



Executive Agency for Higher
Education, Research, Development
and Innovation Funding



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Chair on Science and
Innovation Policies
SNSPA, Bucharest, Romania



INSTITUTUL de PROSPECTIVA

„Smart Cities”

**Cercetare | Dezvoltare | Inovare | Cooperare
internationala**

UEFISCDI

Prof. Adrian Curaj





Figure 1.3 The UN 17 Sustainable Development Goals (SDGs), implemented by all the world's countries in 2016.



Source: YouTube

Fueled by

Digitization

Mobilization

Augmentation

Disintermediation

Automation

Biological transformations



The rise of Digital Challengers

How digitization can become the next growth engine for Central and Eastern Europe

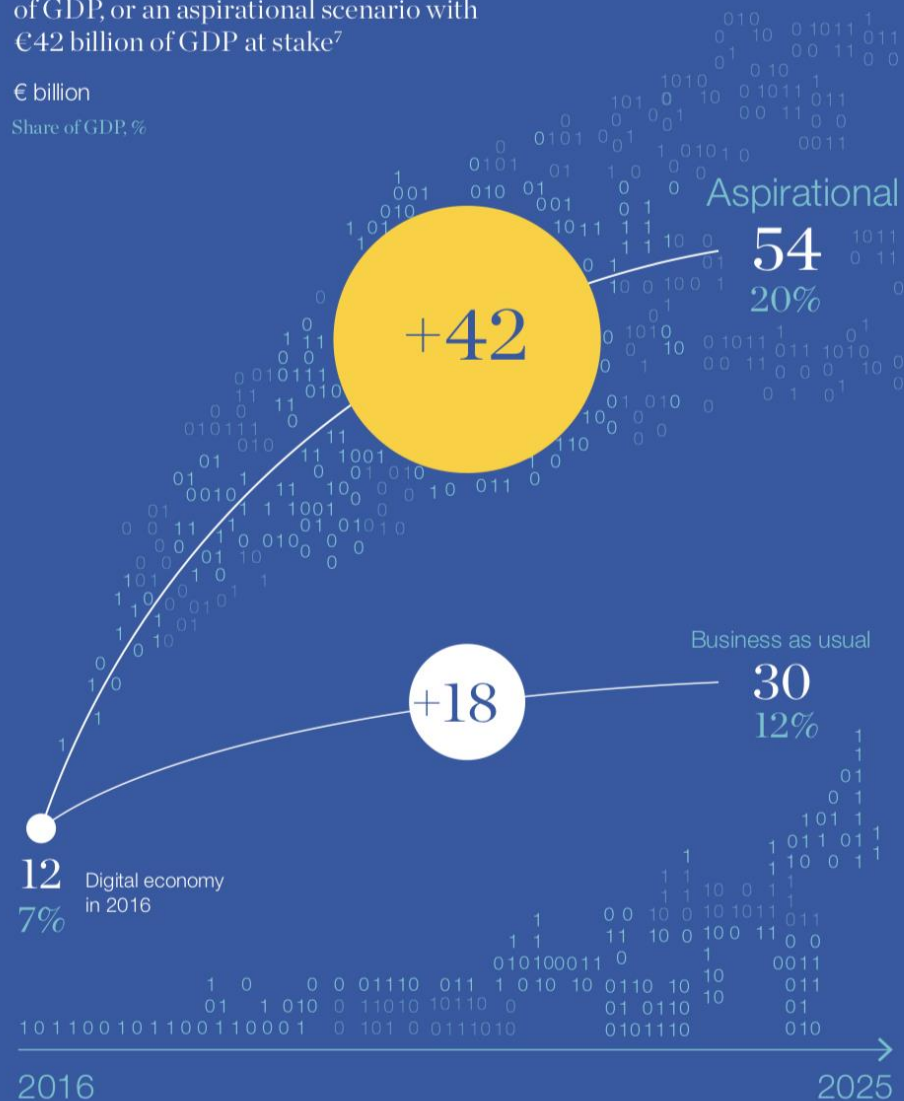
Perspective on Romania



We see two trajectories for Romania to grow its digital economy: a business-as-usual scenario bringing an additional €18 billion of GDP, or an aspirational scenario with €42 billion of GDP at stake⁷

€ billion

Share of GDP, %



Romania, prin UEFISCDI, membra in initiative europene si internationale:

Joint Programming Initiative Urban Europe (JPI Urban Europe)

- ERA-Net Smart Cities & Communities (2015)
- ERA-Net Smart Urban Futures (2016)
 - ERA-Net Sustainable Global Urbanisation (2016)
- ERA-Net Urban Connectivity and Accessibility (Dec. 2019-2020)

2015 - prezent

Positive Energy Districts (PED)

SET Plan Action 3.2

2019



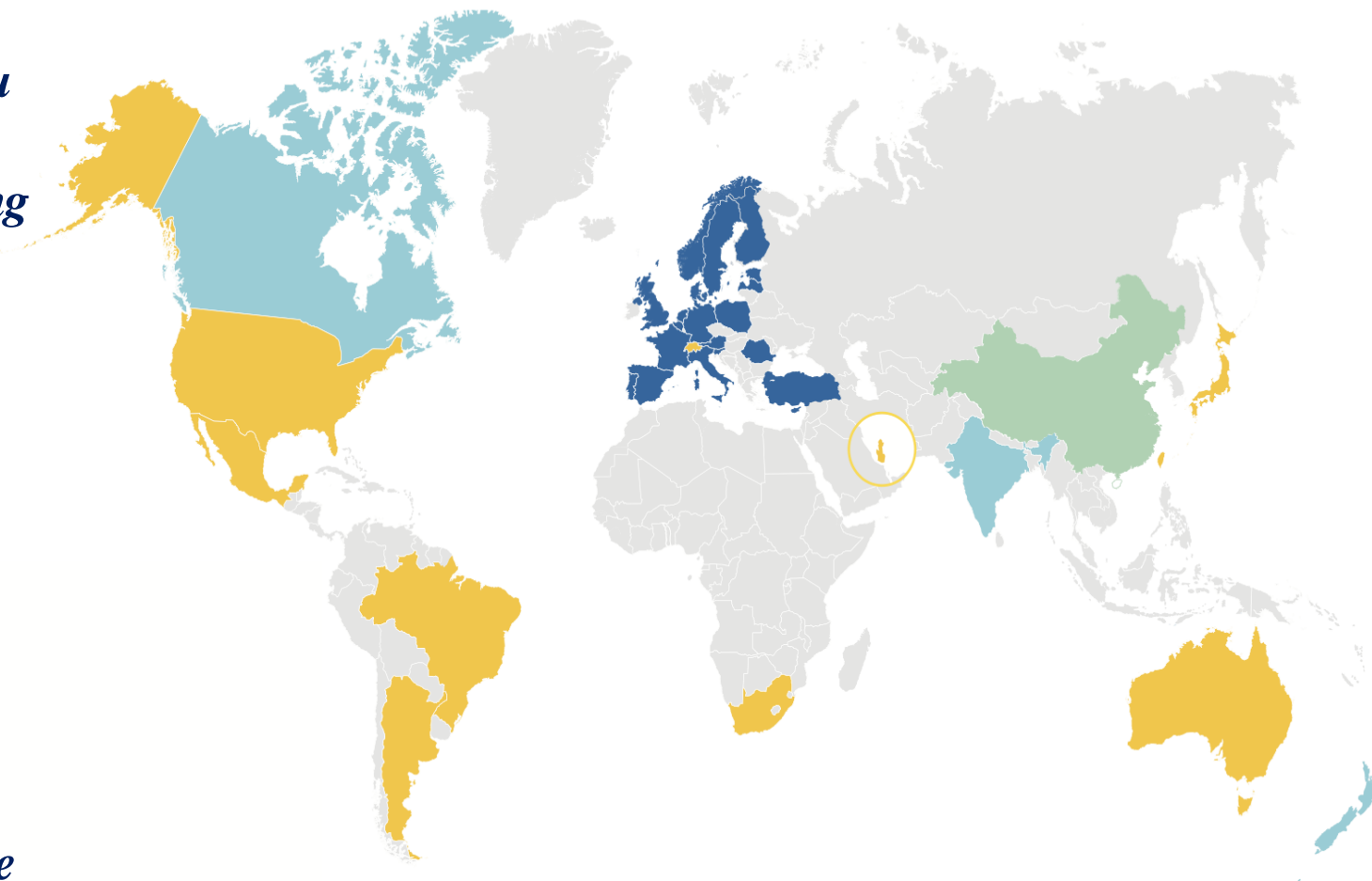
Joint Programming Platform Smart Energy Systems **JPP Era-Net SES** (SET Plan Action 4)

- Smart Grids Plus
- Smart Energy Systems
 - MICall19

2015 - prezent

*Romania, prin
UEFISCDI,
este membru
activ al Joint
Programming
Initiative
Urban
Europe*

*peste 20 de
tari implicate*



● **JPI Urban Europe**
Members: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Italy, Latvia, Netherlands, Norway, Slovenia, Sweden, United Kingdom
Observers: Estonia, Poland, Portugal, Romania, Spain, Turkey

● **China**
Joint call under development, relationships with various organisations established (funding agencies, research organisations, urban planning organisations)

● **Argentina, Australia, Brazil, Japan, Mexico, Qatar, USA, South Africa, Switzerland, Chinese Taipei**
Joint call related to Belmont Forum and SUGI

● **New Zealand, India, Canada**
Exploration of cooperation opportunities



100 Positive Energy Districts & Neighbourhoods (PED) by 2025

*“**Positive Energy Districts** are energy-efficient and energy-flexible urban areas which produce net zero greenhouse gas emissions and actively manage an annual local or regional surplus production of renewable energy. They require integration of different systems and infrastructures and interaction between buildings, the users and the regional energy, mobility and ICT systems, while optimising the liveability of the urban environment in line with social, economic and environmental sustainability.”*



Map: Malin Danielsson • [Get the data](#) • Created with [Datawrapper](#)



Romania in PED: primul exercitiu de mapare

URBAN EUROPE



BOOKLET OF POSITIVE ENERGY DISTRICTS IN EUROPE

PREVIEW

A compilation of projects towards sustainable urbanization
and the energy transition



URBAN EUROPE

16 Laser Valley – Land of Lights, Măgurele, Romania

General information	
City	Măgurele, Romania
Project name	Laser Valley – La
Project status	planned <input type="checkbox"/> unde
Project start – end	from 2019
Contact	Cosmin Holeab, Elena
Project website	http://landoflights.ro
Size of project area (hectare)	Smart technological deve - Măgurele City: 4.500 - Măgurele Science Park - Măgurele Science Village - Urban regeneration (Măg
Building structure	Newly built <input type="checkbox"/> Existing neighb
Land use	Mix of - housing, - office space/business, - schools, university/science, - cultural facilities, - natural facilities (river, forests, Ne
Financing	- Public - Public-Private - Research funding - Green financing - Other (business angels)

Resources:

- Office space, housing, schools, university
- Mix of housing, business, science, cultural facilities and natural facilities (river, forests, Neajlov River delta)
- Environmental target for all development projects (fossil fuel-free by 2030)
- Energy target for all developments
- An 'understood' territory, ready for smart territorial development
- A science park with a core of 20 ha; a hub of public research facilities; companies, business incubators and accelerators, a cognitive computing and cyber security research pole.

Strategies

Goals/ambition

Positive Energy ☒ Carbon-free ☒ Sustainable neighbourhood ☒ Zero-emission ☐ Climate neutral ☐ Energy neutral ☐ Energy efficient ☒ Social aspects/affordability ☐

Environmental target for all development projects: fossil fuel-free by 2030

Sursa: https://jpi-urbaneurope.eu/app/uploads/2019/04/Booklet-of-PEDs_JPI-UE_v6_NO-ADD.pdf

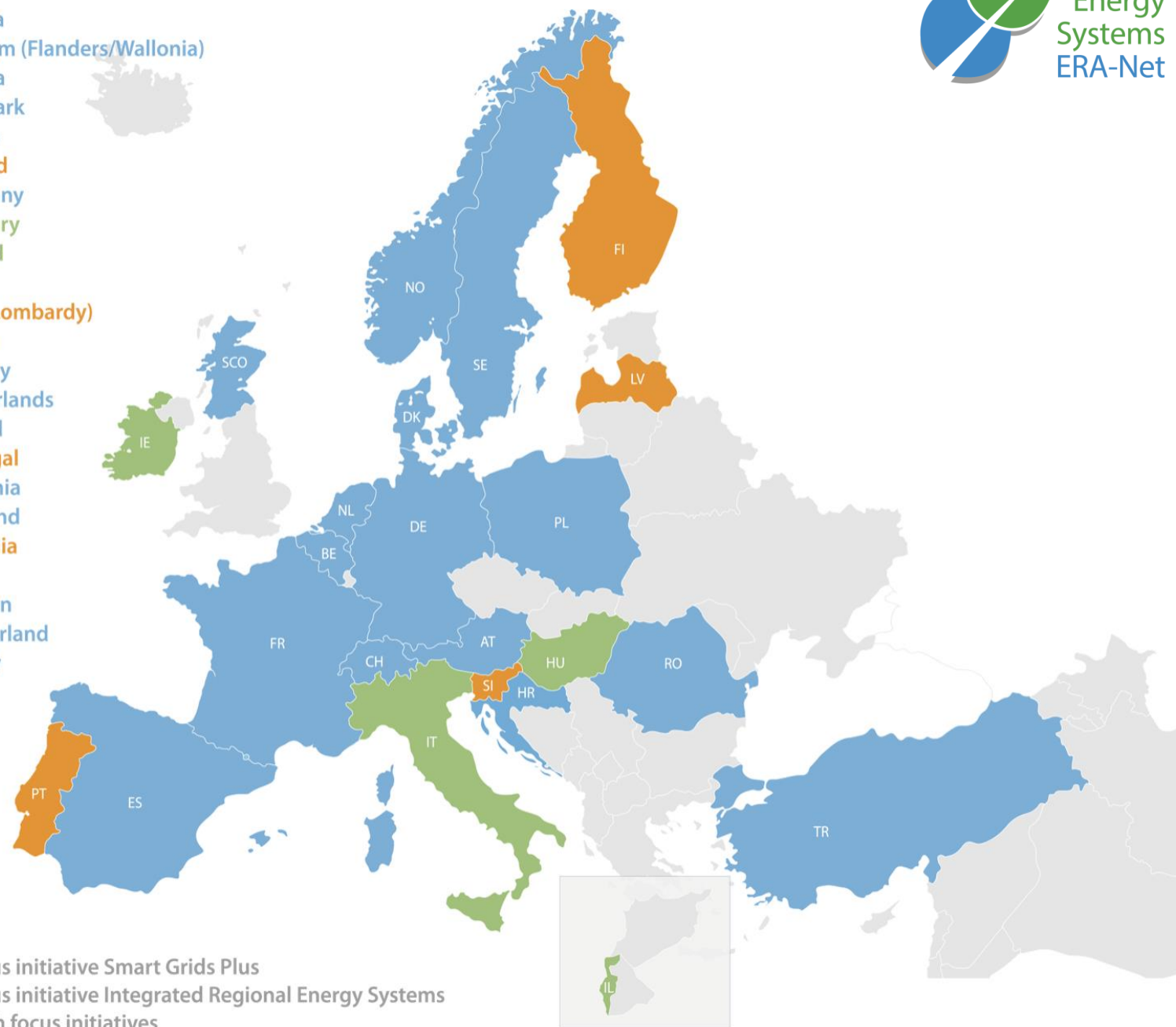
Romania, prin
UEFISCDI, este
membru al
Joint
Programming
Platform

Smart Energy
Systems

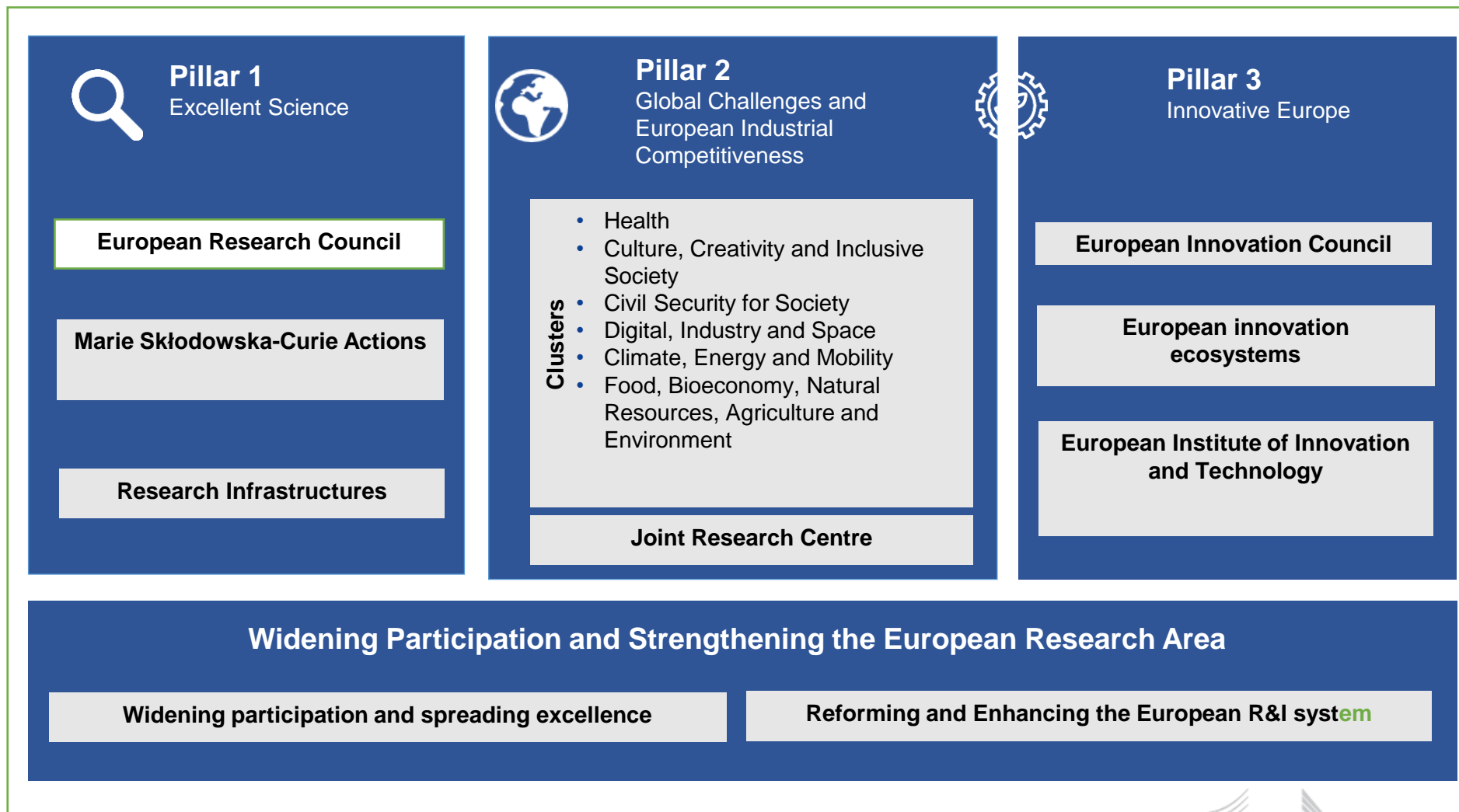
SET Plan Action
4

Austria
Belgium (Flanders/Wallonia)
Croatia
Denmark
France
Finland
Germany
Hungary
Ireland
Israel
Italy (Lombardy)
Latvia
Norway
Netherlands
Poland
Portugal
Romania
Scotland
Slovenia
Spain
Sweden
Switzerland
Turkey

■ focus initiative Smart Grids Plus
■ focus initiative Integrated Regional Energy Systems
■ both focus initiatives



Horizon Europe: Preliminary structure



**Adaptation to climate
change, including societal
transformation**



RDI National Strategy 2014-2020

RDI National Plan

1

Increase competitiveness of Romanian economy through innovation

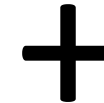
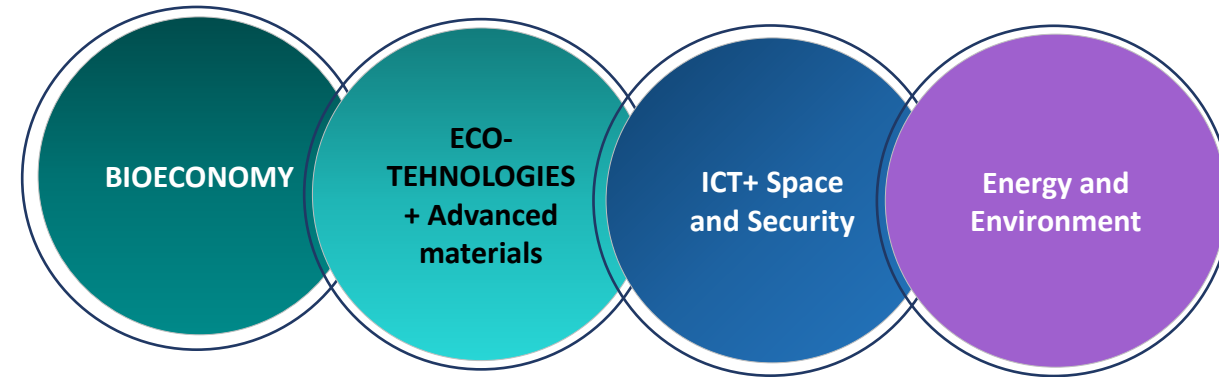
2

Increase Romanian contribution to the progress of frontier knowledge

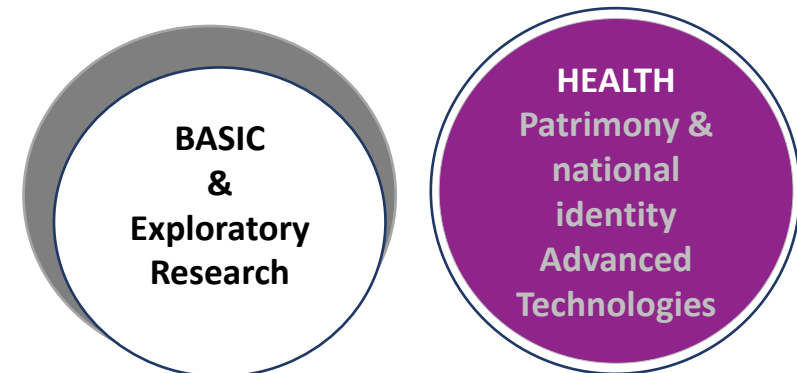
3

Increase the role of science in society

Smart specializations



Public sector priorities



Advances in the Theory and Practice of Smart Specialization

Edited by
Slavo Radosevic
Adrian Curaj
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Livu Andreescu
Imogen Wade



S3 & “SPACE for EXPERIMENTATION”

RDI Strategy

VIZIUNE ECOSISTEM CDI

OBIECTIVE STRATEGICE ASOCIATE
FONDURILOR NAȚIONALE

Investment Plan

	Program 1			Program N
Domenii smart naționale				
Domenii frontieră				
Provocări societale				

POLITICI TRANSVERSALE

PNCDI

Smart Specialization Strategy

VIZIUNE DEZVOLTARE PRIN SPECIALIZARE
INTELIGENTĂ

OBIECTIVE STRATEGICE ASOCIATE FONDURILOR
EUROPENE

Investment Plan

	Inovare	Antreprenuriat	Educatie	Altele
Domenii smart naționale				
Domenii smart regionale				

PRINCIPII DE SINERGIE ÎNTRE PROGRAME

“POR”-like
2021-2027

“POC”-like
2021-2027

“POCU”-like
2021-2027

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Strategii
regionale de
inovare

Inovare
Antrep.

Industria
IMM

Agenda
Digitală

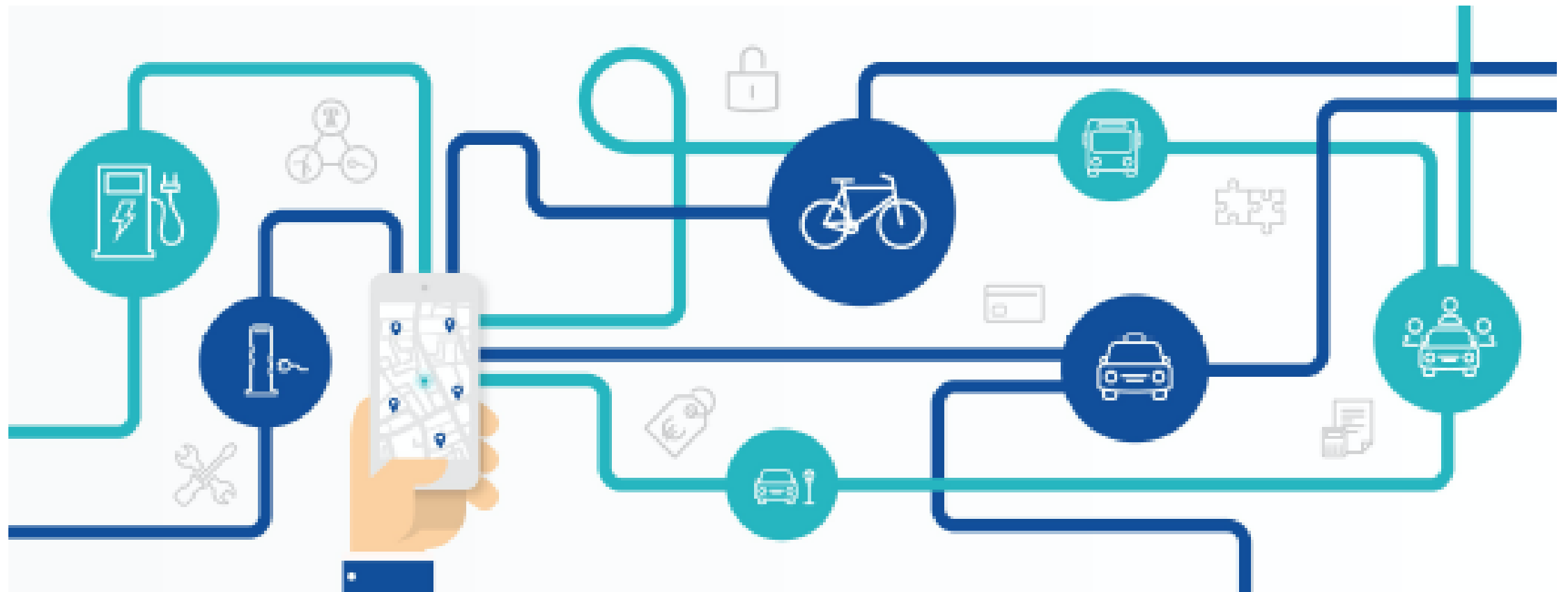
Resurse
umane
pentru SI

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MAGNET CITIES

Migration and Commuting in Romania





Medium.com

Mobility as a Service — MaaS

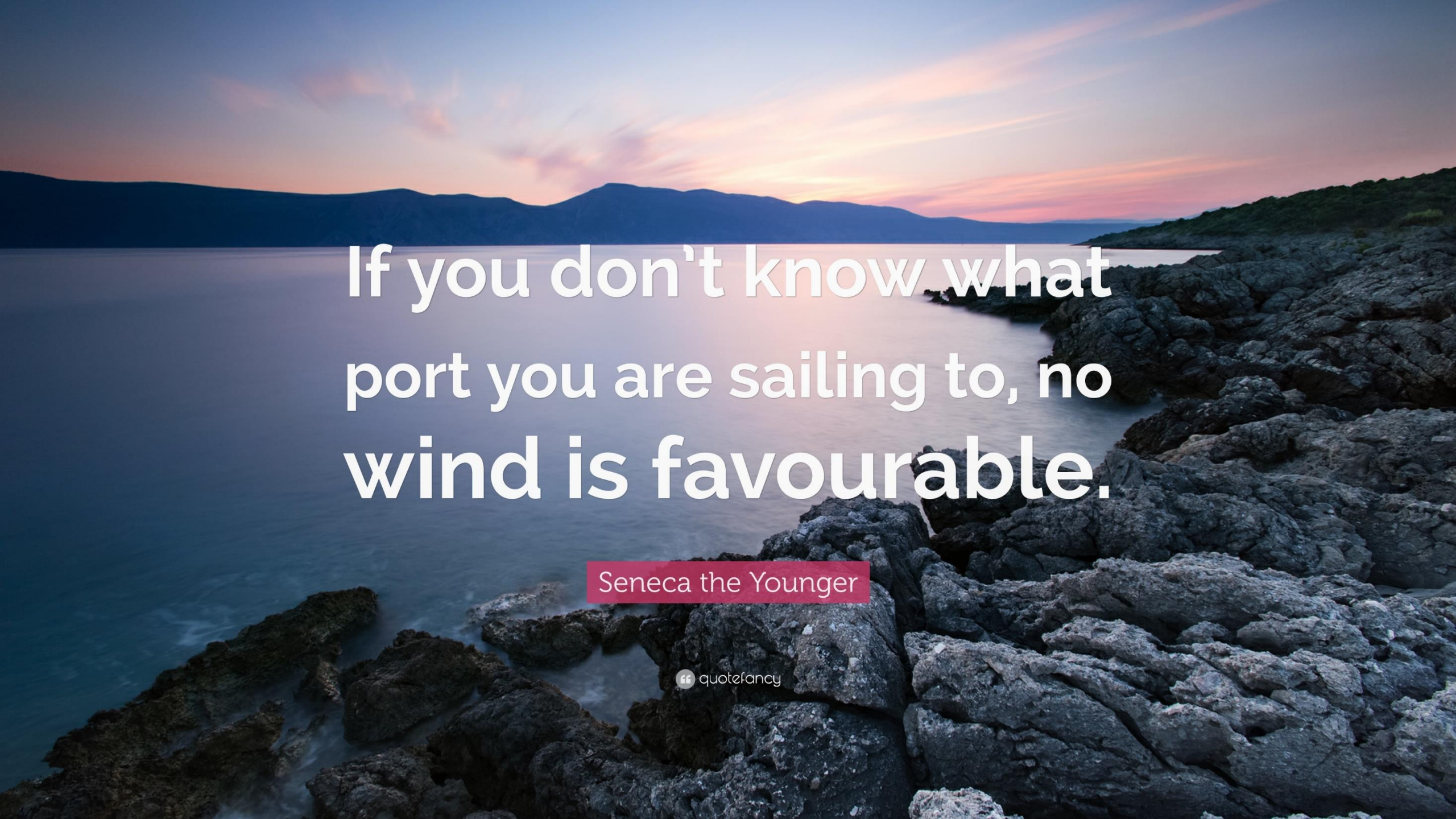
★ ★ WINNER ★ ★

“Sensing as a Service”

Enabling CSPs to utilize their deployed hardware locations beyond their core function, with a wide range of environmental IoT sensors. A platform for collecting and processing sensor data, using our Nokia AVA platform, and also selling it using a blockchain powered marketplace. A variety of real-time environmental data, unusual data detection, future values prediction, site monitoring, and hardware control and anomaly detection offering essential insight to data consumers.

DEVELOPER:

NOKIA



If you don't know what
port you are sailing to, no
wind is favourable.

Seneca the Younger

Thank you!
Multumesc frumos!

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