



# How are EIT-KICs shaping the future of innovation in Europe

**InnoEnergy: Contribution to the EU Green Deal**



InnoEnergy is supported by the EIT,  
a body of the European Union

Diego Pavia, InnoEnergy, CEO  
Brussels, 4th February 2020

## Agenda

1. Establishing InnoEnergy credibility *[4 slides]*
  
2. Lessons learnt over 10 years and future contribution: How is EIT InnoEnergy shaping the future of in Europe (focus on the EU Green Deal) *[5 slides]*
  - Vision. Policy and regulatory framework
  - It is not about R&I, only
  - 2 easy wins (with no new € printed, so no new deficit)
  - Proposed picks for where to put the bet
  - A blueprint: European Battery Alliance





"European" endeavour Impact we seek (2030 targets as per 2019)	
<b>CO2 (40%)</b>	Climate change (lower than 0°C)
<b>Renewable (32%)</b>	From 13.000 TWh/year (2018) to 9.000TWh/year (2050)
<b>Energy Efficiency (32,5%)</b>	
<b>Jobs, Growth, Competitiveness</b>	<b>X.XXX B€</b>

# InnoEnergy executive summary 2010-2019 (2/4)

Contributing to the **EU Energy Union** objectives ... with **industrial** relevance

www.innoenergy



## A sample of the 300+ assets under management

		Generation					Transmission	Distribution	Load (as electrified as possible)												
"C"		Renewables							Industry (H&P)	Transport			Buildings (H&P)								
Coal	Gas	Nuclear	Hydro	PV	Wind	Wave	Tidal	Cement	Petrochemical	Siderurgy	...	Airplanes	Maritime	Trains	Commercial	Passenger	cars	Industry	Commercial	Households	Public

**"European" endeavour**  
**Impact we seek**  
 (2030 targets as per 2019)

**NexWafe**



**Minesto**



**Hardt Hyperloop**



**NorthVolt\***



**WindFloat\***



**Skeleton\***

**CO2**  
**(40%)**

Climate change  
(lower than 0°C)

**Renewable**  
**(32%)**

From 13.000 TWh/year (2018) to  
9.000TWh/year (2050)

**Energy**  
**Efficiency**  
**(32,5%)**

**Jobs, Growth,**  
**Competitiveness**

**X.XXX B€**



Impact of the InnoEnergy early stage start-ups & NorthVolt (as per IRIS methodology)

**Disclaimer!!**

### Economic impact (actuals)



**2432**

Direct Jobs created  
(indirect \*4)



**191M€**

revenue generated  
by supported start-ups\*



**1.001M€**

of external funds raised  
by supported start-ups\*

### Social impact (actuals)



**31**

Female entrepreneurs



**391**

Students leading/working  
in supported start-ups



**61,000**

people with access to  
energy in developing  
countries

### Environmental impact (projected installed based in 25 years of operation)



**1,4 Gtn**

of CO2 saved  
Equivalent to  
**14,000,000** ICE cars



**7,1 B€**

Savings in energy costs



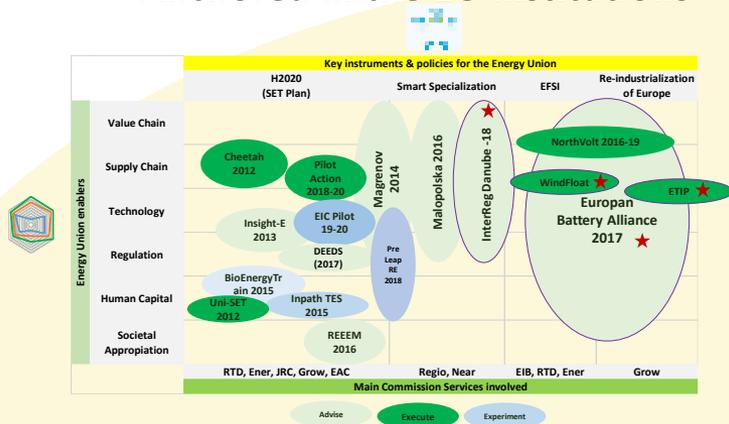
**420 TWh**

Generated from  
clean energy sources  
On a EU annual baseline of 13.000  
TWh

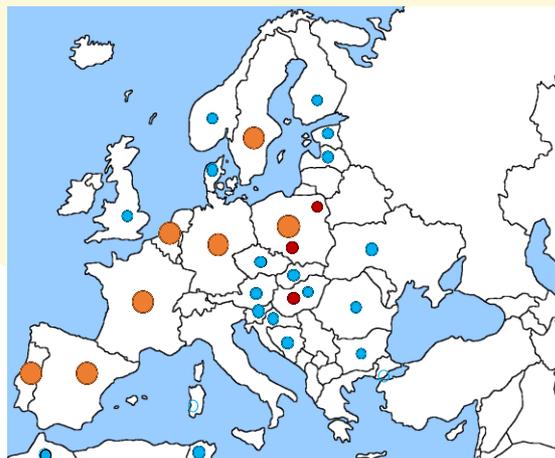
\*Early-stage start-ups & NorthVolt

As per IRIS methodology of GIIN (Global Impact Investing Network)

### Anchored in the EU institutions



### In the field in 21 countries



### Partnership as Dec 2019

	Shareholders	Associated & Project Partners	Total
Industry	8	341	349
Research Centers	5	42	47
University	10	61	71
Business School	1	4	5
Public Authorities		3	3
Investors		1	1
<b>TOTAL</b>	<b>24</b>	<b>451</b>	<b>475</b>

### A micro European Energy System

- Partners across all the **Value Chain**
- Partners across all the **Supply Chain**
- All **energy carriers**
- Challengers and incumbents**
- 21 country regulations**
- 210 Million end- customers**

# How is EIT InnoEnergy shaping the future of innovation in Europe's (Green deal) (1/5)

A sound political and regulatory framework in place - Europe leading the world

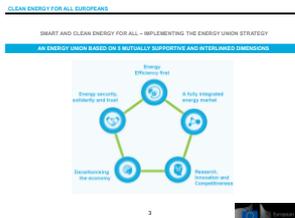


2015

2019

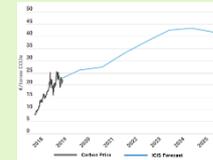
2024

2030



**EBA blue print**

- EPBD
- Renewables
- Security supply
- Market Design
- Mobility
- CO2
- ...
- **NECPs**
- .....

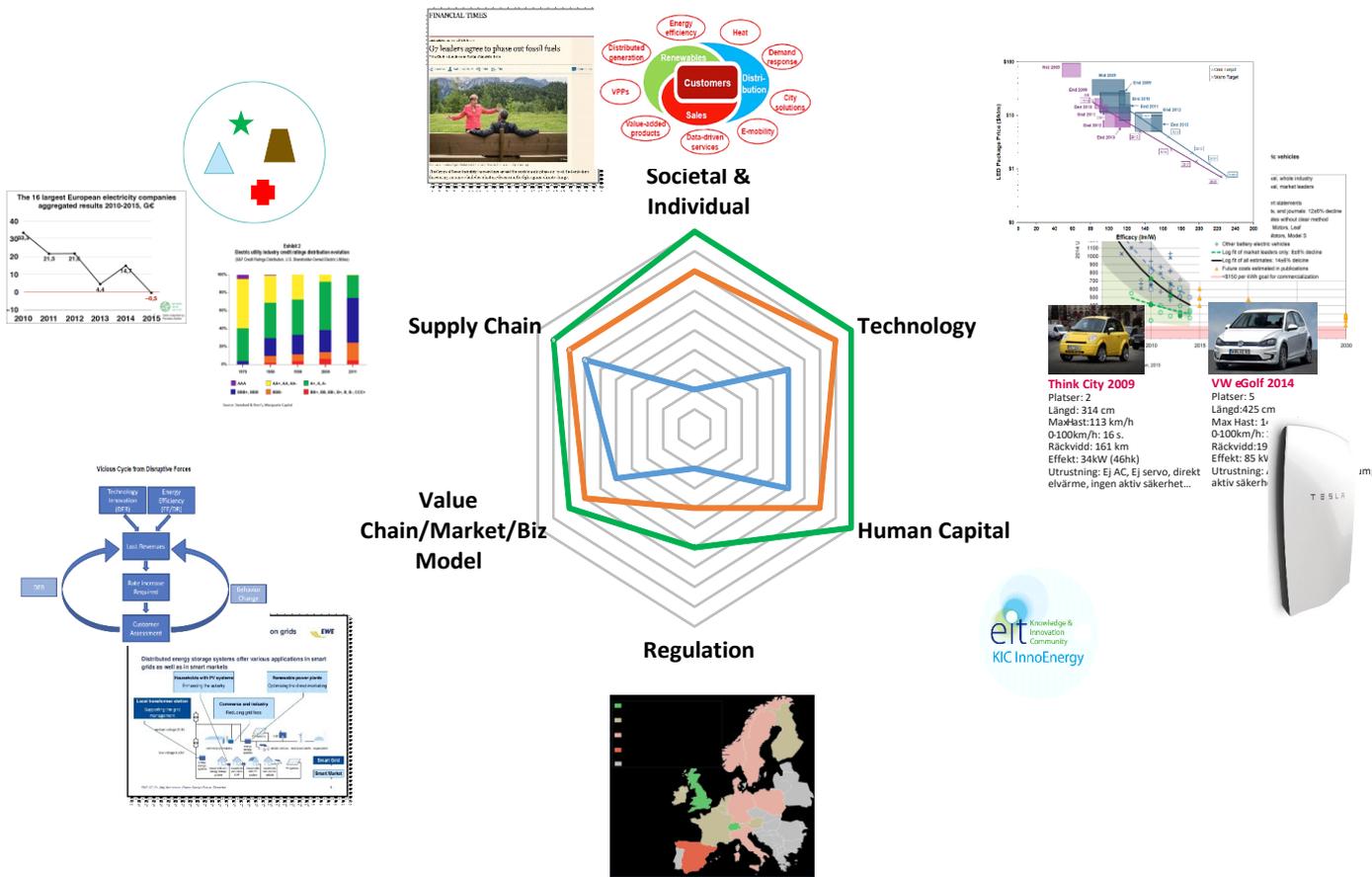


EU ETS prices



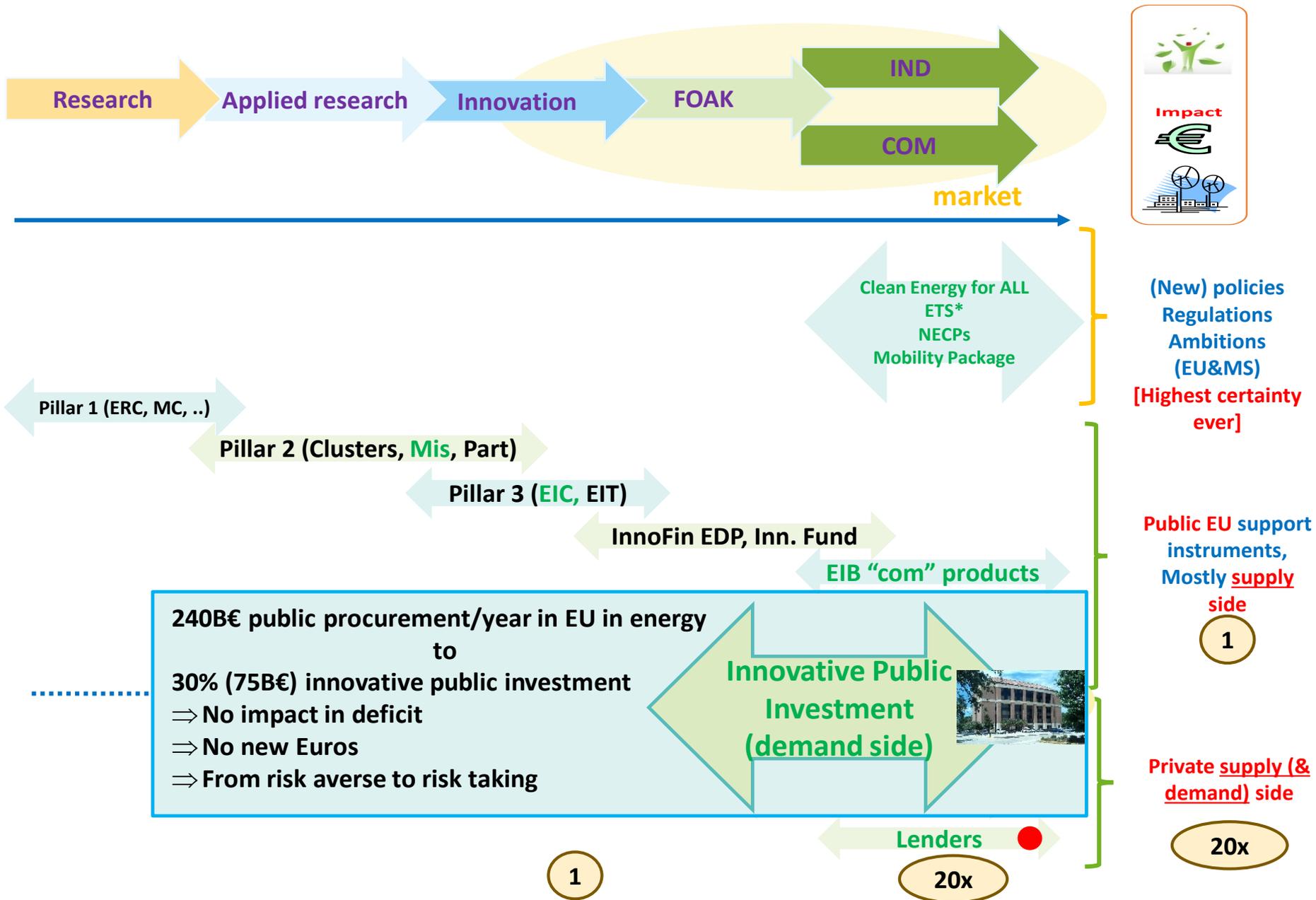
Figure 15.3 - Projected progress of Member States towards 2030 climate targets

It has to be a multidimensional approach



# How is EIT InnoEnergy shaping the future of innovation in Europe's (Green deal) (3/5)

Good EU support instruments ... yet 2 easy low hanging fruits

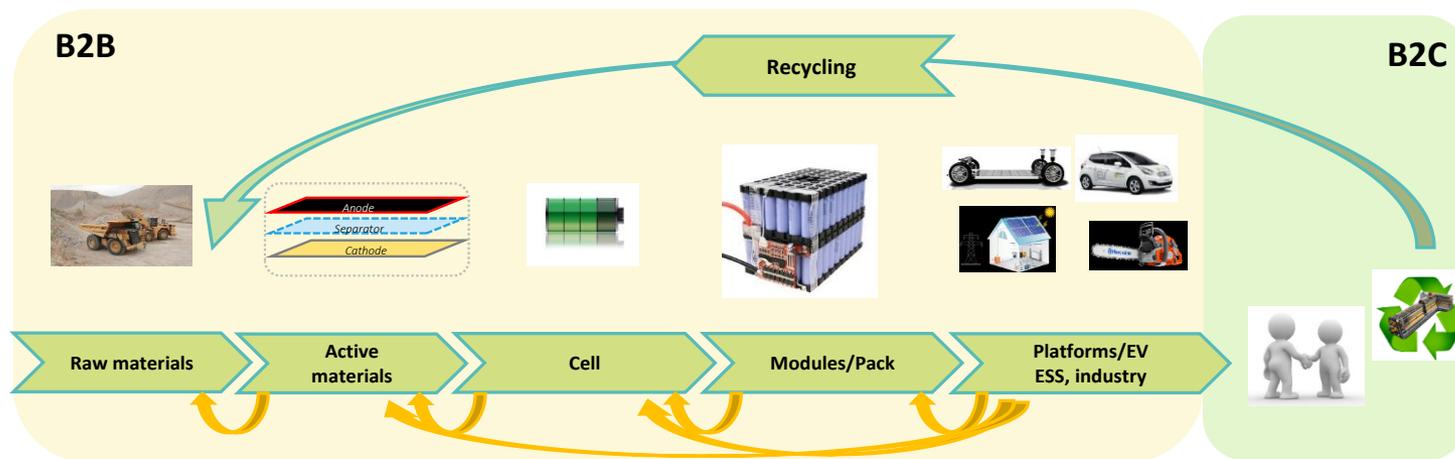


### Selection criteria (top 10)

1. **Big impact:**
  - business –*in the money*; how many Denmark's 😊-
  - Jobs –*at least 1M*
  - Energy transition (*CO2, clean Air, LCOE, ...*)
2. **Big internal EU market** (*no demand risk*)
3. **Strong EU position in one step of the value chain** (*no need to be #1 everywhere, stranded costs of others is also good*)
4. **Reasonably homogeneous EU** existing regulation, easy to upgrade/tailor (*low regulatory risk*)
5. Key EU players use to **export** (*first step EU, then US or Asia or Africa*)
6. Obvious **gradients** with other top economies (*i.e. China, US, Japan*)
7. **CAPEX** intensive (*finance world on board, to be helped, resilience*)
8. **Circular** (so recycling is/will be in the money) (*sovereignty*)
9. **Manageable** (*is CCAV maybe too wide?*)
10. Rather **B2B** or **B2B2C** than B2C

Europe capturing a **new** market worth **250B€/year** in 2025 ...

... by acting quickly ..... with a **value chain** approach



... in a multidimensional perspective

**4M-5M jobs**

