

JRC POINT Review of Greece: Context, Scope and Findings

24 February 2021

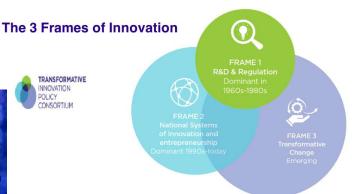
Matthjis JANSSEN, Yannis TOLIAS, Dimitrios PONTIKAKIS

Research Centre

A European Green Deal

Striving to be the first climate-neutral continent











Challenges of lagging regions

- Industrial decline and mass emigration
- Structural change: low-productivity agriculture/tourism
- Weak tradable sectors: Investment barriers
- Lacking scale-efficient production and business innovation
- Societal and environmental challenges
- Large infrastructure gaps

- Deep productive transformations, esp. in energy and transport systems, and digitalisation
- Renewed interest & new approaches to industrial policy – no longer a taboo
- Emergence of new framework of thinking: transformative innovation policy
- European Green Deal and EU Recovery Fund (>1 tn EUR for Green and Digital Transitions)

Pressing need to develop knowledge-intensive production capabilities

→ Problem: no framework available for full-blown industrial policy!



Need to re-discover planning capabilities

Saturn V: world's most powerful rocket

- Dependent on massive network (est. 400,000 people*)
- Network disbanded since early 1970s
- Humanity has since lost heavy-launch capability
- No point using old 'blueprint' world moved on

Industrial transitions

- → Lost capability for long-term, large-scale social action
- →Climate emergency: Non-negotiable deadlines, Massive coordination task
- → No point reviving 20th cent. industrial policies world moved on

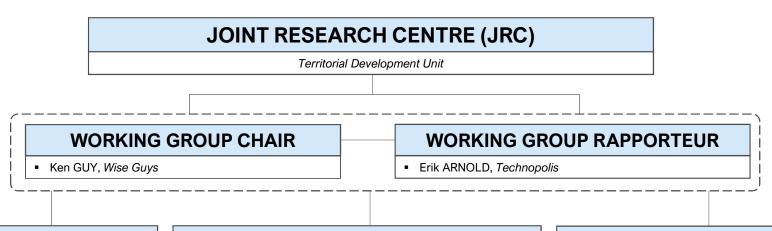
*https://www.theguardian.com/science/2009/jul/02/apollo-11-back-up-team





LAGGING REGIONS Working group:

"Understanding and Managing Industrial Transitions"



EXPERTS CONDUCTING REVIEWS

- Héloïse BERKOWITZ. CNRS
- Patries BOEKHOLT. Innovation Policy Matters
- Matthijs JANSSEN, Utrecht University
- Totti KÖNNÖLÄ, Insight Foresight Institute
- Ruslan STEFANOV, ARC Fund
- Yannis TOLIAS, Innovatia Systems
- Christos EMMANOUILIDIS. Cranfield University
- Gabriela PIRVU, Romanian Clusters Association
- Gabilela i IIIVO, Nomanian Glusters Association
- Mircea PETREA, *ElfNet*

MEMBER STATES

Regional authorities

- Andalucía (Spain)
- Western Macedonia (Greece)
- All regions (Romania)
- Catalonia [own resources]
 (Spain)

LICOTATES

- National authorities

 Ministry of Development (Greece)
- Council of Ministers (Bulgaria)
- Ministry of Economy, Energy and Business Environment. and other ministries with inputs in S3 (Romania)

ADVISORY BOARD OF DISTINGUISHED EXPERTS

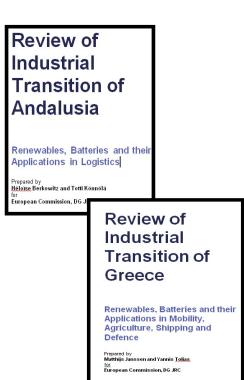
- Effie AMANATIDOU. University of Manchester. UK
- Antonio ANDREONI, University College London, UK
- Bjørn ASHEIM, Circle, Lund University, Sweden
- Mario CERVANTES, OECD, STI Directorate, France
- Tatiana FERNÁNDEZ SIRERA, Generalitat de Catalunya, Spain
- Ian HUGHES, University College Cork, Ireland
- Gernot HUTSCHENREITER, OECD, STI Directorate, France
- Rene KEMP, University of Maastricht/UNU, Netherlands
- Göran MARKLUND. VINNOVA, Sweden
- Pietro MONCADA-PATERNÒ-CASTELLO, EC DG Joint Research Centre, Spain
- Matias RAMIREZ, SPRU, UK
- Joe RAVETZ. University of Manchester. UK
- Johan SCHOT, Utrecht University, Netherlands
- Attila VARGA, University of Pecs, Hungary

First step is evidence: Reviews of Industrial Transition

Coordination hinges on non-readily available evidence

Each review is a **study** of the affected industrial system in the territory. Aims:

- Provide evidence about the affected production and consumption system and its direction;
- Identify realistic transition pathways and associated institutional, investment and skills needs;
- Propose governance solutions so that disparate policy domains coordinate under a coherent industrial development logic;
- Make concrete policy recommendations for the advancement of the transition and for managing its downsides.



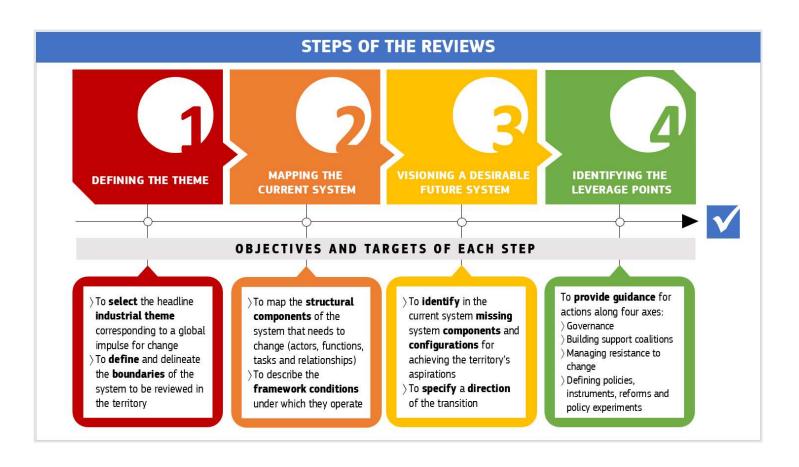
Four pilot reviews on-going in Andalusia, Bulgaria, Greece and Romania.

Advance summaries here: https://s3platform.jrc.ec.europa.eu/i

nttps://sspiatform.jrc.ec.europa



The POINT methodology for reviews





https://europa.eu/!Gr34Ng

European Commission

Scope and Process of Review in Greece

JRC Partners in Greece:

Ministry of Development & Investments; GSRI; NDC; Region of Western Macedonia

Review Scope:

Renewables, Batteries and their Applications in Mobility, Agriculture, Shipping and Defense

Process:

- Consultation meetings with stakeholders (Oct. 2019 and Feb. 2020)
- Evidence, analysis, write up and comments on drafts (Nov. 2019 Dec. 2020)
- Publication (February 2021)
- Presentation to stakeholders (today)



Findings and Recommendations

POINT Review Greece



A unique window of opportunity: the sustainability transition

Households

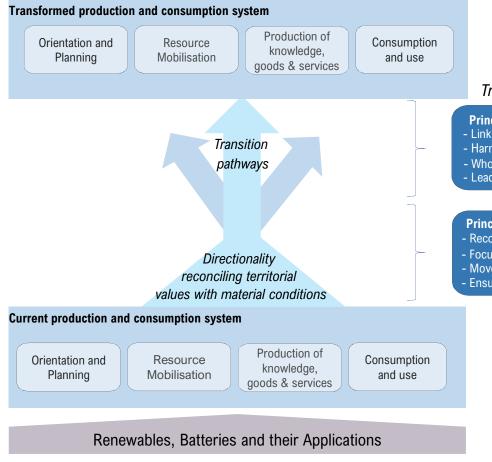
- Energy efficiency
- Own RES production (prosumers)
- Electric Vehicles
- Mobility solutions

Businesses

- Energy producers
- ICT solution providers
- Land transport and logistics
- Manufacturing
- Construction



The approach



Transition management policies

Principles for supporting transition pathways

- Link disparate production systems and steer consumption
- Harness distributed agency and allow experimentation
- Whole-of-government mobilisation, beyond R&I
- Leadership and sustained impulse at the highest level

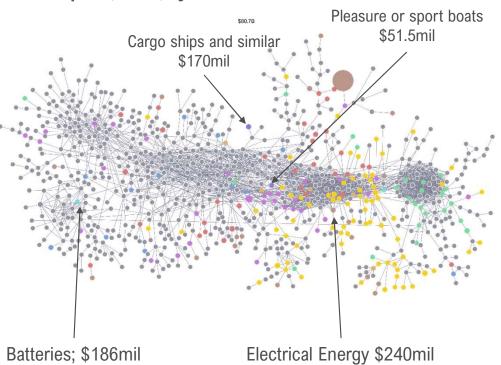
Principles for *projecting* transition pathways

- Recognise that comprehensive transformations are costly
- Focus on time-critical solutions to territorial problems
- Move beyond the territory's comparative advantage
- Ensure open search and multi-level alignment



Economic footprint

Greek exports, 2017, by value



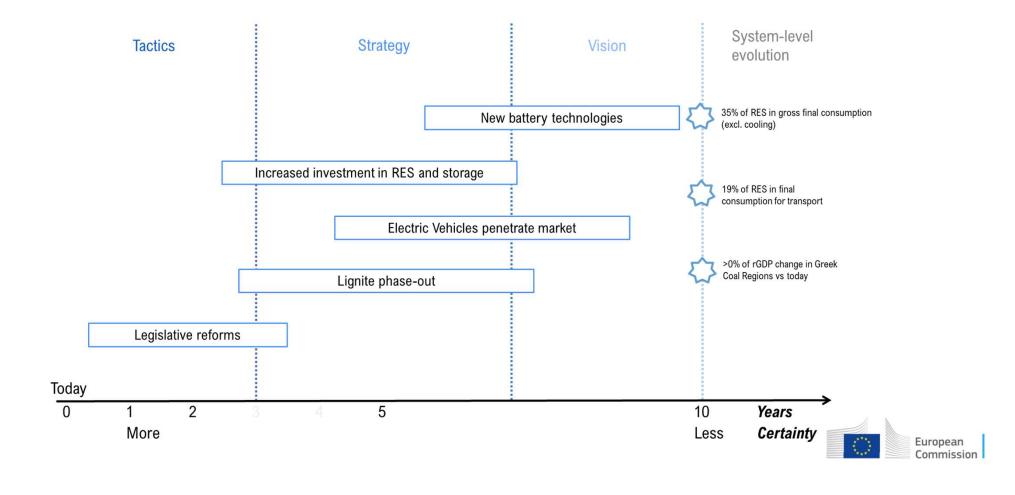
PRODUCT SECTORS	9	T	A STATE OF THE PARTY OF THE PAR	0	A	X	4	80	

NACEv2	Description	Legal Entities	Turnover (mil EUR)	Employment
19.2	Manufacture of refined petroleum products	35	12 510	3 561
20.5	Manufacture of other chemical products	168	394	1 458
27.2	Manufacture of batteries and accumulators	13	177	638
29.1	Manufacture of motor vehicles	14	7	414
35.1	Electric power generation, transmission and distribution	6 369	18 114	31 295
38.1	Waste collection	440	264	3 083
38.2	Waste treatment and disposal	103	153	1 872
38.3	Materials recovery	203	262	1 969
45.1	Sale of motor vehicles	2 494	3 494	11 593
45.2	Maintenance and repair of motor vehicles	14 640	946	32 296
45.4	Sale, maintenance and repair of motorcycles and related parts and accessories	2 487	410	5 312
46.7	Other specialised wholesale	12 926	15 334	42 075
47.3	Retail sale of automotive fuel in specialised stores	4 981	6 244	17 197
49.1	Passenger rail transport, interurban	9	262	943
49.2	Freight rail transport	5	12	33
49.3	Other passenger land transport	35 052	1 464	70 882
49.4	Freight transport by road and removal services	17 083	2 315	36 493
50.1	Sea and coastal passenger water transport	1 411	1 224	8 776
50.2	Sea and coastal freight water transport	567	775	7 851
72.1	Research and experimental development on natural sciences and engineering	4 200	305	10 887





Nationally-set transition targets









Data & Algorithms







Financing

Home RES & Charging







CO2 Reduction



Headline targets: 35% RES in gross final consumption; 19% RES in transport; Economic resilience Niches / Diffusion Public procurement of Local RES-EV Electrified short-PVs / Micro-grids energy efficient experiments haul sea transport for households opportunities transport Consumption Clean ports and Environmental Public transport Private EV adoption (application areas) Remediation shipping **Energy Storage** Transmission & Distribution Recollection of EV charging (pumped hydro & **Smart Grid** distribution batteries & turbines infrastructure infrastructure batteries) networks Local RES **Production** Waste management Suppliers of EV Battery producers **Biomass** supply: firms, (incl. recycling) capabilities (mainly Sunlight) components communities Knowledge Mainly Research Centres and Universities → startups? development Planning & Resource Coordination for substantial and long-term financial commitment for coherent investments, e.g. Greek Green Pact mobilization



The desired state of the system

Orientation and planning

- Extend joint ministerial committee and 'Green Pact' for electric mobility; e.g., via the use of working groups also addressing skills, businesses, regions
- Consider interregional learning via e.g., scalable demonstrator experiments
- Enhance industry involvement, via roadmaps and consultation 'fora'

Human and financial resource mobilisation

- Reverse brain drain via support for development paths targeting local challenges
- Certify and accredit the offer of vocational training
- Establish thematic vocational training centres (cf. CoVES)
- Use EU funding schemes linked to the European Green Deal Investment Plan (EGDIP)
- Intensify PCP and PPI
- Develop rating tools and a digital one stop shop for investments

Production of knowledge, goods and services

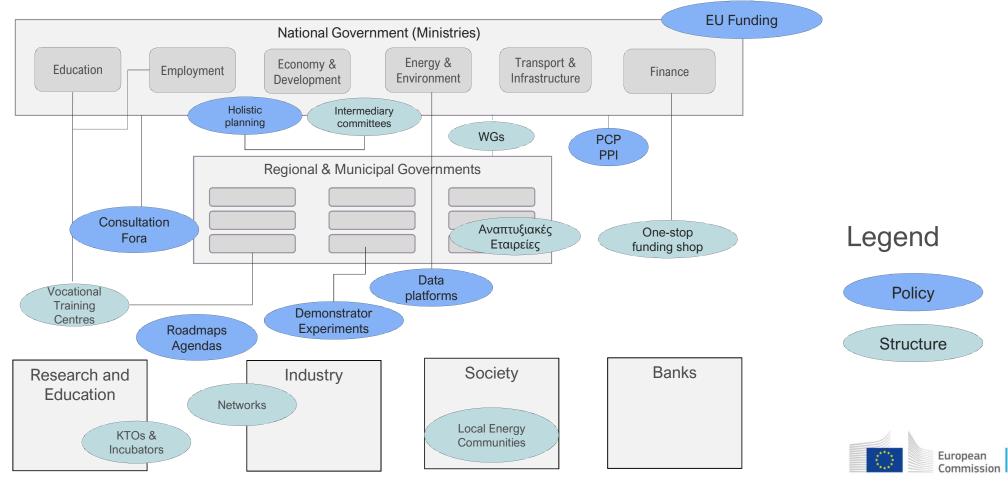
- Target FDI at industrialisation related to RES technologies and digitisation
- Forge links between energy and transport sectors/systems
- Upgrade public investments that create demand and attract businesses and FDI
- Enforce active environmental regulations
- Create regulatory sandboxes for experimentations
- Support KTOs and incubators

Consumption and use

- Enable prosumers and reform the local energy community law to avoid excesses
- Support energy citizenship and link RES production to different application domains (e.g., private EV, electric boats)
- Exploit niches with special demands, like EV on islands
- Expand RES-based public transport (like buses), e.g., via municipality-owned development companies



System-enhancing interventions



Catalysing the Greek Transition

1. Coordination process

- A 'Greek Green Deal for Sustainable Industry and Quality Employment' following a mission approach, inspired from Dutch 'Top Sectors' and Catalan 'Shared Agendas'
- Advance preparation and planning, government leadership, and wide stakeholder coordination
- Primacy of an industrial development intervention logic over all other logics of intervention
- Sequencing: First, supply side-measures (industrial expansion in relevant areas), then (or in parallel) demand-side measures



Catalysing the Greek Transition

2. Public policy interventions

- Legislation: microgrids, sandboxes, enforcement of environmental regulations, policy stability
- **Enabling actions:** Strategic provision of public infrastructure (network infrastructure, 'smart grid', EV charging and hydrogen refueling facilities, ...); Skills (think ahead, (re)train, with/in businesses); demand management (smart meters, city-level standards, EV facilities, etc.); acceptance of RES (energy communities match with territorial values)
- Financial stimuli: ecosystem development, facilitate investment and increase appropriability, Public-Private Partnerships
- **R&D&I**: targeted research & development, knowledge transfer, public procurement of innovation, pre-commercial procurement (requires mostly capabilities, not money)



Thank you!

"No wind is favourable to the one who does not know to which port to sail." Lucius Annaeus Seneca (c. 4 BC – AD 65)

https://s3platform.jrc.ec.europa.eu/industrial-transition



© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the <u>CC BY 4.0</u> license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

