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## **SDG 7 as an enabling factor for sustainable development**

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**Session 5: SDG 7**

# Objectives

- This presentation aims to show that SDG 7 can be considered as an enabling factor for the achievement of other SDGs, in particular SDG 13 on climate action but not only.
- Discuss how technology innovation, especially in the electricity sector (fundamental in the SDG 7 perspective and especially wrt. 7.2 and 7.2 targets), can promote the achievement of a low-carbon energy system

# Methodology

Interaction	Name	Explanation
+3	Indivisible	Inextricably linked to the achievement of another goal.
+2	Reinforcing	Aids the achievement of another goal.
+1	Enabling	Creates conditions that further another goal.
0	Consistent	No significant positive or negative interactions.
-1	Constraining	Limits options on another goal.
-2	Counteracting	Clashes with another goal.
-3	Cancelling	Makes it impossible to reach another goal.

→ **We adopt a seven-point scale of SDG**

**interactions** (as reflected in Goal's scoring) from most positive (+3) to most negative (-3).

→ **107 Targets under 15 Goals under analysis**

(SDG 17 has been discarded because it regards implementation; the same applies to the targets of each Goal that are referred to the “means of implementation” which will be considered as enabling factors).

Source: Nilsson M, Griggs D, Visbeck M., *Nature* 534 (2016)

# SDG 7 and SDG 13: Energy and Climate Change

## Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

7.1: By 2030, ensure **universal access** to affordable, reliable and modern energy services

7.2: By 2030, increase substantially the share of **renewable energy** in the global energy mix

7.3: By 2030, double the global rate of improvement in **energy efficiency**

7.4: By 2030, enhance international cooperation to **facilitate access to clean energy research and technology**, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and **promote investment in energy infrastructure and clean energy technology**

7.5: By 2030, expand infrastructure and **upgrade technology** for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries...

## Goal 13: Take urgent action to combat climate change and its impacts

13.1: Strengthen **resilience and adaptive capacity to climate-related hazards** and natural disasters in all countries

13.2: Integrate climate change measures **into national policies, strategies and planning**

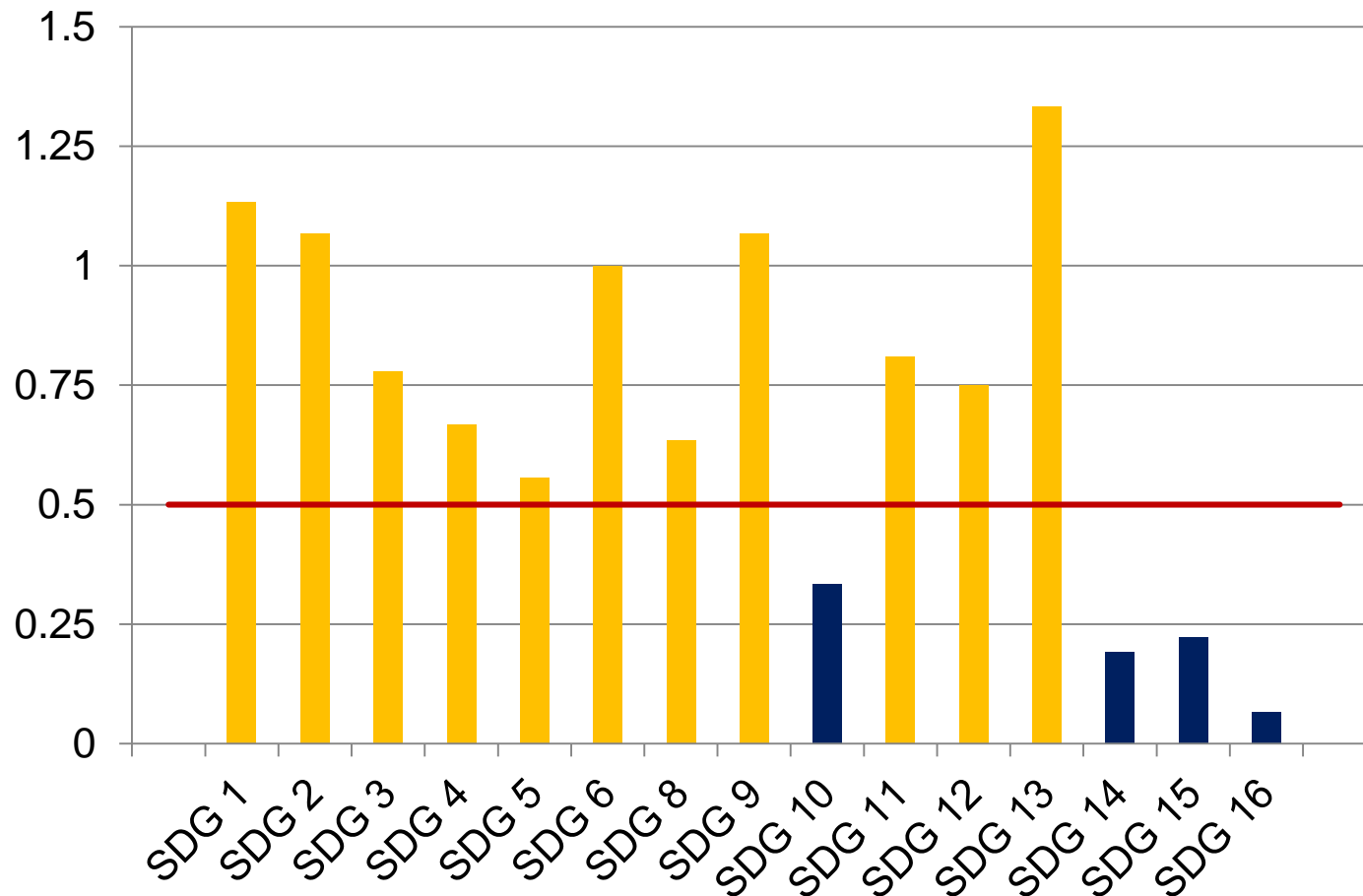
13.2: Improve **education**, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.4: Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to **a goal of mobilizing jointly \$100 billion annually by 2020** from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the **Green Climate Fund** through its capitalization as soon as possible.

# Interactions between SDG 7 and SDG 13: Results

		SDG 7		
		7.1 Access	7.2 Renewables	7.3 Efficiency
SDG 13	13.1 Adaptation	-1	3	3
	13.2 Policies	0	2	2
	13.3 Education	1	1	1
Single target average		0	2	2
Goal average		1.33		

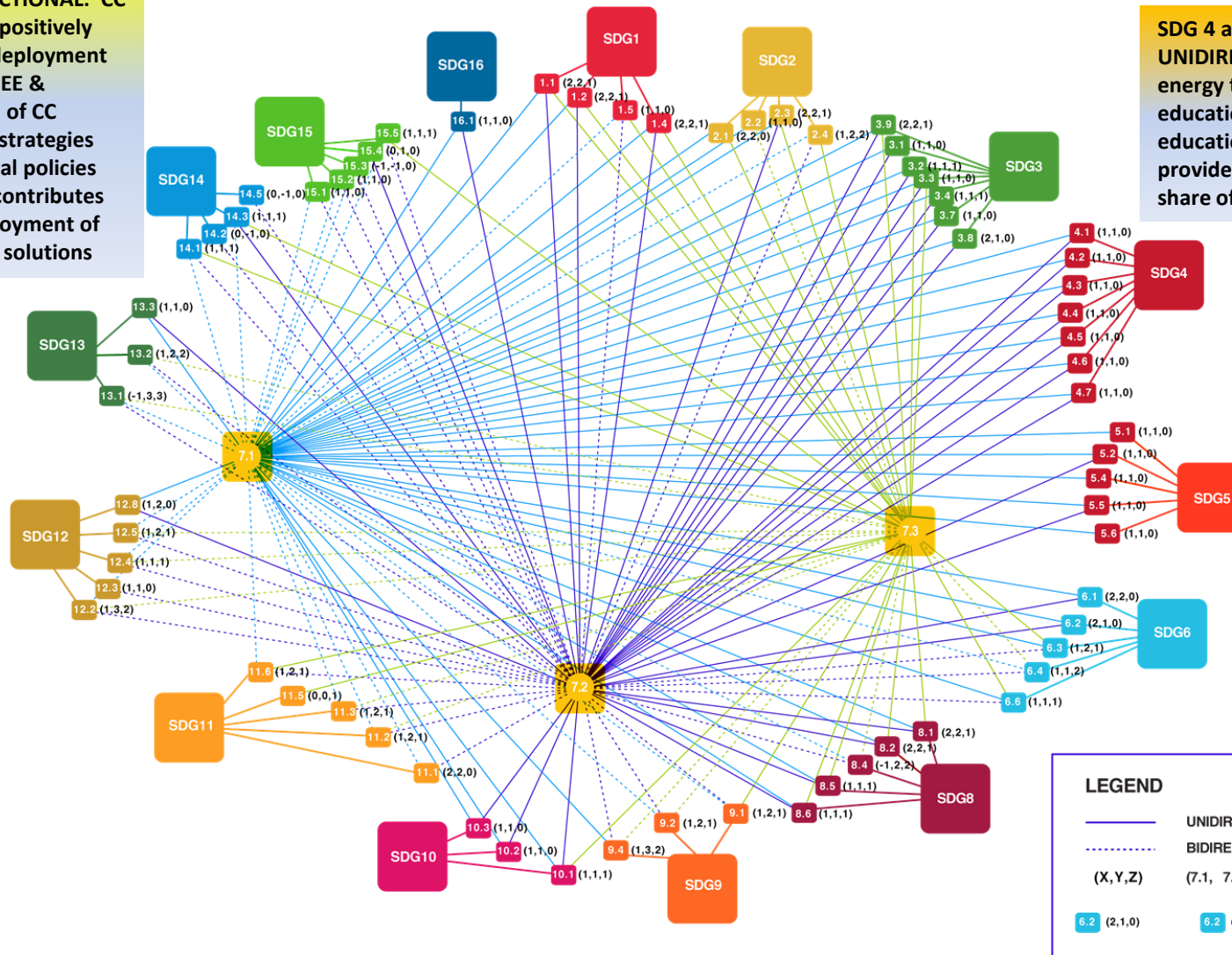
# Interaction between SDG 7 and the other SDGs: Results



# Interaction between SDG 7 and the other SDGs: Directional Analysis

**SDG 13.1 & SDG 13.2 and SDG 7.1 and SDG 7.1** BIDIRECTIONAL: CC mitigation positively driven by deployment of RES and EE & integration of CC mitigation strategies into national policies positively contributes to the deployment of RES and EE solutions

**SDG 4 and SDG 7.1** UNIDIRECTIONAL: providing energy to households benefits education, but improving education does not directly provide energy access or increase share of RES



# The role of technology innovation in implementing the Agenda 2030

## The important role of technology innovation in implementing the 2030 Agenda

A clear example of technology innovation in relation to Targets 7.2 and 7.3 is the **digitalization of the electricity sector** through:

- **smart meters** → encouragement for end users to be more energy efficient, thus potentially reducing energy demand in the peak hours to the benefit of both consumers themselves (lower energy costs) and energy utilities (better management of the energy supply).
- **smart grids** for distributed generation → improvement of the efficiency of the overall energy system.



# The role of the private sector

Chemicals	Communication	Energy, Utilities and Mining	Engineering and Construction	Financial Services	Healthcare	Manufacturing	Professional Services	Retail and Consumer	Technology
13 CLIMATE ACTION	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	8 DECENT WORK AND ECONOMIC GROWTH	3 GOOD HEALTH AND WELL-BEING	8 DECENT WORK AND ECONOMIC GROWTH	8 DECENT WORK AND ECONOMIC GROWTH	8 DECENT WORK AND ECONOMIC GROWTH	8 DECENT WORK AND ECONOMIC GROWTH
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	8 DECENT WORK AND ECONOMIC GROWTH	8 DECENT WORK AND ECONOMIC GROWTH	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	8 DECENT WORK AND ECONOMIC GROWTH	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	4 QUALITY EDUCATION	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION
2 ZERO HUNGER	4 QUALITY EDUCATION	13 CLIMATE ACTION	13 CLIMATE ACTION	5 GENDER EQUALITY	5 GENDER EQUALITY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	5 GENDER EQUALITY	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION
3 GOOD HEALTH AND WELL-BEING	3 GOOD HEALTH AND WELL-BEING	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE ACTION	4 QUALITY EDUCATION	13 CLIMATE ACTION	3 GOOD HEALTH AND WELL-BEING	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING
6 CLEAN WATER AND SANITATION	13 CLIMATE ACTION	6 CLEAN WATER AND SANITATION	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	4 QUALITY EDUCATION	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	13 CLIMATE ACTION	12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Source: PwC (2015) Make it your business:  
Engaging with the Sustainable Development Goals.

Company investments in digital innovation impact on **SDG 7** (especially 7.2 and 7.3), **SDG 8** (3.45 million jobs created in 2016-2025) and **SDG 13** (15.8 GtCO<sub>2</sub> emissions avoided in 2016-2025)  
McKinsey → **digital innovation** (smart meters and smart grids) can **boost profitability by 20 to 30%** for companies operating in the energy and utilities sector

# Conclusions

- SDG 7 can be considered “enabling factor” for the implementation of the other SDGs, and in particular SDG 6, SDG 8, SDG 9, SDG 11, SDG 12, SDG 13.
- Investment in technology innovation acknowledged as one of the main "means of implementation" within 2030 Agenda, by leveraging the **transformative potential of the private sector**.
- **Technology innovation investments** towards SDG 7 in relation to **digitization of electricity grids** could:
  - Reinforce water-pumping and irrigation systems (SDG 6); Create new jobs (SDG 8); Guarantee the reliability of supply by grid optimization and aggregation (SDG 9); Decarbonize the transport sector allowing better air quality in cities (SDG 11); Ensure sustainable production and consumption patterns (SDG 12); Reduce fuel consumption with environmental benefits (SDG 13).
- Sustainable energy will play a crucial role in the next decade for achievement of 2030 Agenda and for closing the gap to mitigation targets (of 2°C and 1.5°C) defined by the Paris Agreement.



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Thank you for your attention

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