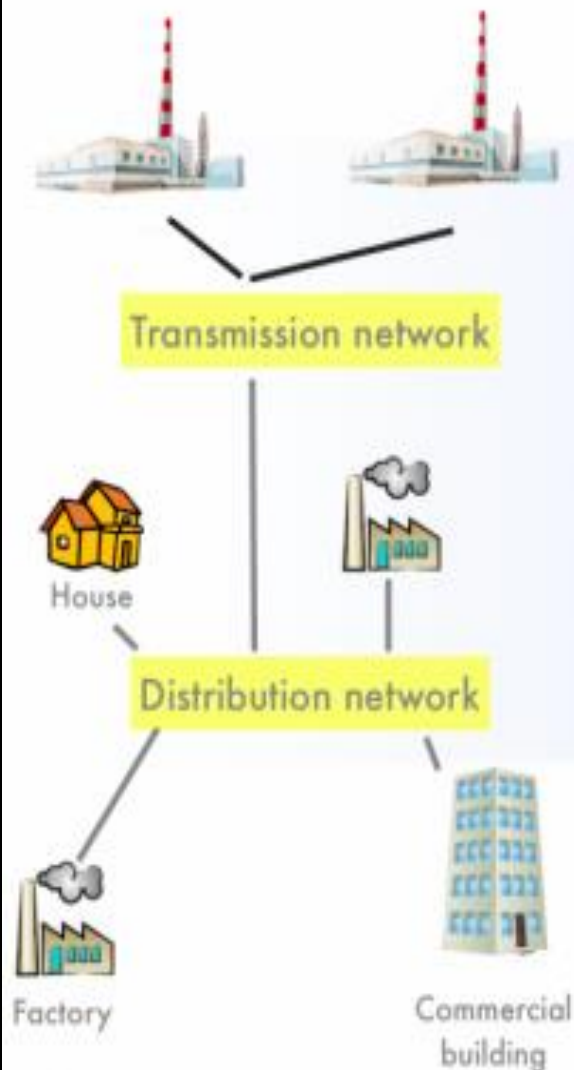


**Key message:** Data and analytics can improve performance and enable cost savings, but, without connectivity, do not fundamentally change the way the electricity sector functions.

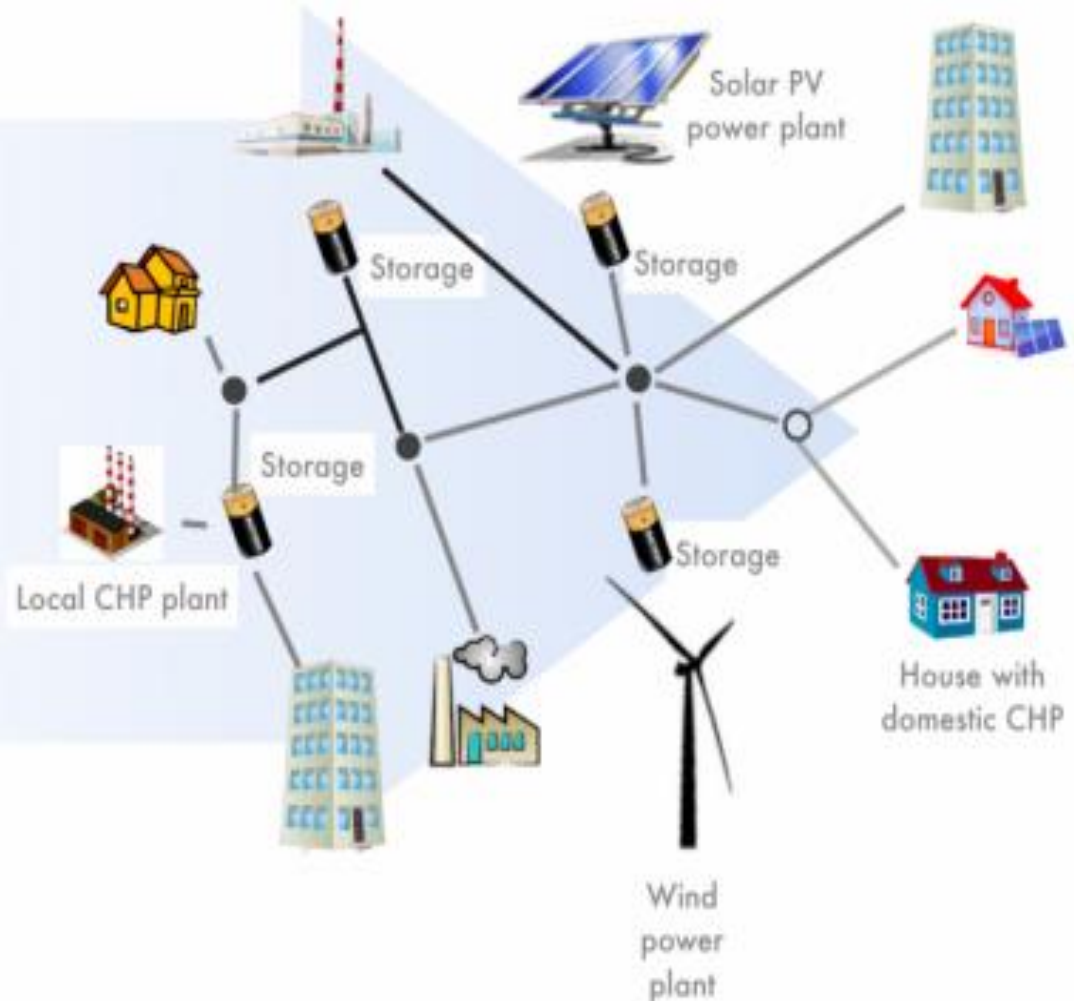
# The Role of **Connectivity** in Reshaping the Electricity Sector



## Yesterday Centralized Power

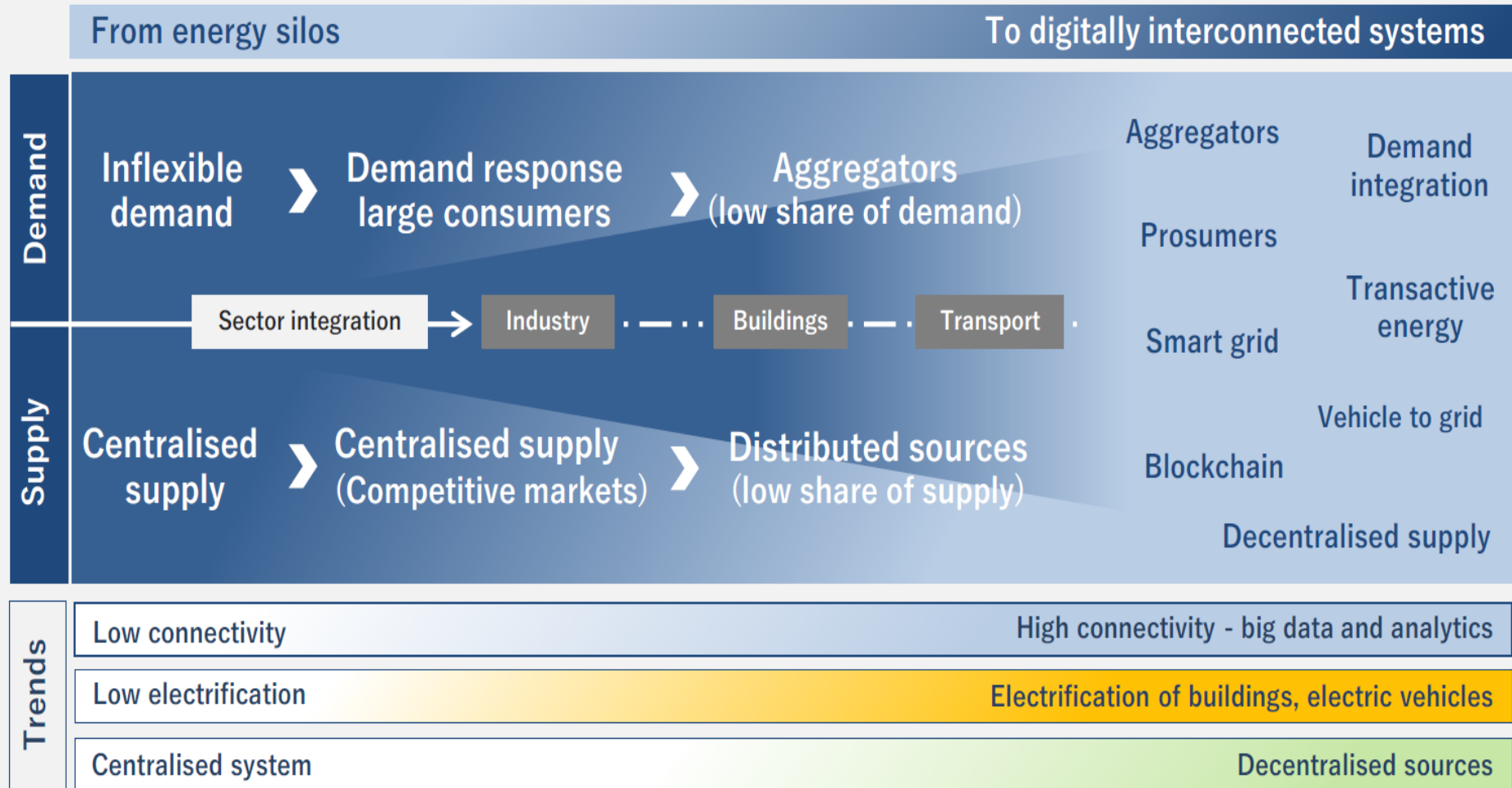


## Tomorrow Clean, local power





# Steps in Digital Transformation of the Electricity Sector



**Key message:** The deployment of digital technologies is creating a more interconnected and responsive electricity system, with the potential to help increase flexibility, efficiency and reliability.

# Anguilla Solar Farm

Before





# Anguilla Solar Farm

After





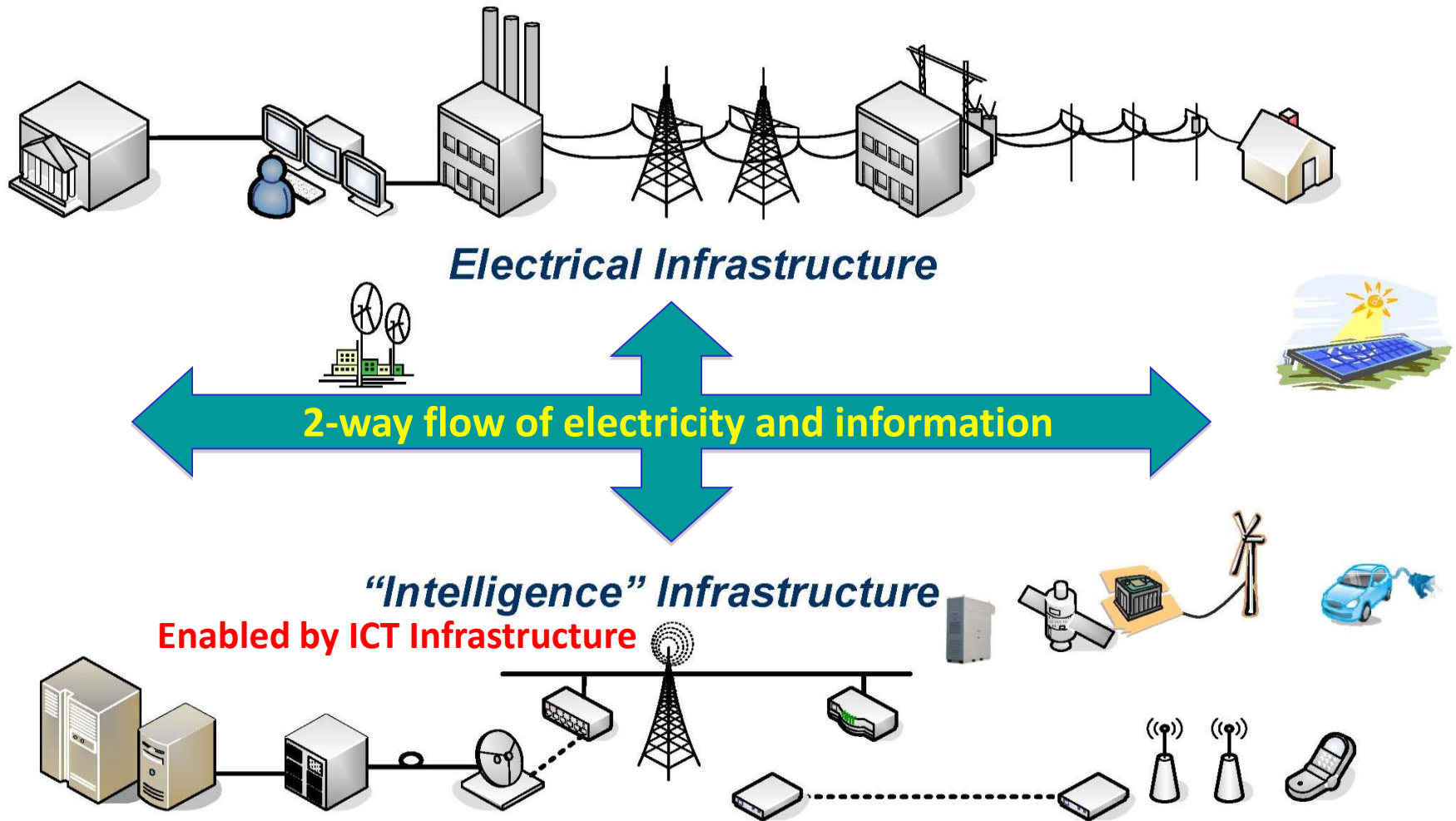








# Smart Grid: The “Energy Internet”





# Smart Grid

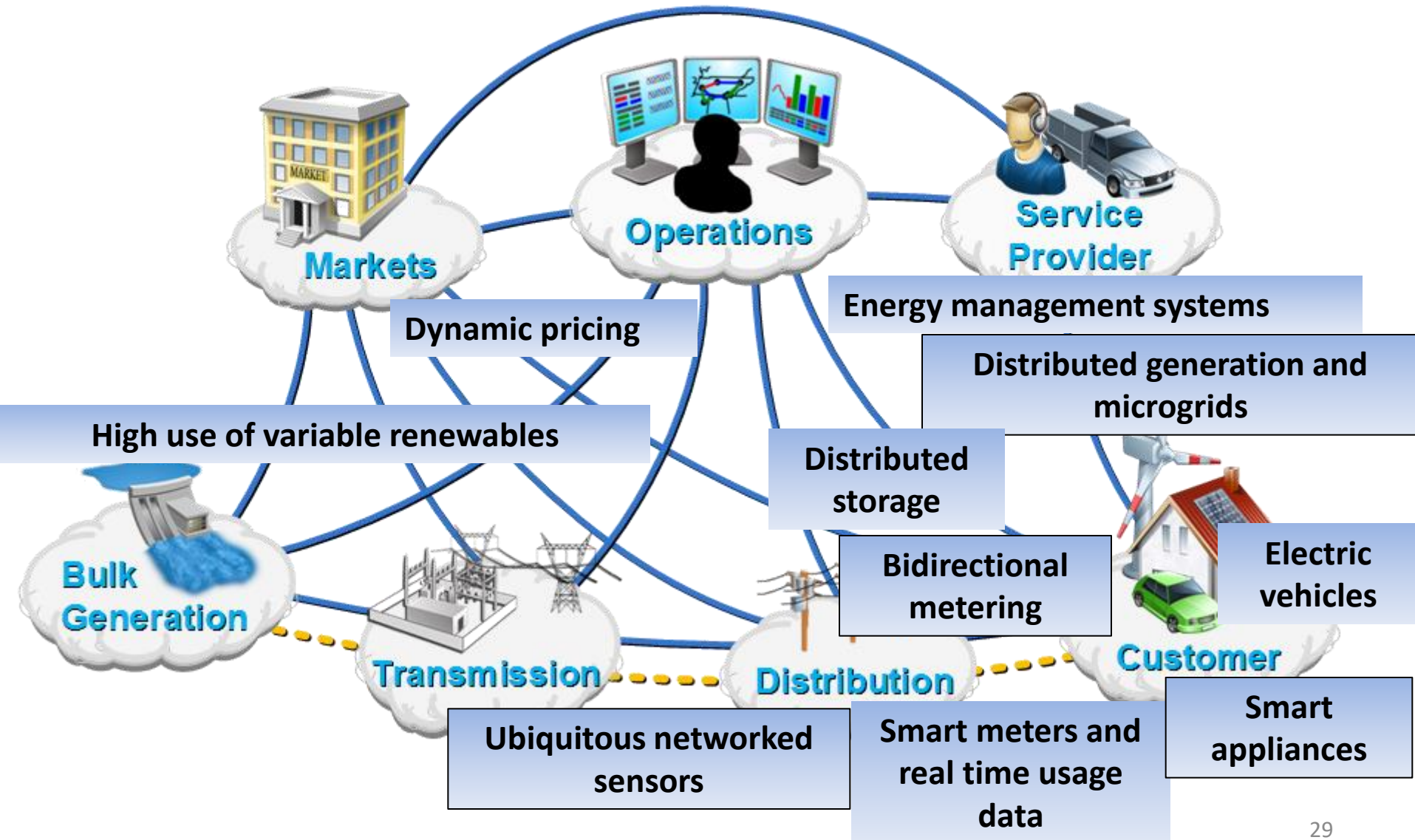
- an automated, widely distributed energy delivery network characterized by a **two-way flow of electricity and information**, capable of monitoring and responding to changes in everything from power plants to customer preferences to individual appliances.
- the electricity delivery system (from point of generation to point of consumption) **integrated with communications and information technology** for enhanced grid operations, customer services, and environmental benefits

(Funding for Smart Grid Activities, US Department of Energy, 2009, link: [www.gefa.org/Modules/ShowDocument.aspx?documentid=925](http://www.gefa.org/Modules/ShowDocument.aspx?documentid=925))

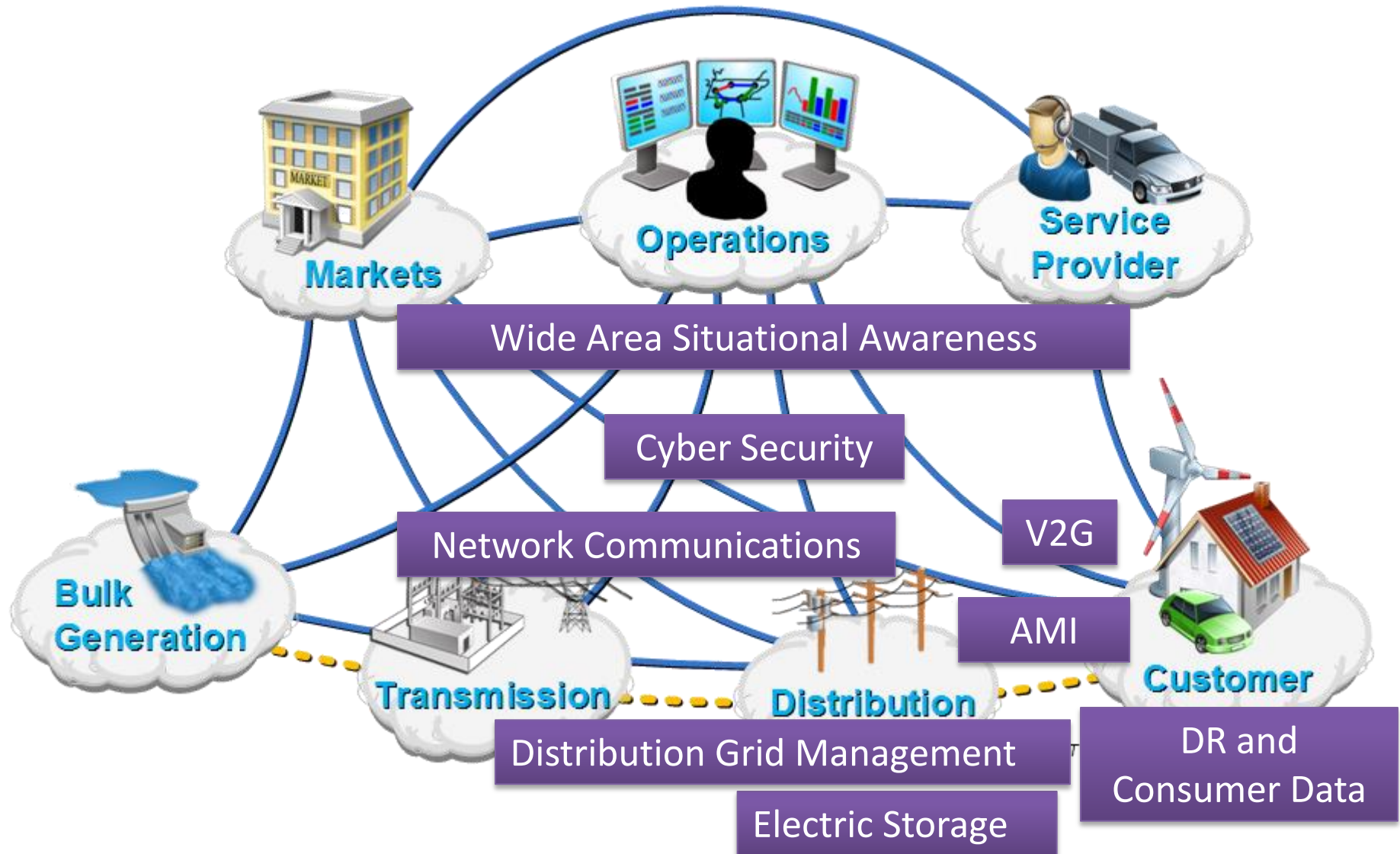
# Smart Grid

- **Improve electrical power generation and distribution system**
  - Integration of electric infrastructure and ICT infrastructure
  - More efficient & better management of power infrastructure
- **Increase use of renewable energy sources**
  - Wind, solar generation, power storage
  - Integration of distributed energy sources into power infrastructure
- **Better management of energy usage**
  - Use of smart meters and Demand Response systems to reduce and balance energy usage
  - Enable use of plug-in electrical vehicles

# What Will the Smart Grid Look Like?



# Smart Grid: Energy & ICT



# **STRATEGIC OBJECTIVES**

**2018 to 2022**

- 1. Re-position CARILEC as the premier provider of energy solutions in the Caribbean region**
- 2. Revise CARILEC business model for greater sustainability, resilience and impact**
- 3. Restructure Secretariat and build capacity at institutional and individual levels**

# **STRATEGIC OBJECTIVES**

**2018 to 2022**

- 4. Become the leading advocate and partner for energy solutions and resilience in the region**
- 5. Act as a catalyst for the adoption of green and innovative business models for energy solution providers**
- 6. Enhance networking, business opportunities and engagements for our members**





**THANK YOU!**  
**CARILEC**

