



SMARCO

SMART Communities Skills
Development in Europe

Green Transition and Sustainability'
in Smart Communities – UNIT 2

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Unit 2 – The European Perspective: Green and Digital Transitions

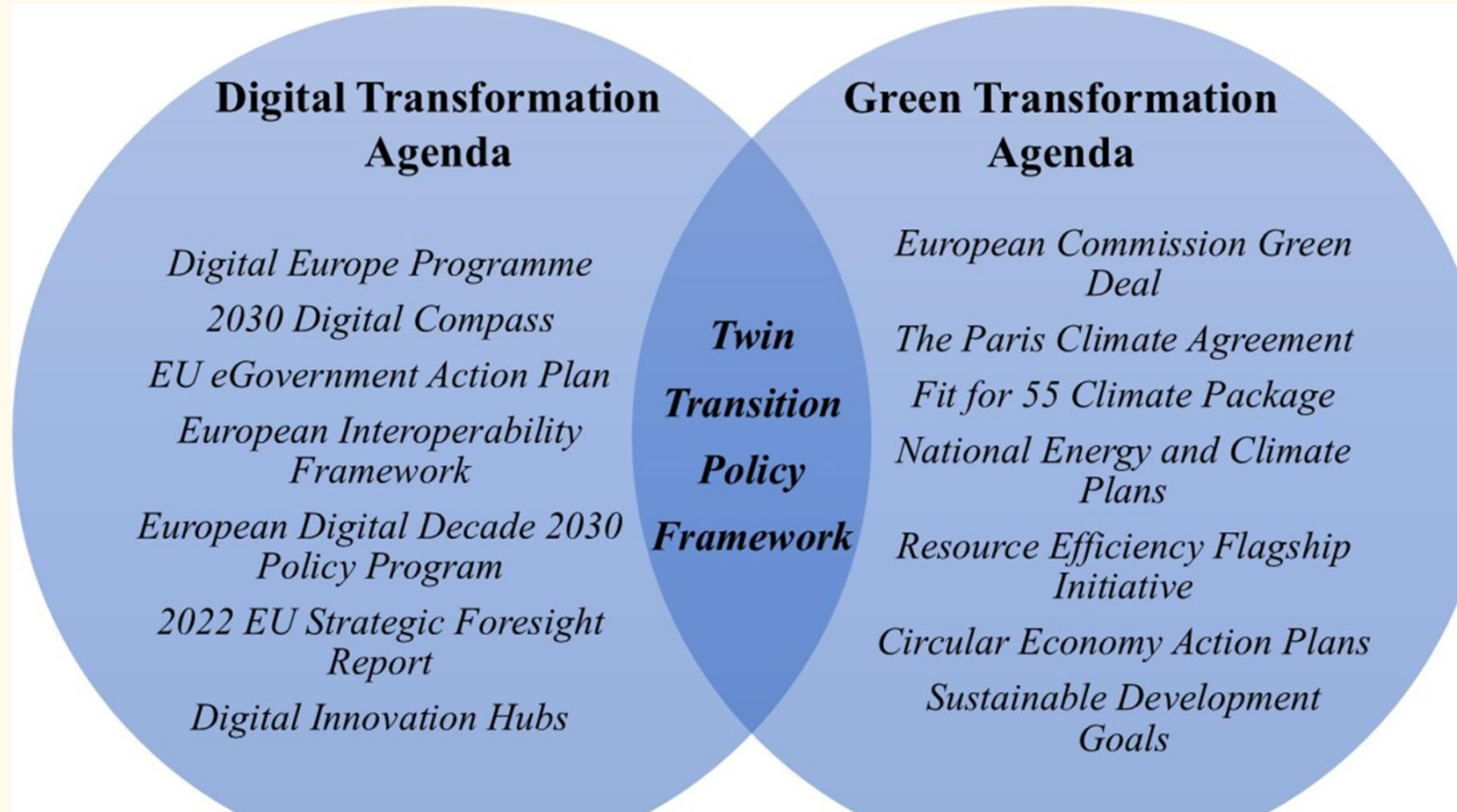
- EU Frameworks and Initiatives
 - European Green Deal: A roadmap for making the EU's economy sustainable and resource-efficient.
 - New European Bauhaus: Connecting design, sustainability, and inclusiveness.
 - Mission: 100 Climate-Neutral and Smart Cities by 2030
 - European Data Strategy and Digital Europe Programme – fostering data-driven smart communities.
 - Smart Specialisation (S3) for regional innovation and local sustainability.



Europe's Twin Transition

- Europe leads a dual transformation — Green + Digital.
- Green Transition: achieving climate neutrality by 2050.
- Digital Transition: empowering citizens and businesses with data and AI.
- Together, they define Europe's sustainable future.
- Learn more:
https://commission.europa.eu/strategy/priorities-2019-2024_en





Tabares, S., Parida, V., & Chirumalla, K. (2025). Twin transition in industrial organizations: Conceptualization, implementation framework, and research agenda. *Technological Forecasting and Social Change*, 213, 123995.



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The European Green Deal

- Announced in 2019 as the EU's growth plan.
 - **Goal:** Net-zero emissions by 2050.
 - **Key Pillars:** clean energy, sustainable mobility, circular economy, biodiversity.
 - Climate Law makes these goals legally binding.
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- https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

The European Green Deal
Striving to be the first climate-neutral
continent



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The New European Bauhaus

- **The New European Bauhaus works by :**
 - engaging people at a **grassroots level**, focusing on neighbourhoods
 - providing **tools and guidance**
 - offering **tailor-made solutions** for different communities
 - incorporating the **views of various stakeholders** into the process of design and implementation
 - prioritising **people** and **social inclusion** but also the **economy** to boost competitiveness and EU strategic autonomy
 - It is the cultural dimension of the Green Deal.
 - Brings together design, sustainability, accessibility, and inclusion.
 - Encourages citizens, artists, engineers, and policymakers to co-create greener lifestyles.
- Example: Lisbon's Marvila District renewal project
 - <https://residentialadvisoryportugal.com/marvila-transformation-lisbons-e3-billion-urban-renewal/>
- <https://new-european-bauhaus.europa.eu/>



EU Mission: 100 Climate-Neutral and Smart Cities

- Supports 100 EU cities to reach climate neutrality by 2030.
- Cities sign Climate City Contracts committing to joint action.
- Focus areas: energy, mobility, data, and citizen engagement.
- <https://netzerocities.eu/>
- <https://netzerocities.eu/case-studies/>



The Intelligent Cities Challenge (ICC) Network

- Network of 150+ EU cities supporting green and digital innovation.
- Builds skills, shares data, and promotes inclusive growth.
- Focus on smaller cities complementing the 100 Mission Cities.
- Development of cities green deals



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Assignment #1 – The Green Deal in Your City



Task: Choose one Green Deal priority (energy, mobility, circular economy).



Identify how your city could implement it locally.



List key stakeholders and barriers.



Propose one solution.



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The European Data Strategy

- Creating a Single Market for Data across Europe.
 - https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en
- Launched in 2020 to enable trusted, fair data sharing.
- Introduces the Data Act and Data Governance Act.
- Establishes common European Data Spaces (e.g., Green Data Space).
 - <https://digital-strategy.ec.europa.eu/en/policies/data-spaces>

Projected figures 2025



530%

increase of global data volume

from 33 zettabytes in 2018 to 175 zettabytes



€829 billion

value of data economy in the EU27

from €301 billion (2.4% of EU GDP) in 2018



10.9 million

data professionals in the EU27

from 5.7 million in 2018



65%

Percentage of EU population with basic digital skills

from 57% in 2018



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Building Capacity for Transformation

Europe's success depends on skills and collaboration.

GreenComp defines sustainability competences.

ICC and Mission Cities support local learning networks.

Education and innovation ecosystems must evolve together.

SMARt COmmunities Skills Development in Europe



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GreenComp – The European Sustainability Competence Framework

- Published by the European Commission (JRC, 2022).
- Defines 12 competences across 4 areas:
 1. Sustainability Values
 2. Complexity Thinking
 3. Futures Literacy
 4. Action for Sustainability
- https://joint-research-centre.ec.europa.eu/greencomp_en



EU Funding Instruments

- Main programmes supporting the twin transition:
 - **Horizon Europe** – R&D for sustainability and innovation.
 - https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en
 - **LIFE Programme** – environmental and climate projects.
 - https://cinea.ec.europa.eu/programmes/life_en
 - **Digital Europe Programme** – skills and technology adoption.
 - <https://digital-strategy.ec.europa.eu/en/activities/digital-programme>
 - **Just Transition Mechanism** – fairness and inclusivity.
 - https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en
 - **Driving Urban Transitions**
 - <https://dutpartnership.eu/>



The UN 17 Sustainable Development Goals (SDGs)

- The 2030 Agenda for Sustainable Development defines 17 global goals.
 - Adopted by all UN Member States in 2015.
 - Address poverty, health, education, environment, and governance.
 - Provide a universal framework for sustainable progress.
-
- <https://sdgs.un.org/goals>



Linking the SDGs with Europe's Transitions

- The Green and Digital Transitions support multiple SDGs:
 - SDG 7: Clean Energy
 - SDG 9: Industry & Innovation
 - SDG 11: Sustainable Cities
 - SDG 12: Responsible Consumption
 - SDG 13: Climate Action
- https://commission.europa.eu/strategy/international-strategies/sustainable-development-goals_en



Challenges in Implementing the Twin Transition

Governance complexity across all levels.

Skill and funding gaps.

Data trust and interoperability issues.

Unequal capacities between regions.

Solutions: collaboration, skills training, open governance.



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Reflection Activity – Your Regional Role

- Reflect:

- What green and digital priorities define your region?
- Which EU programmes could support them?
- What competences are still needed?
- Define one action you can take toward the twin transition.



Unit Completed - What's Next?

To consolidate your learning and reflect on the key concepts covered, please take a moment to complete this quiz.

Your feedback and results will help you track your progress and support continuous improvement of the training experience.

By completing this quiz, you will also become eligible to receive a certificate of successful training completion.

Click the [link](#) to begin the quiz!



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Panos Fitsilis bio page



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- **Professor Dr. Panos Fitsilis** is a full Professor at Business Administration Dept. of the University of Thessaly, Greece., Director of Research Lab for “Management, Digital and Educational Skills” (MANDEIS) of UTH, and academic coordinator of the module “Software Design” at Hellenic Open University.
- He has extensive project management experience with the development and deployment of large IT systems and extensive management experience in various senior management positions. His research interests include Smart Cities, Smart Factories, Industry 5.0, Business Information Systems, Social Systems, Educational Technology, Software Project Management, etc.



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