



Horizon 2020

Feilim O'Connor
European Commission
DG Energy
05.06.2019 – Sustainable Places

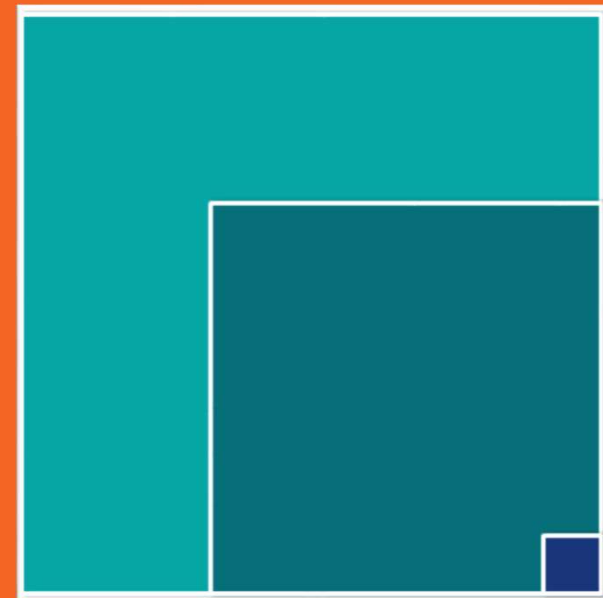


Every EU citizen enjoys the benefits that the EU brings for **less than one cup of coffee a day**

EU-28 Gross National Income
EUR 15 887 billion

EU-28 Member States Public Expenditure
EUR 7 249 billion

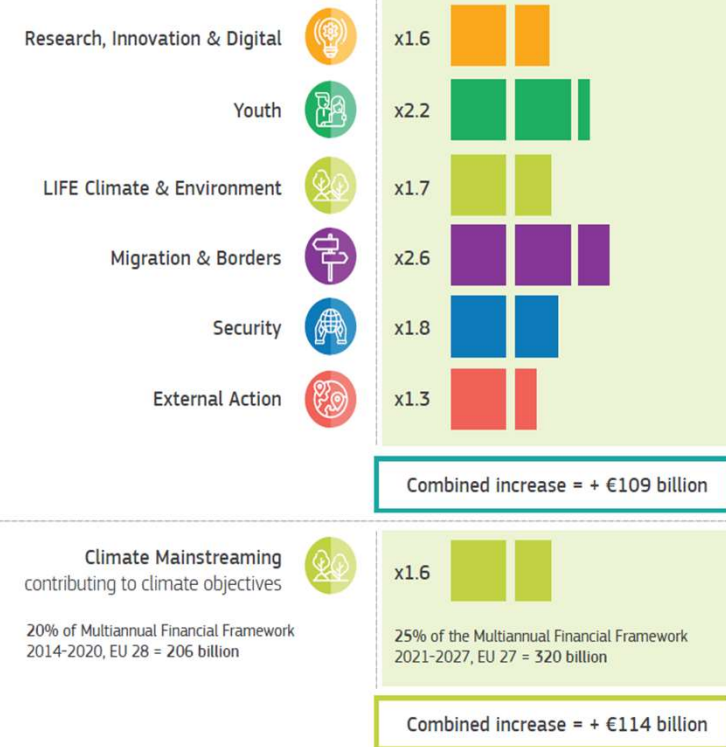
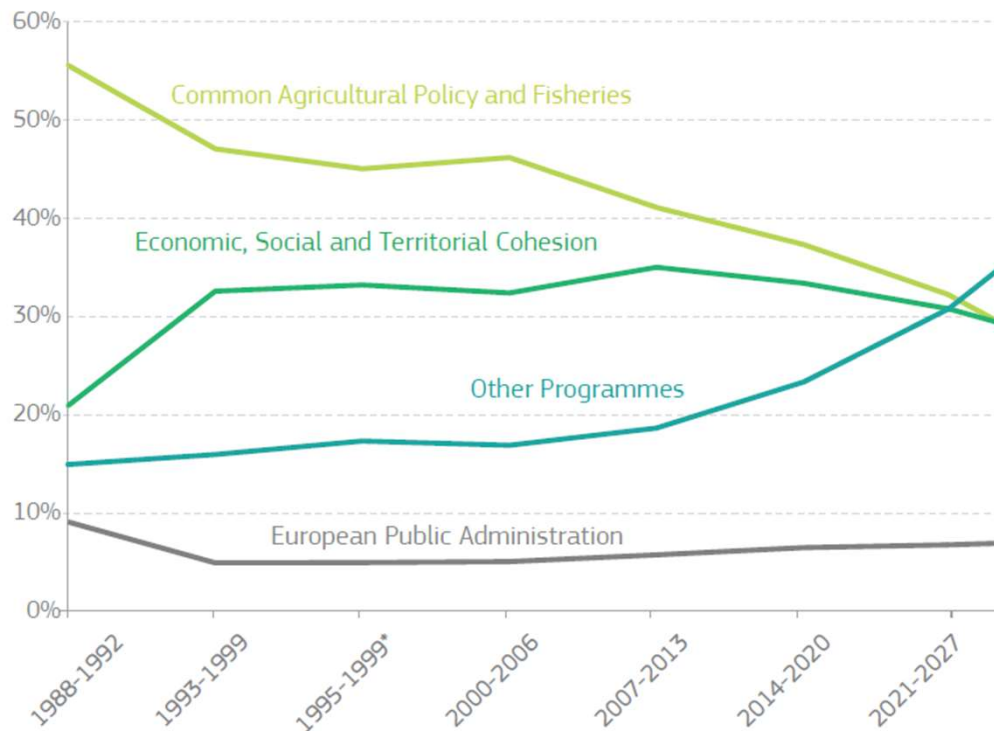
EU annual budget
EUR 145 billion



2018

The next long-term EU budget:

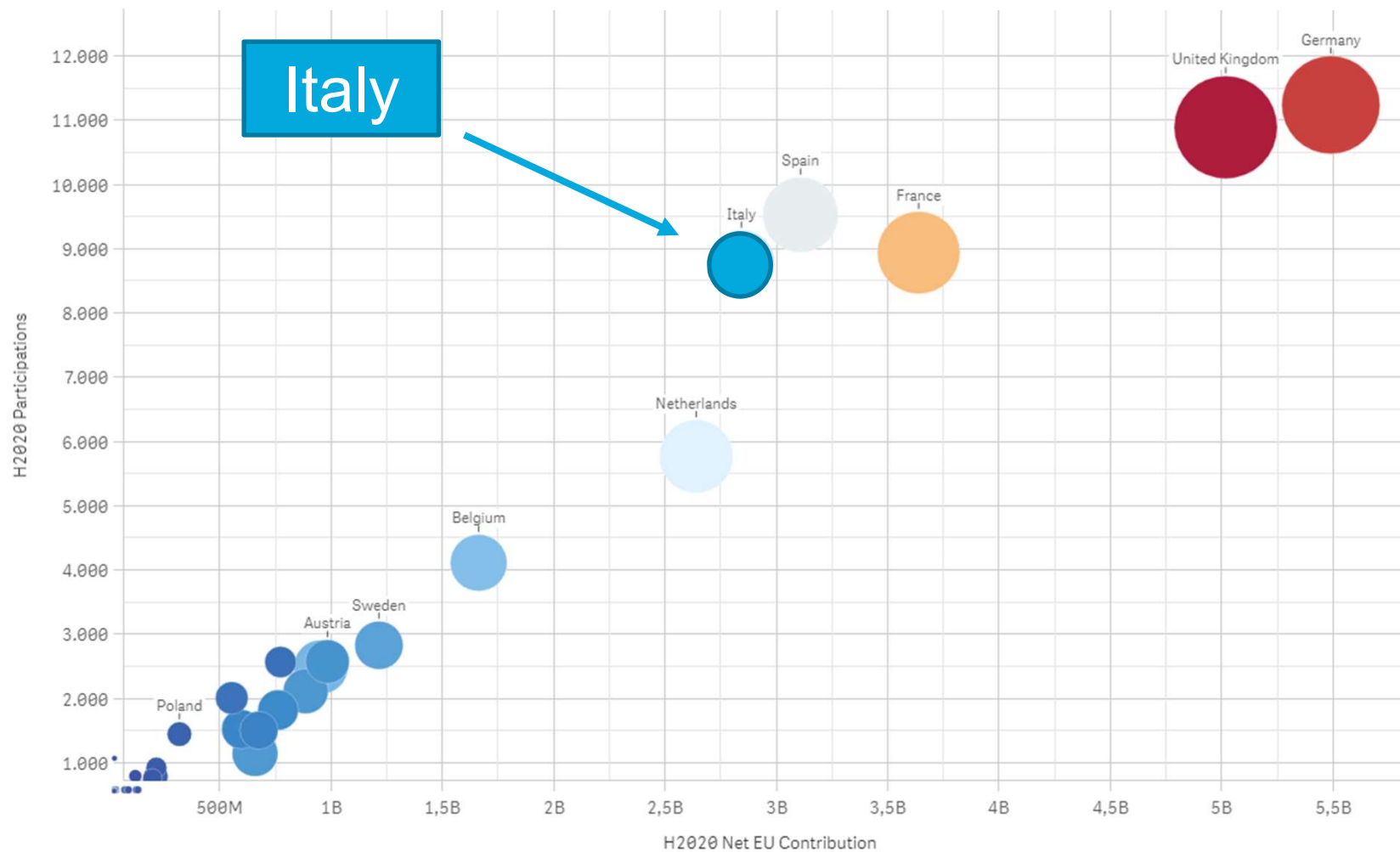
Evolution of main policy areas in the EU



Source: European Commission

CLEAN ENERGY FOR ALL EUROPEANS

Participations vs Net EU Contribution by Country



Size and colour: Leading, Coordinating role of a country - EU Contribution (EURO)

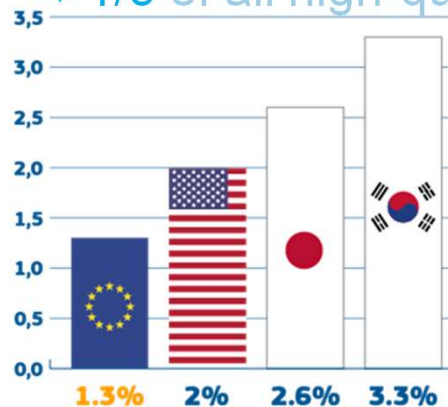
While benefiting from world-class research and strong industries...

Our knowledge and skills are our main resources.

→ 7% of the world's population

→ 20% of global R&D

→ 1/3 of all high-quality scientific publications



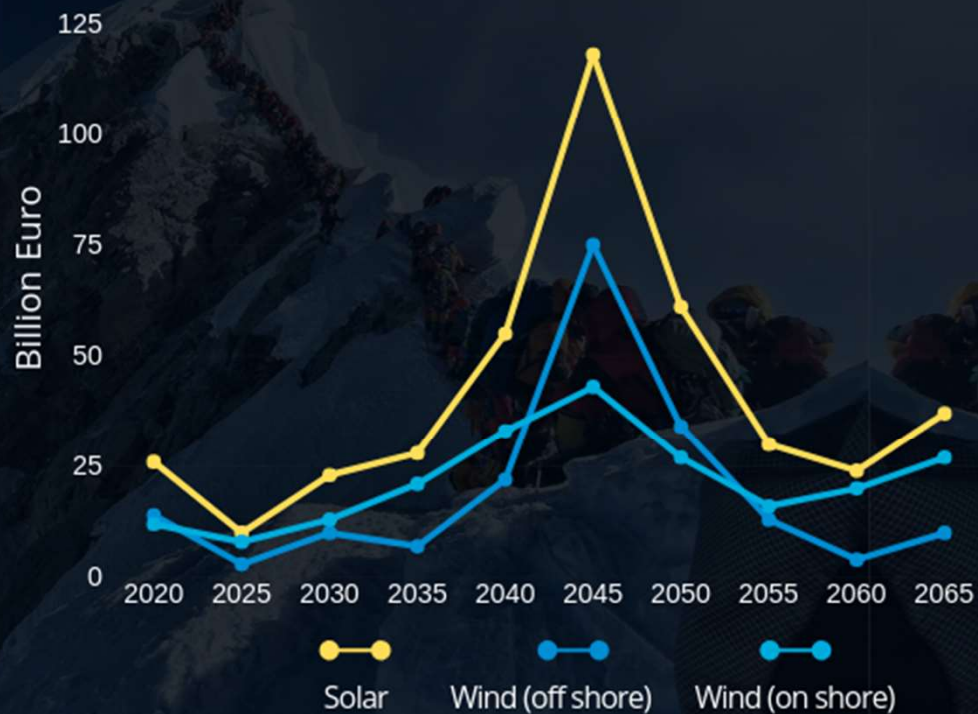
1.3%
EU business
R&D
investment

...Europe fails to transform leadership in science into leadership in innovation and entrepreneurship



EU ANNUAL INVESTMENTS

In the 'EU Long Term Strategy' of 1.5C



MOUNT FOREVER INVEST

@FEILIMOC 

8 island opportunities
("calls")

in 5 minutes

Islands

Smart Cities

Smart Airports

Consumer Engagement and

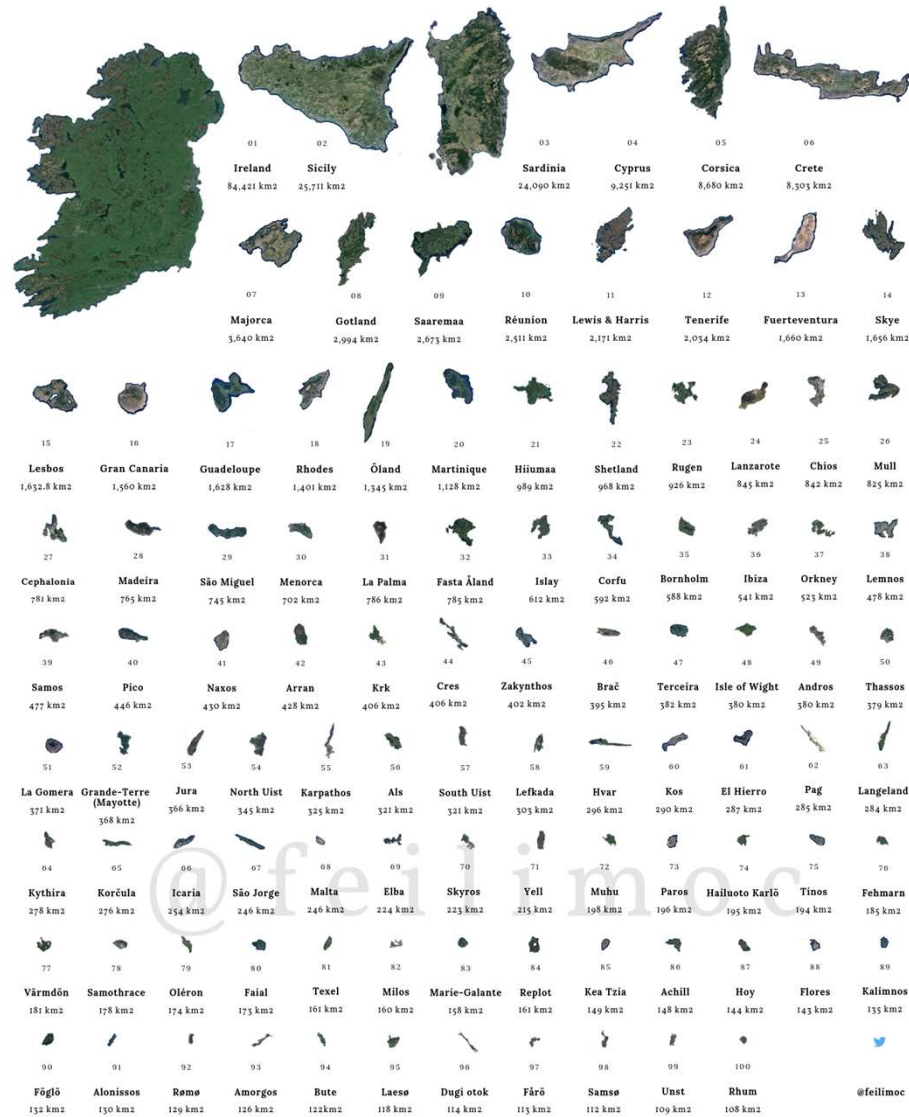
Demand Response

TSO-DSO

DC – AC/DC

—

THE 100 LARGEST EU ISLANDS*



100 km
*no more than 1 bridge, or fixed link to the European mainland

Islands

“Rapid relief Islands”
LC-SC3-ES-11

NEW

From zero to hero islands

- 90% fossil → 90% Clean
- 5,000 – 100,000 people
- Local Energy Communities

2-3 Million Euro

Islands

“Energy Islands”
LC-SC3-ES-3

- Local energy systems
- Isolated regions
- 4 impact criteria
(solutions, communities, strategies, replication)

5-6 Million

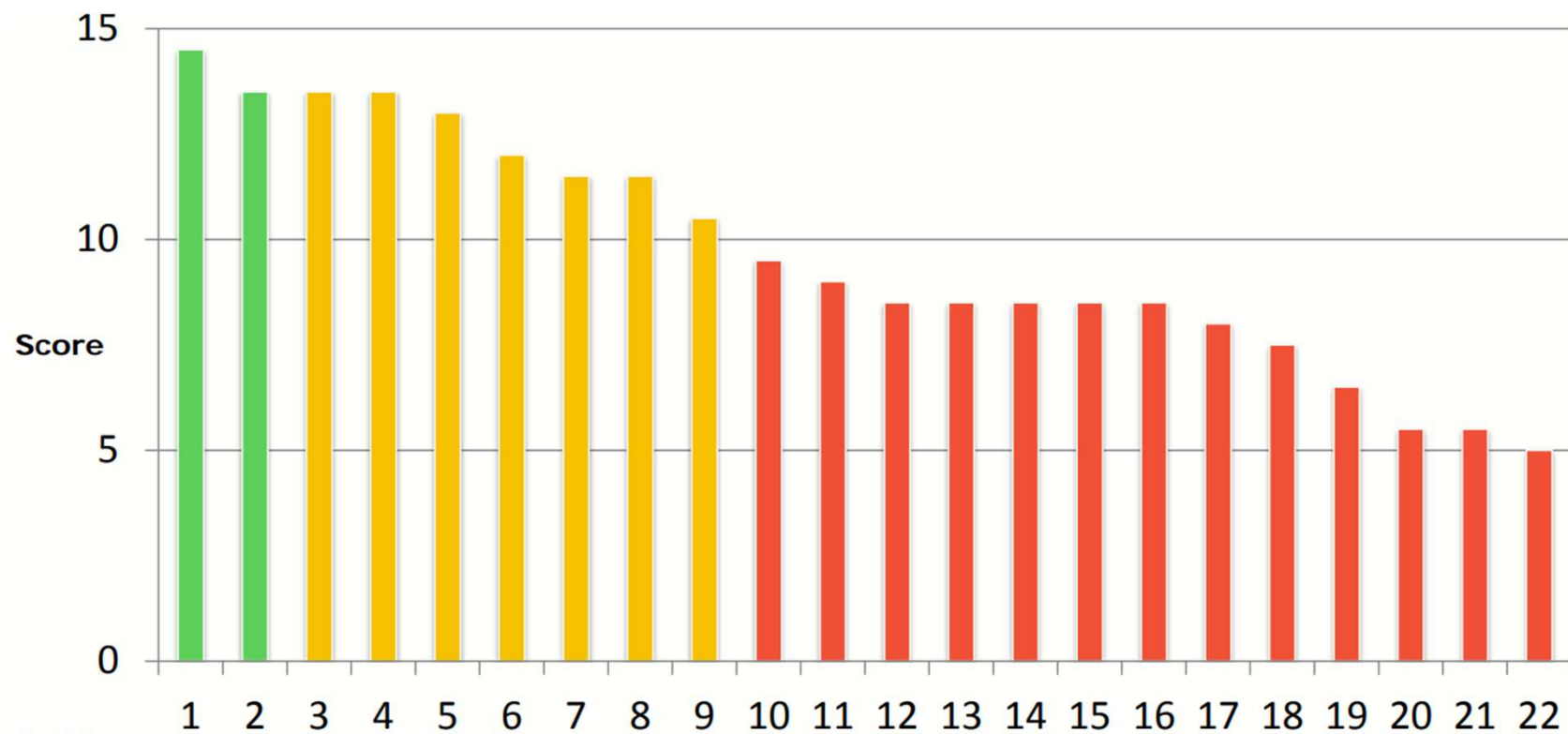
Islands

“Geographical Islands”
LC-SC3-ES-4



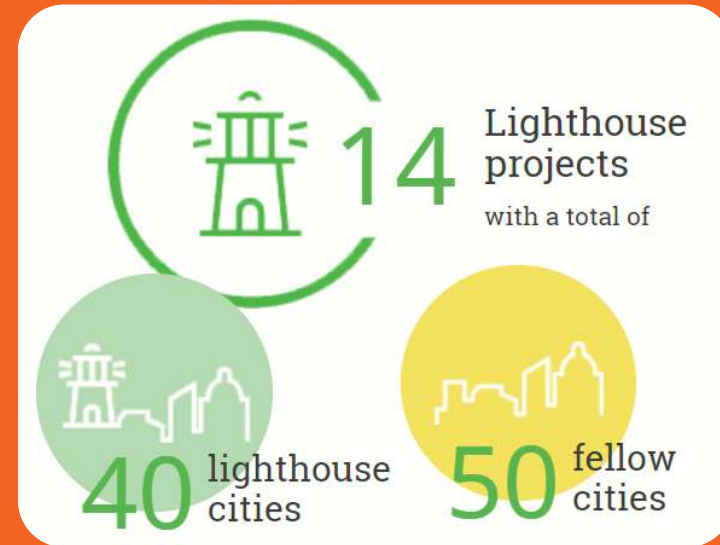
5-7 Million

ES-4-2018 "Energy Islands"



Smart Cities and Communities

Lighthouse cities



The well-established “Smart City call” for pioneering how cities can integrate solutions

- Positive Energy Districts
- Only Innovative solutions
- “Lighthouse” and “fellow”

15-20 Million
(6-8 Million per Lighthouse)

Smart Airports

LC-SC3-SA-1-2020
“lighthouse airport”

NEW

Encouraging airports to blend biofuels

- Bio-kerosene at the airport
- 2 parts (local and remote blending)
- Fuel costs = 30% of overall
- 2-3% as a starting point
- 1 lighthouse and 2 “fellow airports”

12 Million

Consumer Engagement and Demand response

LC-SC3-EC-3

The Consumer / Prosumer nexus

- Demand response innovations
- Households
- Grid operator incentives
- Cooperatives and peer-to-peer (IoT, AI, Blockchain)

4-6 Million Euro

TSO - DSO Consumer large scale demonstration

LC-SC3-ES-5

The grid perspective

- One project that demonstrates the setting-up of markets and digital platforms



20-22 Million Euro

DC – AC/DC

LC-SC3-ES-10

Hybrid grid that's modular, resilient and brings together high RES

- Demonstration activates of DC grid architecture (in at least 2 MS, or AC)
- Test in isolated and interconnected modes
- MV- LV
- (Cyber)security
- Reducing inertia issues

7 Million Euro



Thank you for your time

#HorizonEU

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