

# Trendy a stratégie v utilitom sektore

Inšpirácie z prezentácií na European Utility Week 2019, Paríž

European Utility Week  
12 - 14 November 2019  
Paris Expo Porte de Versailles  
Paris, France



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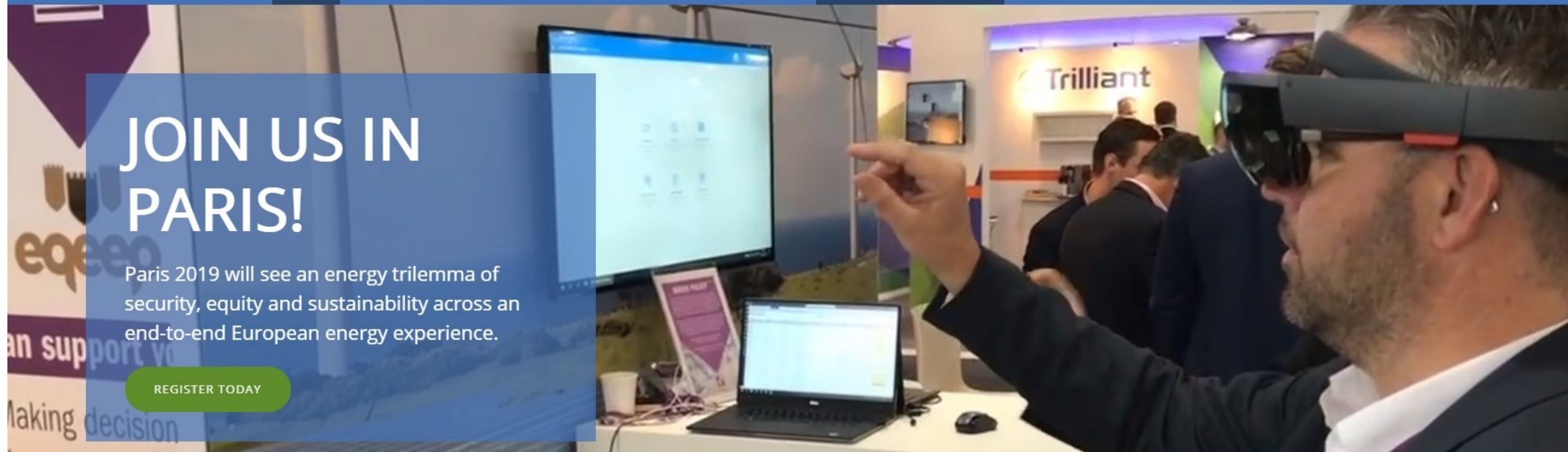
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## What is the key technology for the digitalisation of the energy sector?

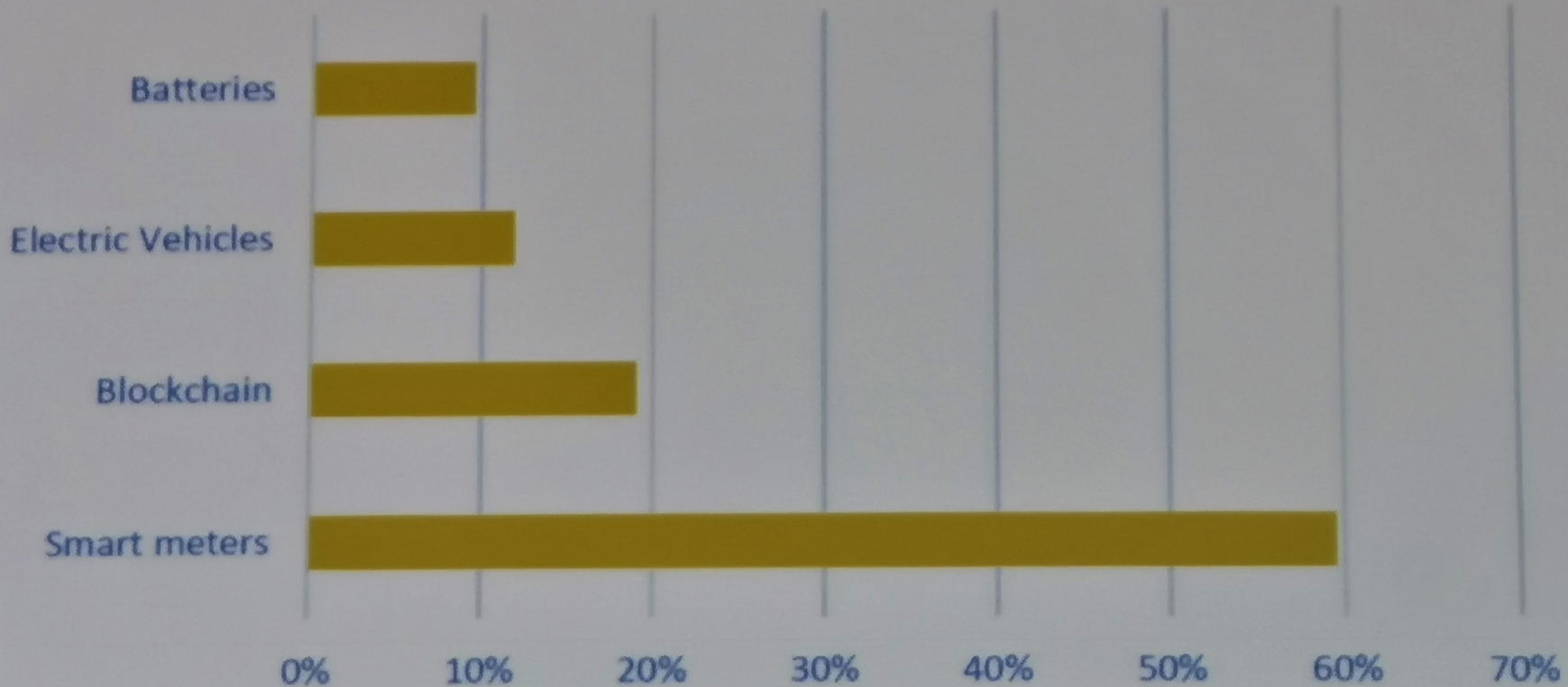
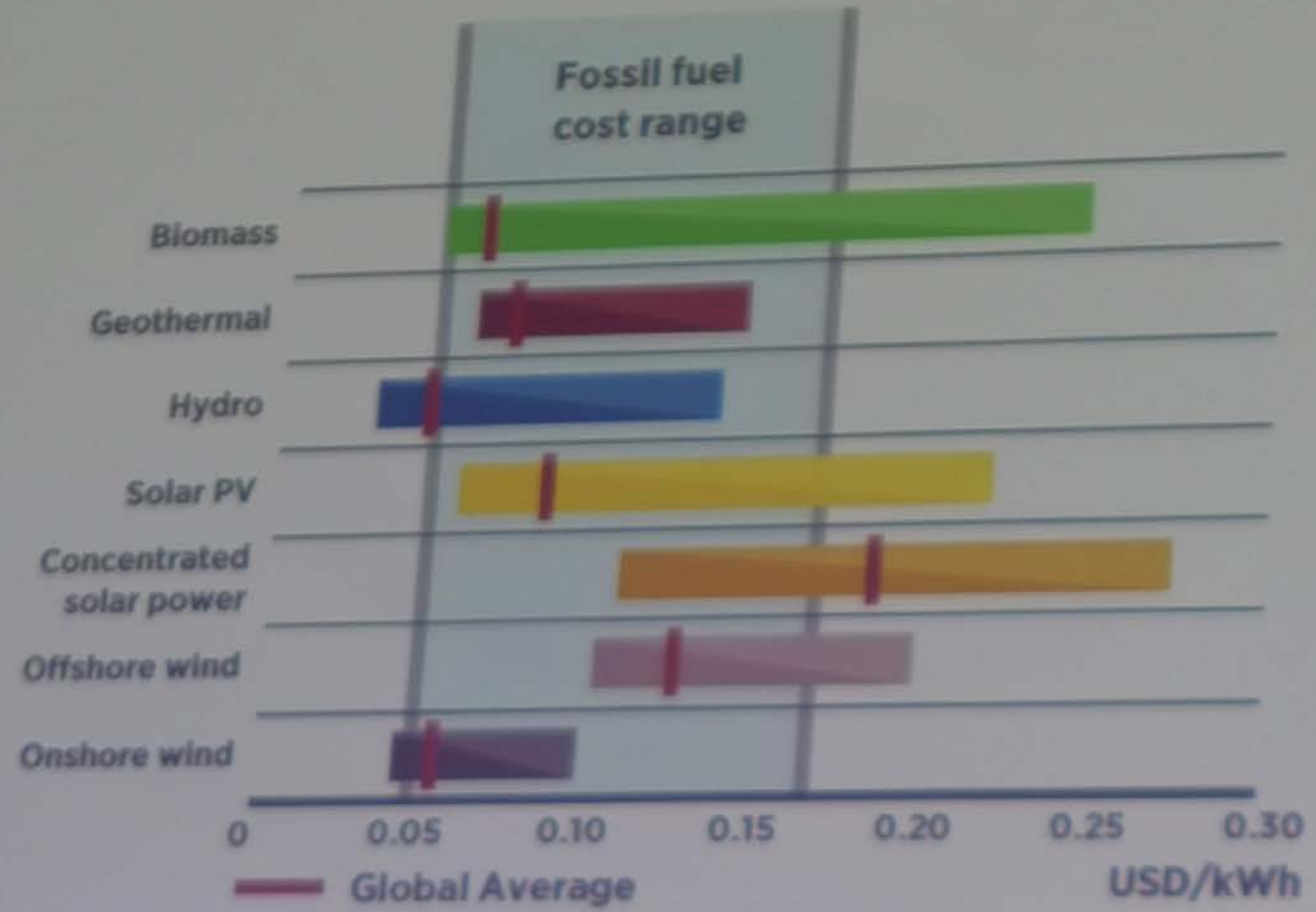


Figure 2: What is the Key Technology for the Digitalisation of the Energy Sector

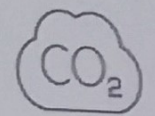
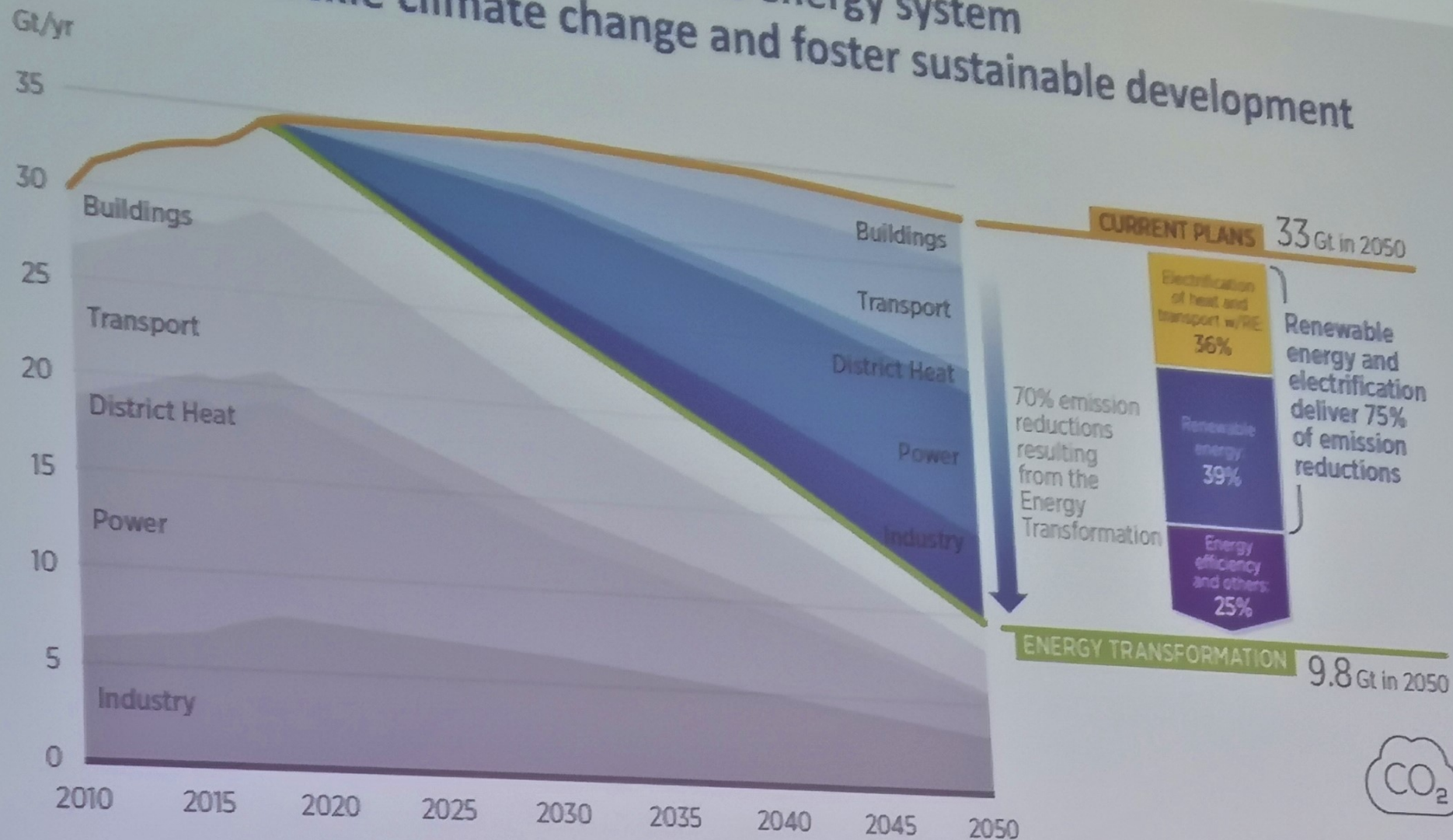
Source: CEER, 2019



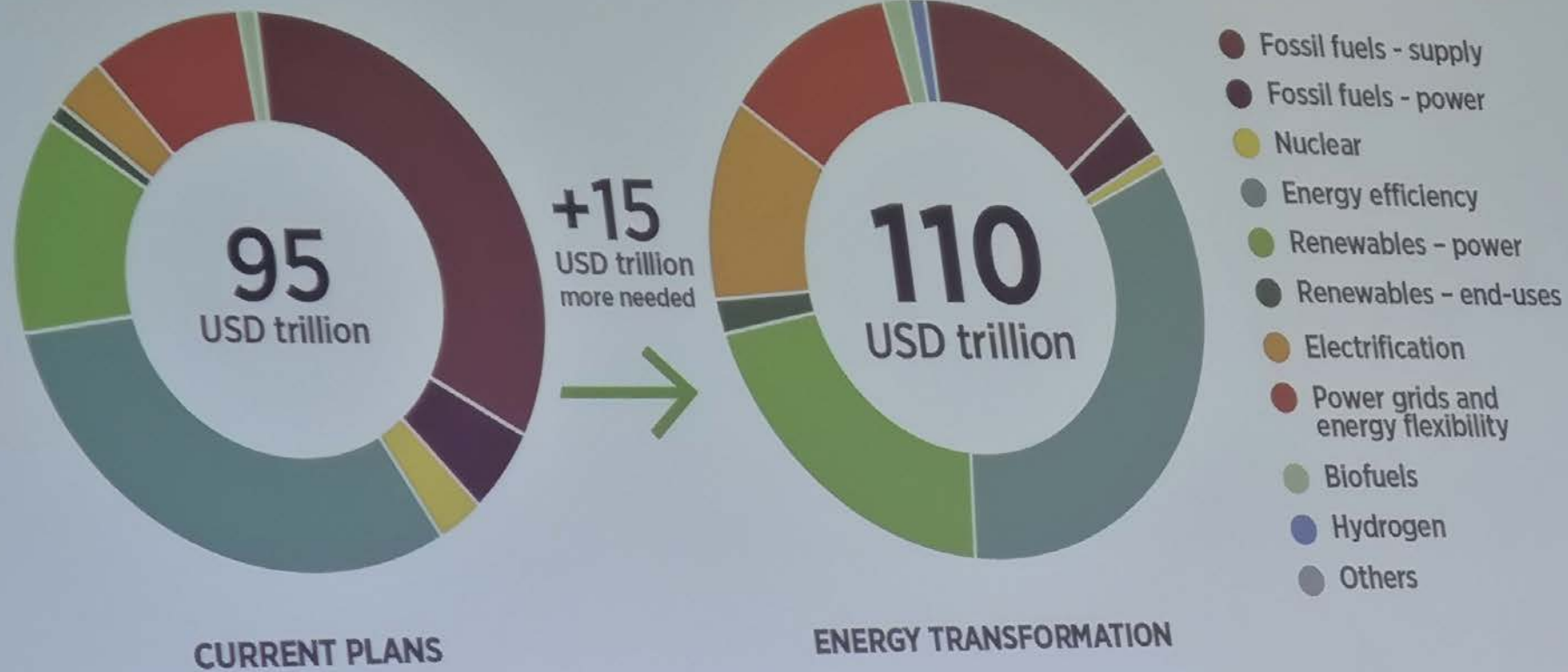
# Enabling change: The business case of renewables continues to strengthen



# A fundamental transformation of the energy system is needed to tackle climate change and foster sustainable development



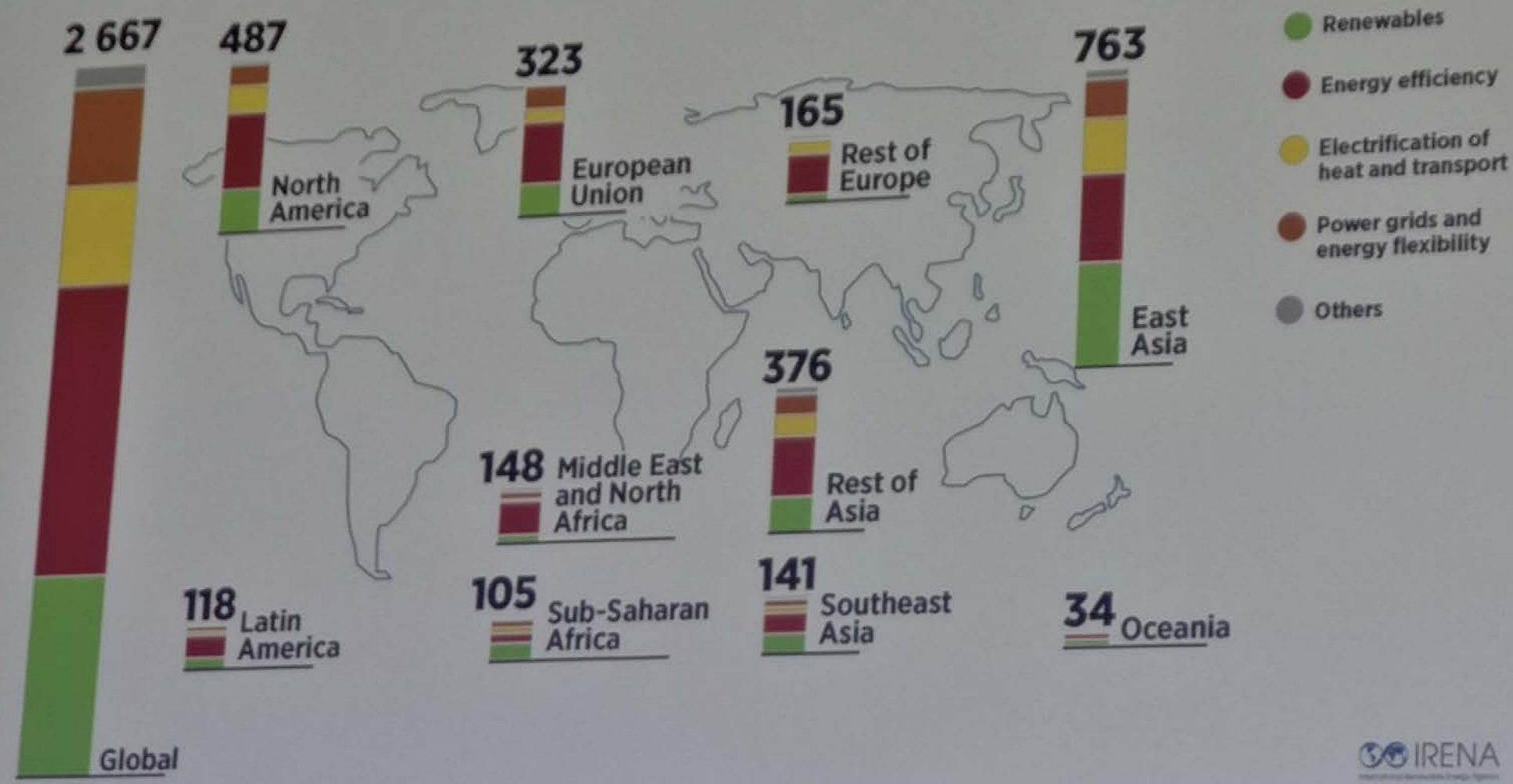
# Cumulative investment needs in the energy sector



- USD 110 trillion needed by 2050 is equivalent to around 2% of global GDP/year over the period.
- USD 50 trillion of this will need to be invested in the power sector for additional RE power generation, electrification of end-use energy applications, electricity grids and flexibility options

# Regional investment needs for the energy transformation through to 2050

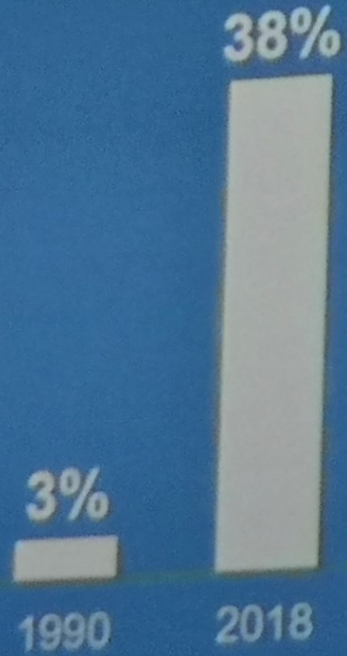
USD billion/yr



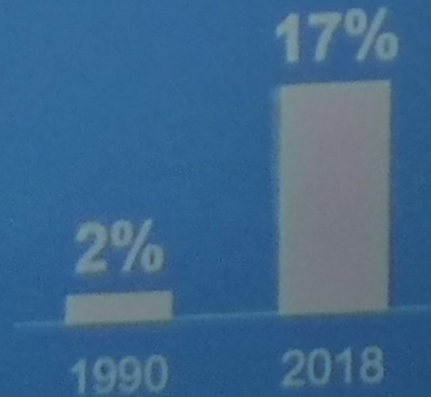
1 We already started

# Share of Renewables

Electricity Production in percent



Energy consumption in percent

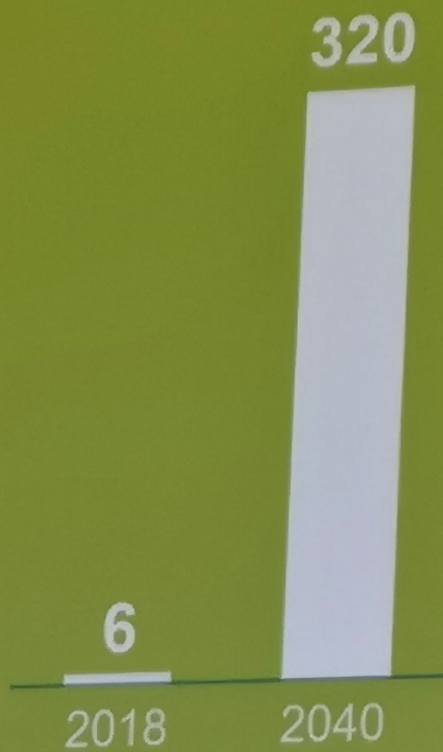


1 We already started

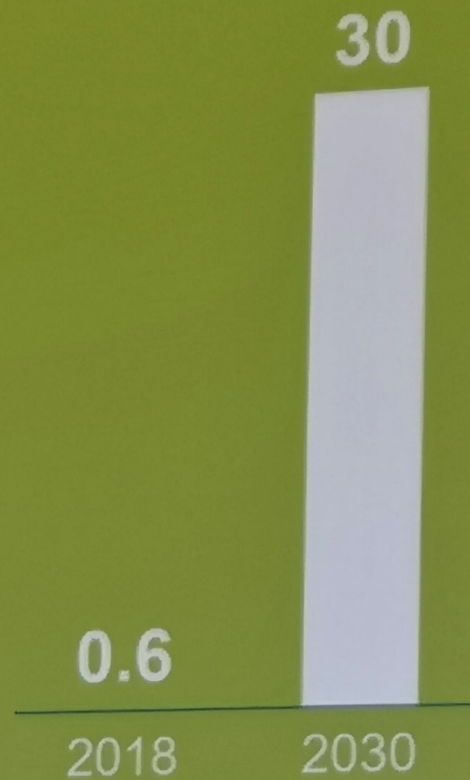
### E-mobility

# Increasing number of e-vehicles and infrastructure

Sales forecast in millions



Charging outlets in millions

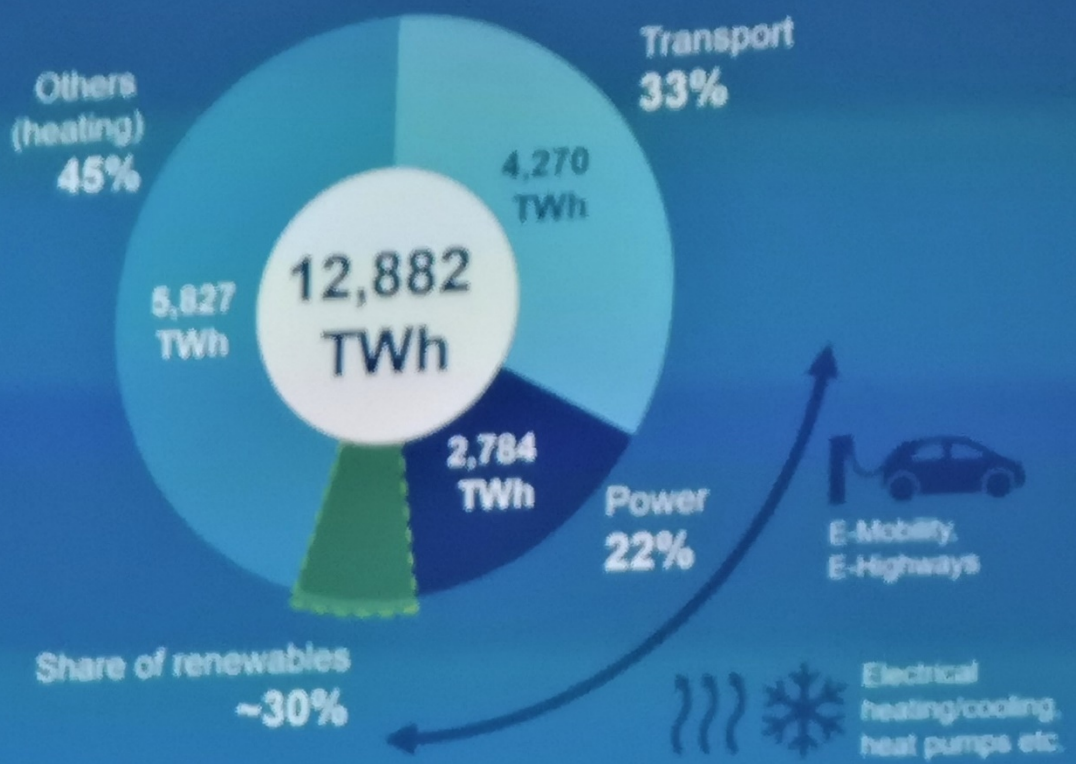




3 Think big:  
Tear down silos

The solution

Direct and indirect electrification with huge potential





## Digitalization today IT as supporting layer for the DSO's business processes

### Typical characteristics:

- IT has an **internal focus**
- IT supports process **automatization**
- IT considered as a **cost center**

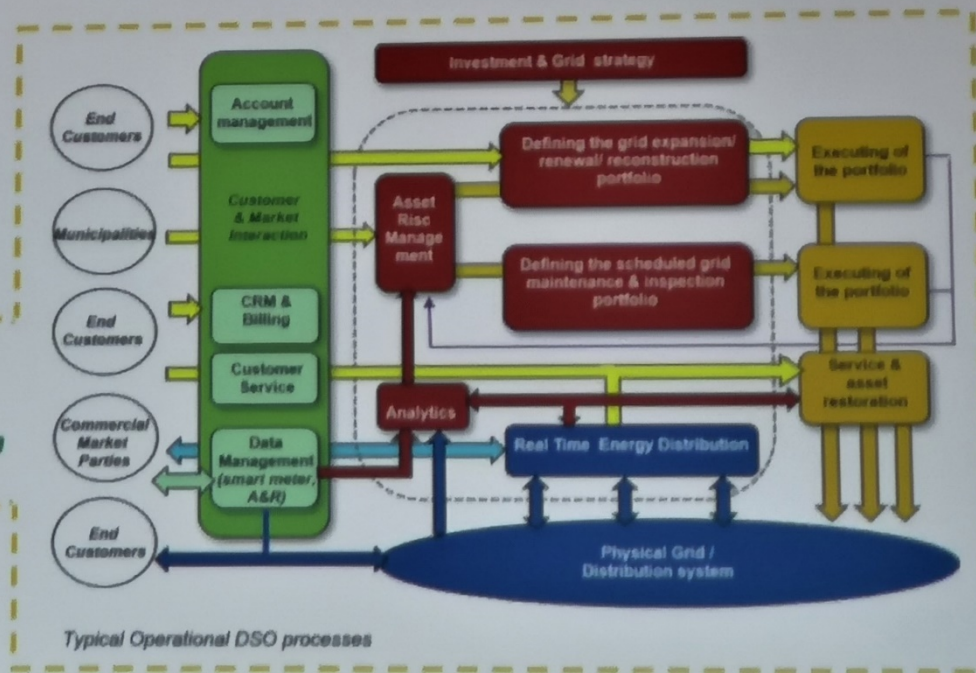
### DSO specific:

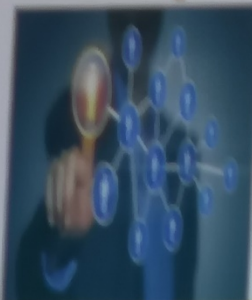
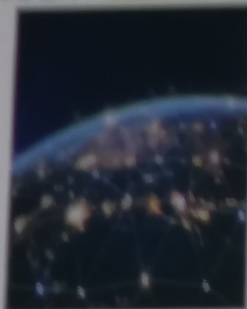
Typical DSO processes:

- **Asset & load monitoring**
- **Grid Planning**
- **Infrastructure operations**
- **Customer & Market facilitation (data sharing)**

### Data driven

- Through Artificial Intelligence (AI) and Machine Learning (ML), IT can fuel **improvements** in these processes



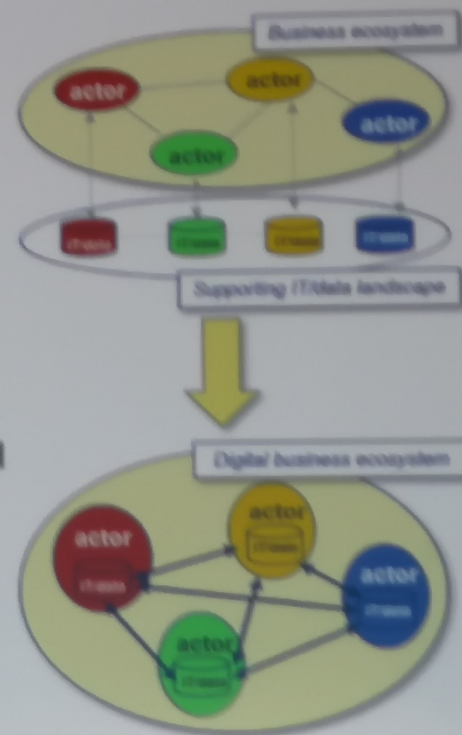


## Digitalization tomorrow Towards the digital ecosystem

### Expected future characteristics:

- IT also has an **external focus**
- Transactions in the business ecosystem are **digitalized**:
  - *Clear API's support transactions in the business ecosystem*
  - *IT seamlessly integrated as a key function in the business*
- **Platform** economy, new business models:
  - *Eliminate friction & fully exploit the value of data*
- Technology, markets & regulation increasingly **intertwined**
- Speed of **change** is increasing

▶ **The DSO challenge**  
Which position to take in this emerging ecosystem?



# Conclusions



1. Digitalization's common role of "improving DSO processes" experiences a radical change: **tomorrow's digital ecosystems** will force DSOs to **implement a Digital mindset and IT competencies as a true primary business function**
2. The evolution of **DNOs to DSOs** will result in continuously **increasing** needs for (external) **data exchange**. To optimally **integrate** in tomorrow's digital ecosystems, it is crucial for DSOs to:
  - Clearly **identify and optimize** their **core activities**
  - Prepare for a **smartly coupled IT setup** that can deal with each of the 4 worlds
  - Actively develop and nurture an "**Energy Data Exchange Framework**" enabling data transactions between all existing and new relevant market parties
3. The **impact of emerging platforms** on the energy system is highly **dependent on political and regulatory decisions**: they can design an **adequately functioning Electricity System** to enable **social welfare** for all !