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Building a Smart Nation: Luxembourg Tackling the Fourth Industrial Revolution

Università Europea di Roma, 17 May 2022

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Building a Smart Nation: Luxembourg Tackling the Fourth Industrial Revolution

Summary

I. Luxembourg and Europe (after the WWII) – Key milestones

II. From an agrarian-economy to a knowledge-economy – several major transitions

III. The industrial revolution 4.0 – content and mechanisms

IV. What's next?

ELARGISSEMENT DE L'UNION EUROPÉENNE
LES ÉTAPES :

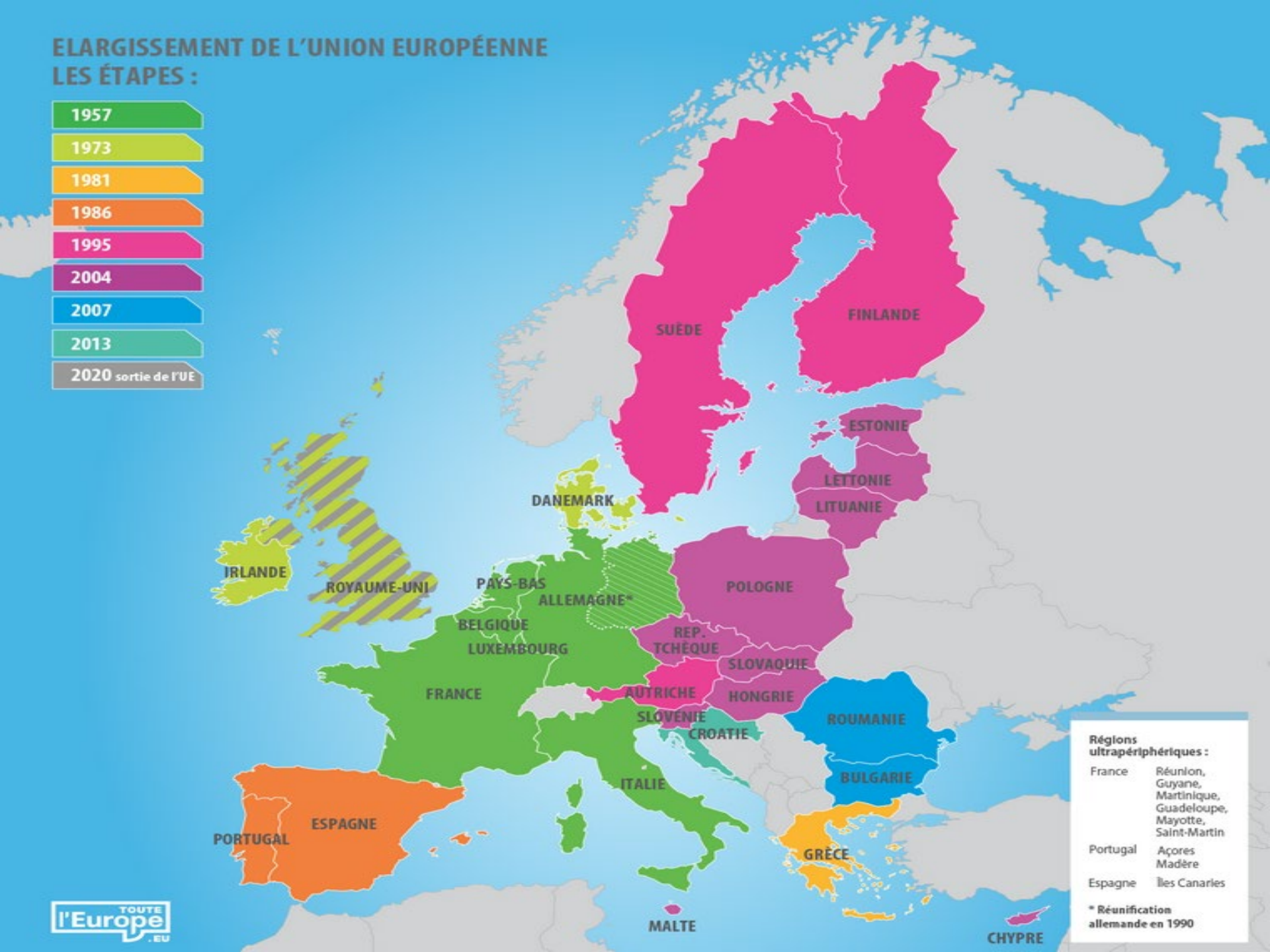

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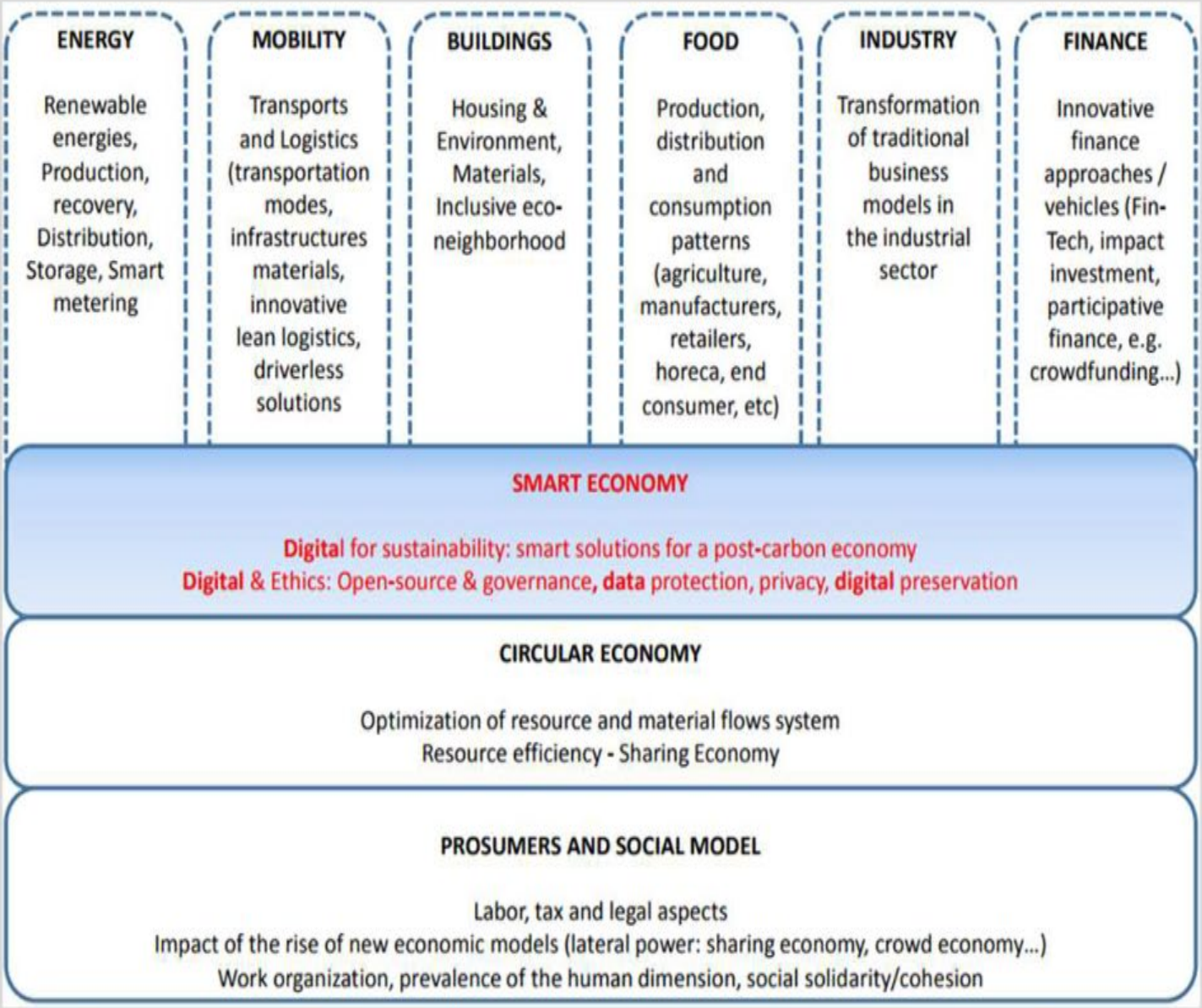
Figure 1: The third industrial revolution in Luxembourg



Source: http://www.troisiemerevolutionindustrielle.lu/wp-content/uploads/2016/11/TIR-Strategy-Study_Short.pdf

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III. The industrial revolution 4.0 – content and mechanisms

- The vision of data usage as central to economic and social development (a 'data-driven economy') is reflected in the 'Digital Lëtzebuerg' strategy, which aims to turn **Luxembourg** into a **'smart green digital nation'**.
- This strategy consolidates ICT as a field of excellence for the economy and encourages the creation of **start-ups in the areas of e-commerce, digital content, cloud computing, big data and e-skills**. Particular efforts are being made to digitize government services in a move towards greater transparency and access to information.
- The investments made in digital infrastructure in recent years have placed **Luxembourg second within the EU in terms of connectivity**, a position which will undoubtedly be consolidated by the Government's 5G strategy for Luxembourg.
- In parallel, **a new strategic vision on artificial intelligence** will further support the country's ambition to be one of the most advanced digital societies in the world.

Funding Model	Government funded with increasing industry contributions.
Target audience(s)	Public and private stakeholders, particularly industries with significant computational requirements and high numbers of processes/roles suited to automation.
Concepts & Focus Areas	Develop the data economy through high performance computer capacity, competency center and pre-emptive workforce skills planning.
Key drivers	Rapidly growing need for cutting-edge computing infrastructure in Europe and social risk with increasing task automation.
Key barriers	HPC capital investments & rapid pace of technological advances, lack of awareness, limited anticipation of company strategy for future skills and jobs.
Implementation strategy	Pilot project followed by later rollout/scaleup.
Results achieved	It is expected that the initiatives will strategically position Luxembourg to maximize potential gains from the Digital Transformation while minimizing the social impact of job automation.
Budget	Project based
Uniqueness factor	European supercomputing hub + pre-emptive, public private partnership tackling digital skills shortage and resulting social issues.
Value-added for policy-makers	A competence center pilot project will ensure proper evaluation mechanisms before replicating the initiative elsewhere in Europe.
Expected Impact	Dramatic boost to Luxembourg's digital infrastructure and increase in workforce mobility.

Source: Digital Transformation Monitor

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