
Towards a Sustainable Digital Transformation with International Standards

Green and digital: the twin transitions and the telco industry role in Asstel's view

Marzia Minozzi

Head of public policy and regulatory affairs

Who is Asstel

- The business association of the Telecom industry
 - Constituted in November 2002, ASSTEL is the not-for-profit Italian official Employers Association of the telecommunication operators (fixed, mobile, internet etc.).



- ASSTEL represents and supports the telecommunications sector interests in relation to Union works rules and to technical and economic issues.

Agenda

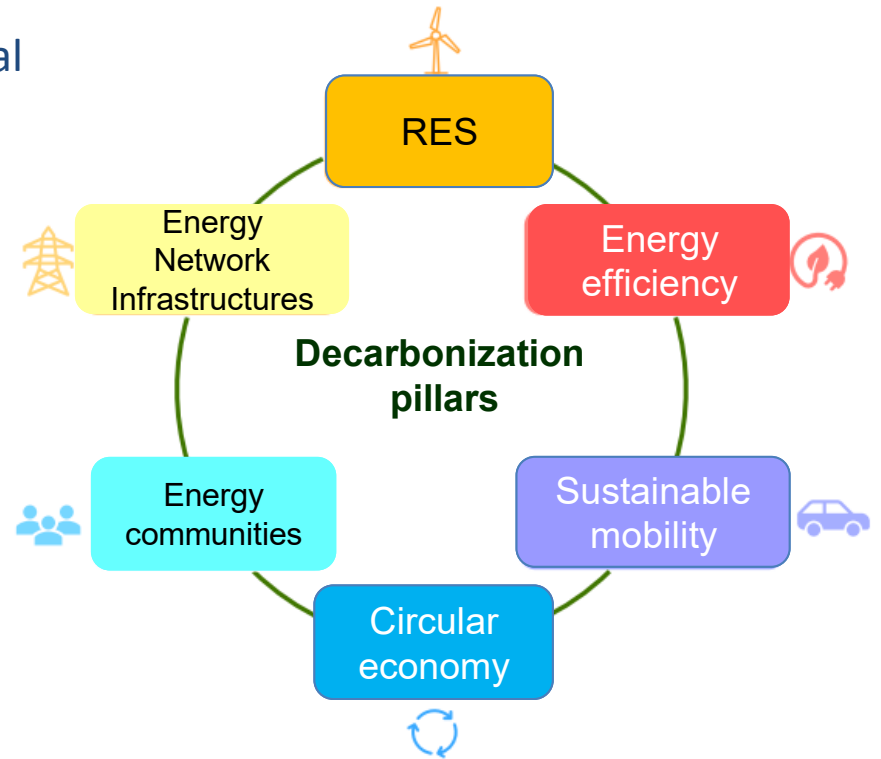
- **Green transformation**
- **Digital transformation**
- **Telco industry role**
 - **VHCN and 5G**
 - **Sustainable mobility as an example**
- **Twinning the transformations**
- **Italian public policy goals**
- **Conclusions**

Green transformation

Green transformation aims at environmental sustainability of modern economies and societies.

The first step is decarbonization, whose pillars are:

- Renewable energy
- Energy network infrastructure
- Energy efficiency
- Energy communities
- Sustainable mobility
- Circular economy



Digital transformation

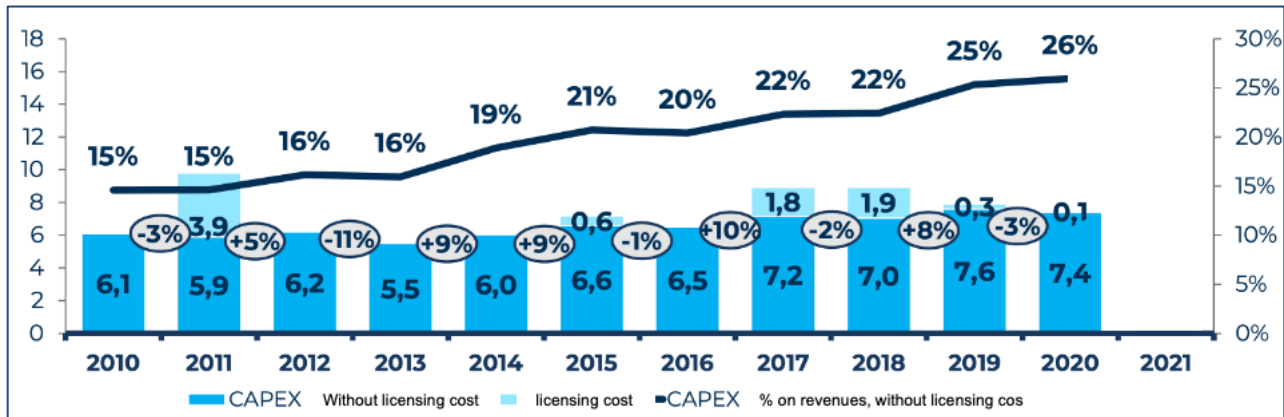
- Digital transformation is the **adoption of digital technology** by an organization.
- Common goals for its implementation are to **improve efficiency, value or innovation.**
- Digital transformation is at the core of **European Union strategic goals.**

A Europe fit for the Digital Age

<< The EU's digital strategy aims to **make this transformation work for people and businesses**, while helping to achieve **its target of a climate-neutral Europe by 2050.** The Commission is determined to make this **Europe's "Digital Decade"**>>

Telco industry role for the twin transformation – Asstel view

- Italian Telco industry is
 - ✓ Energy efficient - € 230 million Investments in 2021 on energy efficiency solutions
 - ✓ Shifting toward RES for consumption (> 4 TWh) and aiming at carbon neutrality
 - ✓ Building (and running) the VHCN (very high capacity network), enabler of the twin transitions



Focus on communication networks performances

example: 5G vs 4G



10x

Decrease in latency:
Delivering latency as low as 1 ms.



10x

Connection density:
Enabling more efficient signaling
for IoT connectivity.



10x

Experienced throughput:
Bringing more uniform, multi-Gbps
peak rates.



3x

Spectrum efficiency:
Achieving even more bits per Hz with
advanced antenna techniques.



100x

Traffic capacity:
Driving network hyper-densification
with more small cells everywhere.



100x

Network efficiency:
Optimizing network energy consumption
with more efficient processing.

Ex: Sustainable mobility and automotive

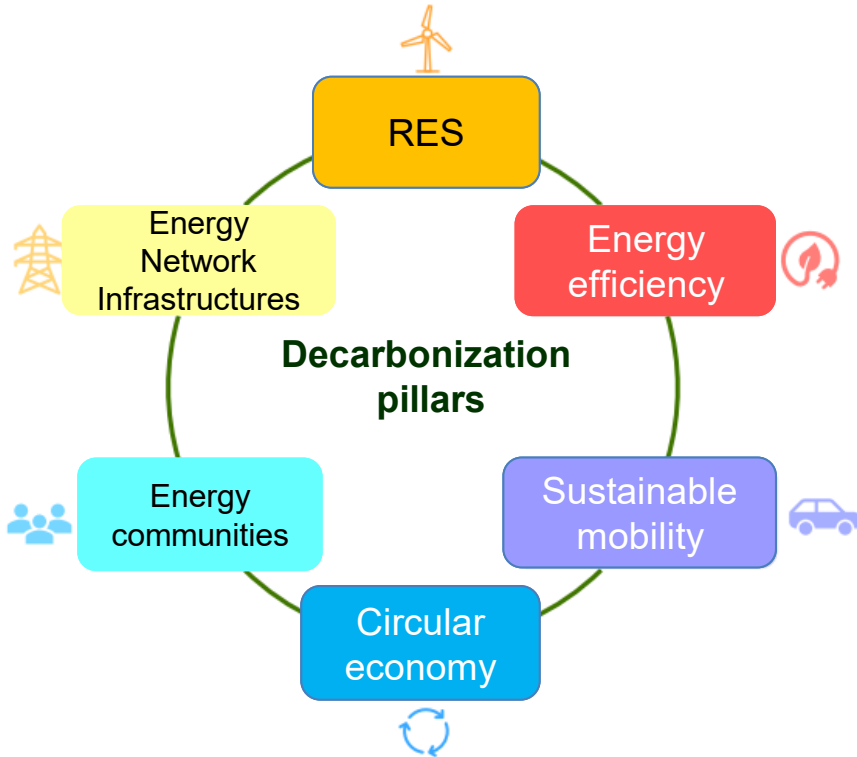
- Evolution of the world of mobility towards a more sustainable model from an environmental, economic and social point of view, enabled by the "evolutionary trends" of:
 - electrification;
 - use of alternative fuels;
 - digitization.

Technical advantages of 5G based solutions: technical performance (range, speed, reliability → increased reaction time), scalability (more users), harmonized cellular technology stack, usage of cellular broadcast technologies, and functional redundancy

Non-technical advantages:

- penetration with communication technology and the size of the eco-system
- ease of upgrading of existing networks
- possibility of including other traffic participants, such as Vulnerable Road Users (e.g. pedestrians), into the eco-system,
- synergies of infrastructure investments between road operators and telco operators, and
- future proof and evolution road-map in 3GPP standardization, which has its evidence in the track record of innovation in the 3GPP eco-system
- synergies with other verticals that are currently supported by 3GPP such as IoT, public safety, etc.

Twinning the transformations



A study by Energy Strategy (PoliMi) and Asstel has highlighted 34 technological solutions that can help reaching the targets in each pillar, as for example:

- ✓ Remote monitoring
- ✓ Demand response
- ✓ Predictive maintenance
- ✓ Smart metering
- ✓ Virtual Grid
- ✓ Network congestion management
- ✓ Enhanced cybersecurity
- ✓ Smart logistic
- ✓ Connected ports
- ✓ Connected vehicles

Italian public policy goals

- The National Recovery and Resilience Plan is developed around three strategic axes shared at a European level:
 - ✓ **digitisation and innovation,**
 - ✓ **ecological transition,** and
 - ✓ **social inclusion.**
- The availability of communications networks and services is key to underpin the three strategic axes
 - ✓ **“Create ultra-fast networks that cover all government agencies, schools, health facilities and museums across Italy, and accelerate the installation of 5G nationwide to reduce the digital divide.”**
- The National Recovery and Resilience Plan earmarks
- a total of € 84.9 billion to support the green transition
- € 40.3 billion for the mission relating to digitalization, € 6.7 billion of those are for NGN and 5G.

Conclusions

- Twin transitions, «green» and «blue», are at the core of public policy
- VHCN are enablers of both transformations
- International standards are at the hearth of telco industry and are the key to the fast spreading of transformative solutions and applications
- Asstel is committed to enhance the enabling role of virtuous telco industry for both transformations.
- Public policy both at EU and national level acknowledges the importance of each of those drivers for future proof and sustainable development.

Thank you

- marzia.minozzi@asstel.it