



confetra

Confederazione Generale Italiana
dei Trasporti e della Logistica

CONFETRA RESEARCH

DEPARTMENT NOTE

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**TRANSITION AND SUSTAINABILITY: CHALLENGES AND
OPPORTUNITIES, VISIONS AND REALITIES
PUBLIC ASSEMBLY REPORT CONFETRA 2023**

ABSTRACT

On November 14, 2023, the 2023 Public Assembly of Confetra took place. In his report, President Carlo De Ruvo aimed to provide a synthesis of a complex policy such as the decarbonization of transportation and logistics, while also addressing ordinary policy issues in the sector. He sought to integrate these aspects into a truly challenging and, in many respects, uncertain endeavor that requires a coherent, coordinated, and transparent framework for businesses and the community. On many of the topics discussed, Confetra puts forward proposals and raises alarms, remaining open and available for dialogue and offering its collaboration to identify the most sustainable solutions not only from an environmental perspective but also economically and socially. All of this is done with the awareness that the implementation of such hard-to-implement strategies always involves the participation of business representatives in transportation and logistics, such as Confetra and its Associative System, to realistically assess feasibility, timing, and sustainability.

1. Economic Situation and Prospects

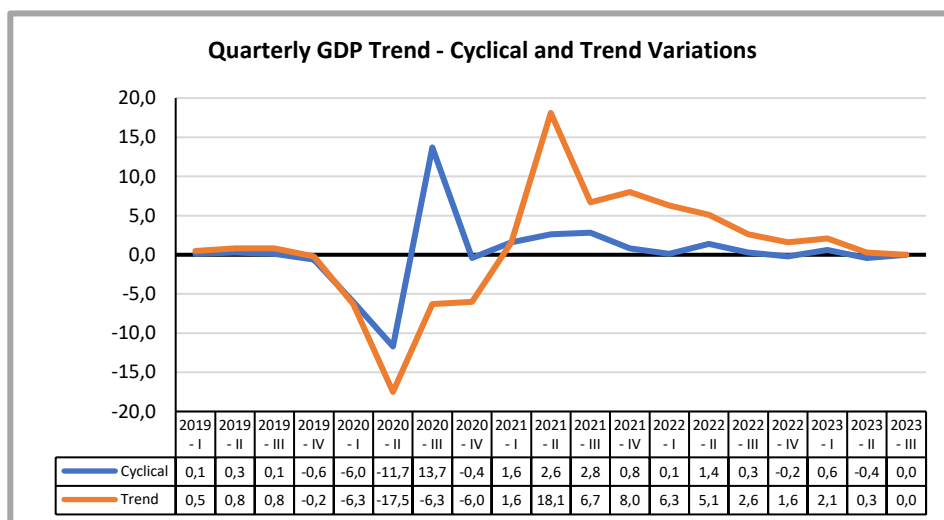
This is an economic, national, and international phase particularly uncertain due to the major technological transitions that production systems are called upon to face. It is also highly exposed to the effects of geopolitical and geoeconomic crises related to war and terrorism, events that no one would want to witness and that continue to generate innocent and defenseless victims, to whom we can only be humanly close without any distinction.

It is necessary to emphasize that war, violence, and oppression are never justifiable. Even if relatively distant from us, these tragedies touch us all and should be condemned unequivocally, hoping that dialogue, the safeguarding and respect of human life, and peace will always prevail.

These dramatic events, following the devastating pandemic, undoubtedly have a significant impact on an economic and social trend showing clear signs of decline and uncertainty. This is also due to the slow pace at which significant and profound technological transformations related to decarbonization and the fight against climate change are taking place.

The latest data provided by national and international economic and statistical institutions undoubtedly incorporate impacts related to the invasion of Ukraine and further turbulence in energy prices generated by the new crisis in the Middle East. However, the economic growth of Italy in 2021 (+8% GDP) and 2022 (+3.7%) was already showing signs of slowdown and tension towards the end of the previous year. This is partly due to the limited availability of fundamental commodities (energy, raw materials, semi-finished products, etc.) and the increase in their prices.

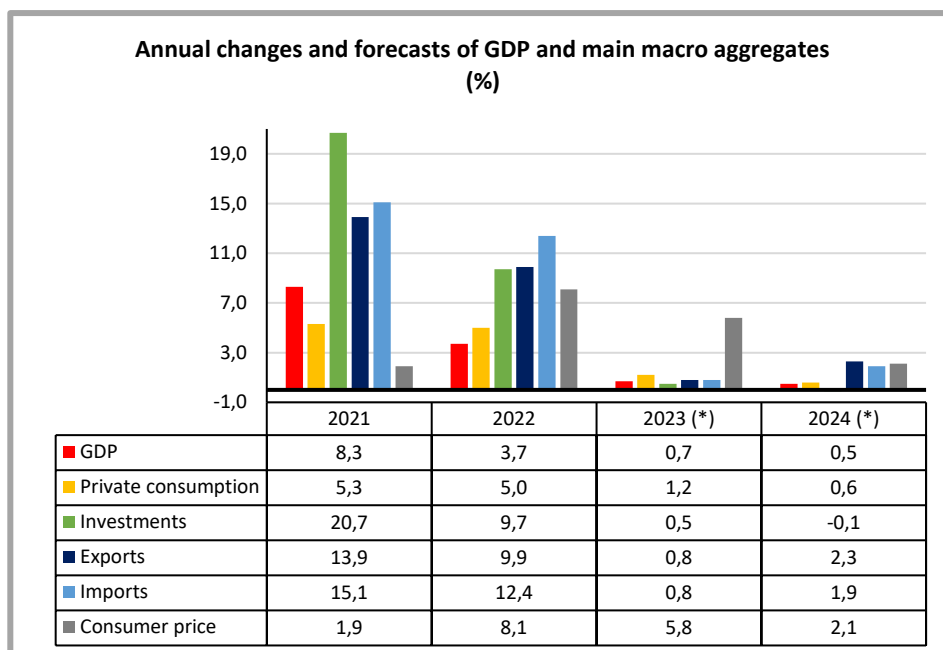
The quarterly variations in GDP began to show an alternation of positive and negative cyclical results and a generally downward trend from the second half of 2022.



Source: Elaborations based on data from ISTAT

The Italian economy, however, has still benefited in 2022 and at least until early 2023 from a positive momentum generated by the strong post-Covid recovery in 2021. However, now and also for the next year, it seems to be returning to the stifling growth levels of the previous decade. The data for the third quarter of this year indicate zero growth, and it is not reassuring at all that Germany has recorded the second consecutive quarter of negative growth, as this result still impacts our economy.

If this trend is confirmed for the fourth quarter as well, 2023 will end for us with a GDP growth of only 0.7%, and the forecasts for the next year speak of a mere 0.5%, practically half of the growth in the Eurozone and Germany.



(*) Forecasts

Source: Elaborations based on data from ISTAT e CSC

However, the trend could change because there are positive signals for 2024 as well, such as the increase in employment and the positive dynamics of the labor market, the recovery of import-export after the expected downturn this year, and a significant reduction in inflation. However, there is also an expected weak dynamic in consumption, investments, and industrial production, partly due to interest rates that could remain high, keeping our economic growth low.

Therefore, the role of public investments becomes increasingly essential, along with the fundamental contribution of the National Recovery and Resilience Plan (PNRR) and other European and national programs.

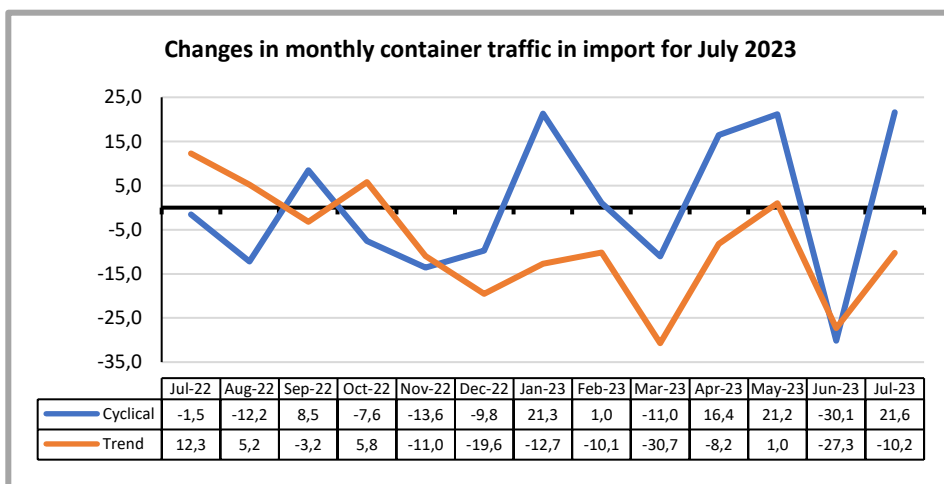
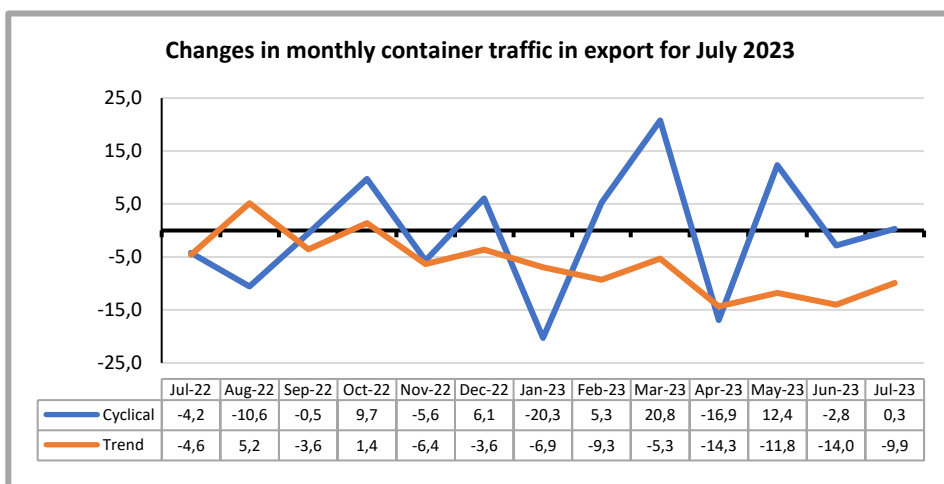
2. Transport Trends and New Geoeconomic Trends

The main driver of transportation and logistics, namely the aggregate demand for consumption, investments, and exchanges, experienced a declining trend in 2023, both domestically and internationally. In 2024, the momentum of domestic demand is expected to remain stagnant but offset by the recovery of foreign demand.

Many agree in highlighting how the current phase of our economy is also due to a significant slowdown in global and European economic growth and international trade, with a direct impact on transportation, starting

from maritime transport, and logistics, also reflecting on other feeder modes such as road and rail transport and related services.

In September 2023, the overall index of spot freight rates for container shipping showed a year-on-year decline of 68.4%, which becomes 81% on the route between Shanghai and Rotterdam and 77% between Shanghai and Genoa. More comprehensively, container movement in our ports in July of this year recorded a year-on-year decrease of 9.9% in exports and 19.6% in imports. The latest data on trade in September reflects this trend, but compared to a trade balance that continues to remain positive.



Source: Elaborations based on data from Seabury

Impacts on freight mobility are also expected from certain phenomena that have been discussed for some time, related to the so-called "deglobalization" post-Covid. This refers to a trend opposite to what has occurred in the last 20 years, where production organization and exchanges were based on lengthy production and consumption supply chains. For Confetra, the increasingly frequent reference to processes such as backshoring, nearshoring, and friendshoring seems overly emphasized, mainly because it is evoked without fully assessing its extent, costs, and risks.

Certainly, globalization is slowing down, also due to the global economic slowdown, but it is not certain that it cannot resume on different bases, driven by ongoing changes in global economic hierarchies, such as the emerging Indian economy. However, value chains and production and trade orientations are changing, albeit slowly, pushing towards regionalization of supplies and markets, where the Mediterranean could regain new centrality. In this context, transport and logistics are called upon to reorganize their services.

Although these are long processes and not without uncertainties, our infrastructure and logistics policy, as well as our businesses, should carefully evaluate the opportunities that may emerge, especially if accompanied by tools such as Special Economic Zones (SEZ) and Strategic Logistic Zones (ZLS). The original combination of industry, transport, and logistics should not be lost, particularly following the recent reform on the so-called "Single Special Economic Zone (SEZ)."

In this economic phase where the transport and logistics sector is facing uncertain prospects, Confetra and its businesses remain convinced that it can represent an opportunity for competitive recovery. This is contingent on the country being able to positively engage in the dynamics of geoeconomic change and technological transition. This involves implementing all the reforms and simplifications that would enable a restart of the sector and the country in general, making the most effective use of the considerable resources available, starting with the funds from the National Recovery and Resilience Plan (PNRR) and Cohesion, the Complementary Plan, and more recently, RepowerEU.

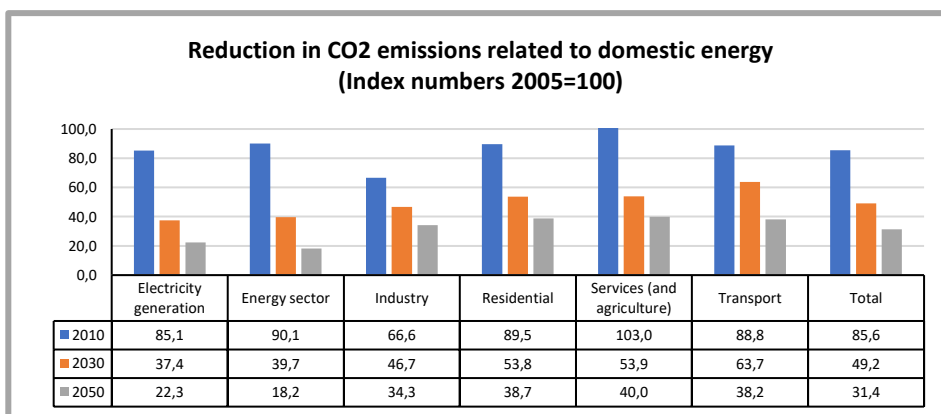
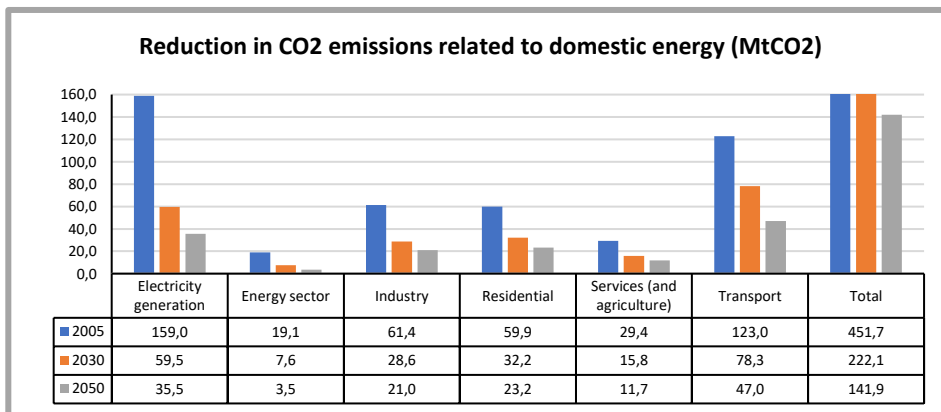
The reference is to substantial public investments in the railway sector, the digitization of the logistics system, the electrification of ports, and all those public and private interventions aimed at energy and environmental transition. This includes the production and distribution of zero or low-emission sources and investments by businesses for the replacement of transport and handling means and the digitization of their production processes.

3. Decarbonization targets and companies

It is precisely in the current context that concerns arise in the productive world, particularly among transport and logistics companies, facing the complexity and difficulty of planning their investments for the energy transition. This is in light of decarbonization targets and timelines set by policies that are not only challenging but, in some aspects, not yet entirely clear and consistent with each other, in terms of realistic feasibility and impacts not only on environmental sustainability but especially on economic and social sustainability.

The European Green Deal has indeed gained significant momentum with the Fit for 55 initiative, setting the goal of climate neutrality by 2050 with a reduction of net greenhouse gas emissions by 90%, and a cut of at least 55% by 2030 compared to 1990 levels. For Italy, the Effort Sharing Regulation (ESR) sets a target of a 43.7% reduction in emissions by 2030 compared to 2005, which is particularly substantial and not without doubts about its actual and timely implementation.

The implications of these global targets in terms of implementation are subject to numerous assessments and analyses, which do not always align clearly with the scenarios outlined by the EU (REF 2020). Translating this goal into concrete terms of decarbonization, according to these scenarios, the reduction in total CO₂ emissions in our country should be 50.8% by 2030 and 68.6% by 2050 compared to 2005 data, from 451.7 million tons of CO₂ in 2005 to 222.1 million in 2030 and 141.9 million in 2050.

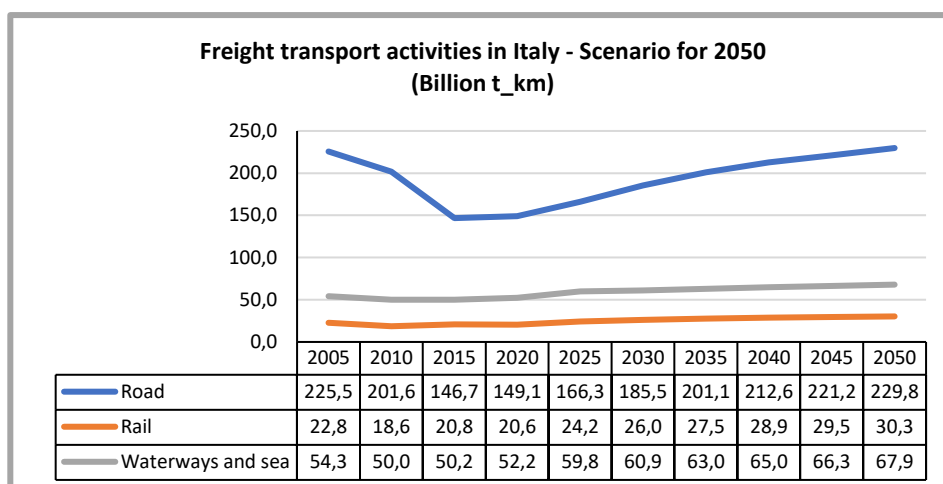


Source: Elaborations based on data from REF 2020 – Energy Transport GHG Scenario

For the transport sector as a whole, the reduction should be 36.8% by 2030 and 61.8% by 2050. In quantitative terms, this translates to a decrease from 123 million tons of CO₂ to 78.3 million by 2030 and 47 million by 2050.

This significant shift in perspective was deemed necessary given that forecasts, based on scenarios developed at the EU level, tended to indicate an increase in emissions. Specifically, for freight transport,

excluding air and international maritime transport, the forecast would result in surpassing the activity levels of 2005 by 2050 (from 302.6 to 328 billion tonne-kilometers).



Note: Excluding international air and sea transport

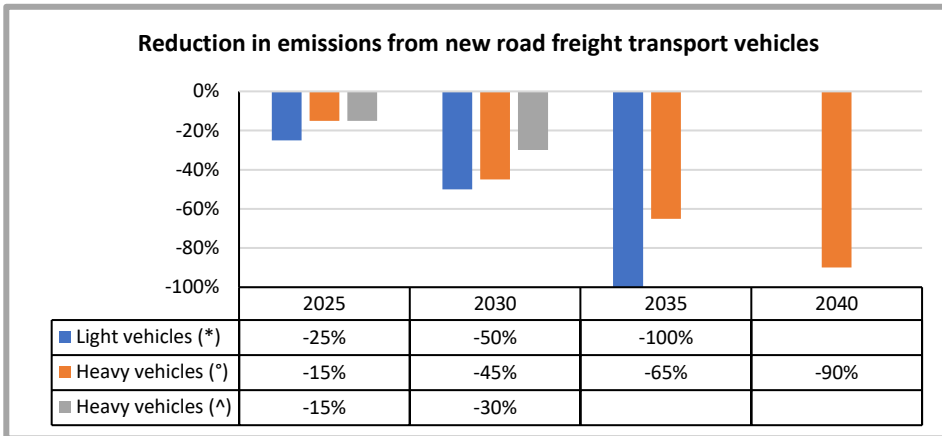
Source: Elaborations based on data from REF 2020 – Energy Transport GHG Scenario

The European decarbonization path for transportation, translated at the national level, depends on the implementation of sectoral policies that are still being defined. All these policies are particularly challenging, with some cases having very tight timeframes. These policies are expected to result in the reduction of greenhouse gas emissions, both directly and indirectly. However, it is challenging to identify the connections and convergences among them, lacking impact assessments, scientific reliability, and a concrete realization of the so-called "technological neutrality" often referred to by businesses and policymakers.

4. The Road Freight Transport

Starting from the road freight transport, the mode attributed to the highest share of final energy consumption in transportation, recent European decisions envision that, compared to 2021, emissions from new light vehicles sold from 2035 should be zero, with intermediate reductions of 25% by 2025 and 50% by 2030.

For new heavy vehicles, the currently discussed EU regulations propose, compared to 2019 levels, a reduction in emissions of 45% between 2030 and 2034, 65% between 2035 and 2039, and 90% from 2040. This represents a much more impactful reduction compared to the previous targets for 2030.



LEGEND

(*) Compared to 2021.

(°) Compared to 2019. Regulation still under examination.

(^) Targets for heavy-duty vehicles before 2020.

Source: Elaborations based on data from European Commission

The European decarbonization path for transportation, starting from the road freight transport – the mode responsible for the highest share of final energy consumption in transportation – involves recent European decisions. These decisions state that, compared to 2021, emissions from new light vehicles sold from 2035 should be zero, with intermediate reductions of 25% by 2025 and 50% by 2030.

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These targets are expected to be achieved with electric or hydrogen vehicles, or in the case of internal combustion engines, only through the use of carbon-neutral or low-emission renewable fuels, such as HVO (Hydrotreated Vegetable Oil), a diesel fuel made entirely from renewable raw materials. The planning of electric charging facilities and the production and supply of zero-emission alternative fuels will be crucial.

A few days ago, the European Parliament approved Regulation Euro 7, which should accompany the transition to achieving emissions targets for new vehicles, expressing a more restrictive position than that expressed by the Council. However, to meet the needs of manufacturers, the European Parliament has requested a delay in the entry into force, set from the publication of all delegated acts, by at least two years for cars and light vehicles (July 1, 2030) and at least four years for heavy vehicles (July 1, 2031). For the same reason, the Council has proposed that the Commission adopt delegated acts for heavy vehicles within 48 months and that the regulation enter into force 60 months later.

Interinstitutional negotiations are thus opening with distant positions between the European Parliament and national governments,

considering that the European Association of Automotive Manufacturers (ACEA) believes that this regulation will inevitably lead to an increase in the unit prices of heavy vehicles by up to 2,700 euros. However, the effectiveness of this regulation compared to its overlap with the targets and timelines for zero-emission new vehicles is not well understood.

Regarding the issue of alternative fuel infrastructure, proposals developed by the European Commission have been defined on the TEN-T (Trans-European Transport Network) to ensure full coverage of the EU territory and accessibility in all regions. Public electric charging infrastructure for light road vehicles should have a maximum distance of 60 km in each direction of travel on the central (core) network by the end of 2025 and on the comprehensive network by the end of 2030.

On the TEN-T networks, electric charging infrastructure for heavy vehicles should also have a maximum distance of 60 km on the central network and 100 km on the comprehensive network. In addition, the presence of charging stations should be ensured in all urban nodes of the network.

Hydrogen refueling stations should also be accessible to the public and located at a maximum distance of 150 km along the central and comprehensive TEN-T networks, with at least one station available in every urban node of the same network. Finally, a minimum coverage of LNG (Liquefied Natural Gas) refueling points for heavy vehicles should be available at least on the central TEN-T network.

The alternative fueling of road transport, planned at the European level for 2030, will require a significant implementation effort, particularly challenging for our country, to ensure adequate coverage of the entire national territory, both urban and extra-urban. This is not only about creating the necessary charging and refueling infrastructure but also building an entire operational, industrial, and logistical supply chain.

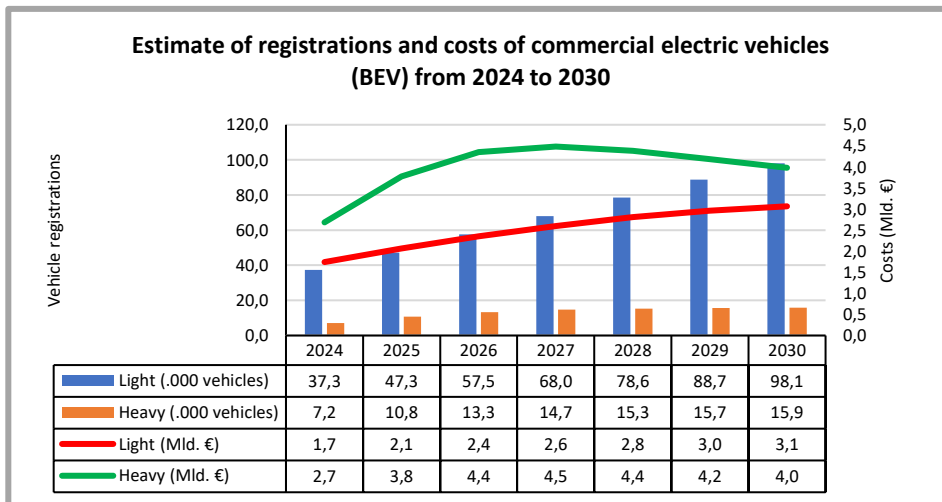
The decarbonization process and EU targets for 2030 require substantial investments in new renewable capacity, infrastructure, energy storage, smart energy solutions, and end-use technologies that ensure a secure energy transition within the expected timeframe.

The National Recovery and Resilience Plan (PNRR) itself does not only foresee investments for energy transition and sustainable mobility and the development of low-carbon transport and distribution infrastructure for a total of 56.7 billion euros. It also includes funding for the development of "technological and industrial leadership in key transition sectors."

However, the decarbonization of the entire freight road transport and related logistics activities, involving around 100,000 companies and over 4 million vehicles, seems rather challenging to achieve within the timelines and dimensions set by EU policies. In such terms, the economic

sustainability for road transport companies appears especially not adequately evaluated.

According to some of our assessments on possible scenarios for the registration of new electrified freight vehicles (MOTUS E), in the period 2024-2030, just under half a million light vehicles and just under one hundred thousand heavy vehicles are expected to come into operation. Compared to these forecasts, the total investment, in terms of TCO (Total Cost of Ownership per vehicle type), could be estimated at over 45 billion euros. Assuming an average impact of 20-25% of incentives on the purchase and operation costs of vehicles, about 9-11 billion euros of public support, direct and indirect, would be needed to achieve just a first plausible step towards decarbonizing commercial vehicles by 2030. These are significant figures that require careful consideration of their impact on corporate and public budgets.



Source: Elaborations based on data from Motus-E

According to Confetra, reducing and eventually eliminating emissions from vehicles used for road freight transport in the long term would certainly be an extraordinary achievement. However, it is achievable only if the efficiency of the technologies used improves simultaneously, and the availability of low and zero-emission energy sources, such as electricity from renewable sources, biofuels, and hydrogen, increases. This requires a dedicated industrial policy and a suitable and reliable energy supply infrastructure.

Confetra believes that road transport companies will not only be required to make a significant financial effort but also undergo a profound logistical and operational reorganization. This reorganization should be consistent with the technological change of vehicles, including their management and maintenance, and the qualification of related personnel, which is already in short supply.

It should also be considered that despite the ambitious decarbonization targets for road freight transport, there will be a significant transition period of phasing out fossil fuels for a long time. This is associated with the inclusion of road transport in the Emission Trading System (ETS) from 2025, particularly regarding the use of fossil fuels. The implications of this inclusion are still to be verified in terms of application and economics. It is inevitable that there will be an increase in road transport prices, which would become unsustainable if exclusively borne by operators.

5. Maritime Transport and Ports

Maritime transport moves over 80% of global trade volume and produces nearly 3% of global greenhouse gas emissions, which have increased by 20% in the last decade. The global fleet still relies on conventional fuels for almost 99%, showing a progressive aging of the fleet; the Italian fleet has an average age between 30 and 40 years, compared to the 22 years of the global commercial fleet. In orders for new ships, the share of those designed to use alternative fuels is growing, but very gradually because the replacement of traditional fuels is still very uncertain in terms of the choice of reference fuel, also in terms of the necessary mix between navigation and port stationing and maneuvering.

The issue of sustainability and decarbonization of maritime-port activities is therefore one of the most relevant and will remain so for the coming decades. Maritime navigation is undoubtedly one of the sectors where emission reduction is strongly hard to abate.

Nevertheless, the strategy adopted by the European Commission and agreed with the International Maritime Organization (IMO) has significantly accelerated the decarbonization path, moving from a 50% reduction to net zero emissions by 2050 compared to 2008 levels. The path involves a reduction in emissions of 20-30% by 2030 and 70-80% by 2040, with the goal of adopting at least 5-10% of zero or near-zero emission technologies, fuels, and energy sources by 2030.

Regarding the fleet, it should be considered that investments in the maritime sector are based on large capital immobilizations, with a lifecycle of at least 25-30 years. In essence, following the EU decarbonization predictions, by 2050, current navigation means should be almost completely replaced or adapted to new energy and propulsion standards.

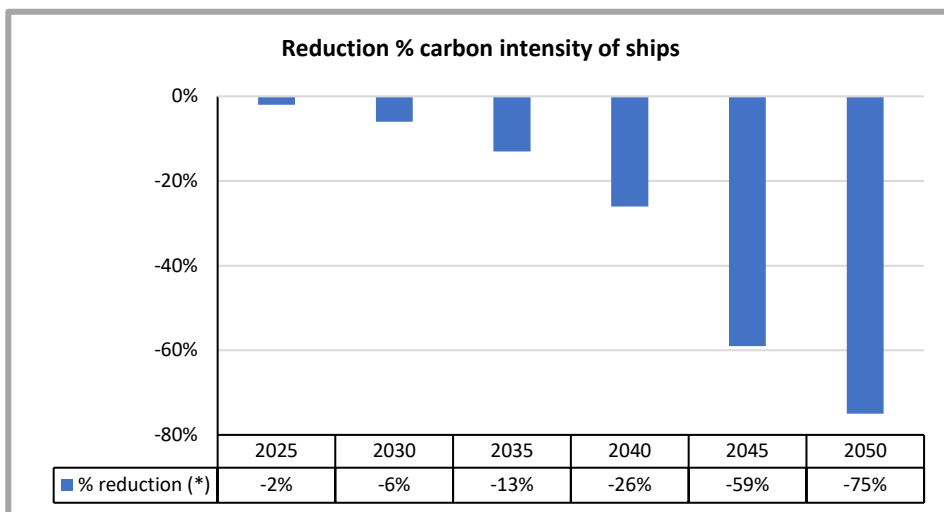
According to recent estimates (UNCTAD), substantial investments ranging from \$8-28 billion per year are needed by 2050 to decarbonize ships and between \$28-90 billion per year to develop the production and distribution of zero-carbon emission fuels. According to other estimates (DREWRY), costs to achieve decarbonization of maritime transport could require total investments of over \$3 trillion in the next 25 years, with a significant portion dedicated to adapting and replacing existing fleets.

The decarbonization strategy followed by the EU also includes the application of the Emission Trading System (ETS) to shipping from 2024, a mechanism that requires shipping companies to surrender or purchase emission allowances per ton of CO₂ equivalent if the allowances received are not sufficient to cover those produced by their ships. The surplus emissions should then be paid for by purchasing allowances on the CO₂ market.

The upcoming application of ETS mechanisms is already showing early signs in the orientations of the main global container shipping companies regarding the possible transfer of their ships' calls from European ports to non-European ports (especially in North Africa), i.e., to transshipment hubs close (over 300 nautical miles) to the EU territory, to reduce the economic cost of ETS application by 50% from 2024.

The additional costs that would result for intra-EU shipping, however, do not only concern container transshipment but the entire sector, with immediate impacts on the increase in transportation prices (carbon surcharge) and potential displacements of maritime cabotage transport compared to road transport, undermining the effectiveness of modal transfer incentives (such as the recently extended Mare-bonus) in segments like RO-RO and RO-PAX. Some estimates already quantify an additional cost of 275 million euros per year for the Italian fleet. The overall strategy for decarbonizing maritime transport is therefore very challenging with significant economic impacts on navigation and port competitiveness.

Indeed, even on ports, the decarbonization strategy will have significant impacts on terminals and maritime and port operators. Firstly, shipping companies are obligated to reduce the carbon intensity of the energy used in ships with a gross tonnage of over 5,000 tons calling at European ports, regardless of their nationality. This means greenhouse gas emissions measured over the entire lifecycle of the fuel used (Well-to-Wake approach), the energy used on board compared to 2020, ranging from -2% in 2025 to -6% from 2030, with increasing reduction targets every five years, reaching -75% by 2050. Regarding emissions in ports, carbon intensity is expected to be zeroed by 2030.



(*) Reduction compared to 2020 data. In ports: -100% by 2030

Source: Elaborations based on data from European Commission

For our ports, the energy and environmental transition focuses on the electrification of docks (cold ironing), for which significant public resources have been allocated across all Port System Authorities (ADSPs), aiming to cover at least 90% of the electricity demand for ships in ports by 2030.

In this context, however, the issue of electrical supply for dock power and the related prices for users needs to be addressed. On the business side, shipping companies and terminal operators are instead required to invest in technological upgrades for naval and handling equipment, for which incentives are still insufficient.

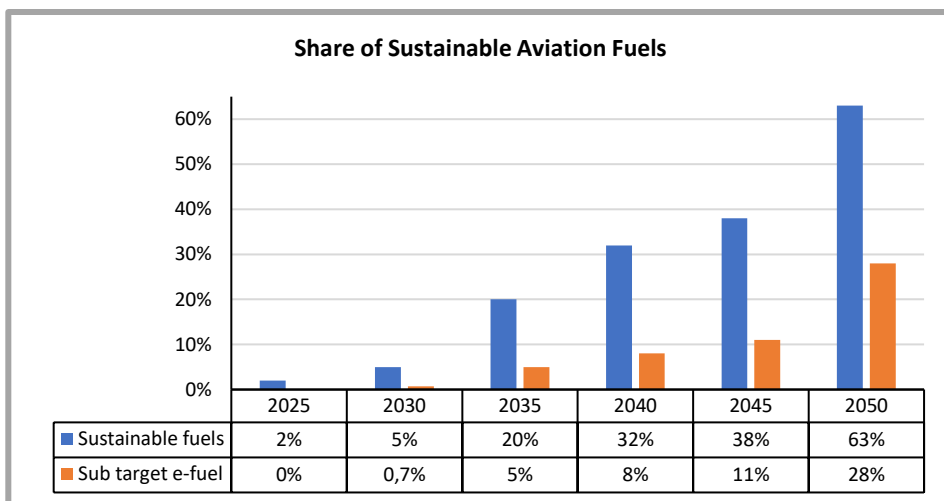
Another area of intervention concerns energy efficiency and the use of renewable sources in port facilities (green ports). It would be desirable to promote the creation of "energy communities" in this regard, with the participation of port operators, and support the investment for the adaptation of companies.

Finally, another aspect of sustainability and decarbonization in navigation and ports involves the storage and distribution of alternative and synthetic fuels (LNG, methanol, ammonia, hydrogen, etc.), aimed at supporting the long process of energy transition in navigation. For now, European policy only foresees ensuring an adequate number of LNG refueling points in ports of the TEN-T network.

6. Air transport

Air transport is responsible for approximately 2.5% of global CO₂ emissions and 3.8% of emissions in the EU, with a 120% increase over the last 20 years. It is also considered a hard-to-abate sector, challenging to decarbonize due to technological limitations in using alternative fuels.

Most of the decarbonization efforts are anticipated post-2030, with emissions expected to decrease by 61% between 2030 and 2050. Among alternative energy sources, hydrogen is projected beyond 2030, with production becoming available in the following decade, while electrification is currently deemed technically impractical. For these reasons, European decarbonization targets for air transport focus on Sustainable Aviation Fuel (SAF). Fuel suppliers are mandated to blend a minimum percentage, starting at 2% by volume in 2025, increasing to 63% by 2050, with a specific sub-target for e-fuels (or e-kerosene, known as synthetic kerosene) beginning in 2030. Only advanced biofuels and e-fuels are permitted as SAF, excluding those derived from food crops. Production and availability of these fuels pose a significant challenge, with the National Recovery and Resilience Plan (PNRR) excluding interventions due to the liberalized nature of air transport in Europe, despite the sector being assigned ambitious and technologically challenging decarbonization targets.



Source: Elaborations based on data from European Commission

Targets for decarbonization have also been set for airports. By 2025, the supply of electrical power for aircraft at rest in the central and comprehensive networks of the TEN-T must be ensured. Airlines operating departing flights from the EU will be obliged to source at least 90% of the fuel needed annually for these routes from European airports. These airports, in turn, will be required to provide the necessary infrastructure for the delivery, storage, and refueling of Sustainable Aviation Fuels (SAF).

Estimates of the costs of the energy transition in air transport vary significantly. According to the European Parliament, substantial investments of €378 billion would be needed between 2020 and 2050 to replace aircraft and introduce new technologies. Research and development (R&D) activities are expected to cost €50 billion, while the total costs of decarbonizing fuels are estimated to be around €33 billion. More substantial costs are projected by other institutions (Amsterdam

Economics Royal Netherlands Aerospace Centre), suggesting that a total of at least €820 billion in additional investments would be required between 2018 and 2050. Expenditure on the decarbonization of European air transport would thus increase from €31 billion in 2018 to €98 billion in 2050, with an average annual cost of around €59 billion, including €25.6 billion in additional costs for the use of alternative fuels. Additionally, European airlines will have to pay an extra €136 billion for the Emission Trading System (ETS) mechanism by 2050.

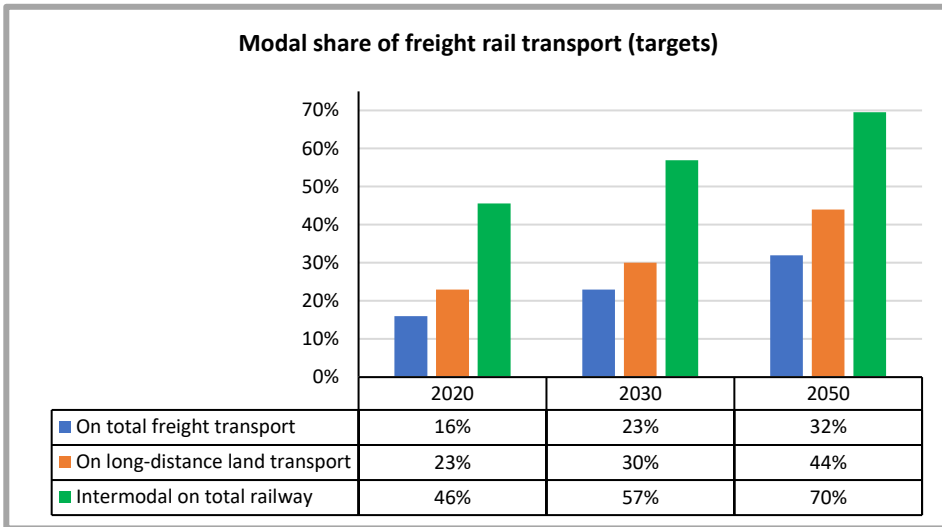
Are these costs sustainable for air transport? What impacts will they have on airlines and airports? The targets of the Green Deal seem to have a potentially negative impact not only on service costs but also indirectly on all sectors supported by air transport, such as tourism.

7. Rail and Intermodal Transport

Even though the railway mode is classified as the one most aligned with decarbonization targets, it also has set targets, albeit modest, for emission reduction. These include the use of renewable sources to power the networks, experimentation with hydrogen, and the adoption of electric charging-based traction and handling systems. However, the most significant commitment pertains to infrastructure and technological adjustments to facilitate the effective shift of goods from road to rail.

The sustainability strategy scenarios derived from the EU and OECD for the overall freight transport aim to significantly increase the share of the railway mode from 16% in 2020 to 23% in 2030, reaching 32% by 2050. For long-distance rail transport (over 300 km) as an alternative to road transport, the target is to increase the share of land transport from 23% in 2020 to 30% in 2030 and 44% in 2050, while reducing the modal share of road transport from the current 60% to 41%. The average distance of freight transport by rail is also expected to increase from the current 307 km to 355 km. Finally, within the railway modal share, EU scenarios aim to increase the share of intermodal transport on railways from 46% in 2020 to 57% in 2030 and 70% in 2050.

These EU-defined targets pose a more challenging task for our freight rail transport compared to other European partners. In 2022, the market share of rail freight in Italy is 12%, compared to a EU average of 17%, 18% in Germany, and 30% in Austria.



Source: Elaborations based on data from Internationale pour le transport combiné (UITC)

The European intermodal transfer project is based on increasing traffic capacity and adapting infrastructure and technology to the standards of the central and global TEN-T networks, requiring substantial investments estimated by UITP at 537 billion euros until 2050. This includes 490 billion euros for railway infrastructure (upgrades, electrification, double tracks, technologies, adjustments to TEN-T standards on freight train dimensions and weights) and 47 billion euros for the modernization of existing terminals, construction of new terminals, and last-mile connection interventions to ports and interports.

In our country, the 2022-2026 MIT-RFI Program Contract presents a significant portfolio of planned investments of almost 120 billion euros, with a substantial portion financed by the PNRR and the Complementary Plan. Regarding rail freight, total investments of approximately 3 billion euros are announced for the next decade to bring the share of rail freight transport closer to the EU 2030 target (23%). However, the implementation times appear too long, and there are missing elements to assess progress towards targets for long-distance (30%) and combined (57%) transport.

Rail freight transport is also called upon to play a significant role in decarbonization, relying on substantial investments in capacity, modernization, and managerial and operational innovations. Fundamental protagonists in this endeavor are railway companies, which will need to support significant investments in rolling stock and technologies. On these last two aspects, EU-level estimates quantify investment needs for intermodal wagons up to 2050 at 12 billion euros and for digitization and infrastructure for alternative fuels in terminals at 15.5 billion euros.

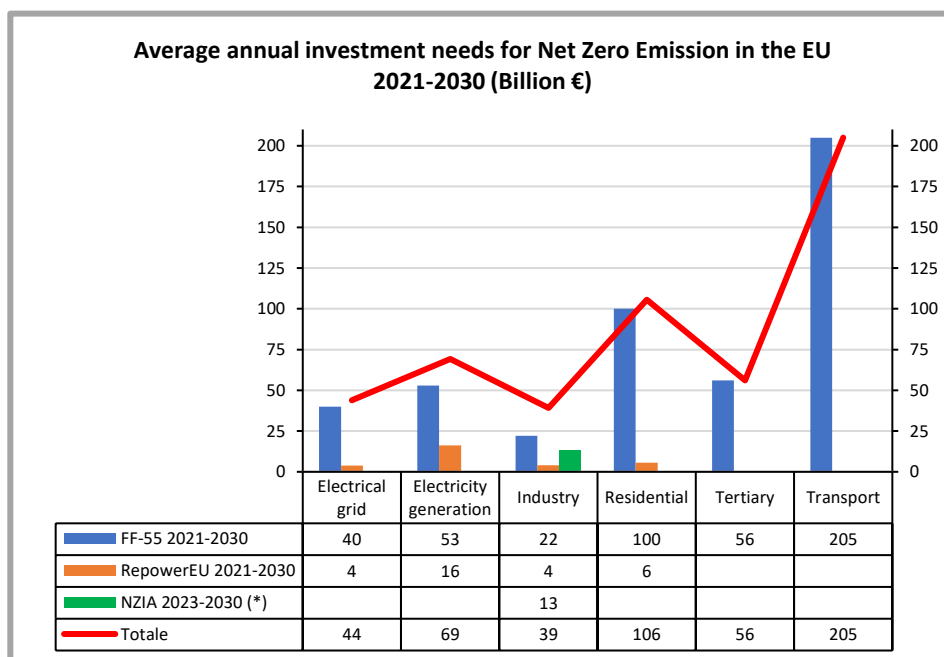
According to Confetra, without a dedicated and coordinated policy for transferring freight transport to rail, with adequate financing tools for

companies, there is a risk of accumulating significant delays in achieving targets by 2030 and 2050. This could lead to a return to road transport, especially for long distances, a phenomenon that could be exacerbated in the short to medium term by the impact of numerous ongoing infrastructure projects.

8. Investment needs and overall strategy

If at the sectoral level the framework of targets and investments for the decarbonization of transportation appears fragmented, there are also concerns at the overall European and national levels, although estimates of necessary investments provide elements for reflection.

At the EU level, with the presentation of the proposal for the Net Zero Industrial Act (NZIA) in March of last year, an exercise in quantifying the average annual additional investment needs in transportation was carried out – derived from the Fit for 55 strategy, with the addition of RepowerEU and, precisely, the NZIA proposal. According to this exercise, at the EU level, an additional 205 billion euros per year would be needed between 2021 and 2030, considering only investments in vehicles and charging and refueling infrastructure, excluding those in road or rail infrastructure.

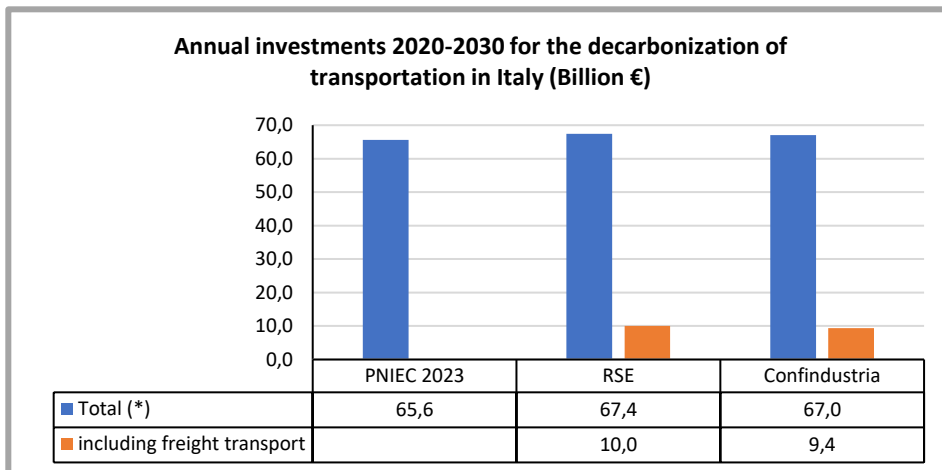


(*) Net-Zero Industry Act [COM(2023) 161]

Source: Elaborations based on data from Europea Commission

At the national level, the estimates reported in the proposal for the National Energy and Climate Plan (PNIEC), presented in June of this year and currently under consultation, quantify the average annual investment for the overall decarbonization of transportation in the period 2023-2030 at 65.6 billion euros. This figure specifically refers to electric-powered vehicles and those from renewable energy sources, without

distinguishing between commercial and public-private mobility. This amount is not far from other estimates (RSE-Ricerca sul Sistema Energetico and Confindustria), which quantify investments at around an additional 67 billion euros in the period 2020-2030, according to the Fit for 55 strategy. In the latter case, a specific portion is also outlined for road freight transport, whose decarbonization process would require an investment of around 10 billion euros in the period 2020-2030.



(*) Including traditional fuel-powered cars and motorcycles

Source: Elaborations based on data from PNIEC 2023, RSE e Confindustria

All the estimates considered here, as well as those previously outlined regarding investment costs at the EU level across various transportation and logistics sectors, do not align entirely. Most importantly, they provide very limited insight into assessing the investment needs for businesses, leaving them in uncertainty or, if you will, with a well-founded fear of significant economic repercussions on their budgets.

Another not insignificant aspect of investment estimates that should be addressed is that some evaluation exercises present "reassuring" analyses of positive impacts on GDP, value added, and employment without highlighting the connected negative impacts. Additionally, they fail to consider that the additional costs of decarbonization would necessarily fall on the prices of transport and logistics services, impacting consumption and investments, and therefore, economic growth.

Regarding the topic of energy transition, it is absolutely essential to conduct more significant investigations, especially into the freight transport and logistics activity. This sector is undoubtedly responsible for a collectively significant share of greenhouse gas emissions but is also the one that requires a substantial technical and economic commitment in the decarbonization strategy.

Another critical aspect emerging from the previous review of technological and financial commitments within the overall European strategy for transport decarbonization and its modal variations is the lack of a comprehensive framework of coherence and coordination among

targets, actions, timelines, and resources, both public and private, required.

The entire process of initiating and developing the European initiative on energy and climate has taken place with a very sectoral and poorly integrated approach, with an exclusively macro vision and without a reliable verification of micro-level impacts on the involved economic operators. Nevertheless, there have been abrupt accelerations in decarbonization paths and related targets, with little attention to contextual conditions and technological adaptation, i.e., production capacity and research, development, and innovation needs. All these aspects have significant repercussions on investments, professional and occupational qualification, and organizational logics of companies, particularly in the transport and logistics sectors, whose technical and operational specificities are highly diversified.

9. Coordination of Major Technological Drivers and the Need for Concrete Experimentation: Urban Freight Distribution

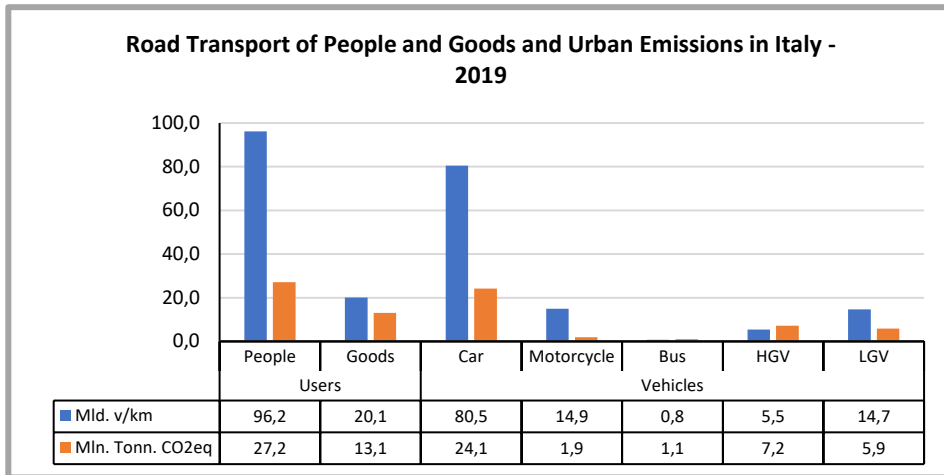
The primary need expressed by transport and logistics companies is, therefore, to have a clear and coordinated framework for the overall and specific decarbonization trajectories of individual modes and the related activities of goods management and movement. This framework should be complemented by policies and tools supporting the energy and technological transition of businesses and a system governance in which all responsibilities, both public and private, coordinate according to realistically manageable timelines and modalities.

Within a system for implementing and monitoring the major technological drivers involved in the complex process of decarbonizing transportation and logistics, which also requires widespread digitization of systems and businesses, there should be privileged areas for experimentation. In these areas, technologies and regulations capable of reducing and eliminating particularly critical emission situations can be deployed and tested in the short to medium term.

For Confetra, this area of more rapid initiation of the goods mobility decarbonization process can be identified in urban distribution, specifically in metropolitan cities and regional and provincial capitals of medium to large size, where there is a higher concentration of pollutants than in other territories, especially in port cities.

According to OECD data, urban freight transport represents "only" 3% of total freight transport in Europe but is responsible for 20% of its emissions and 8.4% of the total emissions from people and freight transport. Additionally, vehicles involved in urban distribution constitute 15% of traffic in cities. Comparing to 2022 data, OECD estimates a 20.3% increase in emissions from light and heavy vehicles in urban areas by 2050 at the EU level.

At the national level, concerning overall road transport, according to data from the Transport Cluster, urban transport constitutes 23.1% of transport (in vehicle/km) and 30.7% of greenhouse gas emissions (in million tons of CO₂eq). Focusing solely on urban transport, the freight transport segment represents 17.3% of transport and 32.5% of emissions.



Source: Elaborations based on data from Cluster Trasporti - 2022 - *Path to 2030*

There are strong reasons to focus attention on decarbonizing urban transport, especially for goods. Favorable contextual conditions exist as well. Firstly, major cities are gradually replacing road public transport vehicles with electric and low-to-zero emission fuel-powered ones. Secondly, urban areas are witnessing concentrated efforts to install public electric charging infrastructure and encourage private charging. Thirdly, there is an increasing trend in home deliveries, leading to a rise in the need to regulate related flows and emissions. Fourthly, the urban spread of digitization and 5G in traffic management facilitates the application of new logistics management technologies (connected and autonomous vehicles, internet of things, smart logistics, big data, artificial intelligence, and blockchain), among others.

Considering the mandatory introduction of new light freight transport vehicles and private zero-emission vehicles to the market in the near future (by 2030), initiating a national project for decarbonizing freight transport in urban centers would be highly consistent and effective for an overall reduction strategy of greenhouse gas emissions. However, it is crucial to extend current sustainable mobility planning to the transport and logistics of goods, involving businesses and their representatives in a progressive shared path.

The project cannot be resolved merely by expanding restricted traffic zones or increasing access fees. It also requires technological transformation and a coherent framework compatible with upstream goods flows and downstream distribution. Fundamental principles need to be established upon which to build a dedicated policy and reduce

regulatory disparities (technical criteria, pricing, access times for loading and unloading) for goods mobility in urban centers.

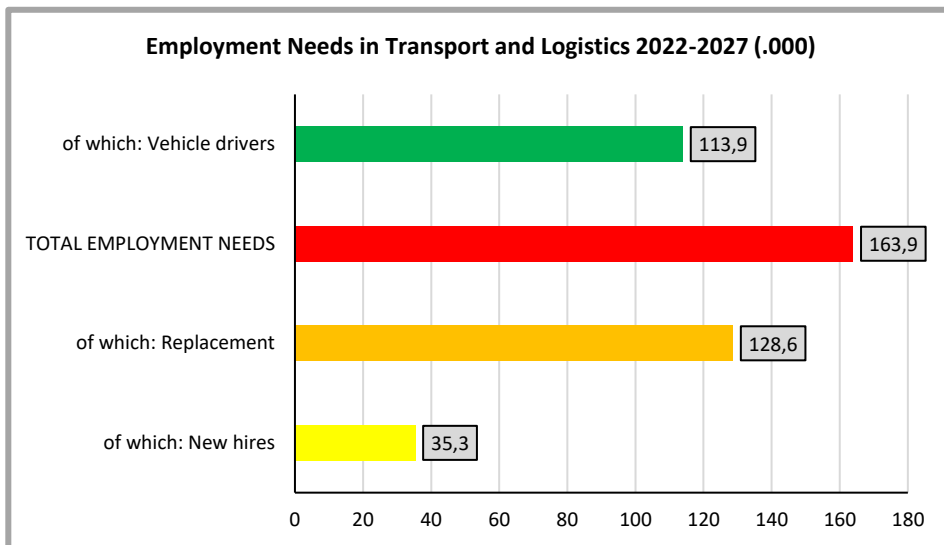
10. Not only decarbonization of transport: current policy priorities

If decarbonization will inevitably shape the activities of transport and logistics in the coming years, in the short, medium, and long term, there are nevertheless structural and everyday policy issues on which a representation like that of Confetra is engaging with institutions and stakeholders at the national and European levels. On some priorities outlined below, which Confetra and its Associative System are advancing in various forums and which significantly impact the efficiency of our companies and, ultimately, the country's economy, responses or at least the opening of further reflection would be appreciated.

Regarding the labor market, Confetra, along with other employers' and trade union representatives, is about to start the renewal of the National Collective Labor Agreement (CCNL) for Logistics, Transport, and Shipping, which for years has shown unanimous regulatory convergence on various issues. Even this time, despite all the difficulties arising from a certainly unfavorable economic situation, the parties will be able to develop a sustainable renewal in the interest of companies and workers.

On labor costs, Confetra insists on the introduction of contribution reductions for new hires throughout the national territory in favor of companies that safeguard employment and on the tax exemption of the increases provided by future national contract renewals.

On training, a particularly important issue for companies in the sector due to staff shortages and the need for updating to new technologies and organizational modules, it is deemed necessary to plan a structural intervention on the school and university system by introducing dedicated training courses on the functions and professional specializations of logistics, transport, and shipping, from vocational schools to technical institutes and basic and specialized university courses. All sectors of the industry suffer from a significant imbalance between labor supply and demand, which companies and Confetra associations seek to address with specific but often limited and occasional initiatives.



Source: Elaborations based on data from Excelsior-Unioncamere

To meet the employment needs of companies, it is also necessary to act on the cultural and communication level: professions in the sector are often perceived as low-skilled, with little technological content, excessive working hours, and inadequate compensation. This is not the case! For many years, wage employment has been regulated by an avant-garde National Collective Labor Agreement (CCNL), providing significant protections, guarantees, and benefits, thanks to an advanced system of bipartite negotiation.

Equally important for professional growth and increased competitiveness of companies and workers in the sector is the role of joint interprofessional funds for training, whose functionality must be safeguarded to adapt existing skills to new organizational and business needs.

Another priority for Confetra is maximum transparency in warehouse contracts, through measures that complement the regulatory framework already defined by the CCNL. In particular, it is necessary to reestablish the Table of Legality at the Ministry of Enterprises and Made in Italy, with the participation of all relevant ministries, to develop measures aimed at preventing and sanctioning irregularities in the sector.

One of the crucial tools to promote legality is the introduction of reverse charge in logistics contracts, meaning the shift of the VAT payment burden to the client, often evaded by suppliers along with tax and contribution obligations. It would be an essential tool for regularization and countering the potential penetration of organized crime; for this reason, it would be necessary for the Ministry of Economy and Finance (MEF) to submit a specific request for a derogation, even temporary, from the EU VAT regulations for the introduction of reverse charge in logistics contracts.

Finally, on the legal minimum wage, on which the National Council for Economics and Labor (CNEL), of which Confetra is a part, recently expressed its opinion, the centrality of collective bargaining is reiterated in line with the confederation's history and legal culture, but there is also support for targeted and specific experimental applications. Obviously, the "pirate" contract system must be fought, considering only contracts that are truly representative, among which the National Collective Labor Agreement for Logistics, Transport, and Shipping must be included, as it is signed by all major employer and trade union confederations.

11. Institutional Reforms: Differentiated Autonomy and Port Governance

Since the beginning of this legislative term, two reforms that particularly involve transportation and logistics have been placed on the political agenda: differentiated autonomy and port governance.

The legislation on differentiated autonomy, currently under parliamentary examination, raises strong concerns among transportation and logistics companies. This is because it includes, among the possible areas for the transfer of powers to regions, infrastructure, ports, and airports. The issue is highly delicate because the efficiency of a transportation and logistics system is based on network logics, from the local to regional, national, and European scales, even from a global perspective. The risk of fragmentation of the system and investment and regulatory policies must be absolutely avoided, also for reasons of equality in basic structural and competitive conditions. At the same time, it should not penalize the competitive capacities of the territories. It is an extremely challenging exercise but must be resolved.

Regarding the reform of port governance, a topic closely related to the previous one and presented in contradictory terms with it, we would like to emphasize that it is a complex matter. It does not only concern the Port System Authorities (ADSP) but also involves fundamental functions for the competitiveness and efficiency of maritime transport and goods handling.

Firstly, revisiting our port offering requires at least an exercise of strategic vision on the geo-economic and competitive positioning of the productive system and port operations in our country. Therefore, before imagining further mergers between port systems, which were already laboriously achieved by the previous reform and not entirely resolved, it would be appropriate to strengthen the central government's governance capacity. This could be done by modifying the role and functions of bodies already provided for, without referring to foreign models of dubious applicability. Hypotheses of privatization, even partial, of the ADSP also seem implausible, as they would end up distorting or canceling their public function of regulation, planning, and security management.

The reform of port governance should fully include the theme of digitization of the logistics chain and bureaucratic simplification, coordination, and rationalization of the numerous entities involved. Investments (PNRR and PNC) and procedural simplifications are currently underway or planned in some cases for a long time. However, there are still uncertainties about their actual completion.

A particular mention should be made about customs procedures and checks on goods in transit. Several major maritime ports (especially Genoa and Naples), as well as airports, are facing a truly critical situation due to the chronic lack of personnel (health and technical) and dedicated facilities, especially for controls. This is an aspect that few observers note but is creating heavy delays and real blockages in the processes of control and verification of goods, both in import and export. It may take up to 5 or 6 days to obtain a simple documentary clearance. The effect is the loss of traffic in favor of European ports and airports.

12. Competition and Economic Regulation

Another relevant topic for the entire logistics and transportation sector is that of competition. In recent years, there has been significant vertical and horizontal integration, which, while desirable for the efficient evolution of services, can significantly impact the competitive balance of companies in individual segments of activity and their access to respective service markets. There is a growing need to introduce preventive measures for economic regulation of logistics markets and transparency and regularity of operators to prevent the emergence of barriers, cartels, and sometimes unethical behavior that reduces market efficiency and can lead to unjustifiable rents.

A final mention on the topic of competition should be made with reference to the Regulatory Authority for Transport (ART). Recently, Parliament abolished its regulatory competence and the related contributory obligation on freight transport companies. The motivations behind this decision are widely shared, as it is a sector already regulated by the Ministry of Infrastructure and Transport and the EU, operating in a free-market regime. However, this exclusion should be extended to other activities—primary, ancillary, and related to the transport, logistics, and shipping of goods—all equally liberalized and already regulated by the same Ministry of Infrastructure and Transport and other competent authorities.

The Parliament's agenda, linked to the approval of the provision excluding freight transport from the competence of ART, goes in the right direction, urging the Government to assess the opportunity to extend the exclusion from ART regulation and the related contributory obligation. Recently, in response to this, ART initiated a consultation on the 2024 contributory resolution, unexpectedly including other activities

previously excluded, such as shipping and maritime agencies. Therefore, it would be advisable for the Government to expedite the implementation of the parliamentary agenda on ART, also to avoid the resurgence of administrative disputes that have always characterized its collection activity, not based on an actual regulatory competence established by law.

13. Intermodality and European Policies: Brenner Emergency and Alpine Passes

In Italy, there is a serious infrastructure delay to support intermodal systems that connect road and rail networks with ports and hinterland logistics platforms. The PNRR-PNC, along with other budget funds, has financed several last-mile connections to the rail network, especially those of the ports, and envisaged the implementation of a real plan. If implemented promptly, these investments can contribute to increasing modal shift towards lower-emission transport. However, there is a need for continuity in the implementation of the many interventions necessary to promote efficient and effective development of national port, hinterland, and interport logistics, including those connected to waterways—a mode still largely marginal in the logistics framework of our country.

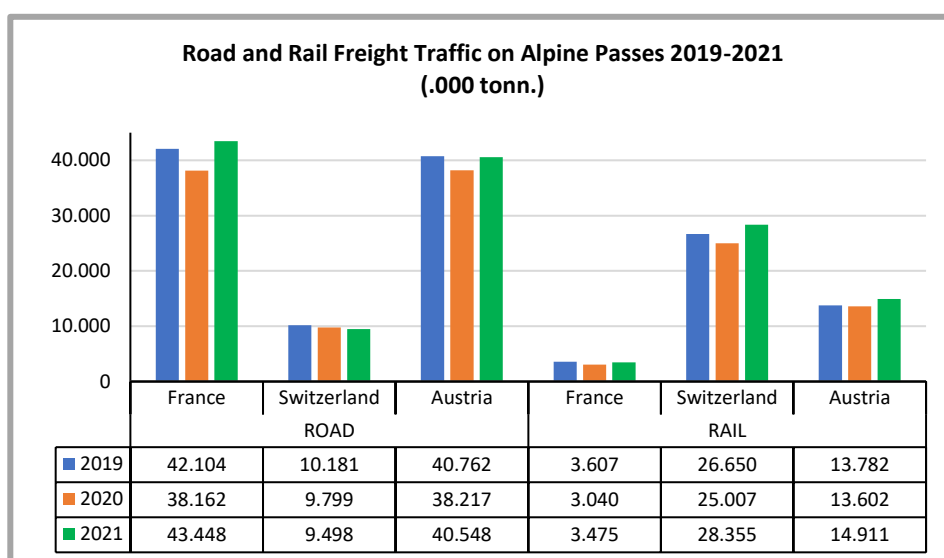
A broader vision of intermodality is also needed to safeguard competitive and competitive balances, making tools like Mare-bonus and Ferro-bonus structural and enhancing them. These tools were recently refinanced but to a limited extent, to ensure continuity with the positive effects generated.

Regarding rail intermodality and combined transport, in addition to the substantial investment needs previously mentioned, there is a need for a positive revision of EU regulations. The Commission, just a few days ago, finally published the proposal to amend the directive on intermodal transport after several failed attempts in past European legislatures. However, strong reservations must be expressed about the timing of its presentation, which leaves insufficient margins for the definitive approval, by the end of the current legislature, of a strategic instrument to promote modal shift of goods from road to rail, waterways, and short-sea maritime transport.

On the Customs Union, the European Commission recently presented a proposal for a complete reform of the Code. The contents follow a commendable direction, simplifying procedures and reducing burdens for businesses through digital transformation and surveillance of imports based on data sharing and centralization at the European level. However, there are still some reservations about the role of the trust and check operator and compliance by all Member States with controls, currently carried out in a significantly uneven manner, as also noted by the

European Court of Auditors. In some countries like Italy, these controls are applied in a rigid and fiscal manner, capable of producing significant competitive imbalances, which will be further complicated by the measurement of the carbon content of imported products, as envisaged by the CBAM (Carbon Border Adjustment Mechanism) Regulation.

Finally, a significant criticality of our logistics system concerns the Alpine passes, particularly the Brenner Pass. These transit routes are our main gateway to communication with Europe and simultaneously represent a fundamental asset and a critical point for our economy and for that of Europe itself. The national and European economies depend significantly on intra-EU trade, and given the substantial portion that passes through the Alps, efficient and effective management of the passes should be optimally supported.



Source: Elaborations based on Swiss Federal Office of Transport (FOT) data

Unfortunately, the importance of the mountain passes emerges, often disruptively, only following critical events such as accidents, landslides, and interruptions, which are becoming increasingly frequent. For several years, a structural criticality has been added due to the opposition of local communities, attributed to the environmental impact of road transits—a theme often instrumentally used by local politicians to conceal protectionist maneuvers for their productions. More recently, even reasons for controlling illegal immigration have been added to the discourse. The issue of Alpine passes has thus become a complex problem that can no longer be underestimated or ignored.

Instead, the management of the Alpine region should be coordinated by a common structure composed of stakeholders—infrastructure managers, service operators, and national and local administrations—that collects real-time traffic and usability data and has continuously updated models of multimodal simulation. This structure should support decision-makers, both political and technical, in emergencies due to

unforeseen events and in the planning of ordinary and extraordinary maintenance interventions on road and rail infrastructure. It should communicate promptly through a dedicated platform with infrastructure users.

Coordination, planning, digitalization, and communication could represent a concrete starting point for managing commercial flows along the Alpine arc, at least to handle transit criticalities. A strong "political initiative" is needed, and the European Commission should take charge if it genuinely wants to safeguard the free movement of goods. Promoting and supporting projects for major European networks (TEN-T) is essential, but, as demonstrated since the Essen Council (1994), it requires very long times compared to almost daily emergencies.



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