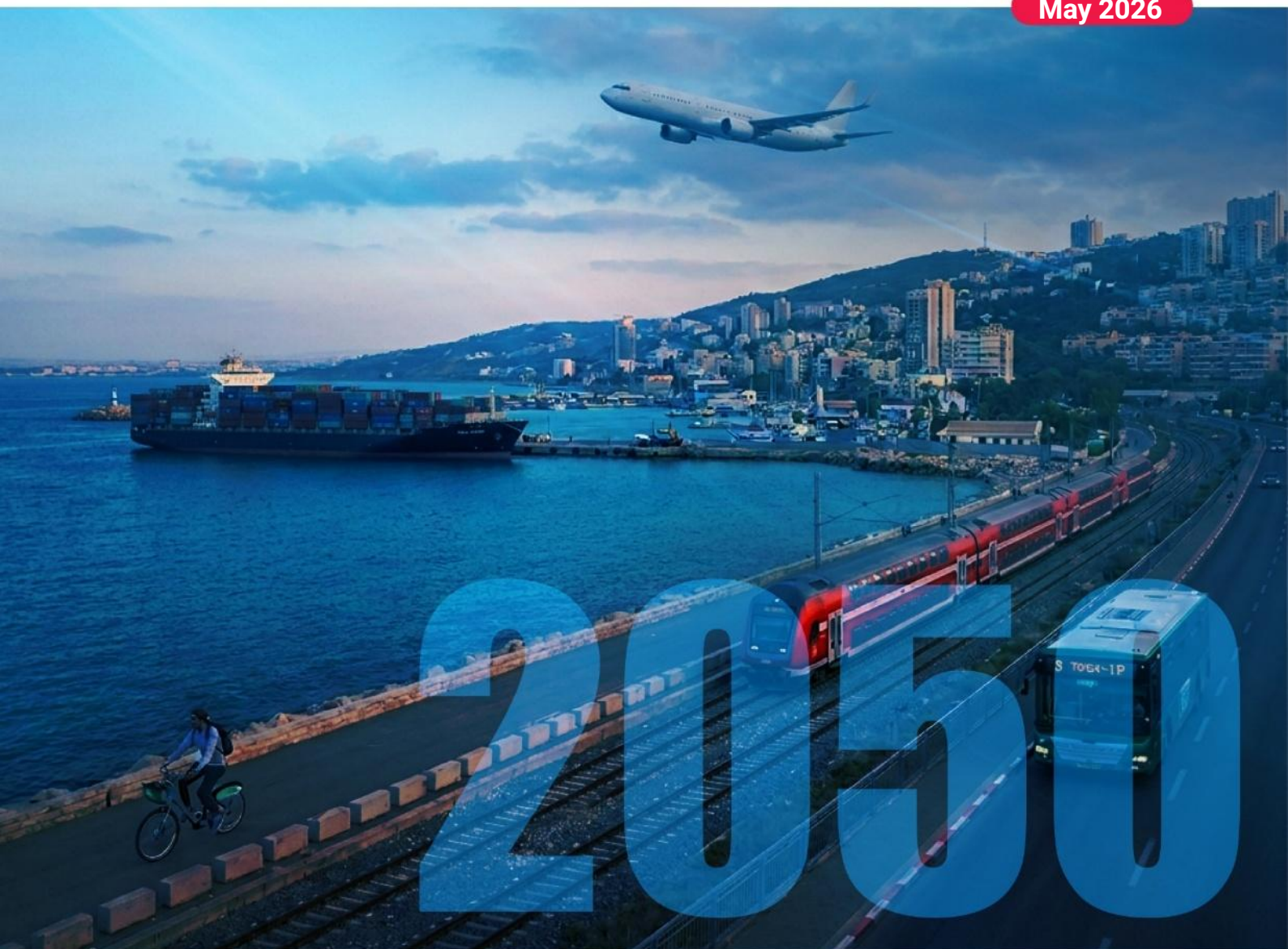


Comprehensive Strategic Plan for Transportation in Israel | 2050

May 2026





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Foreword

The Comprehensive Strategic Plan for Transportation in Israel – 2050 was prepared by the Planning, Policy, and Strategy Department within the Economics, Budgets, and Strategy Division of the Ministry of Transport, as part of the work of the steering committee appointed by the Director General of the Ministry of Transport for this purpose. The steering committee included members of the Ministry of Transport's management team, as well as executives from infrastructure companies and government corporations across the various transportation sectors.

The plan was developed with the assistance of experts from diverse transportation fields - including transportation engineering, transportation economics, public transport, smart mobility, shipping, ports, and aviation—alongside the transportation team within the Strategy Unit of KPMG.

Transportation in Israel is a challenging sector to address. The multi-year population growth rate in the country - the highest among developed nations - combined with the geopolitical situation, land and resource scarcity, social issues, and a developed economy reflected in high demand for movement at the local, national, and international levels, all present unique challenges to Israel in planning its transportation sector.

Transportation planning is required to match capacity with demand, maximize safety and security, prevent environmental and climate degradation, and serve as the foundation for a thriving social and economic fabric. Furthermore, transportation is a sector deeply interconnected with numerous other disciplines.

This plan is designed to serve as the basis for the long-term planning of specific strategic plans, master plans, and detailed transportation programs across a wide range of topics: land, air, and sea; infrastructure development and operations; regulation; economic matters; and more. Additionally, this plan serves to connect the world of transportation with other disciplines and national plans that interface with transportation on an ongoing basis.



We extend our gratitude to everyone involved in this endeavor: the authors of the plan, the members of the steering committee and their representatives, the Ministry of Transport employees who took part in the work, and our partners in other ministries and entities. It is our hope that this plan will guide the planning of various transportation sectors in a manner that contributes significantly to enhancing the welfare of the public in Israel.

Sincerely,

Opher Eliashar

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Ministry of Transport and Road
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Senior Deputy Director General,
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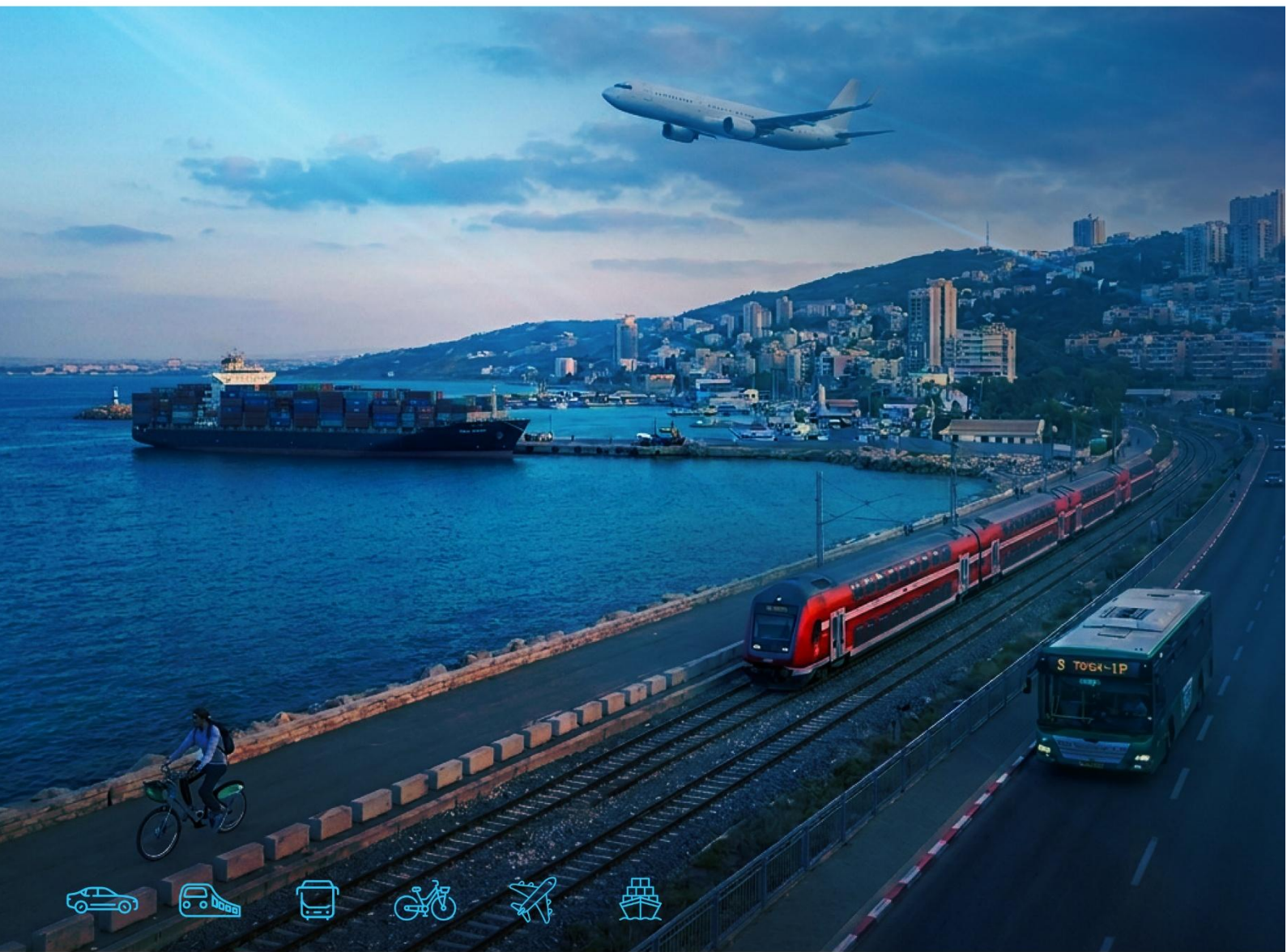
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Executive Summary





Israel's transportation sector faces unique challenges, foremost among them its population growth rate and scarcity of land. Israel's growth forecast for 2050 points to an increase of approximately 6 million residents, creating a significant rise in demand for transportation services needed to enable connectivity for both people and freight between various points across the country as well as between Israel and the rest of the world. This connectivity is made possible through land transportation (private or public), maritime and air transportation, and through digital remote connectivity, which is gaining increasing momentum.

The Comprehensive Strategic Plan for Transportation in Israel for 2050, prepared by the Planning, Policy and Strategy Division of the Ministry of Transport, offers an integrative national framework for Israel's transportation system across all its components and its long-term development. The plan addresses transportation challenges, sets a vision, goals, and targets, and outlines directions of action for their fulfillment. The plan serves as a foundation for a wide range of subsequent plans in the various transportation sectors.

Vision for 2050

"A transportation system that enables accessibility, connectivity, and interoperability for all societal and economic needs, with high reliability and a high level of service, while maintaining sustainability, safety, and operational continuity on land, at sea, and in the air."

Derived from this vision, four high-level goals have been established to guide Israel's transportation sector over the next 25 years:

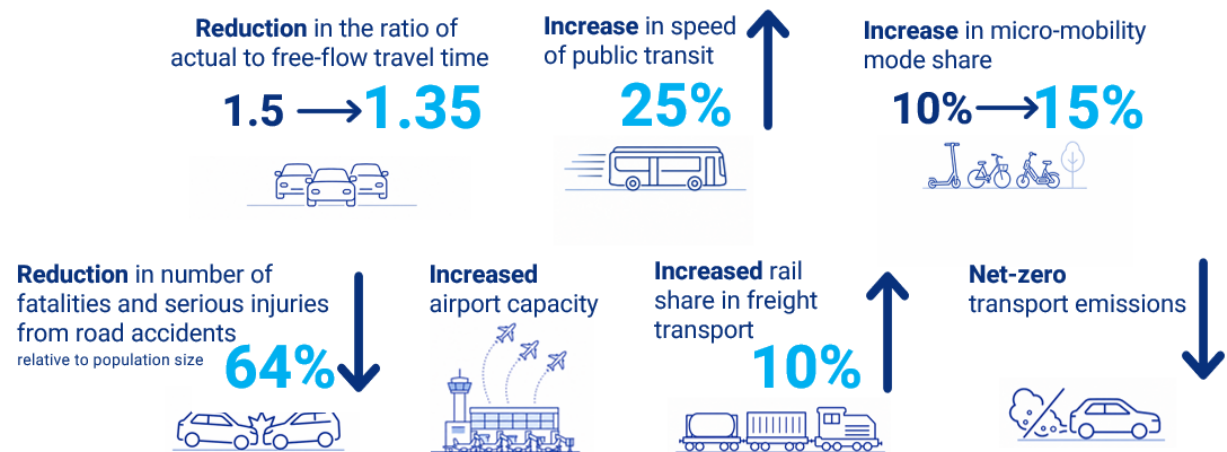
- 1 | Accessibility:** Ensuring accessibility, connectivity, and interoperability for the entire population in an efficient and reliable manner, at a high level of service.
- 2 | Safety:** Ensuring safe movement across all transportation systems and reducing road accidents through infrastructure improvements, enhancement of vehicle safety systems and driver monitoring, promotion of responsible driving culture, and regulation.
- 3 | Sustainability:** Developing and managing a sustainable transportation system by protecting natural resources and the environment, reducing emissions, air pollution, and noise, and promoting efficient energy consumption across the transportation sector.



4 | **Economic Development:** Promoting a transportation system that drives economic productivity and employment.

For each of the high-level goals, key quantitative outcome indicators have been defined to help assess the implementation of the strategic plan and the achievement of its goals over time. Systematic implementation of the strategic approach detailed in this plan is projected to contribute by the year 2050 to a significant reduction in road congestion from a current average estimated value of 1.5 down to a value of just 1.35 of the index of the actual travel time relative to free-flow travel time; a 25% average increase in public transport speeds within metropolitan areas; an increase from 10% to 15% in micro-mobility's share of total mileage; a 64% reduction in the number of fatalities and serious injuries from road accidents relative to population size; an expansion of international airport capacity in alignment with growing demand; a 10% increase in rail's share of freight haulage; a 20% reduction in empty truck movements; and net-zero pollutant emissions from transportation.

Outcome Indicators for the Strategic Plan - 2050





To achieve the goals and outcome indicators, the strategic plan sets forth the following priorities:

- 1 | **Mass Transit** – Continued development and expansion of mass transit systems and networks
- 2 | **Demand Management** – Enhanced use of economic tools, demand-reduction policies, increased vehicle occupancy rates, optimization of public transport subsidies, and improved spatial planning
- 3 | **Data Infrastructure** – Significant development of data capabilities within the Ministry of Transport
- 4 | **Smart Mobility** – Capitalizing on the high potential of integrating innovative and intelligent transport solutions.

Strategic Priorities

Mass Transit



Demand Management



Data



Smart Mobility



From a **budgetary standpoint**, investments in the range of hundreds of millions of NIS annually will be required for demand management tools, data infrastructure development, and the advancement of technology and innovation. The cost of projects for developing mass transit systems (such as trains, light rail transit, and metro networks) will continue to grow throughout the lifespan of the plan, subject to adjustments based on updated data and technological changes. Conversely, there will be a decline in the volume of investment in road infrastructure, while the public transport subsidy component will be reevaluated in terms of efficiency and effectiveness.



At the **institutional level**, the plan recommends strengthening integration, collaboration and synchronization across all relevant entities within the Ministry of Transport, between the Ministry and the transportation infrastructure agencies and other transportation corporations, as well as with other government ministries. Furthermore, it establishes robust frameworks for performance measurement, oversight, and evaluation, alongside the creation of a dedicated transportation strategy unit (internal or external) to oversee implementation.

In order to optimize integration and planning processes, the strategic process defined core principles for developing future transportation strategic and master plans. Designing these initiatives demands a holistic perspective that addresses Israel's distinct transit challenges – including geographical and demographic constraints, multi-stakeholder complexity, cost-benefit optimization, and the direct impact on public welfare and quality of life. Consequently, three pillars of planning principles were established: methodological guidelines, principles for coping with a changing reality and conditions of uncertainty, and principles of transport planning.

On the **operational level**, the plan outlines a multi-year operational roadmap to draft new strategic plans, master plans, and policy papers as well as updating existing ones. This includes topics such as data infrastructure, emerging technologies, aviation, maritime ports, road safety, public transport, demand management, sustainability, micro-mobility and more. These documents will constitute the next phase in implementing the comprehensive strategy, translating it into actionable initiatives to tackle Israel's transport hurdles while leveraging next-generation technologies to modernize the transportation ecosystem.



Introduction

The transportation sector is a key growth engine for the Israeli economy and directly affects the quality of life of Israel's citizens. Israel faces numerous transportation challenges. The country's population growth rate – the highest among developed nations – combined with the geopolitical situation, scarcity of land and resources, social issues, and a developed economy resulting in high demand for movement at the local, national, and international levels, all give rise to challenges unique to Israel in planning its transportation network. These challenges are accompanied by global trends of increasing life expectancy that will influence the transportation needs of the third and fourth age, changes in working, studying, and commerce habits, as well as technological developments and a revolution in computing power – foremost among them the advent of autonomous vehicles and artificial intelligence – which will lead to extensive changes in the world of transportation. Planning the transportation sector must provide appropriate capacity to meet demand, deliver maximum safety and security, prevent environmental and climate damage, and serve as a foundation for a thriving social fabric.

Transportation affects the lives of every person, at every point in time, and has extensive interdependencies with many disciplines. Sound planning of the transportation sector from a comprehensive and integrative perspective can provide great benefits to welfare, safety, environmental quality, and security, and can deliver economic, social, safety, and security benefits at the local, national, and international levels.

In the past two decades, over 15 strategic plans and master plans have been written with the aim of addressing sector challenges. This plan was developed in order to create a unified language, define a vision, establish high-level goals, targets, and success indicators, as well as chart key courses of action for achieving them. The plan also seeks to enable effective integration of the various transportation strategic plans and master plans, and integration of the strategic transportation plan with national strategic plans and other plans that interact with the transportation strategic plan, such as comprehensive spatial planning, housing, energy, environmental protection, human capital, and more. Integrating these domains is intended to ensure systemic coordination, a holistic perspective, and optimal realization of the mutual impacts between transportation and national development components. This is accompanied by measurement, monitoring, and evaluation of implementation, so that the entire system operates in a joint and coordinated direction and ensures long-term planning continuity.



The Strategic Process

The strategic process comprises three phases:

1. **Phase 1:** Development of the strategic framework
2. **Phase 2:** Preparation of a roadmap for implementing the strategic framework and setting strategic, organizational, and budgetary principles for transportation development in Israel
3. **Phase 3:** Breaking down the plan into master plans and specific strategic plans for the various transportation sectors as well as updating existing plans to align with the comprehensive plan

Phase 1: Development of the Strategic Framework

Phase 1 of the plan focused on developing the strategic framework – articulating Israel's transportation vision through 2050 and defining high-level goals and outcome indicators for their achievement.

The following steps were carried out within this phase:

1. Literature Review

- Review of national strategic plans in the transportation field from around the world
- Analysis of existing strategic plans by the Ministry of Transport
- Analysis of national plans influencing transportation in Israel

2. Interviews with over 30 key figures in the Israeli transportation sector

Interviews were conducted with a wide range of stakeholders from the Israeli transportation sector and other relevant interested parties. The interviews focused on Israel's transportation goals for 2050, the prominent challenges requiring attention in the strategic plan, and the strategic steps that could address those challenges.

3. Analysis of technological trends and macro trends expected to affect the future of transportation, passenger behavior, and more.

4. Multi-participant strategy workshop

A large-scale brainstorming workshop was held, addressing prominent challenges in the transportation sector, possible indicators, and courses of action. The session also dealt with integration issues within the Ministry of Transport, operational agencies and other government bodies.



Phase 2: Preparation of a roadmap for implementing the strategic framework and setting strategic, organizational, and budgetary principles for transportation development in Israel

Building on the strategic framework formulated in the first phase, the second phase focused on constructing the roadmap for implementing the strategic framework and the required changes – both in existing plans and in the drafting of new plans – as well as organizational and budgetary aspects necessary to meet the high-level goals of the comprehensive plan for 2050. This phase constitutes the action plan for implementing the strategic framework.

The following steps were taken during this phase:

1. Identifying material changes required in the transportation budget in order to enable achievement of strategic goals and establishing parameters for budgetary prioritization.
2. Formulating principles for strategic planning according to which future strategic and transportation plans should be prepared, with emphasis on integration aspects in the work of the ministry and its agencies.
3. Identifying significant organizational gaps and defining control, evaluation, and re-planning mechanisms that will lead to changes in the organizational plan and in the principles of the organizational structure of the ministry and its agencies.
4. Multi-year plan for writing and adapting strategic plans in light of the gaps identified. The plan includes new strategic plans that need to be written, and existing strategic plans that require updating.
5. Mapping information and data bases, identifying gaps and the steps required to close them.
6. Identifying significant technological trends in the coming decades and mapping the steps needed to adopt them.

Phase 3: Implementation of the Strategic Plan

The third phase deals with implementation of the strategic plan with a multi-year plan and with implementing the budgetary and organizational recommendations. Its purpose is to translate the transportation vision for 2050 into departmental operations, strategic plans, position papers, policy documents, and specific master plans for the various transportation topics – leading to achievement of the plan's success indicators.

This phase includes the following actions:



1. **Formulating new strategic plans:** New strategic plans, master plans, position papers, and policy documents will be developed in areas and sectors that have not yet received adequate attention, or where an updated response consistent with the ministry's long-term vision and policy is required. Each plan will be built in accordance with the defined strategic principles and will include goals, indicators, and steps for achieving them.
2. **Adapting existing plans:** Existing strategic plans will undergo adaptations in accordance with the established planning principles, subject to the multi-year work plan and in line with updated demand data and trends. This process will ensure synchronization among all plans under a unified planning language, cross-cutting goals and outcome indicators that serve them and will prevent duplication or contradictions.
3. **Formalizing measurement, monitoring, and evaluation processes:** Processes and mechanisms will be established to ensure tracking of plan implementation, measurement of progress against targets, and systematically capture lessons-learned. These processes will enable the ministry to operate flexibly while continuously improving and adapting to a changing reality.
4. **Implementing organizational changes:** The organizational changes formulated in Phase 2 will be implemented – including the establishment of a transportation strategy implementation team to engage in synchronization and promotion of the strategic plan, formalizing new work routines, and embedding planning tools and information infrastructures that support optimal strategic management

This document is intended for a variety of audiences: Ministry of Transport personnel, entities within adjacent government ministries, and entities within operational agencies and government infrastructure companies, who can learn about the goals that will guide the ministry in the coming decades, how integrative planning is carried out at different levels and at the implementation stage, and about the investment vectors and transportation issues in which the ministry will deepen its engagement in the coming decades.



Definitions and Terms

Methodological Definitions

Vision: A statement describing the future the Ministry aspires to reach, disregarding constraints of time, resources, and capacity.

Goals: The broad achievements the Ministry aims for in its activities. Goals define the desired future in the environment and are an expression of the Ministry's vision.

Targets: The interim milestones that bring us closer to the goal. Targets serve the Ministry in achieving its goals. A target must be concrete, measurable, and achievable.

Indicator: A measurable quantitative variable reflecting a certain state examined at a given moment.

Input Indicator: An indicator reflecting the scope of input invested in a particular activity.

Output Indicator: An indicator reflecting the quantitative value produced by a particular activity.

Outcome Indicator: An indicator reflecting the value created in the target group – in the economy or in society – as a result of the action taken; it constitutes the purpose of the action. Outcome indicators are influenced by government activity but are also subject to external influences.

Strategic Plan (for a transportation sector): A broad-ranging policy document defining measurable national goals and targets for the development of a specific transportation sector (such as air, sea, freight, safety, emergency, etc.), including courses of action, required resources, and a framework timetable.

Transportation Master Plan: A planning document that translates strategic plans into a project portfolio including budget resources and a timetable.

Implementation Plan: A detailed plan based on the master plan and including specific projects from within that master plan.

Policy Paper: A document whose purpose is to impart guiding principles or rules regarding a focused transportation issue.



Transportation Terms

WCR (Walk-Cycle-Ride): Describes all means of transportation other than private vehicles: walking, cycling and micro-mobility, as well as public transport.

Micro-Mobility: Personal and lightweight transportation means for short distances, such as electric scooters and electric bicycles.

Mass Transit System (MTS): A system for transporting large numbers of passengers, such as heavy rail, light rail, or BRT with significant right-of-way priority over private vehicles.

Public Transport Lane: A lane designated for buses and public transport, allowing them to move faster even during peak hours.

High Occupancy Lane: A lane designated for public transport and private vehicles with high passenger occupancy.

MaaS (Mobility as a Service): A mobility concept based on personalized matching of the appropriate transportation means for each trip, based on a technological system providing information about all transportation modes on a single platform, and which does not require ownership of means of transportation.

Accessibility: The ease with which destinations can be reached.

Connectivity: The degree to which different nodes in a spatial network are connected to one another.

Interoperability: The interface between different transportation means and different transportation infrastructures, and the ease of movement between them, which directly affects transportation efficiency and availability.

Commuting: Travel with a high frequency pattern of people from their place of residence to their place of work or study and back.

Modal Split: The relative distribution of use among different modes of transportation across all trips in a given area, primarily the distribution between private vehicle use and public transport.

Smart Transportation: Integration of advanced technologies, computing infrastructure, autonomy, and advanced data management in transportation systems, infrastructure, transportation management (such as real-time traffic management), and vehicles, in order to achieve transportation goals and targets such as improving mobility, reducing congestion, reducing accidents, promoting sustainability, and more

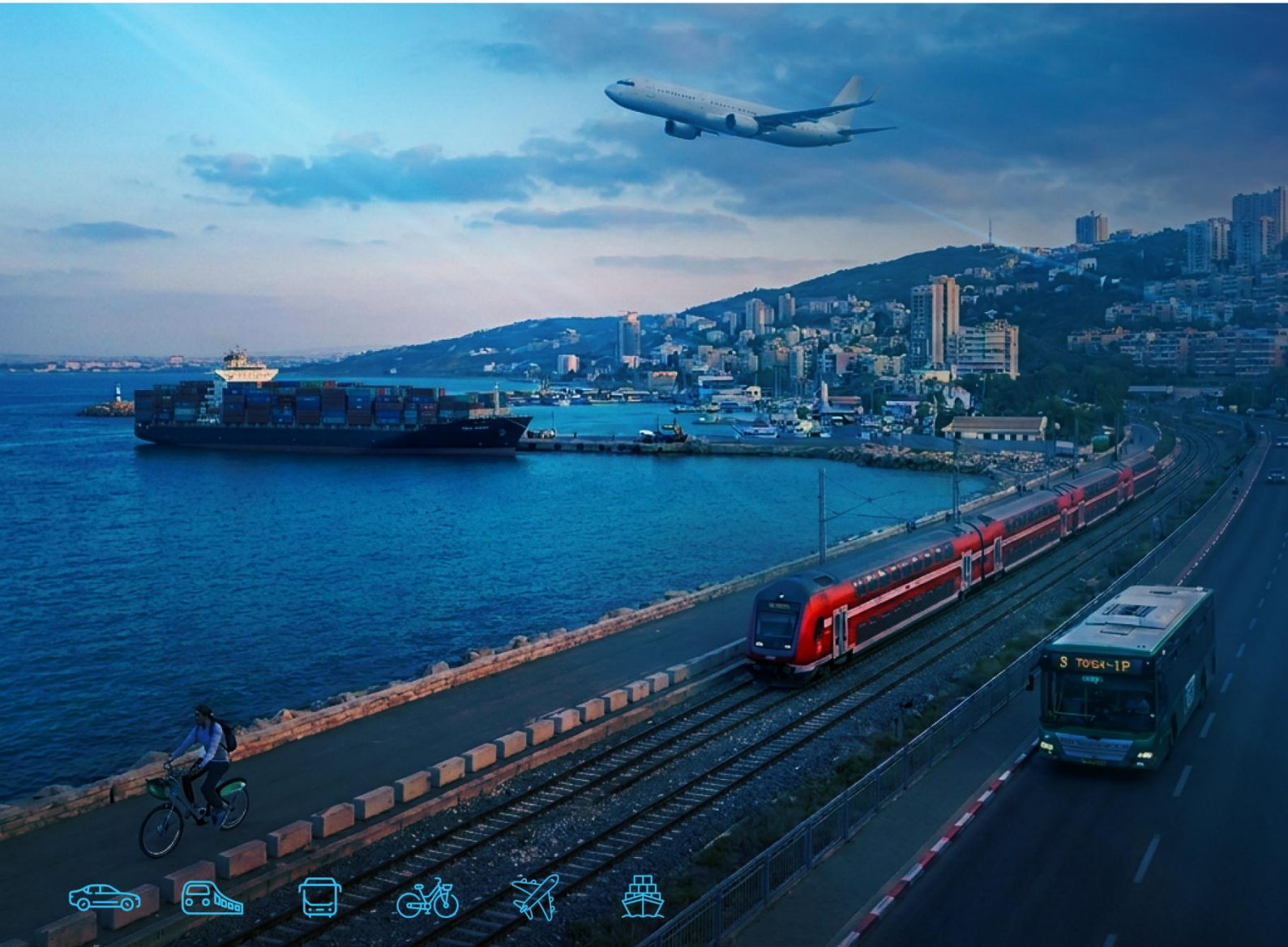


Sustainable Transportation: A system that provides a response to current transportation needs without compromising the ability of future generations to meet their needs in environmental, social, and economic terms – a system that reduces environmental damage, promotes energy efficiency, and encourages the use of environmentally friendly means.



Part I

The Strategic Framework





1.1. Methodology for Formulating a National Transportation Strategy

The formulation of the National Transportation Strategy for Israel for 2050 is based on a methodology drawing from three key international bodies:

1. Methodology developed by the World Bank for national strategic transportation plans¹.
2. A policy document of the Jaspers organization operating within the framework of the European Union and the European Investment Bank (EIB) for preparing national and regional transportation plans (Comprehensive Transport Plans)².
3. An OECD principles document for transportation project planning, whose prominent principles were incorporated in Section 2.3, Principles for Preparing Strategic Plans and Transportation Plans³.

In addition to the above international methodologies, the plan was also grounded in the Israeli Government Planning Guide⁴.

The purpose of the methodology is to base the strategy on a clear, consistent, practical, and measurable planning framework, by learning from international best practices in developing transportation strategies worldwide. The World Bank methodology creates an orderly distinction between the core components of the strategy – vision, high-level goals, sub-goals, indicators, and courses of action – thereby enabling the formulation of a consistent planning process linking decisions to measurable outcomes. The tiered structure, similar to strategic plans in other fields, helps avoid common planning biases, such as excessive focus on courses of action, physical investments, or the definition of sectoral goals.

The EU policy document includes a working guide for preparing a national or regional transportation plan and incorporates foundational principles used in the preparation of this plan: establishing a basis for sustainable development of the transportation sector in the medium-to-long term, presenting connectivity in strategic planning between high-level goals, sub-goals, and indicators as detailed below, and recommendations for comprehensive transportation plans by sector (land, air, and sea) and by mode and region as will be presented

¹ World Bank, [Preparing a national transport strategy: suggestions for government agencies in developing countries](#), (2008).

² Jaspers, [Methodological support to the preparation of National and Regional Transport Plans](#), (2014)

³ ITF-OECD, [Strategic Infrastructure Planning: International Best Practice](#), (2017)

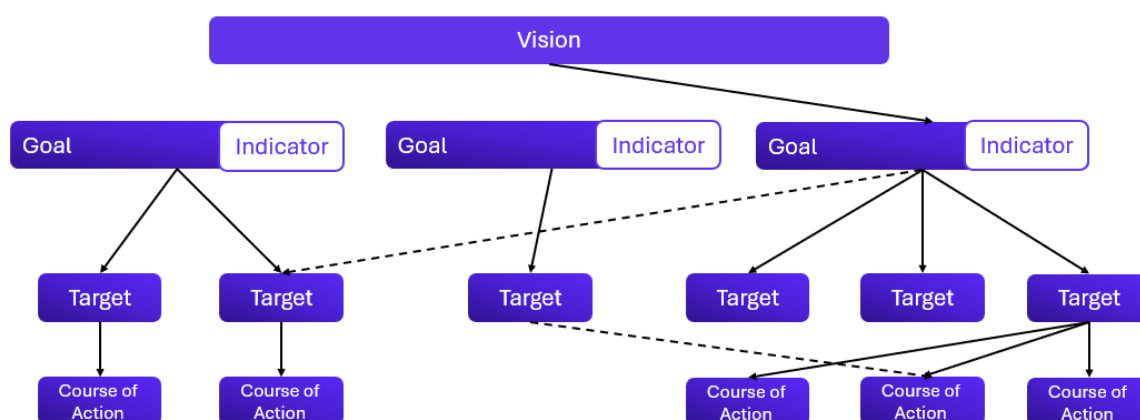
⁴ Michal Tabibian-Mizrachi, [The Government Planning Guide, Updated Version \(4.1\)](#), (2010), Jerusalem: Prime Minister's Office – Policy Planning Directorate

in Part III in the multi-year plan. Additionally, the process of building the Comprehensive Strategic Plan for Transportation was also based on the methodological work stages of that document:

1. An analysis was conducted of the key gaps in Israel's transportation sector and in strategic transportation planning.
2. High-level goals were formulated derived from gap analysis, previous plans, and international review.
3. Quantitative outcome indicators were developed for the high-level goals.
4. A roadmap was formulated for implementing the strategic framework, including: budgetary development vectors, organizational recommendations, building a common language within the Ministry of Transport and with other bodies, and a multi-year plan for developing concrete courses of action for implementation.

Based on the work of the World Bank, the European Union, and the Israeli Government Planning Guide, it was decided to formulate an orderly planning structure to guide the building of the strategy and ensure long-term strategic vision (Figure 1).

Figure 1: Structure of Israel's National Transportation Strategy



- **Vision of the Comprehensive Strategic Plan for Transportation:** The desired reality of the transportation system for 2050, reflecting the central values and long-term aspirations
- **Goals of the Comprehensive Strategic Plan for Transportation:** The key achievements the transportation system must attain to realize the vision



- **Courses of Action:** Key areas of activity or strategic steps required to be implemented in order to advance the achievement of sub-goals
- **Indicators:** Means of measuring compliance with the target for each of the plan's goals. The plan uses outcome indicators. A numerical value to be aimed for has been defined for each outcome indicator

The above methodology is a significant component that will enable a unified language among all stakeholders influencing transportation in Israel. Additional components for creating a unified language are detailed below. The next chapter details the current and future trends and challenges facing the transportation sector, integrating these professional insights directly into the methodology.

1.2. Challenges and Trends Affecting the Transportation Sector through 2050

The central trends influencing the future development of transportation are as follows: population growth rate stemming from, among other factors, high fertility rates and increasing life expectancy; the GDP per capita growth rate leading to higher consumption, and in land transportation also the level of motorization (number of private vehicles per capita) growth rate and the adoption of smart technology systems. Israel finds itself in a unique situation in which the country's population growth rate is almost four times higher than the OECD average (Chart 1). As a result of the high growth rate in Israel, Israel's population is expected to grow by approximately 50% by 2050 – representing approximately 5–6 million additional residents (Chart 2). A high natural increase rate requires meeting a rapid production pace for infrastructure capacity in order to provide a response to growing needs. The accelerated growth will necessitate a comprehensive adaptation of transportation systems to enable efficient and sustainable mobility for the growing population. In addition, Israel's per capita economic growth rate, among the highest in developed countries, is reflected in growing demand for movement and transportation services. This is true both in land transportation – growing demand to provide access to an ever-increasing number of destinations, in an ever-more convenient manner, and growing demand for private vehicle purchases – in aviation (growing demand for flights), and at sea (growing demand for goods movement through the sea and ports originating from growth in the volume of global trade and globalization).

Chart 1: Average Annual Population Growth Rate, Israel Compared to the OECD, 2023⁵

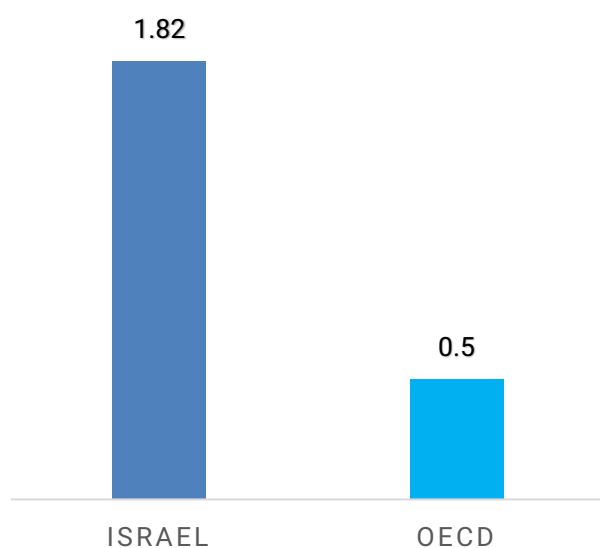
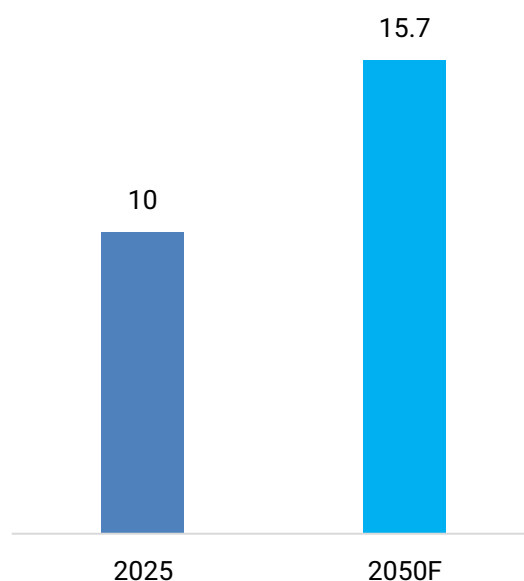


Chart 2: Israel's Population Size in 2025 and Projected Population for 2050, Medium Scenario (in Millions of Citizens)⁶



In light of the projected increase in population and the economy, in a “business as usual” scenario – without a dramatic change in planning policy and its actual implementation, and without the penetration of smart technologies and other trends (such as remote work) – there will be a dramatic increase in the number of motorized vehicles in Israel, which will place significant strain on transportation infrastructure. In this scenario, where the population grows according to projections and the rate of motorization growth remains constant at approximately 1.2% per year⁷, similar to other countries with low motorization levels – approximately 4.4 million additional vehicles would be added by 2050, representing a 97% increase in the number of vehicles traveling on Israel’s roads (Chart 3).

In public transport as well, a substantial growth in the number of passengers is projected.

⁵ Processing of [World Bank Data](#) for 2024

⁶ Central Bureau of Statistics, *Population Projections for Israel 2025–2065, by Population Group, Sex and Age* (2022).

⁷ Based on CBS Data: *Population Data, Number of Private Vehicles, and Motorization Rate, 1994–2024*, (2024).

Maintaining the current modal split (approximately 17% public transport⁸) in 2050 would lead to a 40% increase in the number of daily trips (assuming that the number of trips per capita will decrease and therefore the rate of growth in the number of trips will be lower than the rate of population growth) – from 2.1 million daily trips across all public transport modes in 2025 to 2.9 million daily trips in 2050 (Chart 4). The increase in the level of motorization together with the projected increase in daily public transport trips illustrates the need for extensive preparation in infrastructure, transportation systems, and the management of policy tools that will channel the load and respond to the broad demand of Israel’s residents for mobility.

Chart 3: Number of Motorized Vehicles in Israel, 2025 vs. 2050 Forecast (Millions of Vehicles)

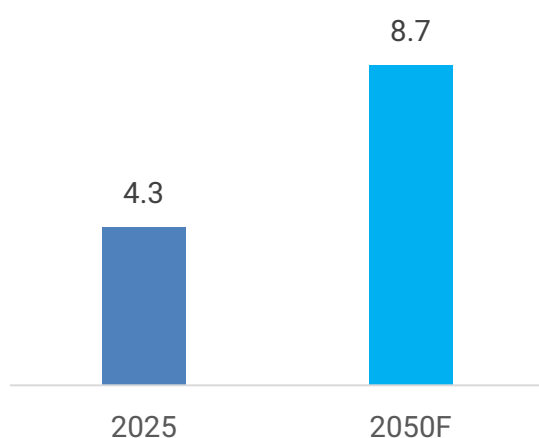
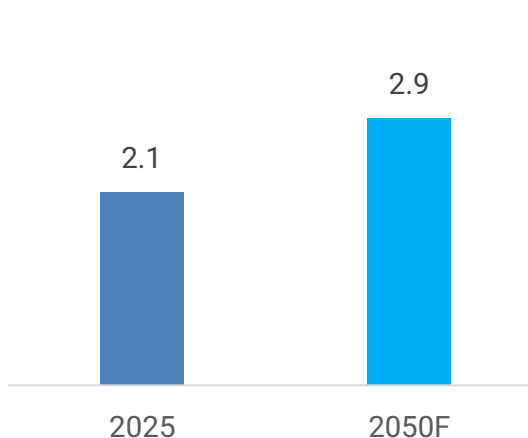


Chart 4: Number of Daily Public Transport Trips, 2025 vs. 2050 Forecast (Millions of Passengers)⁹



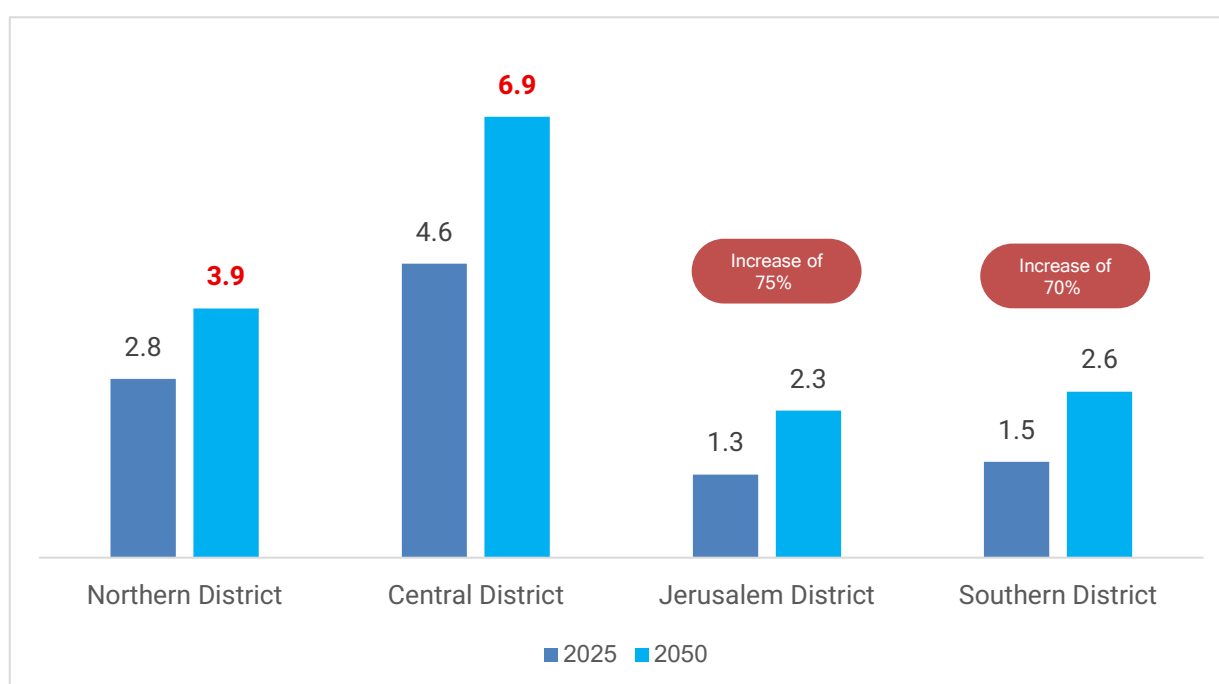
The projected load on infrastructure is expected to manifest across all regions of Israel: according to the National Economic Council’s projection, approximately 45% of Israel’s population (approximately 7 million residents) will reside in the central region, alongside growth of over 70% among residents of Jerusalem and southern Israel (Chart 5). Additionally, the distribution of population groups in the future is expected to differ from today. Considering this, beyond central Israel, other regions will require comprehensive transportation responses – such as mass transit systems – in order to cope with growing demand, or urban solutions such as

⁸ Based on annual vehicle-kilometer (VKT), passenger rail, and public transport automated fare collection (AFC) data measured in passenger-kilometers (2024)

⁹ Ibid.

mixed-use development that will respond to projections of declining trip generation per capita due to transportation congestion. Different population groups will receive transportation responses tailored to their social characteristics (for example, the ultra-Orthodox population is characterized by high pedestrian and public transport modal share).

Chart 5: Population Growth Forecast in Israel by Region, 2025 vs. 2050 ¹⁰

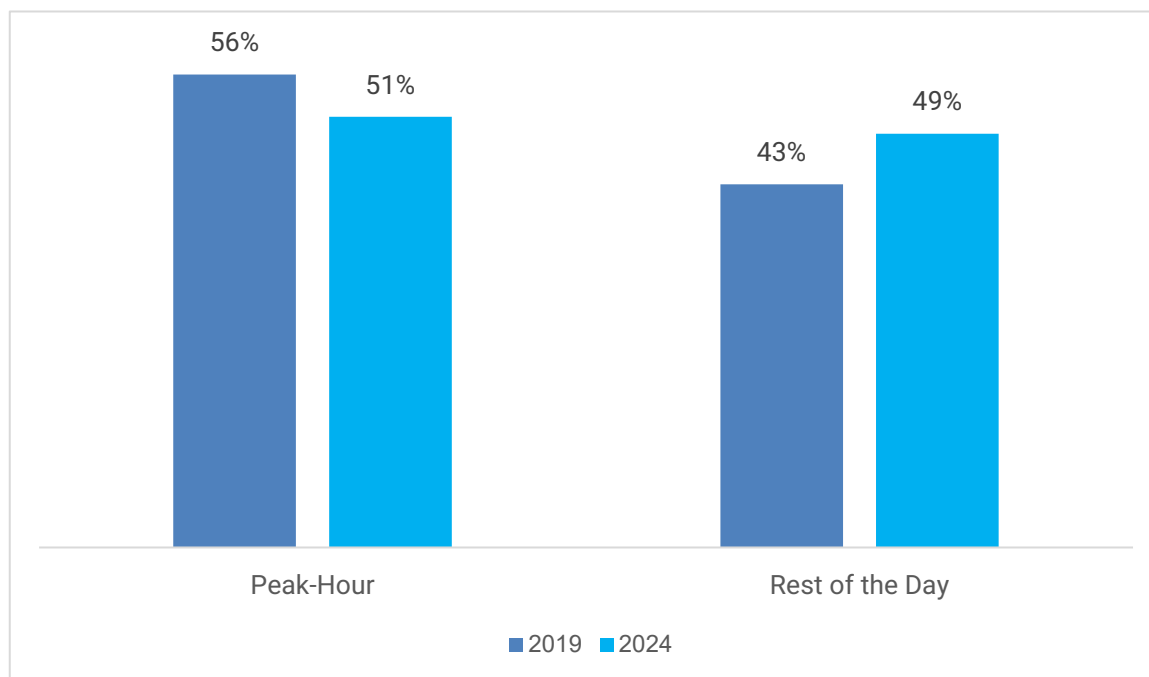


Even today, population growth is affecting the mobility habits of passengers and creating increasing pressure on transportation infrastructure. Due to road congestion, passengers are choosing to travel during off-peak traffic hours rather than traditional commuting hours. According to traffic analyses on Highway 6 (Trans-Israel Highway), a significant proportion of passengers are seeking alternatives to peak hours (06:00–09:00 and 15:00–20:00), with a comparison between 2019 and 2024 showing a 5% decline in the share of vehicles during peak hours out of the total daily vehicles on the road, in favor of travel during other hours (Chart 6).

Phenomena of shifting trips to early morning hours or postponing them to late-night hours are becoming more prevalent and are creating an extension of peak congestion to additional hours of the day. Changing travel habits in response to road congestion diminishes the welfare of road users and represents a further stage in the increase in load on the transportation network.

¹⁰ National Economic Council, [Regional Population Scenarios for Israel – 2020–2050, Medium Scenario](#), (2021)

Chart 6: Proportion of Peak-Hour Vehicle Traffic on Highway 6 Compared to the Rest of the Day Out of Total Daily Vehicle Entries, 2019 vs. 2024¹¹



In an attempt to address the growing road congestion, and as part of the paradigm shift presented in the Strategic Plan for Public Transport Development (2012), the Ministry of Transport significantly increased budgets for developing public transport and mass transit systems as well as the public transport subsidy budget – in an effort to encourage passengers to shift from private vehicles to public transport. These investments included a NIS 19 billion increase in the annual budget over the decade (from NIS 10.3 billion to NIS 29.7 billion), and in 2024 these budgets constituted 74% of the transportation development budget compared to 58% a decade earlier. Additionally, the relative share of the road development budget declined (Chart 7) from 40% to 23%. These investments aim to substantively improve the quality of public transport service in Israel.

Despite the extensive investments, a comparison of public transport boarding rates (number of passenger boardings per 1,000 population per day in 2024 vs. 2019) reveals a decline in public transport usage. The decline occurred particularly during morning and evening peak hours (Chart 8). This decline may stem from the impact of COVID-19 and the Swords of Iron War¹², which led to a drop in the number of users in those years and resulted in lost years for public transport. Public transport in Israel has two central objectives – a transportation objective

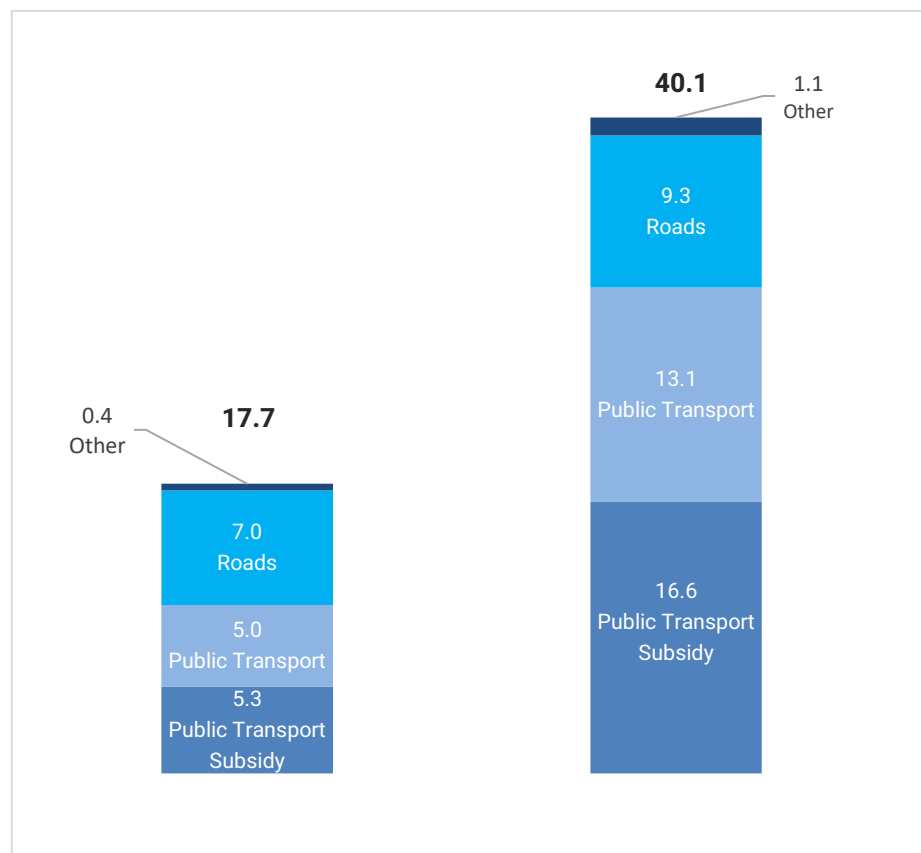
¹¹ Data processing based on data from "Derech Eretz," the Highway 6 concessionaire

¹² The war which began as a result of the attack by Hamas on October 7th, 2023



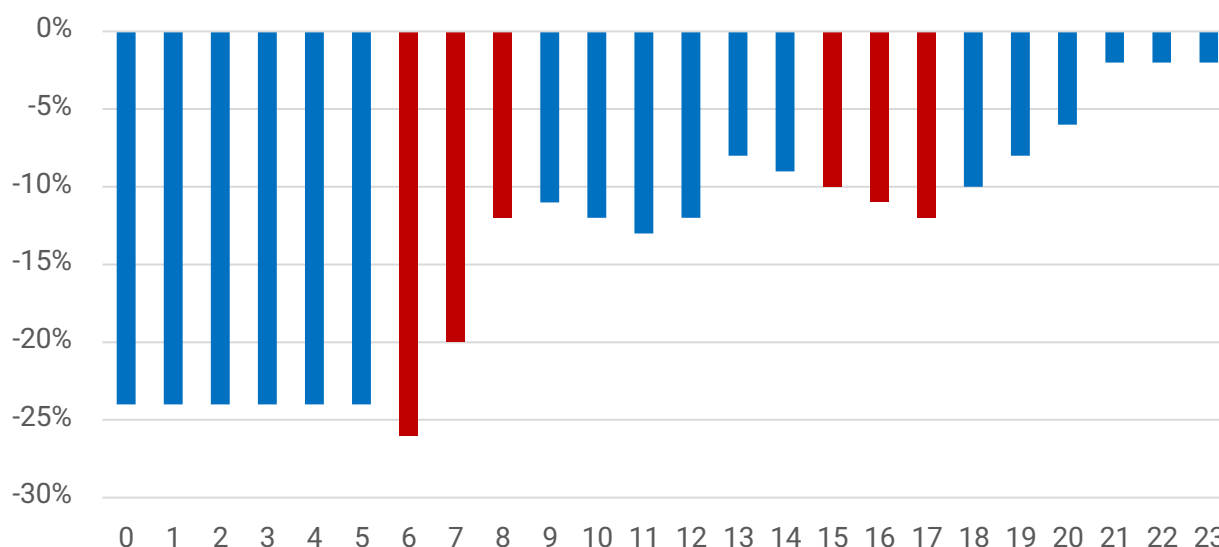
characterized by improving traffic flow, and a social objective of enabling mobility for the entire public. According to a review of public transport data for buses in Israel, significant efficiency improvements are needed to reach these objectives. For example: Israel has approximately 4,000 bus lines, yet at the start of 2024, 80% of weekly passengers used only 20% of these lines. This means many lines serve a minority of passengers in a manner that requires examining the efficiency of their operation. The operating costs of these lines are high since most serve urban areas which consume many vehicle and driver hours. These data highlight the multiple roles of bus service as both a transportation tool and a social tool and underscore the need to examine how subsidies are managed so that they provide service with transportation value aimed at addressing congestion and assist in providing solutions that enable everyone to move efficiently. Possible solutions include on-demand transportation in low-demand areas, allocation of fleet size and frequency according to demand, and changing the existing incentive mechanism for public transport operators and passengers

Chart 7: Breakdown of the Transportation Development Budget (in NIS Billions), 2014 vs. 2024¹³



¹³ [Budget Proposal for Fiscal Years 2023–2024](#), Ministry of Transport, (2023)

Chart 8: Rate of Change in Public Transport Boardings (Boardings per 1,000 Capita per Day), 2024 vs. 2019, by Hour¹⁴ (In Red – Peak Hours)



Alongside the significant challenges in the transport sectors on land, Israel also faces challenges in the maritime and aviation sectors.

In maritime related sectors, the volume of cargo passing through Israel's ports is projected to approximately double by 2050. In the past decade, substantial port infrastructure has been constructed, significantly increasing port capacity. An organizational restructuring of the market has also increased competition in the sector, improving port efficiency through technological improvements and work methods. Development plans for building additional terminals and further increasing capacity exist at existing ports. It is necessary to plan for the longer term how to cope with growing demand after the utilization of current capacity, and with the potential regional freight haulage demand expected from the Abraham Accords and the IMEC (India Middle East Europe Economic Corridor) project.

An additional challenge in maritime transportation is building Israeli shipping capacity, whose economic cost is higher than foreign shipping but which holds strategic importance in several aspects: for creating a workforce capacity in maritime related professions, for operational and business continuity during wartime and emergencies, and for benefits such as higher maritime safety levels, better communication with the Israeli port economy and more.

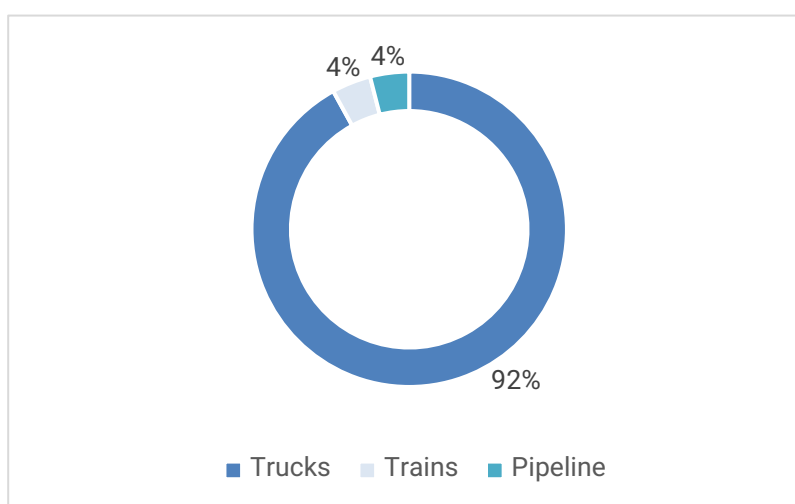
The mode of freight transport by land has a decisive impact on road congestion. The vast majority of freight (92%) is currently transported by trucks (Chart 9). Only a small portion (4%)

¹⁴ Data processing based on the [Public Transport Ticketing Clearinghouse Database](#), (2024)



of freight volume is transported by rail, with the rest being transported through pipelines. This rate is significantly lower than Europe, where trains carry approximately 20% of total freight. However, Israel's unique geographic structure as a small, hilly country, alongside operational and economic characteristics, incentivizes truck transport. It is necessary to examine how to maximize the potential of rail and pipeline transport, while also taking into account technological changes such as autonomous and electric trucks, demand management, and administrative steps.

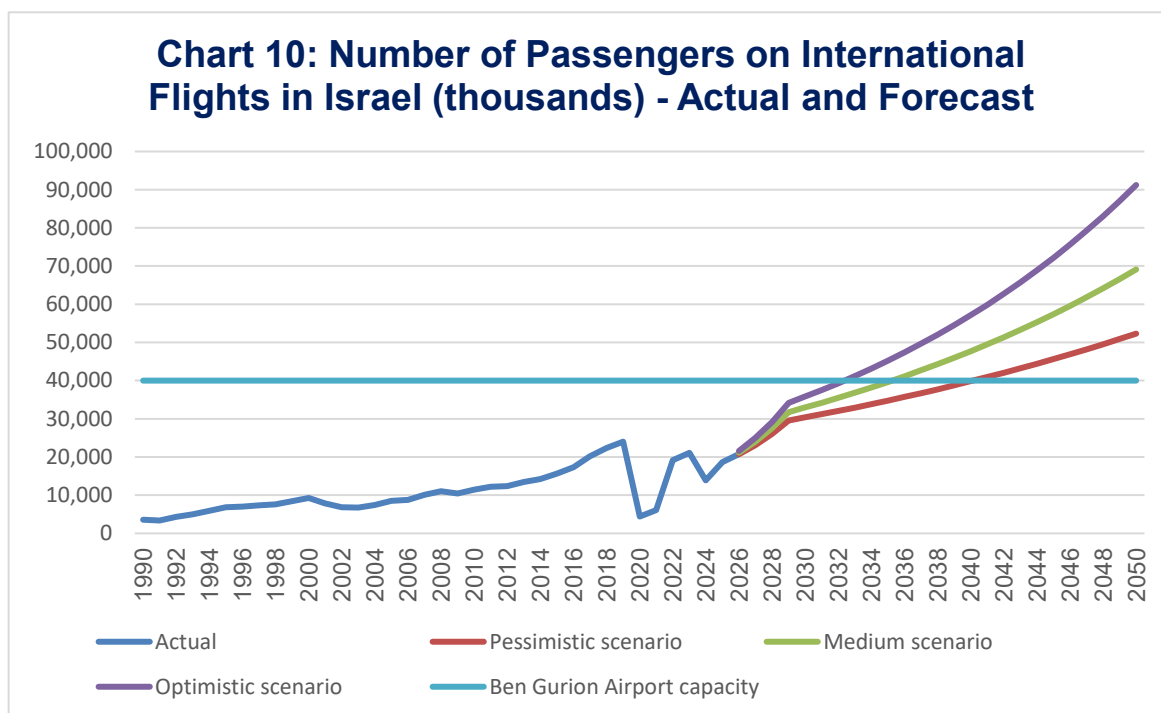
Chart 9: Distribution of Freight Transport in Israel, Ton-Kilometers, 2024¹⁵



In the aviation sector, projections indicate that it will not be possible to meet the expected passenger traffic volumes even before 2050, even after completing expansions at Ben Gurion Airport enabling it to accommodate 40 million passengers per year (Chart 10). According to estimates, the number of international flight passengers in 2050 is projected to range between 50 and 90 million, meaning additional international airports will need to be established in Israel.

¹⁵ Central Bureau of Statistics (CBS) data, (2024)

Chart 10: Number of Passengers on International Flights: 1990–2025 (Actual), 2026–2050 (Forecast), in Thousands¹⁶



¹⁶ Actual data obtained from the Central Bureau of Statistics (CBS). The forecast is based on three scenarios: pessimistic, optimistic, and medium. The underlying assumption is that passenger traffic will return to pre-COVID and pre-war trends within three years from today, after which passenger numbers will increase annually at a fixed rate according to each scenario. Numerous parameters affect passenger traffic; this forecast is indicative only, intended to illustrate orders of magnitude.



In addition to the challenges noted in transportation sector on land, sea, and air, global and national events such as COVID-19 and the Swords of Iron War have emphasized the importance of maintaining operational continuity in transportation systems. The importance of continuous transportation during emergencies has highlighted the need to build a transportation system capable of coping with shocks and extreme events – enabling movement of critical goods by land, air, and sea, as well as transport of soldiers and military systems alongside regular passenger movement. Thus, the absence of an Israeli merchant fleet of minimum required scope could affect Israel's ability to maintain stable and continuous trade during an emergency, particularly for critical resources essential to the economy and military. In the air, Israel's congested airspace must be efficiently shared between the operational needs of the Israeli Air Force and civilian flights, particularly given the growing needs of both sides both in times of emergency as well as routine operating conditions.

Extreme events affecting the transportation sector can arise from a variety of factors, such as wars, cyberattacks, earthquakes, mass-casualty incidents, pandemics, blackout scenarios, and climate change. The climate change anticipated in the coming decades is likely to affect Israel's transportation system. The frequency and intensity of extreme weather events are expected to rise, creating numerous negative impacts on the functioning of transportation systems, infrastructure, and road user behavior. These consequences necessitate proactive preparation and the creation of climate resilience and alternatives as early as the planning and development stages of transportation infrastructure and systems. Below are several potential impacts of extreme climate events on the transportation system. Other types of extreme events, as noted, may have additional impacts.

- **Extended travel times and service disruptions:** Climate related incidents such as floods, severe storms, and heat waves are expected to disrupt traffic flow, slow travel speeds (especially rail), significantly extend travel times, and cause service disruptions
- **High maintenance costs:** Increased infrastructure wear due to extreme heat and rainfall will raise maintenance and operating costs for roads, bridges, tunnels, railway tracks, drainage systems and other infrastructure
- **Extended infrastructure project timelines:** Extreme weather events are expected to cause construction delays and make it difficult to meet planned timetables
- **Blockage of transportation arteries:** Severe climate related incidents such as floods or powerful winter storms may block major transportation arteries, disrupting the movement of passengers and goods
- **Supply chain disruption:** Recurring disruptions to transportation infrastructure, ports,



and logistics will slow and damage the stability of national and international supply chains

- **Avoidance of public transport:** Extreme weather may cause the public to avoid public transport and micro-mobility, preferring private vehicles, thereby exacerbating congestion and pollution

Over a 25-year horizon leading up to 2050, technological advancements are expected to reshape both the global and local transportation landscape. Already in the past few decades, the transportation sector has been undergoing a technological revolution that is changing travel patterns and mobility options: over the past 25 years, new technologies have been integrated into the transportation system, such as advanced navigation systems (like Waze and GPS), micro-mobility solutions (e.g., electric scooters and bicycles), electric vehicles, and the MaaS (Mobility as a Service) model—which offers an alternative to the traditional vehicle ownership model. In the next 25 years, leading up to 2050, this trend of technological innovation is expected to intensify and accelerate, introducing advanced technologies that will fundamentally redesign the transportation system.

Several key trends can be identified today:

- **Autonomous Vehicles:** The introduction of autonomous vehicles is expected to bring about a profound change in the transportation system, reducing the number of traffic accidents caused by human error, shifting patterns of private vehicle use and ownership, and transforming public transport and ridesharing. These vehicles may enable more efficient utilization of travel time and road capacity, support the integration of public and private transportation, and influence infrastructure layout and the development of new residential areas further away from city centers. Conversely, there is a scenario in which the availability of autonomous vehicles will increase travel demand from both licensed drivers and individuals without a driver's license, which could significantly worsen road congestion. Preparations must be made for this scenario as well.
- **The Vertical Dimension in Low-Altitude Airspace:** The development of electric Vertical Takeoff and Landing (eVTOL) aircraft will create a new transportation domain that could alleviate congestion on ground infrastructure, particularly in dense urban areas. Utilizing the vertical dimension in low-altitude airspace has the potential to expand the capacity of existing passenger and cargo transit systems. However, this trend carries significant challenges regarding aviation safety, supporting infrastructure, air traffic management, environmental considerations (such as noise pollution), and more.
- **Smart Traffic Management:** The development of advanced, data-driven, real-time traffic



management systems will enable dynamic demand-capacity regulation, rapid adaptation to fluctuations in demand and unusual incidents, and a significant improvement in the efficiency of the entire transportation system. These technologies will help reduce travel times and alleviate congestion, serve as a supporting infrastructure for implementing future technologies such as autonomous vehicles, connected transportation, and demand-responsive mobility services, and enable a fast and effective response to unexpected events on the road network

- **The Energy Revolution and Ultra-Fast Charging:** The transition to synthetic fuels and low-emission propulsion systems is a cornerstone of reducing pollutant and greenhouse gas emissions from the transportation sector. Hydrogen and synthetic fuels are expected to play a significant role, particularly in sectors where electrification challenges are more complex—such as aviation, maritime shipping, and heavy freight transport. In the private and public vehicle sectors, rapid advancements in energy storage technologies are projected to continue, including advanced batteries (such as solid-state batteries) that could improve driving ranges, charging times, safety, and energy density. Another transition currently maturing in leading markets is the creation of an electric "refueling" experience: the deployment of supporting infrastructure and ultra-fast charging stations that will reduce wait times to just a few minutes—similar to traditional refueling, thus poised to become the dominant technology for land vehicles in the coming decades
- **Improvement of remote conferencing technology:** Creating a sense of face-to-face conferencing may lead to acceleration in remote work as a substitute for travel.

The accelerated integration of these technologies is expected to lead to a fundamental transformation of Israel's transportation system, creating new opportunities for sustainable development and improving service quality, safety, and the overall travel experience for road users. However, Israel's transportation sector is characterized by a significant gap between the technologies available globally and domestically, and the actual pace of their implementation. Currently, over 600 startups, technology companies, research institutes, and entrepreneurial initiatives operate in Israel, offering a wide range of smart mobility solutions¹⁷ - spanning data-driven command and control systems, communication infrastructure, alternative energy, micro-mobility, and future capabilities such as vertical takeoff aircraft, operational drones, and

¹⁷ Ministry of Economy and Industry, [Smart Mobility: How Israel is Driving the Future of Transportation](#). (2025) ¹



computing systems. Rather than narrowing, this gap is widening due to the rapid maturation of advanced technologies worldwide and the accelerated adoption of data-driven, communication-based, advanced energy, and multimodal solutions within international transportation systems.

Currently, the field of smart mobility and innovation is regulated to some extent from organizational, budgetary, and regulatory standpoints, but it does not receive the full attention and systemic implementation required, unlike various traditional transportation sectors such as physical infrastructure (roads, interchanges, lanes, and tunnels), public transport, licensing, and others.

The Ministry of Transport successfully promotes the evaluation, testing, and piloting of innovative technologies and smart mobility—such as drones, smart traffic management, V2X communication, and more. However, the transition to broad, systemic implementation is not progressing at the necessary pace. To maximize the benefits of these pilots and proofs of concept, the Ministry must strive to further refine its systemic implementation mechanisms. The goal is to translate successful findings from the early stages into widespread, rapid deployment in accordance with the highest standards. Strengthening this component, alongside refining the regulatory framework, will provide the necessary leap forward to bridge the gap between Israel's status as a global leader in technology development and its capacity for systemic technology implementation.

The challenges facing the transportation sector in the coming decades are significant. The response to these challenges, as well as to the trends expected to influence the coming decades, is detailed in Part II, Chapter 2.1, which outlines the comprehensive strategic plan, including the transportation vision for 2050, high-level goals, sub-objectives, and indicators for their implementation. This response is further elaborated in Chapter 2.2, which presents the budgetary vectors that will shift due to the need to address the aforementioned challenges. Additionally, Part III of the plan introduces a multi-year program to develop further strategic plans and policy papers aimed at deepening and expanding courses of action to tackle the challenges outlined in this chapter.

1.3. International Review

As part of formulating the National Transportation Strategy, an international review was conducted to learn how countries with characteristics similar to those of Israel have formulated their national transportation strategies and what goals and indicators they chose in long-term



planning. The review included five leading transportation countries: Austria, Singapore, Georgia (USA), the Netherlands, and Finland. These countries were selected for their excellence in transportation and shared characteristics with Israel such as population size, population density, urbanization rate, and vehicle ownership rate.

It should be noted that alongside these shared characteristics, Israel also possesses unique attributes, such as a high rate of natural population growth, a long and narrow geographical structure, and its status as an "economic island." Consequently, the strategic plans of other countries should not be adopted precisely as they are, but rather with the necessary adjustments.

In addition to this review, the strategic plan also drew goals and courses of action from a review conducted as part of the National Strategic Plan for the Development of the National Road Network - specifically, the "Network 2050 Summary Report (2021)" - which covered eight countries (England, Germany, the Netherlands, Australia, New Zealand, Canada, the United States, and South Africa) and analyzed the United Nations report on sustainable transport¹⁸.

An analysis of the core objectives identified in the international review - conducted as part of the National Road Network Plan - reveals that the surveyed countries share common goals with the strategic plan detailed in this document, such as accessibility, sustainability, safety, freight movement, and economic development. Additionally, the primary indicators in the "Road Network Plan 2050" plan included: total delay and speed indicators relative to travel time (within the domain of accessibility and road congestion); the number of fatalities, serious injuries, and severe accidents (within the domain of safety); CO2 emissions, compliance with air quality standards, energy consumption, and noise levels (within the domain of sustainability); and truck flow efficiency indicators (within the domain of freight).

The selection of these countries involved several key stages: first, a mapping of globally advanced countries and metropolitan areas in the field of transportation was conducted, alongside interviews with transportation experts to deepen the understanding of various strategic plans worldwide. From the identified countries and metropolitan areas, five outstanding examples were selected that had implemented strategic plans utilizing a methodology similar to the one defined in this strategic plan (Part III of this document). In the next stage, the common characteristics of these countries and their relevance to Israel's unique challenges were analyzed. Finally, the specific plan components - vision, goals, and indicators - that were found to be highly relevant to Israel were isolated.

¹⁸ Ministry of Transport, [National Road Network Strategic Development Plan 2050](#) (2022); Ministry of Finance and Ministry of Transport, [Network 2050 Summary Report \(2021\)](#); UN Department of Economic and Social Affairs, [Sustainable Transport, Sustainable Development](#) (2021)



Analysis of the plans revealed that the reviewed countries work to advance four central goals :

1. **Interoperability and Accessibility:** The core strategy focused on creating fast and efficient transfers between different modes of transportation, with the aim of ensuring seamless and easy mobility for the public. Key courses of action included expanding walking, cycling, and public transport routes (WCR – Walk, Cycle, Ride), as well as establishing multimodal transportation hubs that facilitate connectivity and convenient transfers between various modes of transport. Within the domain of accessibility, the prominent indicators for measuring improvement were travel times, and in some plans, modal split targets and transportation demand management (TDM) goals.
2. **Sustainability:** The surveyed countries focused on incentives and environmental regulation. Key courses of action included transitioning to low-carbon transportation, placing restrictions on the licensing of polluting vehicles, easing operations for electric vehicles—such as issuing new licenses exclusively to zero-emission taxis, rental cars, and shared vehicles—simplifying regulations for installing residential EV charging stations, and providing financial incentives for projects based on environmental criteria.
3. **Economic Development:** The primary strategy identified was focusing on easing the transportation burden on suppliers and businesses. The countries emphasized improving transportation infrastructure, adopting new regulations aimed at enhancing transport safety and efficiency, and optimizing supply chains to ensure the most efficient allocation of resources possible.
4. **Increasing the Capacity of the Existing Road Network:** The core strategy centered on harnessing technology, planning tools, and policy measures to achieve transportation objectives. Key courses of action in this area include centralized traffic management utilizing data and technology.

The two central objectives at the heart of most plans were improving accessibility and maintaining sustainability.



Below are the key elements of the various plans:

Austria¹⁹

The primary goal of the Austrian transportation plan is to meet the transport climate target set under the Paris Agreement - transitioning to a carbon-neutral transportation sector by 2040. To this end, a comprehensive action plan for 2030 was formulated in 2021, incorporating a combination of regulation, economic incentives, smart urban planning, and the adoption of advanced technologies. The Austrian plan is built upon two central pillars of action:

1. **Reducing Transportation Demand:** Austria aims to maintain current annual passenger volumes until 2030, despite projected population growth. To achieve this, the "15-minute city" concept is being promoted, which involves planning areas such that every resident can access essential services on foot or by bicycle within fifteen minutes, serving as an alternative to motorized transport.
2. **Mobility via Green Transportation:** Austria has set a modal split target of 47% of all trips to be made by walking, cycling, and public transport, alongside a target of 60% of total travel to be conducted through sustainable modes and shared mobility (WCR). In the freight sector, the target is for 40% of goods to be transported by rail. Furthermore, milestones have been established to phase out polluting vehicles, beginning with a ban on the sale of emitting passenger cars and motorcycles by 2030, and completing the transition to zero-emission light commercial vehicles for freight by 2035.

Singapore²⁰

Singapore has formulated a strategic transportation plan for 2040, whose primary objectives are creating a safe and healthy transportation system, promoting equity and full accessibility for people with disabilities, and achieving a target maximum travel time of 20 minutes to the nearest neighborhood hub and 45 minutes to the city center. The plan aims to address exceptionally high population density and ensure high-quality, equitable mobility for the entire population, while taking into account the country's spatial constraints.

To achieve these goals, Singapore is employing a combination of planning, technological, and social solutions. In order to reduce travel times, the country is prioritizing walking, cycling, and

¹⁹ Federal Ministry for Innovation, Mobility and Infrastructure, Republic of Austria, [Austria's 2030 Mobility Master Plan](#) (2021)

²⁰ Land Transport Authority, [Land Transport Master Plan 2040](#) (2019)



public transport (WCR), encouraging mixed-use land development, and investing in dynamic mobility services and autonomous buses. In order to ensure equity, efforts are focused on making public spaces accessible to people with disabilities—through the installation of ramps, elevators, and accessible stations, as well as training programs for public transport personnel. In addition, objectives for sustainability, healthy lifestyles, and road safety are being promoted through the transition to clean vehicles and the tightening of safety standards.

Georgia (USA)²¹

The State of Georgia has selected the promotion of economic competitiveness as the primary goal of its transportation policy. This goal has been translated into four strategic pillars of action: strengthening business growth, improving connectivity between rural and urban areas, enhancing transportation resilience, and meeting economic targets through responsible fiscal management. The plan focuses on several key areas: strengthening freight systems and connectivity for small businesses while positioning Atlanta as a logistics hub through advanced loading and unloading technologies; promoting collaborations with the private sector; investing in infrastructure that connects rural areas to employment, education, and services; and ensuring transportation resilience, with an emphasis on improving road safety, maintaining continuous operation of the transportation system during emergencies, and mitigating commercial and safety risks

The Netherlands²²

The surveyed plan is a strategic plan for public transport, aimed at addressing the rising demand for transportation and establishing public transport as the preferred alternative nationwide. This plan strives to expand service, ensure a transition to zero-emission vehicles, enhance the passenger experience, and lead in transportation innovation and safety.

To achieve these goals, the Netherlands is operating in three main directions:

First, it is strengthening the public transport network at both the national and regional levels, including expanding capacity in urban areas, connecting peripheral areas to employment hubs, and developing high-speed rail between metropolitan centers.

Second, it promotes seamless and accessible door-to-door travel through demand-responsive transport, collecting and analyzing real-time transportation data, and establishing multimodal

²¹ Georgia Department of Transportation (2021) . [Statewide Strategic Transportation Plan 2050](#)

²² Government of the Netherlands, [Public Transport 2040](#) (2019)



transportation hubs that facilitate easy transfers between different modes of transport.

Finally, emphasis is placed on operating quiet, safe, and emission-free public transport, integrated with compatible urban planning, to deliver high-quality service in densely populated spaces and achieve zero-emission public transport by 2030.

Finland²³

Finland aims to promote a transportation system that balances national connectivity, environmental sustainability, and economic efficiency. The national strategic plan emphasizes meeting the transportation needs of residents and businesses in both urban and peripheral areas, while upholding values of equity, accessibility, and a clean environment.

To achieve these goals, Finland is operating across several complementary areas. In terms of connectivity, it is developing demand-responsive transport services and improving commercial transport infrastructure. Regarding the environmental aspect, the country encourages the selection of low-emission transportation through integrated land-use and transport planning, while utilizing agreements between the national government and local authorities to implement green solutions. To improve economic efficiency, emphasis is placed on the smart management of existing infrastructure, prioritizing investments based on sustainability and connectivity values, and utilizing technology for maintenance and traffic management.

The international review conducted as part of the National Strategic Plan for the Development of the National Road Network—the "Network 2050 Summary Report (2021)"—similarly revealed that the transportation plans in the surveyed countries and metropolitan areas chose to emphasize four objectives similar to those of the plans examined in the comparative study: accessibility, sustainability, economic development, and safety.

²³ [The National Transport System Plan for 2021-2032](#). (2021) '

1.4. Analysis of Major Transportation Plans in Israel and Related National Plans

As part of constructing the comprehensive strategic plan through 2050, a mapping of 14 major transportation plans formulated over the past 15 years was conducted (Table 1). The mapping included 3 core plans addressing broad, cross-cutting transportation issues: the Strategic Plan for the Development of Public Transport (2012)²⁴, the Master Plan for Transportation in Israel by Land, Air, and Sea (2014)²⁵ and the Strategic Plan for the Development of the National Road Network 2050 (2021)²⁶. Additionally, 11 supporting plans were mapped, which focused on specific topics within land transportation or on transportation plans for distinct geographic regions. In the aviation and maritime sectors, there are currently no strategic plans promoting objectives and courses of action.

The purpose of this mapping was to examine the subjects addressed by the various plans, the objectives they chose to promote, and the primary courses of action evaluated. Furthermore, the mapping addressed the question of integration between the various plans by examining whether there are uniform objectives promoted across all plans, whether consistent indicators exist between them, and whether the sub-objectives or courses of action effectively address the goals the plans set out to promote.

Table 1: List of strategy plans that were examined

Plan	Year Published
Strategic Plan for Public Transport Development	2012
Master Plan for Transportation in Israel: Land, Air, and Sea	2014
Strategic Plan for Public Transport Development in Haifa	2015
Strategic Plan for Railway Tracks	2017
Master plan for Public Transport to Arab Communities	2019
Road Safety Plan 30 to 50	2020
Mass Transit and Public Transport Plan for Ashkelon Sub-District 2040	2020
National Strategic Plan for the Transport of Freight and Cargo	2021
Strategic Plan for National Road Network Development 2050	2021

²⁴ Ministry of Transport, [Strategic Plan for Public Transport Development](#) (2012)

²⁵ Ministry of Transport, [Master Plan for Transportation in Israel: Land, Air, and Sea](#) (2014)

²⁶ Ministry of Transport, [Strategic Plan for National Road Network Development 2050](#) (2021).

Strategic Plan for National Road Network Development 2030	2022
Mass Transit and Public Transport Plan for Greater Netanya-Hadera 2050	2022
National Plan for Parking	2023
Master Plan for Walkability	2024
Strategic Plan for Mass Transit Development in the Jerusalem Metropolitan Area 2050	2024

Below is a detailed breakdown of the primary objectives that each of the core plans sought to promote:

Strategic Plan for the Development of Public Transport²⁷

The primary objective of the public transport plan formulated in 2012 was to construct a long-term strategic planning framework to address population growth in Israel. An additional goal of the plan was to promote public transport that is reliable, fast, frequent, and characterized by a high quality of service. Within this framework, the plan established a series of quantitative targets for the target year 2030, based on the service characteristics of public transport in developed countries and metropolitan areas with well-developed transit systems. The plan categorized these targets into several levels: strategic targets for public transport development (Table 2), intercity public transport development, metropolitan public transport development, urban service development, and public transport development in peripheral and rural areas.

Table 2: Strategic Targets for Public Transport – 2030

Category	2030 Target
Level of Service	100 km of public transport per resident - Average speed of 25 km/h
Level of Usage	250 boardings on public transport per resident per year 40% of trips made by public transport
Level of Investment	50,000 NIS investment per resident 150 meters of dedicated infrastructure per 1,000 residents

These targets were also tailored to the metropolitan level, with distinct targets defined for each metropolitan area. In addition, population and employer coverage targets within proximity to

²⁷ Ministry of Transport, [Strategic Plan for Public Transport Development](#) (2012)



mass transit stations (at 300 and 600 meters) were established for the metropolitan areas, along with commercial speed targets to the metropolitan core. Furthermore, while the plan formulated various courses of action, these were not linked to the defined targets and lacked prioritization among themselves. Nevertheless, this plan marked the beginning of a shift in the sub-objectives of the Israeli transportation sector, moving the focus from road paving toward public transport and mass transit systems.

Master Plan for Transportation in Israel by Land, Air, and Sea²⁸

The Master Plan for Transportation formulated in 2014 had three primary high-level goals:

1. Developing Israel's spatial landscape in a manner that enables maximum economic growth while ensuring social equity and striving for quality of life and environmental protection (NOP 35).
2. Improving passenger welfare and ensuring fast, comfortable, and safe travel.
3. Developing the freight transport system by land, sea, and air, and developing suitable cargo ports/terminals to meet demands and improve service efficiency.

Based on these goals, several sub-objectives were established:

1. Developing accessibility, efficiency, and equity in land transportation.
2. Encouraging the implementation of Intelligent Transportation Systems (ITS) and utilizing advanced technologies for a more efficient and safer use of transportation systems.
3. Directing transportation development in accordance with sustainable development principles.
4. Developing international and domestic aviation infrastructure.
5. Integrating the port system into national economic development while ensuring sufficient capacity.
6. Continuing to improve transportation safety.

For each of these sub-objectives, courses of action were established to promote the goals. Additionally, the plan proposed 17 quantitative indicators to measure various transportation aspects. However, the plan avoided directly linking these indicators to the sub-objectives and the various courses of action. The Comprehensive Strategic Transportation Plan for 2050 aims to establish this very connectivity, as detailed further in this document.

²⁸ Ministry of Transport, *Master Plan for Transportation in Israel: Land, Air, and Sea* (2014)



Strategic Plan for the Development of the National Road Network 2050²⁹

The National Road Network Plan for 2050, developed in 2021, is currently the most up-to-date and central plan for land transportation development in Israel. It constitutes a significant plan for the development of land transportation in Israel through the year 2050. The plan was built considering the following guiding transportation vision:

"The strategic plan will provide a level of accessibility and mobility within a balanced, multimodal transportation system that supports quality of life and the holistic, equitable development of the country's society and economy, with an emphasis on safety and the environment."

In light of this, eight objectives were selected for the plan:

1. **Accessibility** – Ensuring good accessibility and mobility for the entire population in an efficient and reliable manner.
2. **Safety** – Striving for zero fatalities while improving safety at every stage of network development, with an emphasis on forgiving infrastructure that encourages safe travel.
3. **Society** – Ensuring good accessibility for all localities and sectors, with an emphasis on equity.
4. **Supporting Housing and Employment** – Supporting and enhancing the development and functioning of urban centers in accordance with the Strategic Plan for Housing and Employment.
5. **Sustainability and Environment** – Developing mobility in a sustainable and land-resource-efficient manner, ensuring energy efficiency across the transportation network, and reducing air and noise pollution.
6. **Growth and Economy** – Supporting the economic growth of the market while ensuring good and efficient accessibility to employment areas, securing freight movement, and providing access to essential facilities.
7. **Quality of Life** – Ensuring the passenger, as a customer of the system, enjoys a variety of choices and a high level of service.
8. **Flexibility** – Flexible planning that takes into account conditions of uncertainty regarding lifestyle habits and technology.

²⁹ Ministry of Transport, [Strategic Plan for National Road Network Development 2050](#) (2021)



Additionally, courses of action and nine indicators, including targets for 2050, were presented. An analysis of the plan reveals that it possesses a hierarchical structure consisting of a vision, objectives, targets, and courses of action. The Comprehensive Strategic Plan for 2050, aims to synchronize between the vision, objectives, and outcome indicators so that all policy makers within the transportation system understand which targets fulfill the established objectives. Furthermore, this document expands on other high-level goals, such as sustainability or safety, and their corresponding indicators. Finally, this plan also seeks to encompass not only land transportation, but maritime and aviation sectors as well.

An overall analysis of the 14 plans, including both the core plans and the additional plans, reveals that they primarily address objectives related to accessibility. Only a limited portion of the plans also seek to promote objectives related to sustainability, economic development, and safety (Table 3).

Table 3: Main Goals in Major Transportation Plans Since 2012



Plan	Accessibility	Sustainability	Economic Development	Safety
Strategic Plan for Public Transport Development	■			
Master Plan for Transportation in Israel: Land, Air, and Sea	■	■	■	■
Strategic Plan for Public Transport Development in Haifa	■			
Strategic Plan for Railway Tracks	■			
Master plan for Public Transport to Arab Communities	■			
Road Safety Plan 30 to 50	■			
Mass Transit and Public Transport Plan for Ashkelon Sub-District 2040	■			
National Strategic Plan for the Transport of Freight and Cargo			■	
Strategic Plan for National Road Network Development 2050	■	■	■	
Strategic Plan for National Road Network Development 2030	■	■	■	
Mass Transit and Public Transport Plan for Greater Netanya-Hadera 2050	■			
National Plan for Parking	■			
Master Plan for Walkability	■			
Strategic Plan for Mass Transit Development in the Jerusalem Metropolitan Area 2050	■			
Budgeting and Financial Investment in Public Transport	■			

Additionally, it was noted that these plans contain numerous outcome indicators, targets, and courses of action; specifically, 50 outcome indicators, 27 targets, and 75 courses of action were

identified. The majority of the indicators and courses of action arose within the fields of accessibility and safety (Table 4)

Table 4: Outcome Indicators, Targets, and Courses of Action from Major Transport Plans Since 2012

	Accessibility	Sustainability	Economic Development	Safety
Outcome Indicators	27	5	2	16
Targets	20	2	3	2
Courses of Action	29	0	8	38

In conclusion, the Comprehensive Strategic Transportation Plan for 2050 integrates the 14 strategic works reviewed above, and for the first time, fully integrates vision, high-level goals, and indicators across all transportation sectors, identifies the necessary actions required in the core plans, and proposes an operational, multi-year work plan to execute these actions.

In addition to the transportation plans formulated over the past 15 years, there are three national strategic plans influence and that intersect with transportation planning in Israel: the Strategic Plan for Spatial Planning of the Planning Administration, the Transition to a Prosperous Low-Emission Economy, and the Strategic Plan for Housing. Below is a summary of these works, along with the implications to be derived from them for the multi-year plan moving forward.

Strategic Plan for Spatial Planning ³⁰

The Strategic Plan for Spatial Planning of the Planning Administration (2024) is a conceptual plan that outlines a long-term vision for the country's physical-spatial planning, while addressing local and global trends such as population growth, climate change, and technological developments. The plan divides the State of Israel into 28 functional regions designed to ensure that all residents within a given functional region have access to all services within that region within 30 minutes. In addition, the plan emphasizes the importance of preserving open spaces and the continuity of ecological corridors, which directly impacts the options for deploying new transportation infrastructure.

³⁰ Planning Administration, [The Strategic Plan for Spatial Planning](#) (2024)



The plan includes 7 primary objectives:

1. Directing the majority of development and promoting supporting infrastructure for urban localities and the four metropolitan areas, alongside emphasizing the strengthening of the country's northern and southern regions, and preserving the diversity and character of localities across both urban and rural spaces.
2. Enhancing urbanism and accelerating the renewal of urban fabrics, alongside preparing for climate change.
3. Promoting regional planning and development that supports spatial collaboration and addresses the needs of the local population.
4. Promoting socio-economic resilience and creating diverse opportunities to reduce disparities, while paying attention to different population types and multi-generational needs.
5. Preserving resources and the functioning and continuity of open spaces, agricultural areas, heritage, landscape, and ecosystems, while addressing climate change.
6. Providing infrastructure solutions for the entire population, alongside ensuring functional continuity and optimizing the use of land and resources.
7. Strengthening Israel's comparative advantages through international cooperation within the region.

Transition to a Prosperous Low-Emission Economy by 2050 ³¹

The document, published in 2020, outlines a strategic plan to transition the transportation sector to low-carbon by 2050. This includes a vision, targets, and courses of action to achieve net-zero greenhouse gas emissions, with a particular focus on increasing the utilization of WCR (Table 5). The plan encompasses investments in advanced transportation infrastructure, service improvements, and policy measures to encourage the use of sustainable modes of transit. Achieving these targets will require substantial investments in charging infrastructure, regulatory adjustments, and long-term planning for both public and private transportation infrastructure.

The plan established several principles for low-emission and sustainable transportation:

1. Promoting Public Transport and Strategic Planning – Elevating the status of public transport as a national and strategic transportation solution for socio-economic growth,

³¹ Ministry of Environmental Protection, *Transition to a Low-Emission, Prosperous Economy by 2050* (2021)



while planning and developing a holistic and integrated network for a 20-year horizon, alongside policies to curb private vehicle usage.

2. Demand Management and Regulation – Implementing economic incentives to encourage public transport and reduce the use of private vehicles and trucks in cities.
3. Promoting Sustainable Transportation – Encouraging sustainable mobility, including walkable spaces, integrated bicycle lanes, and public transport.
4. Technological Advancement – Integrating advanced technologies such as electric buses, shared mobility services, and integrated systems.
5. Reducing the Need for Mobility – Integrating transportation and land-use planning, alongside promoting telecommuting (working from home) and flexible working hours.

Table 5: Targets of the Low-Emission, Prosperous Economy Plan by 2050



Target	Indicator	2018	2030 Target	
Zero-Emission Vehicles	Percentage of zero-emission vehicles out of total vehicle fleet	0%	25% for light-duty vehicles under 3.5 tons and buses, 10% for heavy trucks	100%
Energy Efficiency	Final transport energy consumption per capita per year (MWh/capita)	7.7	6-7	2-3
Reduction in Private Vehicle Mileage	Maximum private vehicle mileage	~ 48 billion km, 5.3K km per capita per year	~55 billion km (~15% reduction relative to BAU scenario), 5.0K km per capita per year	~70 billion km (~25% reduction relative to BAU scenario), 4.2K km per capita per year
Freight Efficiency	Maximum mileage for trucks and heavy vehicles	9 billion km	~9.5 billion km (~15% reduction relative to BAU scenario)	~11 billion km (~25% reduction relative to BAU scenario)
Increasing Sustainable Transport Mode Share	Percentage of trips made by WCR (Walk, Cycling, Ride) out of total trips	37%	50%	70%
High Accessibility	Percentage of population able to reach the nearest metropolitan center within 45 minutes	47%	60%	70%
Reducing Motorization Rate	Total private vehicles in Israel (in millions)	3.0	Upwards of 3.7 million vehicles	Upwards of 5.0 million vehicles



The Strategic Plan for Housing³²

The Strategic Plan for Housing was formulated by the National Economic Council in 2017 and has been updated over the years. The plan established targets for the construction of 1.5 million new housing units by the year 2040, addressing the growing housing needs of the population, optimal geographic distribution, shortening the duration of the planning process, and increasing urban renewal. National policy includes the densification of city centers and expanding construction in Jerusalem and the North, alongside establishing new cities in the South. These developments are expected to significantly impact transportation demand patterns and will require a systemic preparation on the part of the Ministry of Transport.

The aforementioned plans have been identified as having significant potential implications for the transportation sector in the coming decades. Consequently, there is a need to align these with the objectives of the Comprehensive Strategic Transportation Plan for 2050, as presented below. It will be necessary to examine key issues, such as whether the Ministry of Transport's road and public transport plans support the national structure of 28 functional regions, whether the emission reduction targets align with the comprehensive transportation plan's indicators regarding accessibility and sustainability, and whether the transportation system can support the demand generated by the housing policy. Implementing these alignments is part of the operational multi-year work plan detailed further in this document.

³² National Economic Council, [Strategic Plan for Housing 2017–2040](#) (2017)

1.5. Strategic Planning Challenges in the Context of 2050

As part of the process conducted between 2024–2025, a mapping of the current state of strategic planning in Israel's transportation sector was performed. This was aimed at identifying the key challenges requiring resolution in the formulation of the Comprehensive Strategic Plan for 2050. In addition to the analysis of the plans mentioned above, interviews were conducted with officials in the Ministry of Transport and its operational agencies, and a strategic thinking session was held with the participation of numerous stakeholders from the transportation sector to identify existing gaps.

From this process, several key challenges emerged that affect strategic planning in the transportation sector:

1. **Decentralization of authority** currently exists between the Ministry of Transport's and its operational agencies. As a result, certain issues at the core of the Ministry's operations lack comprehensive management and a strategic vision. Consequently, core areas with a significant scope of activity and requiring specialized expertise are managed without a clear lead at the Ministerial level. For example, in the maritime transport sector, there is no agreed-upon strategic plan; the field of data is fragmented across various departments within the Ministry and its operational agencies; and in the aviation sector, there is currently no strategic plan nor a responsible entity at the Ministry to monitor its formulation.

► **Proposed solutions to this challenge** are presented in Section 2.4, which covers key organizational recommendations, and in Part III, which outlines the recommendation for formulating a comprehensive organizational plan as part of the multi-year plan.

2. **An integration challenge exists across the various levels of management:**

- **National Strategy** – There is limited joint long-term planning between the Ministry of Transport and other bodies (such as the Planning Administration, the Ministry of Construction and Housing, the Ministry of Energy, and the Ministry of Environmental Protection) that are responsible for strategic plans impacting transportation in Israel. Consequently, there is no alignment in objectives, spatial planning units (districts, functional regions, etc.), targets, and outcome indicators. As noted above, there are three key plans influencing transportation planning in Israel: The Spatial Plan of the



Planning Administration, the Plan for a Prosperous Low-Emission Economy of the Ministry of Environmental Protection, and the Strategic Plan for Housing of the National Economic Council. The Ministry of Transport and the relevant bodies must maintain ongoing integration in both planning and implementation.

- **Strategic Planning (Within the Ministry):**

1. A gap currently exists in establishing a unified language for the Ministry's strategic planning and in aligning toward shared objectives and joint measurement. Some plans include clear objectives and targets, while others focus primarily on courses of action and projects. Similarly, some plans incorporate success indicators, whereas others lack indicators entirely. This lack of uniformity makes it difficult to formulate a comprehensive overview and coordinate between the various plans.
2. Strategic planning is not fully centralized within the Ministry of Transport. Portions of the planning and strategy reside within operational agencies and government - owned executing companies. Policy-making is the role and responsibility of the Ministry of Transport, whereas the role and responsibility of the operational agencies and government companies is to implement the Ministry's policy.

► **Proposed solutions to this challenge** are presented in Section 2.4, which covers key organizational recommendations, and in Part III, which outlines the recommendation for formulating a comprehensive organizational plan as part of the multi-year plan.

- **Planning and Execution of Infrastructure Projects** – The Ministry of Transport invests immense efforts in advancing the transportation sector and promotes hundreds of projects across various areas of activity. This massive volume of activity makes it challenging to maintain a comprehensive, birds-eye view of the progress status of the various transportation projects. For instance, the "Shita" system, which consolidates project status data from all infrastructure companies, enables project-level monitoring but fails to generate an overall picture of project progress against schedules, budgets, and key execution bottlenecks. Furthermore, the lack of systemic simulation tools makes it difficult to detect inter-agency planning conflicts in their early stages. Additionally, partial coordination over the years among the various



entities in the transportation ecosystem—including infrastructure companies, planners, executing bodies, local authorities, and utility providers—has led, and continues to lead, to cumulative delays of many years in the construction and operation of major transportation projects. These delays manifest in ongoing damage to system efficiency, worsening congestion, and heavy economic costs. Estimates point to a cumulative loss of tens of billions of shekels to the economy due to delays in implementing projects designed to improve mobility, reduce congestion, and optimize nationwide transit. Prolonged execution periods and a high concentration of simultaneous construction sites result in a perpetual state of capacity deficit.

Beyond these challenges, there is a clear need for an authority to lead these issues horizontally and resolve disputes at all levels—such as conflicts between the objectives of national plans, disputes between executing bodies and local government, or with utility companies (e.g., the Israel Electric Corporation, telecommunications companies) during transportation projects.

► **Proposed solutions to this challenge** are presented in Section 2.4, which covers key organizational recommendations, and in Section 2.3, which addresses principles for integrated planning.

3. **There is currently no regulated and systematic prioritization** of the Ministry's courses of action and of the overall projects executed in the transportation sector based on clear criteria. The various strategies led by the Ministry are not always translated into prioritization across all entities while taking into account budgetary aspects and all existing plans and constraints. Cost-benefit analyses are currently conducted for specific sectors or specific projects often without reference to a comprehensive prioritization that also considers broader transportation factors or situations where there is a conflict between different objectives, such as economics, safety, and the environment.

► **Proposed solutions to this challenge** are detailed in Part III of the multi-year plan, which includes drafting a policy paper on the economic principles of transportation investments (prioritization and economic development).



4. **The high volume of activity across all sectors makes it difficult to monitor and control the strategic planning** of the Ministry and its various departments, as well as the implementation of various transportation plans and projects. This challenge stems from budgetary and legal gaps that make it difficult for the Ministry of Transport, as a central government authority, to conduct oversight on the progress of these plans.

► **Proposed solutions to this challenge** are presented in Section 2.4, which covers key organizational recommendations, and in Part III, which outlines the recommendation for formulating a comprehensive organizational plan as part of the multi-year plan.

5. The Ministry does utilize technology, leveraging the extensive knowledge within the Israeli innovation ecosystem. Nevertheless, **a gap remains in the Ministry's preparedness for the holistic integration of technological advancements** in the transportation sector with respect to regulation, deployment infrastructure, and cybersecurity.
- A gap exists between the latest innovations in the market and the Ministry of Transport's response to them in terms of regulation, infrastructure preparedness, and deployment.
 - Furthermore, the pace of technological innovation in the market is rapid, whereas the Ministry's response rate in evaluating, regulating, and deploying these innovations—as well as in infrastructure preparedness—is, at times, naturally slower. This creates a perpetual gap.

► **Proposed solutions to this challenge** are presented in Section 2.4, which covers key organizational recommendations, and in Part III, which outlines the recommendation for formulating a strategic technology plan as part of the multi-year plan.

6. **A gap exists in the Ministry's preparedness to ensure continuity of operations**, which could be compromised by climate change, wars, earthquakes, mass-casualty events, and other disasters. Addressing this requires the investment of managerial resources, the development of coping strategies, and the integration of specific requirements into transportation projects



to ensure resilience and continuity during crisis events.

- ▶ **Proposed solutions to this challenge** are presented in Part III, which outlines the recommendation for formulating a strategic plan on emergency readiness and operational continuity, as part of the multi-year plan.

7. **There are several strategic transportation issues within the land, air, and sea sectors that currently lack strategic plans or policy papers that require drafting.**

- ▶ **This issue is addressed** in Part III, which focuses on the multi-year plan for drafting new strategic plans and updating existing ones.

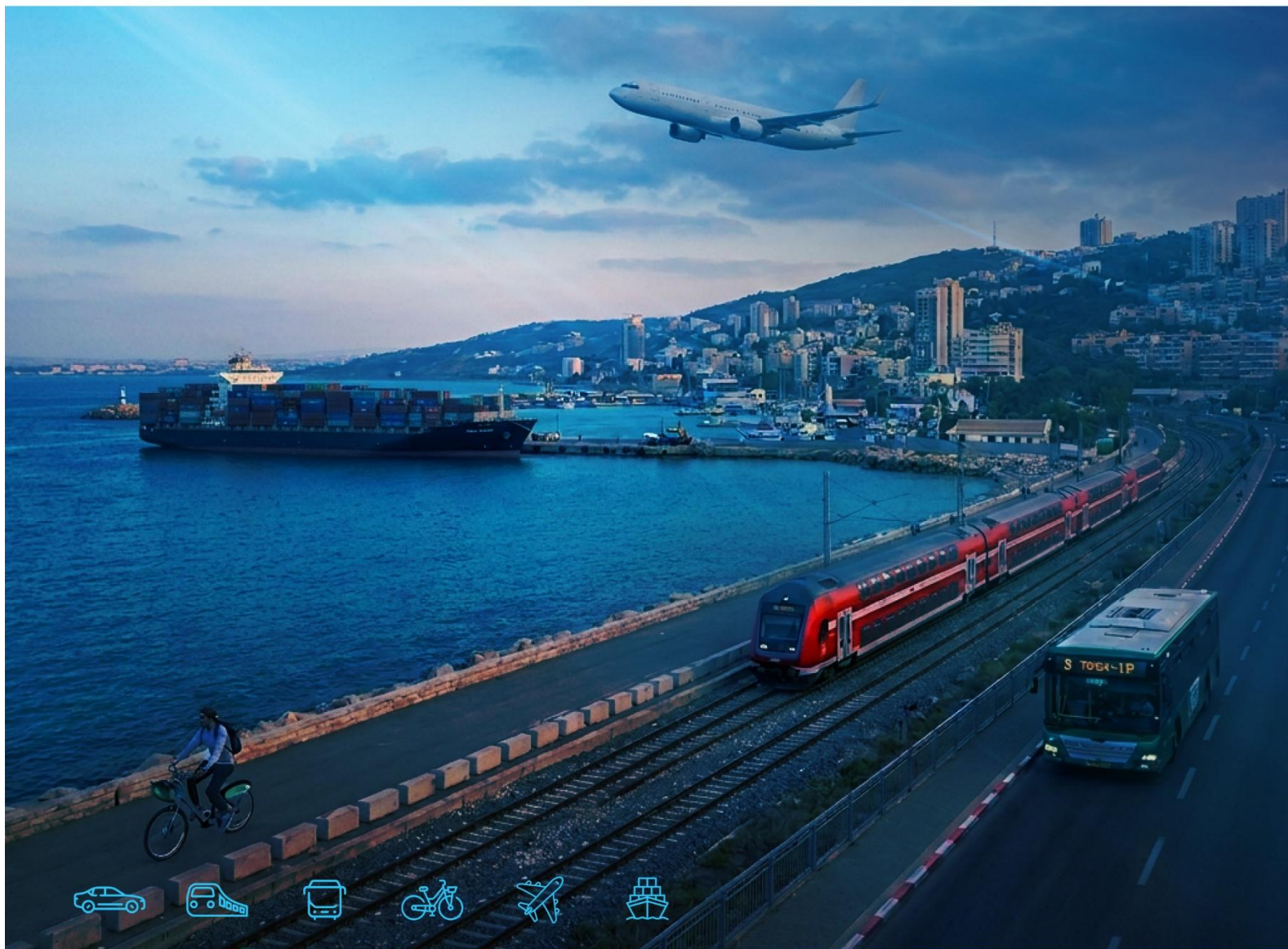
In conclusion, the Ministry of Transport is leading unprecedented activity and investment across various transportation sectors. However, numerous challenges remain within the Israeli economy and the transportation market, alongside existing gaps in strategic planning.

In response to these challenges, the "Comprehensive Transportation Strategy 2050" proposes a methodical and structured strategic plan. For the first time, this plan connects vision, high-level goals, objectives, and key performance indicators (KPIs) to serve as the foundation for a shared, integrated language across all transportation entities in Israel. This plan is detailed in the following chapter.



Part II

Roadmap for Implementing the Strategic Framework



2.1. Vision, Goals, Outcome Indicators, and Courses of Action

Vision for 2050

"A transportation system that enables accessibility, connectivity, and interoperability for all societal and economic needs, with high reliability and a high level of service, while maintaining sustainability, safety, and operational continuity on land, at sea, and in the air."

Goals of The Strategic Plan:

- 1 | **Accessibility:** Ensuring accessibility, connectivity, and interoperability for the entire population in an efficient and reliable manner, at a high level of service.
- 2 | **Sustainability:** Developing and managing a sustainable transportation system by protecting natural resources and the environment, reducing emissions, air pollution, and noise, and promoting efficient energy consumption across the transportation sector.
- 3 | **Economic Development:** Promoting a transportation system that drives economic productivity and employment.
- 4 | **Safety:** Ensuring safe movement across all transportation systems and reducing road accidents through infrastructure improvements, enhancement of vehicle safety systems and driver monitoring, promotion of responsible driving culture, and regulation.

The objectives of the strategic plan were selected based on an analysis and integration of 14 past plans formulated by the Ministry of Transport. The analysis revealed that the majority of these plans focus on these four objectives, with the bulk of the plans addressing the promotion of the accessibility objective, and to a lesser extent, sustainability, economic development, and safety (Table 3). Even in plans that featured additional objectives, those are subsumed within the four high-level goals of the Comprehensive Transportation Strategy. Furthermore, an analysis of the targets and courses of action in these past plans showed that they primarily



operated to realize these four objectives. Similarly, the international review indicated that these are the central goals that various countries choose to promote in their long-term strategic plans.

Strategic Plan Indicators

A clear definition of indicators that are linked to sub-goals and high-level goals provides a methodical approach to establishing a unified, integrated language across the entire transportation sector. The "Comprehensive Transportation Strategy 2050" integrates dozens of indicators from the past 15 years into a streamlined, structured set of long-term indicators.

In accordance with the methodology established for the strategic process, primary outcome indicators were formulated for each of the strategic plan's goals. These indicators were based on:

1. Strategic studies conducted by the Ministry and its operational agencies.
2. International benchmarking.
3. Consultation with transportation experts.
4. Outputs from the strategic workshop

The outcome indicators were selected based on the following principles:

1. **Clear and Measurable:** The outcome indicators must be clear in its outcome and in relation to the goal being measured. It must also be measurable over time and at a frequency that allows for the assessment of progress. Consequently, indicators for which a structured, consistent, and long-term measurement framework cannot be established (even within a few years) were excluded.
2. **Quantifiable (with Numerical Value):** Only indicators that can be quantified were included; indicators that do not allow for a quantitative assessment of goal achievement were excluded from the plan.
3. **Consolidation of Duplications:** Indicators that were repeated multiple times or appeared in different formulations but served the same underlying principle were consolidated.
4. **Distinction Between Primary and Secondary Indicators:** For each goal, a limited number of key Indicators were selected as primary indicators to help measure that goal. For several primary indicators, secondary indicators were also selected to complement them and provide an additional perspective.
5. **Outcome Rather Than Output or Input:** The plan's objective is to create a tangible impact. The plan's outputs are intended to serve as means to achieve actual outcomes in the field.



The Outcome Indicators

1. Level of Service (LOS) Indicator for the Intercity Road Network

The indicator: The ratio of actual vehicle travel time to free-flow travel time.

Description: The ratio between the actual travel time on roads and the travel time under free-flow conditions (as observed during late-night hours, without congestion or disruptions).

Primary indicator:

- **Geographical Scope:** The intercity road network numbered with 1 to 3 digits (excluding preferential/high-occupancy vehicle lanes).
- **Time Scope:** 6:00 AM to 8:00 PM, Sunday through Thursday (working days).
- **Vehicle Scope:** All vehicle types utilizing the specified road segments/lanes.
- **Calculation:** The total vehicle hours within the measured road network between 6:00 AM and 8:00 PM, relative to the hours the recorded travel (VKT - Vehicle Kilometers Traveled) during these times would have taken based on travel speeds on each road between 3:00 AM and 4:00 AM (under free-flow conditions).
- **Required Data:** Travel times/speeds for each intercity road segment (available via Google data) and traffic volumes for each segment (non-continuous data, requiring adjustments).
- **Current Value:** An exact value requires calculation. Estimated weighted ratio: ~1.5 (with a relatively high standard deviation).
- **2050 Target:** Despite ongoing congestion and potential deterioration, there is potential for improvement due to changes in travel habits and the implementation of demand and traffic management measures—reducing the ratio to 1.35.
- **Method of Measurement:** Retrieving travel times and segment lengths from Google for all road segments, and traffic volumes from traffic counts, as well as cellular/mobile data where feasible. Calculating total travel times based on night-time speeds multiplied by daytime traffic volumes, and dividing the two values (can be calculated for each hour of the day)

Secondary indicator:

The share of intercity travel volume (VKT) where the ratio of actual speed to free-flow speed exceeds 2.0.

- **Objective:** To identify the percentage of travel operating under severe level-of-service



degradation (congestion failure).

- **Geographical Scope:** The intercity road network numbered with 1 to 3 digits.
- **Time Scope:** 6:00 AM to 8:00 PM, Sunday through Thursday (working days).
- **Current Value:** Approximately 12.5% (Estimated - requires precise calculation).
- **2050 Target:** 7.5%

Note: In principle, it is desirable to expand the measurement of both the primary and secondary indicators to cover 24 hours a day, 7 days a week, so that potential weekend congestion can also be reflected over time. The current barrier to this is the lack of structured or reliable data on traffic volumes across all segments of the network. As such data becomes available through cellular or other advanced monitoring systems, it will be possible to expand both the primary and secondary indicators to encompass all hours of the week.

2. Public Transport Level of Service (LOS)

Primary Indicator 1:

Weighted door-to-door speed of public transport in metropolitan areas (trips based on origin-destination-hour weighted by passenger volume).

Description: This indicator calculates the total travel times when using public transport (PT) and the travel distances that can be covered within a given time. The indicator holds transportation significance by reflecting improvements in PT travel speeds, as well as social significance by reflecting service improvements for populations without a private vehicle or with low vehicle availability.

- **Geographical Scope:** The four metropolitan regions in Israel.
- **Time Scope:** 6:00 AM to 8:00 PM, Sunday through Thursday (working days). A weighted average will be calculated across these hours based on passenger volume per hour.
- **Vehicle Scope:** All modes of public transport, including heavy rail, light rail transit (LRT), BRT, or combinations thereof, with the indicator weighting them according to passenger volume and travel times on each mode.
- **Calculation:** The measured times include in-vehicle time (On Board), walking, waiting, and transfers. If a trip between an origin and destination requires one or more transfers, the travel time will encompass all transit modes used.



- **Required Data:** In-vehicle travel times, frequencies (to calculate wait times), and walking times at the origin and destination of each trip.
- **Sampling:** Calculated on a sample basis across dozens of origins and destinations for each hour and for each metropolitan area individually. The sample must be representative, unbiased, and proportional to the travel volume in each area, while providing minimum coverage per area to ensure statistical significance.
- **Current Estimate:** The average door-to-door speed is approximately 12 km/h (requires calculation as detailed above).
- **2050 Target:** Increasing the weighted speed to 15 km/h.
- **Method of Measurement:** Can utilize existing measurement methodologies from the National Public Transport Authority, or be calculated by acquiring PT fare payment (ticketing) data, frequencies (published on the Ministry's website), walking distances and times to stations from surveys or GIS map layers, and actual PT travel times from the PT management system.

Note: Over time, this indicator will reflect potential changes resulting from the addition of high-capacity mass transit systems.

Secondary Indicator:

The standard deviation of the indicator above—specifically, the share of trips where the door-to-door PT travel speed drops below 10 km/h (target: a significant reduction, to be calculated).

Primary Indicator 2:

The ratio of door-to-door travel time by public transport to door-to-door travel time by private vehicle between the same origins and destinations. Door-to-door time includes walking, waiting, transfers, parking, and "perceived time."

Description: An indicator measuring the primary components of passenger utility as perceived by the passenger, which ultimately influences the decision to use public transport services. This indicator evaluates the public transport level of service relative to private vehicles in terms that express passenger utility. The measurement covers door-to-door travel times, including walking and waiting for PT, and parking at the destination for private vehicles. Out-of-vehicle times for PT (walking, waiting) will receive a penalty multiplier representing transit discomfort (an addition of 0.8 to 1.0 minutes for every actual minute), and a "transfer penalty" will be added for each



transfer to represent the discomfort of switching between transit vehicles during a given trip. For private vehicles, an additional penalty of 1.0 minute per minute will be added for time spent searching for parking, where applicable. The indicator includes both metropolitan areas and the periphery to include social equity aspects.

- **Geographical Scope:** The four metropolitan regions in Israel, cities and local councils in the periphery, and regional councils outside metropolitan areas.
- **Time Scope:** 6:00 AM to 8:00 PM, Sunday through Thursday (working days). A weighted average will be calculated across these hours based on passenger volume per hour.
- **Required Data:** In addition to PT travel times, private vehicle travel times for the tested routes by hour of the day using Google API data. Estimated parking search times will be added based on destination type and hour.
- **Calculation:** Calculated on a sample basis across dozens of origins and destinations for each hour within each metropolitan area or region (peripheral city or peripheral regional council) individually. It will also be calculated on a sample basis across dozens of origins in a specific metropolitan area to dozens of destinations in other metropolitan areas and regions. The sample must be representative, unbiased, and proportional to the travel volume in each area, while providing minimum coverage per area to ensure statistical significance.
- **Current Estimate:** The ratio in metropolitan areas ranges between a daily weighted average of 1.5 and 1.75 (with a high standard deviation within each metropolitan area).
- **2050 Target:** A ratio of 1.4 to 1.5, depending on the metropolitan area, region, or the specific assessment group (inter-regional connectivity) being measured.
- **Method of Measurement:** Utilize existing measurement methodologies from the National Public Transport Authority. Alternatively, data can be collected from dozens of key hubs across different metropolitan areas to establish a statistical baseline. Private vehicle travel times by hour of the day can be extracted from Google and coded via the Google API. PT data will be acquired regarding net travel time of transit vehicles versus gross travel time—the net time plus walking times during transfers.

Notes:

- Over time, this indicator will reflect potential changes resulting from the addition of high-capacity mass transit systems.
- This indicator separately measures and tracks changes over time in the level of service



for private vehicle travel in metropolitan areas as an input.

- In peripheral areas, particularly within regional councils, there is a structural challenge in providing traditional public transport services at a level of service comparable to private vehicles. Improving this indicator in these areas will require adapting new and appropriate transportation systems to their geographic structure.

3. Private Vehicle Occupancy

Primary Indicator:

The weighted average passenger occupancy rate (occupancy factor) across all private vehicle travel (VKT).

Description: This indicator measures the efficiency of private vehicle usage in transporting passengers and the rate of shared rides (carpooling), which is a key transportation planning objective. The national weekly occupancy rate is approximately 1.4 (including weekends), where most passengers other than the driver are family members. The occupancy rate is relatively high during evenings, nights, and weekends, and low during morning peak hours in radial movements toward metropolitan centers (approximately 1.15 in Tel Aviv, and slightly higher in other metropolitan areas). This indicator targets the specific pain point of low vehicle occupancy during peak operational hours in metropolitan areas.

- **Geographical Scope:** The 4 metropolitan regions.
- **Time Scope:** 6:00 AM to 8:00 PM, Sunday through Thursday (working days).
- **Required Data:** Distribution of vehicles by number of occupants. Currently, this data is virtually non-existent; there are no field surveys, and external vehicle detection/measurement is unreliable. Existing data sources rely on travel habit surveys (self-reporting as a passenger rather than a driver in a private vehicle) and non-systematic counts conducted at gas stations, traffic lights, and ramps where vehicles slow down or stop. Establishing a structured, sample-based observation system for this purpose will be required.
- **Current Estimate:** Approximately 1.3 on average across metropolitan areas between 6:00 AM and 8:00 PM on working days only (requires a dedicated survey).
- **2050 Target:** 1.45 (for working days only).

Note: This value is expected to increase as the network of High-Occupancy Vehicle (HOV) lanes expands (including HOV 2+ lanes where appropriate), congestion pricing



eases conditions for shared vehicles, preferential parking is provided, etc.

- **Method of Measurement:** Advanced technological monitoring systems are required. Currently, this can be conducted via manual count surveys or by stopping vehicles.

4. Micro-mobility Use

Primary Indicator:

The share of trips made on foot or via micro-mobility devices out of all trips ranging between 1 and 5 km in length (excluding trips made for exercise or recreational sports).

Description: Over the past decade, the use of non-motorized and active transport has increased, particularly in urban areas. This includes walking, traditional cycling, and a variety of electric devices such as e-bikes and e-scooters. This activity largely replaces motorized trips made by private vehicles and public transport, thereby mitigating urban traffic congestion. The development of bicycle lane networks has expanded the use of these modes, which in the previous decade were still marginal (nationally, only 4% of trips of this length were made on foot, and 1.5% by bicycle).

- **Geographical Scope:** The 4 metropolitan regions.
- **Time Scope:** Sunday through Thursday (working days).
- **Required Data:** Extracted from travel habit surveys—evaluating all trips in metropolitan areas between 1 and 5 km in length, and identifying those made on foot or via micro-mobility devices by purpose and distance.
- **Current Estimate:** 10% (12% in the Tel Aviv metropolitan area; approximately 3% in Jerusalem according to a 2024 survey).
- **2050 Target:** A weighted average of 15% across the four metropolitan regions.
- **Method of Measurement:** Conducting a national or metropolitan-level travel habits survey.

5. Freight Transport Efficiency

Primary Indicator:

The share of heavy trucks (over 16 tons) out of total domestic freight transport, measured in ton-kilometers (excluding light trucks).

Description: Trucks are currently the near-exclusive mode of domestic freight transport in Israel. Aside from trucks, a small share of freight is transported by rail and fuel pipelines, with much of the rail transport serving port-to-port routes. The current share of heavy trucks (rail



vs. trucks over 16 tons) in heavy freight transport is estimated at 95%, while the railway's share is approximately 4%. In the European Union, the corresponding figures are 75% and 16% respectively (2024). Despite challenging objective constraints—primarily short haulage distances—it is vital to make concerted efforts to shift freight traffic from trucks to rail and reduce the near-monopoly of trucks in freight transport. This is due to the significant negative externalities of trucks compared to rail, including their impact on road congestion, air pollution, and road safety.

- **Geographical Scope:** National.
- **Time Scope:** Annual.
- **Required Data:** Israel Railways data, truck mileage by type and weight category, pipeline transport data, and freight truck surveys.
- **Current Estimate:** 95%
- **2050 Target:** 85%
- **Note:** Achieving this target requires constructing freight terminals and transshipment hubs for aggregates from the Negev and containers from the ports, constructing additional rail spurs, and more.

Secondary Indicator:

The share of empty trips (runs without cargo) out of total heavy truck mileage.

Description: The phenomenon of empty return trips is widespread, and in many cases, it is highly challenging to secure a return load for part or most of the route. This is particularly true for the transport of quarried materials, fuel tankers, etc. It is estimated that 44% of truck mileage is currently traveled empty. Improved coordination and planning can mitigate this issue, thereby reducing overall truck mileage for any given volume of transported cargo.

- **Geographical Scope:** National.
- **Time Scope:** Annual.
- **Required Data:** Extracted and processed from truck waybills.
- **Current Estimate:** 44%
- **2050 Target:** 35%
- **Method of Measurement:** Acquiring freight rail mileage and ton-kilometer data from Israel Railways. Acquiring annual mileage data for heavy trucks (over 16 tons) from the Ministry of Transport's Licensing Division, and multiplying it by 60% of the net truck



capacity (to reflect the fact that not all trucks run fully loaded). More precise data regarding the rate of empty trucks will be obtained through dedicated truck surveys or digital waybill data.

6. Emissions

Primary Indicator:

The annual monetized damage from total pollutant and greenhouse gas (GHG) emissions across all transportation modes.

Description: This indicator measures, in monetary terms, the aggregated damage caused by emissions of greenhouse gases (CO₂), carbon monoxide (CO), nitrogen oxides (NO_x), and hydrocarbons (HC), which constitute the primary pollutants emitted by transportation modes. The indicator assigns a distinct weight to each ton of pollutants based on the damage values defined by the Ministry of Environmental Protection and the Prat Procedure (the Israeli transport appraisal guidelines).

The economic damage per ton varies significantly among these pollutants—ranging from an estimated 199 NIS per ton for carbon dioxide (CO₂) to 52,700 NIS per ton for nitrogen oxides (NO_x). Consequently, aggregating these emissions into a single indicator must be conducted in terms of monetary cost rather than physical weight.

For hydrocarbons (HC) (which contribute, among other things, to smog formation), no damage-cost-per-ton estimate was found in the values of the Ministry of Environmental Protection. However, since its emission volume from vehicles has remained low since 2015, the indicator will be calculated without it.

- **Geographical Scope:** National
- **Time Scope:** Annual
- **Required Data:** Extracted from annual datasets provided by the Ministry of Environmental Protection.
- **Current Value:** 5.08 billion NIS (in 2023 prices), of which 3.65 billion NIS is from carbon dioxide emissions, 0.05 billion NIS from carbon monoxide emissions, and 1.38 billion NIS from nitrogen oxide emissions.

Note: This indicator has been on a downward trend due to improvements in fuel composition and vehicle standards; in the year 2000, it stood at approximately 7.5 billion NIS using the same price index.



- **2050 Target:** Net-zero emissions from transportation.
- **Method of Measurement:** Based on emissions data from the Central Bureau of Statistics (CBS) and the Ministry of Environmental Protection.

Note: This indicator primarily reflects a high-rate transition of the vehicle fleet to electric propulsion and other highly efficient alternatives, including partial electrification within the heavy truck sector.

7. Severe Road Traffic Casualties

Primary Indicator:

The annual number of fatalities and serious injuries from road traffic accidents per 100,000 population.

Description: This indicator reflects the annual number of severely injured traffic casualties—encompassing fatalities, very seriously injured, and seriously injured persons—relative to the population size. The term "seriously injured" is subject to varying definitions and registration methods across databases; the only comprehensive and systematic source is the healthcare system, which records the injury severity of all traffic casualties admitted to hospitals. This registry currently covers 24 hospitals, effectively encompassing all medical centers that treat traffic casualties. Injury severity is classified into 75 levels of severity using the international Injury Severity Score (ISS), which is assigned to each patient upon admission (an alternative scoring index also exists).

- "Very Seriously Injured" describes a complex, potentially life-threatening injury. The average hospital stay in Israel for this category is approximately 20 days, and half of these patients are discharged directly to medical rehabilitation.
- "Seriously Injured" involves an average hospital stay of 9 days, with 17% of these patients transferred to medical rehabilitation.

Healthcare system data is more comprehensive and accurate than the police data published by the Central Bureau of Statistics (CBS), as it also captures micro-mobility riders, pedestrians, and other casualties for whom a police file was never opened.

Based on the 2021 Transportation Project Procedure economic parameters, the monetized value of a fatality in 2025 values is approximately 10 million NIS, a very seriously injured person is approximately 7 million NIS, and a seriously injured person is approximately 2.5 million NIS. These costs include "pain and suffering" damages, which constitute the majority



of the calculated cost for fatalities and very serious injuries.

Accordingly:

- The cost of one very seriously injured person is equivalent to approximately 2.6 seriously injured persons.
- The cost of one fatality is equivalent to approximately 4 seriously injured persons.
- **Geographical Scope:** National
- **Time Scope:** Annual
- **Required Data:** Extracted from the Gertner Institute datasets within the Ministry of Health.
- **2024 Baseline Value:** 5,591 Equivalent Serious Injuries (compared to just 3,806 in 2018), representing 56 persons per 100,000 population. In 2024, there were 436 fatalities, 946 very seriously injured persons, and 1,397 seriously injured persons, which aggregates to the aforementioned 5,591 equivalent serious injuries.
- **2050 Target:** 3,140 Equivalent Serious Injuries, representing 20 persons per 100,000 population, based on a projected population of 15.7 million.
- **Method of Measurement:** Receiving data from the National Road Safety Authority, which aggregates data from the Israel Police and the Ministry of Health.

Note: The 2050 target represents approximately 36% of the 2024 baseline value. While highly ambitious (European targets are even more stringent), it is attainable through advanced active vehicle safety systems that will continuously improve over time, automated driving technologies—including a transition to fully or partially autonomous vehicles—as well as policy measures enacted by the Ministry of Transport, and broader governmental parameters such as enforcement and education.

8. Airport Capacity

Primary Indicator:

International passenger capacity at airports in Israel

Description: This is an economic indicator that reflects the capacity of Israeli airports to meet the continuously growing demand for international flights over the years

- **Geographical Scope:** National
- **Time Scope:** Annual



- **Required Data:** Data regarding the capacity of airports for international flights. Currently—Ben Gurion Airport (Ben Gurion International), Ramon Airport, and Haifa Airport—sourced from the Israel Airports Authority (IAA) data. In the future, as additional airports are established via private concessionaires, the data will be provided in accordance with the concession agreements.
- **2025 Baseline Value:** 35 million passengers
- **2050 Target:** 80 million passengers
- **Method of Measurement:** Summing the capacity data of all operational international airports in Israel.

9. Seaport Capacity

Primary Indicator:

Cargo throughput capacity at maritime ports in Israel.

Description: This is an economic indicator that reflects the capacity of Israel's seaports to meet the continuously growing demand for cargo and freight movement over the years.

- **Geographical Scope:** National
- **Time Scope:** Annual
- **Required Data:** Data regarding port capacities, sourced from the Israel Ports Company (IPC)
- **2025 Baseline Value:** 90 million tons
- **2050 Target:** 120 million tons
- **Method of Measurement:** Summing the capacity data of all maritime ports in Israel.

Note: It should be noted that port capacity depends on numerous parameters, including infrastructure scale, equipment, technology, operational methods, and labor. Furthermore, the capacity specified above does not account for demand arising from regional cargo movement, such as the IMEC (India-Middle East-Europe Economic Corridor) project, which is difficult to quantify at this stage.

Targets and Courses of Action

The Ministry of Transport is currently advancing numerous courses of action across land, sea, and air domains. Furthermore, the extensive strategic plans formulated over the past 15 years—which were reviewed as part of this study—likewise encompassed a wide range of action lines.



Within the framework of the multi-year plan, the sub-goals will be broken down into specific courses of action, such as those currently being promoted by the Ministry of Transport (with some courses of action serving multiple goals simultaneously):

1. **With Regards to Accessibility:** Implementing smart mobility solutions and innovation; optimizing public transport operations; and developing infrastructure, such as integrated transport hubs, metropolitan mass transit systems, and a nationwide rail network connection. Additionally, the Ministry promotes walkability, the increased and safe use of micro-mobility, and the assurance of operational resilience and business continuity across all transportation systems during emergencies.
2. **With Regards to Economic Development:** Optimizing freight transport; developing aviation infrastructure and optimizing airspace; improving service; reducing vehicle maintenance costs; and increasing competition at seaports. Additionally, the Ministry promotes the reduction of excess regulation, promotes regulatory optimization, and the creation of effective regulation to balance diverse public interests—such as ensuring adequate safety standards—with reducing the cost of living.
3. **With Regards to Sustainability:** Electrifying buses; encouraging the use of zero-emission/non-polluting vehicles; promoting walkability and the increased and safe use of micro-mobility; developing mass transit systems powered by clean energy; and promoting emissions reduction in freight transport.
4. **With Regards to Transportation Safety:** Improving road infrastructure within urban areas and on intercity highways; treating traffic conflict points and hazards (blackspots); enhancing the safety of heavy vehicles; improving micro-mobility safety; optimizing regulation; enhancing maritime transit safety; and improving aviation safety.

Some of these courses of action serve the goals of the plan and will be utilized by the Ministry in the coming years. Other courses of action will be restructured, refined, and prioritized within the framework of the detailed multi-year plan presented in the final chapter of this document.

Focus Areas

The strategic vision for the year 2050, the high-level goals of the plan, and the indicator values required for its implementation serve as the "North Star" for the transportation sector in Israel in the coming decades. An analysis of the current state of transportation in Israel, alongside the challenges identified during the strategic process, points to the following areas, where focused efforts will facilitate the attainment of the plan's high-level goals and indicators:



1. Continued Advancement of Mass Transit Projects

Over the past decade, the State of Israel has invested considerable efforts in advancing mass transit systems, including light rail transits (LRT), railway network expansions, and BRT systems. These projects constitute a central cornerstone in providing a long-term solution to the growing travel demand and traffic congestion, particularly within metropolitan areas. Unlike private vehicles, population growth and urban densification present an opportunity for mass transit networks. Consequently, the "Comprehensive Transportation Strategy 2050" emphasizes the necessity of continuity in executing mass transit projects, while optimizing planning processes, maintaining budgets, and adhering to schedules. Accordingly, the bulk of the transportation development budget in the coming years will continue to be invested—as it was during the past decade—in mass transit projects such as the Metro, additional light rail lines, and the expansion of the heavy rail network

2. Promoting Demand Management Tools

Alongside investments in mass transit infrastructure, the plan emphasizes the systemic advancement of demand management tools. This is driven by the understanding that in tandem with expanding supply, demand management will contribute to mitigating the growth of congestion hours across the entire network and optimize the efficiency of the existing transportation system. Tools such as congestion pricing, enhancing the attractiveness and service quality of public transport, and encouraging remote activities ("telecommuting / cyber-trips") can drive shifts in the short-to-medium term at a lower cost compared to mass transit projects. Furthermore, implementing efficient urban planning principles, such as mixed-use development, can help reduce the demand for motorized transport services in the long term. Demand management is not intended to replace investment in mass transit, but rather to support it through relatively modest investments.

Currently, the Ministry of Transport does not actively manage transport demand, except for a certain demand management effect derived from public transport subsidies. In 2024, the Ministry of Transport allocated public transport subsidies totaling NIS 17 billion per year³³. While this subsidy serves as a social tool enabling the provision of transport services at prices below actual cost, it also manages demand to some extent, as it is designed to shift passengers from private vehicles to public transport—thereby reducing congestion, lowering emissions, and enhancing safety. However, there is currently no economic study demonstrating the efficiency of the current subsidy utilization, and thus its efficacy as a demand management tool remains unclear. The sub-goal of demand management aims to expand the toolkit utilized, shift commuter behavior, and explore methods to optimize

³³ Ministry of Transport, [Proposed Budget for Fiscal Years 2023–2024](#) (2023)



subsidy utilization.

3. Advancing Data Capabilities within the Ministry of Transport

The capability to plan and manage a transportation system tailored to the needs of users depends heavily on data availability and quality. Currently, significant challenges exist in the collection, analysis, and sharing of transportation data. In light of this, the strategic plan recommends collecting up-to-date and reliable information, developing a centralized data infrastructure to serve all professional stakeholders, and utilizing advanced analytical tools to rapidly identify trends and shifts in the mobility patterns of road users in Israel. Investing in the data domain will facilitate the advancement of learning, planning, and implementation processes in both the long and short term.

4. Promoting Smart Mobility

The coming decades are expected to bring far-reaching technological advancements, such as autonomous vehicles and the utilization of low-altitude airspace for transportation. The strategic plan emphasizes preparing physical, regulatory, and simulation infrastructures for future technologies; recruiting and training specialized personnel in technology testing and implementation; and integrating advanced systems, tools, and equipment. This runs alongside establishing effective testing mechanisms and fostering a culture of innovation within the Ministry of Transport. Broadly deploying technology across Israel's transportation network will enable the optimization of existing infrastructure capacity, smart traffic management, enhanced safety and enforcement, and the preservation of sustainability.



2.2. Shaping Budgetary Vectors in the Transportation Development Budget through 2050

Over the past decade, the Ministry of Transport significantly increased its budget allocations for the development of mass transit systems and public transport subsidies, in an effort to encourage commuters to shift from private vehicles to public transport. In the preceding decade, the core strategy pursued by the Ministry of Transport focused on investments in road network development, constructing roads, interchanges, bridges, and associated infrastructure in order to establish connectivity nationwide as well as within metropolitan areas for private vehicles, buses, and trucks.

In the past decade the Ministry's strategy shifted toward sustained investment in road infrastructure alongside an accelerated investment in the development of mass transit systems, both in urban areas—via light rail transit (LRT) and Bus Rapid Transit (BRT)—and intercity corridors through heavy rail infrastructure (with a strong emphasis on railway electrification). Furthermore, the public transport subsidy expanded substantially. The Ministry of Transport's annual transportation development budget (which includes public transport subsidies) grew by over 100%, rising from approximately NIS 18 billion in 2014 to roughly NIS 40 billion in 2024—an increase of about NIS 22 billion. Public transport budgets, which accounted for 58% of the total budget in 2014, rose to 74% of the transportation development budget in 2024, with 33% allocated to expanding public transport passenger capacity through investments in mass transit systems, and 41% directed to public transport subsidies. As a result, the per capita subsidy grew 2.5 times over the decade, from NIS 646 per capita in 2014 to NIS 1,660 per capita in 2024. Concurrently, the relative share of the budget allocated to road development decreased from 39% to 23% in 2024³⁴.

Now, within the framework of the Comprehensive Transportation Strategy 2050, an initial assessment was conducted regarding the strategies and tools the Ministry of Transport can utilize to deliver optimal value to road users. In light of this, this chapter evaluates strategic alternatives to determine budgetary prioritization for the transportation development and public transport support clauses. This aims to map out the core vectors that will shape the transformation of the transportation budget through the year 2050.

³⁴Ibid.

[The Budget Law for Fiscal Years 2013 and 2014](#) (2013)



The Ministry of Transport possesses several budgetary tools to achieve the high-level goals of the Comprehensive Transportation Strategy 2050—accessibility, sustainability, economic development, and safety:

1. **Investments in mass transit development to optimize passenger capacity in public transport** aimed at shifting passengers from private vehicles to public transport (buses, light rail, metro, heavy rail). This includes addressing the challenge of **inter-modality**, which provides "door-to-door" transport solutions, including the first and last mile, as well as seamless transfers and transitions between various modes of transport along the route.
2. **Investment in preventive maintenance of physical infrastructure** for private vehicles, buses, and trucks - encompassing roads, bridges, and interchanges.
3. **Investment in demand management** by utilizing economic policy tools (positive and negative incentives) and regulatory measures to reshape commuter behavior. This includes optimizing travel hours, travel zones, modes of transport, ridesharing (multiple occupants in a single vehicle), trip frequency, and "cyber-trips" that reduce overall vehicle miles traveled - such as virtual meetings, digital services, and remote work.
4. **Optimizing the public transport subsidy mechanism** to incentivize the shifting of passengers from private vehicles to public transport, and the diversion of freight from trucks to rail.
5. **Investment in data-driven management** through data collection and processing, and increasing their utilization to formulate strategy, support optimal planning, execute projects, and operate the transportation network, including traffic management, in the most efficient manner.
6. **Investment in the integration of new technologies** and utilizing emerging technologies to optimize existing transit, for instance through smart traffic management based on data and AI tools, autonomous vehicles, and to deliver enhanced safety alongside higher environmental quality and sustainability standards.

An analysis of the budgetary vectors through the year 2050 highlights three tools that must be advanced to achieve a further quantum leap toward realizing the high-level goals of the Comprehensive Transportation Strategic Plan, alongside shifts in resource allocation for the additional tools available to the Ministry.

A cost-benefit analysis of the potential tools reveals that three highly beneficial tools can be advanced at a relatively low annual cost - in the tens of millions of NIS per tool: the integration of new technologies (encompassing data technologies, the incorporation of new modes of transport, and advanced infrastructure), the optimal utilization of data, and demand management. These tools are poised to yield substantial benefits relative to their cost and can



drive shifts in the short term (within a few years). Being non-traditional tools, their precise impact on the transportation landscape cannot be predicted with absolute certainty, given the limited experience accumulated with them - particularly in Israel - and the time required for implementation and shifting market habits. Nonetheless, these are tools where the benefit-to-cost ratio is expected to be exceptionally high.

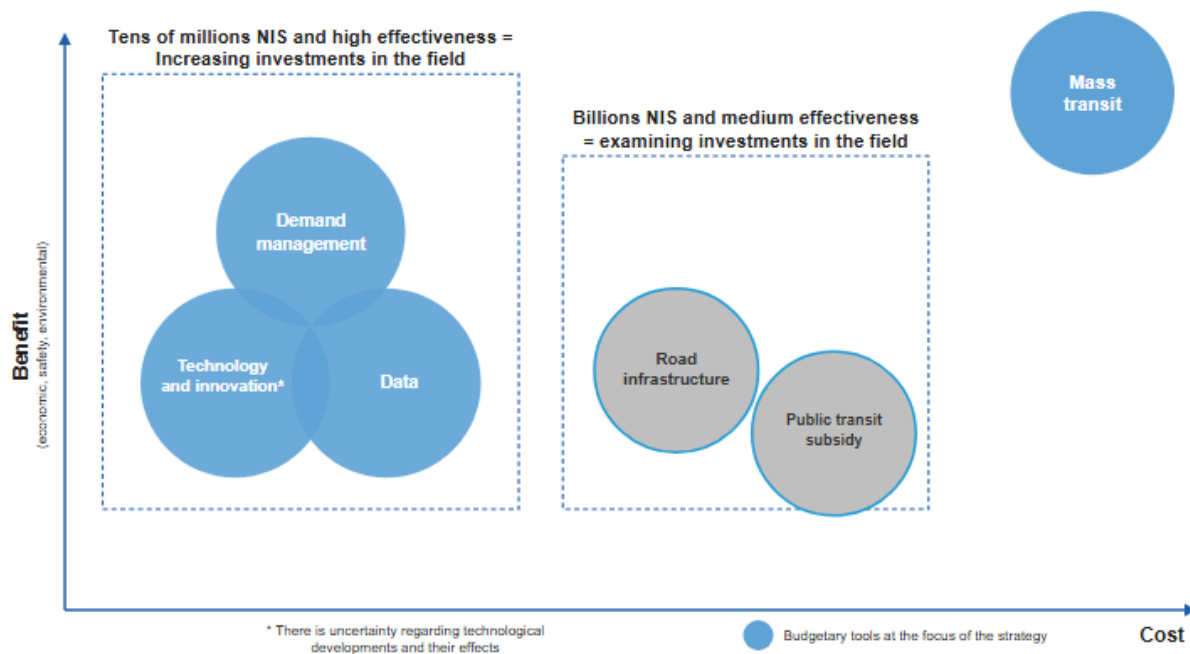
Regarding demand management via congestion pricing, this approach has been tested in other countries and proven effective however, has not been tested yet in Israel. Before implementing such a measure in Israel, pilot programs will be required to determine how to deploy this tool optimally. This financial mechanism can also mitigate the negative externalities resulting from transportation. Naturally, this tool must operate alongside a viable alternative to private vehicles in the form of high-quality public transport.

Enhanced data utilization, which includes gathering more comprehensive and higher-quality data, is also expected to provide pathways to solutions with a high benefit-to-cost ratio. While it is difficult to clearly forecast the precise contribution of this tool, proper data optimization and upgrading data utilization possess immense potential relative to their cost.

In contrast to these measures are the conventional tools, which involve massive investments in infrastructure development, roads, and railways. Their costs are significantly higher (in the billions of NIS), yet their transport benefits can be predicted with a relatively high degree of certainty prior to investment. Although some uncertainty exists regarding actual costs and benefits may vary, these are familiar tools to all stakeholders in the transportation sector. These conventional tools are designed to yield results in the medium-to-long term (over 10 years) in achieving the strategic plan's high-level goals (Figure 2). Their planning and execution timelines are lengthy, and these projects typically cause disruptions to the public.

Infrastructure development, particularly the expansion of mass transit systems, will continue to serve as a cornerstone of the transportation strategy. However, placing greater emphasis on other tools, specifically smart transportation, new technologies, optimal data utilization, and demand management, could spark a true revolution in Israel's transportation sector, as illustrated by the cost-benefit schematic diagram in this chapter.

Illustration 2 : Cost-Benefit Scheme for Transportation Measures to Be Implemented in the Strategic Plan



An initial estimate of the implementation costs for new technologies - encompassing digital infrastructure, equipment, personnel, and pilot programs - is projected at approximately NIS 60 million per year over the upcoming five-year period (Table 6). This budget allocation is estimated at a mere 0.5% of the total transportation infrastructure development budget. Assuming the proposed investments and plans are executed within the next five years, the share allocated to technology and innovation is expected to grow to approximately 1.5%–2.0% of the total development budget between 2030 and 2050. Through this, the Ministry of Transport will be able to: (1) close gaps between market innovation and the Ministry's response; (2) accelerate the Ministry's adaptation rate to match technological shifts in the market; and (3) actively foster and encourage innovation.

Table 6: Parameters Need for Implementing Technology and Encouraging Innovation*

Specification	
Digital Infrastructure	Cloud for transportation related data
	AI systems
	Cybersecurity
	User applications
	Interface for Advanced Driver assistance Systems
	Simulation infrastructure
	Processing and analytics software
Equipment	V2X communication
	Intersection presence sensors
	Dynamic lane dividers
	Embedded wireless charging
	Mobile elevated lane
	Smart signage
	Drone fleet for traffic management
	Adaptive lighting
Personnel	Structural repair robot
	Digital infrastructure experts
Pilot Programs	Testing and safety experts
	Pilot and testing guidelines

*Additional components may also be required, depending on technologies and detailed characterization.

The budgetary investment required to build a unified and comprehensive data system, encompassing a variety of sources, data processing, and accessibility, is estimated at tens of millions of NIS per year. Regarding the advancement of demand management tools, the congestion pricing project alone is estimated to require an initial investment of hundreds of millions of NIS. This runs alongside additional tools, such as promoting remote activities that reduce vehicle miles traveled (VMT) for work, leisure, commerce, education, and more, as well as dynamic parking pricing, which may require supplementary budgeting. Alongside the congestion pricing project, a viable, attractive public transport alternative with enhanced service quality will be required for the commuting public. This move will necessitate optimizing the efficiency of the subsidy budget at any given budgetary level.



Regarding the Ministry's additional tools - which include expanding public transport passenger capacity through infrastructure development for mass transit systems, expanding road infrastructure, and subsidies - the strategic plan proposes shifts in how the budget is invested across these instruments.

Expanding public transport passenger capacity through investment in mass transit systems

development: Over the lifespan of the plan, major development projects are scheduled for completion, including the Metro, LRT, and BRT in the Tel Aviv metropolitan area, alongside the LRT and BRT in Jerusalem. Furthermore, the necessity of these tools will be evaluated in additional metropolitan areas. It is proposed to adopt a strategy focused on allocating resources based on two principles:

- 1. Tailoring Public Transport Capacity Based on Trip Types:** An analysis of passenger trip distribution within the public transport network from 2019 reveals that 60% of all trips in Israel are intra-urban. Intra-metropolitan and inter-metropolitan trips account for 18% and 14% of total trips, respectively, while trips outside metropolitan boundaries constitute a mere 8% (2018–2019 Cellular Data Survey). Consequently, it is proposed to allocate resources for transit development according to passenger trip distribution to benefit the majority of commuters, while strengthening the urban fabric and encouraging short trips within cities. Allocating resources based on this distribution enables the alignment of infrastructure development with specific transit corridors (as expanded upon in the following section). Although metropolitan trips carry greater weight in terms of kilometers, evaluating the network by trip type - a less conventional indicator accurately reflects public demand and centers the focus on addressing short-distance travel needs.
- 2. Investing in Transport Modes Based on Their Comparative Advantage:** Different modes of transport possess unique comparative advantages that manifest across various dimensions. The comparative advantage of the private vehicle lies in its high degree of personalization to individual needs, flexible trip timing, optimal route selection, the ability to travel from almost any origin to any destination, ride comfort, and other parameters. In the absence of negative externalities like congestion, pollution, and safety risks, the private vehicle offers inherent advantages. From a systemic perspective, however, private vehicles generate severe negative externalities such as traffic congestion, pollution, and lower safety levels compared to public transport. Ultimately, this also harms the individual. The congestion that private vehicles inflict upon the road network creates scenarios where the infrastructure can no longer absorb the volume of demand, resulting in both systemic and personal detriment.

Public transport, conversely, offers a solution based on a sub-optimal fit for individual needs, requiring walking, waiting, adherence to fixed routes, and more. On the other hand, it



generates exceptionally high systemic benefits by leveraging economies of scale—pooling multiple passengers into a single vehicle. Furthermore, the parameters representing the disadvantages of public transport can be mitigated to make it highly attractive even from an individual standpoint - by enhancing availability and comfort, shortening travel times (via rapid mass transit systems or dedicated bus rapid transit lanes), offering low fares, and more.

Broadly speaking, public transport in its various forms holds a comparative advantage where demand patterns are concentrated, allowing the system to capitalize on economies of scale and generate high systemic utility at the cost of minor compromises to individual customization (and potentially with no compromises at all if the transit service is highly attractive). Conversely, when demand is dispersed, it is impossible to aggregate sufficient ridership to yield economies of scale without requiring excessive compromises in the level of service provided to the individual.

Micro-mobility and autonomous vehicles (AVs) serve as a potential bridge between the private vehicle and public transport ecosystems, as they can offer individuals the full benefits of freedom of movement and personalized utility while significantly minimizing capacity constraints. Nonetheless, micro-mobility carries disadvantages, such as safety conflicts with pedestrians and motor vehicles. Similarly, while autonomous vehicles offer major benefits in terms of traffic flow and expanding effective road capacity, they pose distinct disadvantages if utilized as single-occupant private vehicles rather than shared transport; in such cases, they could substantially exacerbate congestion.

The strategic vision presented in this plan centers on maximizing the comparative advantage of each transport mode, recognizing that the transportation strategy must adapt to the specific conditions of each distinct space, as illustrated in the following table (Table 7). Achieving the efficient utilization of all transport modes requires the deployment of economic mechanisms—such as correct pricing regimes, subsidies, and taxation—alongside the development of road and mass transit networks, the establishment of proper incentives for public transport operators, and effective and efficient spatial planning.



Table 7: Modal Efficiency Across Spatial Contexts

Classification	Transport Mode	Flexibility and Personalization	Demand Pattern	Travel Distance	Optimal Environment	Congestion Impact & Effect on System Travel Speed
Public Transport – Low Flexibility & Concentrated Demand Response	Bus	Requires compromise	Concentrated but moderate. The entry threshold for systemic benefit and economies of scale is ~15-20 boarding passengers per trip.	Short (even 2–3 stops) up to a few km. Suitable for any distance when other modes are not justified.	Urban, suburban, as well as metropolitan and long-distance intercity when other modes are unsuitable	Minor traffic congestion impact when occupancy levels are high and the comparative advantage is realized. Average door-to-door travel speed is low.
	BRT	Requires compromise	Concentrated; entry threshold of hundreds or a few thousand passengers per hour.	Short to medium (due to relatively low operating speeds).	Urban, suburban, metropolitan	Minor traffic congestion impact when occupancy levels are high and the comparative advantage is realized.
	LRT	Requires compromise	Highly concentrated. Thousands of passengers per hour.	Medium (travel speed is not very high, but service is continuous with right-of-way over	Urban, suburban, metropolitan	Operates on fully dedicated/grade-separated infrastructure.



				other modes, including at intersections).		
	Metro	Requires compromise (mainly regarding walking distance to and from stations)	Highly concentrated and on a very large-scale. Thousands to tens of thousands of passengers per hour.	Medium to long	Suburban, metropolitan	Underground metro is the only mode providing full grade separation from all other modes, including at intersections.
	Train	Requires major compromise due to few stations and limited origin-destination pairs	Highly concentrated and on a very large-scale	Long; every station stop introduces a significant delay.	Inter-metropolitan or cross-metropolitan	Operates on fully dedicated/grade-separated infrastructure.
Personal Modes – High Flexibility & Distributed Demand Response	Micro-Mobility	Full flexibility	Distributed	Short	Micro-mobility	Full flexibility.
	Private Vehicle	Full flexibility (when no congestion or parking scarcity)	Distributed	Any range	Short to long	Generates congestion, particularly at low occupancy rates.
	Shared Autonomous Vehicle	Full flexibility, but involves compromise due to sharing	Distributed (2-3 passengers already provide an advantage over current average occupancy in typical private vehicles).	Any range	Short to medium	Relieves congestion through high infrastructure utilization from efficient traffic flow, yet induces new congestion by generating latent demand (e.g., non-driving populations).



Regarding public transport subsidies and the regulation of operators, it is proposed to optimize incentive mechanisms to enhance the efficiency of public transport within the framework of the existing budget, and to evaluate whether and how the subsidy budget should be restructured to achieve the plan's high-level goals. As outlined in the chapter on transportation challenges, despite a substantial increase in the subsidy budget, there has been a decline in the share of public transport users relative to the total population of road users. It should be noted that the Ministry of Transport recently advanced the public transport fare reform, which lowered transit fares for certain demographic groups while raising them for others. The long-term impact of this reform on public transport ridership rates cannot yet be quantified at this stage.

In light of this, it is proposed that the allocation of the subsidy budget focus on elevating the level of service and road user satisfaction based on trip types, ensuring that support for service enhancements is aligned with demand levels in each region. A dedicated policy paper derived from this strategic plan must be advanced to develop an alternative framework for investing subsidy budgets, aimed at increasing the existing modal split—meaning, expanding the utilization rate of public transport. For example, this could involve providing alternative public transport operating models for locations, times of day, or origin-destination pairs where regular bus or minibus services are economically unjustified, while concurrently establishing baseline thresholds for bus occupancy or line operation to maximize the economies of scale inherent to bus services.

Regarding the development of road infrastructure, which currently incurs billions of NIS annually, it is proposed to reduce the budget for constructing new roads over the long term (partly due to severe land scarcity), both in relative terms compared to other components and in absolute terms, and to reallocate those funds toward the maintenance of existing roads and safety components.

Table 8 outlines the policy tools available to the Ministry of Transport and the budgetary vectors projected to shape the transportation development budget through the year 2050. For each tool, the magnitude of the required budgetary shift relative to the current baseline is defined, indicating whether financial investment should be increased or decreased. Additionally, it provides an estimated annual budgetary projection of the required investment, along with explanatory notes regarding the actions to be advanced within each respective policy framework.

Table 8: Proposed Changes to the Transportation Development Budget

Tools	Magnitude of Budgetary Change	Estimated Annual Budgetary Cost	Explanation
Data		Tens of millions of NIS	Systematically collects, processes, and shares multi-source data to drive decision-making and modernize Israel's transport management framework
Technology		Tens of millions of NIS	Accelerates the adoption, regulatory readiness, and development of cutting-edge transportation technologies like smart traffic management and autonomous vehicles.
Demand Management		Hundreds of millions of NIS	Reduces vehicle mileage by implementing congestion pricing tied to strong transit alternatives and promoting digital substitutes like remote activities and virtual meetings.
Mass Transit Development		Billions of NIS	Completing LRT and Metro network development in Gush Dan based on updated demand modeling and data; continuing LRT development in Jerusalem; evaluating the necessity of these modes in other metropolitan areas along with alternative options; and developing rail networks.



Road Infrastructure Development		Billions of NIS	Reducing new road construction and its share of the total budget, shifting focus to road maintenance—emphasizing preventive maintenance over reactive repairs—and expanding micro-mobility and pedestrian infrastructure in suitable urban and metropolitan locations.
Public Transport Subsidy		Billions of NIS	Evaluating and targeting subsidies based on cost-effectiveness.
Aviation		Billions of NIS	Expanding international airport capacity to serve users in Northern and Southern Israel via PPP models.
Maritime		To be determined in the Strategic for Ports	Long-term seaport development tailored to projected demand, including regional transit potential; developing dry ports to increase port capacity and alleviate congestion in surrounding areas.

In conclusion, alongside the existing investment of billions of NIS in mass transit systems, an annual investment of hundreds of millions of NIS is required to advance three highly beneficial tools relative to the alternatives. These tools will assist in achieving the high-level goals of the Comprehensive Strategic Plan for 2050.

Regarding the funding and implementation framework for these tools, a systematic evaluation



should be conducted to align projects with Public-Private Partnership (PPP) models. These models enable a more efficient allocation of risks between the public and private sectors, ensuring that each risk (whether related to planning, execution, or operation) is managed by the party best equipped to handle it. Consequently, this approach can optimize the cost-benefit ratio, mitigate budget overruns and schedule delays, and enhance operational performance over time. Furthermore, utilizing PPP structures facilitates the creation of performance-driven financial incentives through output- and level-of-service-based contracting, rather than merely adhering to engineering specifications. This ensures that infrastructure assets are managed sustainably over time, maintaining availability, reliability, and operational efficiency. In addition, involving the private sector allows for the acceleration of investments, the spreading of costs over time, and the utilization of complementary financing sources - such as land value capture, private-sector loans, and more - without increasing the immediate direct budgetary burden on the State, while fully preserving public control over objectives, regulation, and the public interest.

2.3. Principles for Preparing Strategic Transportation Plans and Transportation Initiatives

Strategic transportation plans are designed to serve as a pivotal tool for shaping long-term policy, ensuring coordinated, efficient, and relevant action that meets the needs of the public and the economy. Formulating such plans requires a systemic perspective that identifies Israel's unique transportation challenges including; geographical and demographic constraints, the multiplicity of stakeholders involved, the cost-benefit ratio, and the direct impact on quality of life and societal welfare. This chapter outlines the core principles that form the foundation for preparing strategic transportation plans. Grounded in previous research and frameworks established both in Israel and internationally³⁵, the chapter presents three fundamental principles for transport planning: methodological principles; principles for adapting to a changing reality and conditions of uncertainty; and transport planning principles.

³⁵(a) Reuveni, Eran (2023). Recommendations for the Preparation of the Economics, Budgets, and Strategy Division in the Ministry of Transport for Formulating a Transport Strategic Plan Framework. Barshi Transport Information Routes Ltd. (b) Prime Minister's Office (2010). The Government Planning Guide. Jerusalem: Policy Planning Directorate. (c) World Bank (2010). Preparing a National Transport Strategy: Suggestions for Government Agencies in Developing Countries. Washington, DC: World Bank. (d) ITF-OECD (2017). Strategic Infrastructure Planning: International Best Practice. OECD Publishing.



Methodological Principles

1. Establishing a Hierarchy of Plans and Defining the Transport Plan's Position within It

Every transport plan under development must be integrated into the existing strategic framework, explicitly defining its position within the hierarchy of various plans. The purpose of this hierarchy is to establish logical linkages between different plans, ensuring that lower-level plans remain bound to and aligned with the goals and objectives of higher-level plans. The proposed hierarchy is structured into three tiers of plans:

- a. **National Strategic Plan** – A long-term policy document that defines national-level goals and objectives for the development of Israel's transportation systems or a specific transport sector (such as aviation, maritime, freight, or safety). The purpose of this plan is to realize one or more of the high-level goals defined in the Strategic Plan 2050 against its derived outcome indicators, while evaluating national needs and establishing quantitative targets.

A strategic plan is designed to support policy measures or delineate an updated planning framework, from which the subsequent levels in the hierarchy will be derived, down to the highest level of detail. Consequently, every strategic plan will comprehensively address the plan's underlying vision or the policy measures it promotes. This policy or plan may be transport-centric, or it may derive from a shift in a general planning paradigm, such as an urban or alternative concept. The planner must demonstrate, qualitatively, how the plan aligns with the policy and objectives of the Comprehensive Strategic Plan. Furthermore, every strategic plan must be presented against a systemic backdrop, including at the spatial level, the transport discipline level (such as public transport, freight, aviation, and ports), and the level of modal integration.

- b. **Master Plan** – A planning document that translates strategic plans into viable policy directions and courses of action. The plan's authors must reference the high-level strategic plan, demonstrating how the master plan directly stems from it and aligns with its goals. The master plan will outline the target objectives to be achieved, the methods for achieving them, and an evaluation of how well the plan addresses the specific problems it is intended to resolve. A master plan may address a particular transportation, social, or geographical segment. It includes economic components, such as preliminary budgetary estimates for the proposed policies or courses of action. Furthermore, a master plan can be national, regional, district-level, municipal, or discipline-specific.



- c. **Implementation Plan** – A detailed plan based on the master plan that encompasses defined projects. The inclusion of projects not originally featured in the master plan may be permitted, provided it is demonstrated that they complement the existing framework of the master plan. The plan will include a clear definition of each project, its readiness, cost (at least a preliminary estimate), an initial cost-benefit analysis, project prioritization, interdependencies, and prerequisites. At the macro level, the plan will outline execution phases, budgets, timelines, annual milestones, and an investment program. Once finalized, detailed execution plans can be formulated for each individual project.

The classification into these three types of plans is utilized internationally³⁶. Certain countries have expanded the planning process encompassed by these three tiers into more comprehensive stages, as seen, for example, in Australia³⁷. The "Comprehensive Transportation Plan 2050" seeks to promote a unified language among transportation bodies in Israel, and therefore proposes the distinct classification into three types of plans as detailed above.

2. Terminology and Methodology

The new strategic plans will utilize a shared conceptual framework encompassing goals, sub-objectives, indicators, and courses of action, grounded in the unified language principles established in the Strategic Plan 2050. Master plans are not required to define an independent vision of their own; however, they must include an operational purpose that aligns with the Ministry's 2050 vision, alongside an explicit evaluation of the broader transportation goals they serve - namely, accessibility, sustainability, safety, or economic development. This shared language facilitates planning uniformity, synchronization between distinct plans, and effective collaboration among all stakeholders both within and outside the Ministry of Transport. The methodological framework (Figure 3) for formulating strategic plans comprises four core components:

- a. **Goal:** The broad achievements toward which the Ministry directs its actions. Goals define the desired future and serve as an expression of the Ministry's vision.
- b. **Sub-objective:** An intermediate achievement that brings us closer to the goal. Sub-objectives are used by the Ministry to realize the high-level goal and must be concrete,

³⁶ Rodrigue, J.-P., Notteboom, T., & Slack, B "Transport Planning and Governance.(2024) '.

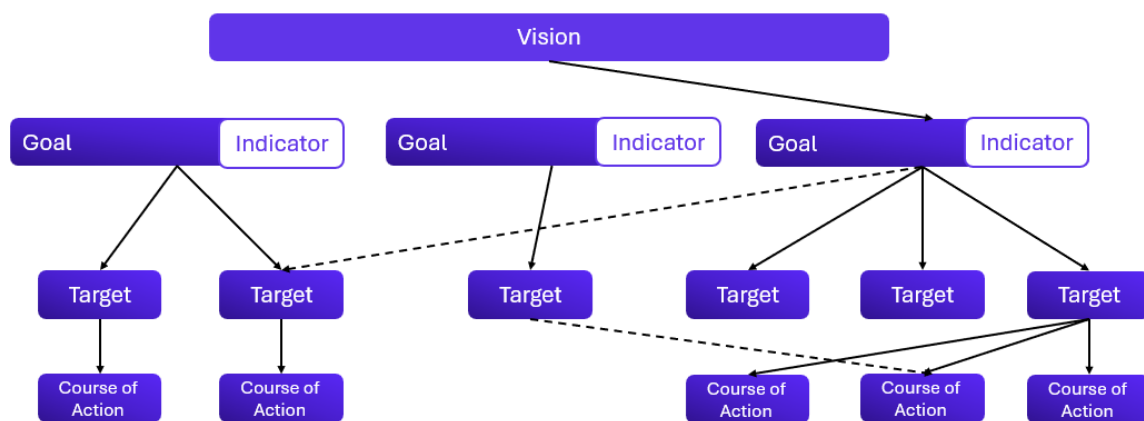
³⁷ [4. Framework Overview | Australian Transport Assessment and Planning](#)

measurable, and achievable.

c. Indicator: A measurable quantitative variable that reflects a specific state evaluated at a given point in time.

d. Course of Action: The proposed actions for the Ministry to undertake in order to achieve the defined sub-objectives. The execution of these actions is the core of the Ministry's operations and constitutes an essential component in realizing the sub-objective.

Figure 1: Structure of Strategy Plans



3. Stakeholder Integration and Coordination

A strategic plan must define clear mechanisms for coordination and collaboration among all stakeholders relevant to its domain. The multiplicity of stakeholders, extended timelines, and substantial capital investments necessitate tight coordination between the Ministry of Transport and intersecting government ministries (such as the Ministry of Environmental Protection, the Ministry of Energy, the Planning Administration, etc.) during strategic planning. This includes committing to shared targets and achieving synergy across the objectives of the various ministries. Furthermore, implementation plans require coordination with operational agencies, local authorities, and other bodies to enable the establishment of evaluation and control mechanisms. Consequently, the coordination process must span the entire lifecycle of the plan - from its initial formulation, through the planning and execution phases, up to activation, operation, and ongoing management. To achieve this, the integration of plans must incorporate several dimensions:

- **Alignment with Higher-Level Plans:** The plan must be aligned with, and actively fulfill,



the goals, indicators, and courses of action of plans positioned higher in the hierarchy.

- **Alignment with Parallel-Level Plans:** The plan must be coordinated with other plans at its own level to ensure no contradictions exist regarding objectives, courses of action, or planned activities within a shared geographical area. As such, the plan must demonstrate compatibility with intersecting plans and illustrate how its implementation impacts projects within those plans whether in a different dimension (e.g., sustainability) or a different spatial sphere (e.g., a district plan must align with adjacent district plans) or a different tier (e.g., a district plan must align with the national plan; similarly for a municipal plan relative to a district plan). In cases of conflict with an intersecting plan, it must be resolved in coordination with its authors so that the newly published plan includes a definitive resolution on the disputed aspects.
- **Alignment with Plans of Other Ministries:** The plan must account for the plans of other ministries that intersect with its scope. Should a conflict between plans arise, the plan's author must surface it and attempt to resolve it with the authors of the intersecting plans. If the conflict remains unresolved, it must be explicitly presented in the plan alongside a justification for the chosen approach over the intersecting one. It is proposed to establish a steering committee to promote joint intra-ministerial and inter-ministerial forums to resolve conflicts between plans.
- **Alignment with Economic and Urban Issues:** An implementation plan must provide tools for economic and urban development. Therefore, every implementation plan must be contextualized within the development plans of its spatial sphere of influence. This includes analyzing the transportation plan's impact on the feasibility of realizing these development plans within the projected timelines and land availability, as well as outlining the economic risks and opportunities resulting from the plan's implementation.

4. Utilization of Prioritization and Resource Management Mechanisms in the Strategic Plan

New plans are required to establish mechanisms for prioritizing courses of action, grounded in policy considerations, system-wide coherence, hierarchy, positioning of the core network backbone, network completion, and public and transport benefits. The prioritization process must address fundamental sequence questions: which actions are critical to achieving the plan's goals, and which must be advanced in the initial phase compared to those that can be deferred to a later stage.

Prioritization will address integrated bundles of complementary actions and will be based, among other factors, on the level of alignment with intersecting plans, the ability to realize high-



level goals, and the attainment of target indicators set by the Strategic Plan 2050—while accounting for budgetary, economic, and project readiness factors (such as statutory planning status, availability, and technological capabilities). Every plan with budgetary implications must undergo a prioritization assessment from a fiscal perspective as well, as part of the broader effort to execute feasible, integrative strategic transportation planning

5. Establishing Indicators for the Strategic Plan

New plans must present clear, quantitative, and measurable target indicators, alongside process indicators, to serve as a framework for the systematic monitoring of the plan's progress toward achieving its goals. Each plan must demonstrate how its proposed indicators align with those established under the Comprehensive Strategic Plan 2050, and how it directly or indirectly contributes to advancing one or more of its objectives.

Furthermore, plans must foster an indicator-based planning culture thus enabling continuous monitoring of implementation against set timelines, as well as the governance and oversight of the infrastructure projects within their scope. Process indicators will allow for the evaluation of operational targets, budgetary effectiveness, and execution efficiency, facilitating early detection of gaps, real-time course corrections, and the continuous improvement of workflows.

Alongside indicators for success, plans must explicitly define indicators of failure. It is essential to recognize when a strategy is underperforming and requires a fundamental reassessment of the underlying problem.

Addressing Changing Realities and Uncertainty in Transportation Planning

Strategic plans must be dynamic and capable of adapting to changing realities and conditions of uncertainty. Consequently, strategic plans must be structured to allow for flexibility and adaptability, alongside establishing an ongoing maintenance mechanism and a continuous monitoring system. This ensures plans are updated within short intervals to remain relevant and serve as effective decision-making tools. Authors of plans must address the following key topics detailed below:

1. Assessment of the Impact of Technological Advancements and Changes on Plan Components

Strategic transportation plans are long-term in orientation and, as a result, must maintain planning flexibility in the face of an environment characterized by rapid technological change, which is expected to profoundly impact transportation systems and passenger behavior.



Therefore, every plan must include a chapter evaluating how technological innovation may influence the achievement of its goals: whether there are conditions under which technological shifts could render certain measures redundant, alter strategic directions, or enable significant acceleration in meeting objectives, alongside an assessment of the probability of these technologies materializing.

2. Preparedness for Maintaining Operational Continuity

Strategic plans must address the capability of the proposed plan to support the continuous provision of essential transportation services during emergencies or crisis situations. Events such as the COVID-19 pandemic or the Swords of Iron war have illustrated that transportation systems are vulnerable to severe disruptions, thereby necessitating advance preparation. Plans must incorporate scenario analyses where functional continuity could be compromised (e.g., shutdown of public transport systems, loss of access to key regions, or supply chain collapses) and define measures to mitigate the extent of impact.

This framework may include developing alternative transportation solutions, defining essential services, prioritizing key populations and services during crises, and adopting principles of multimodality, flexibility, redundancy, and risk management as part of comprehensive planning. Events to prepare for include wars, extreme climate events and natural disasters, pandemics, cyberattacks, and mass-casualty incidents.

The planning process must embed a structured assessment of relevant risks, evaluate the exposure of plan components to these impacts, and propose solutions for risk mitigation, infrastructure resilience, and rapid post-disruption recovery. Furthermore, it is recommended that every plan evaluate its contribution to reducing greenhouse gas emissions and advancing sustainable transportation.

Principles for Transportation Planning

1. The Role of the Transportation System

The transportation system is designed to serve the public through a broad perspective of the spatial environment in which it operates. Transport demand is derived from urban and economic systems on the one hand and influences the capacity and direction of development within those very systems on the other.

2. Hierarchy

The transportation system must be viewed through the hierarchical classification of its



components. This principle applies across all transportation systems, including the road network, public transport network, freight transport system, and airports. Clear criteria must be developed to define each level in terms of traffic, passenger, or freight volumes, common trip lengths, and systemic interfaces.

Emphasis shall be placed on the interfaces between different levels, systems, and modes of transit for example, the interface between a highway and passenger rail stations, or between a seaport and rail or heavy truck cargo terminals. Interfaces between transit modes directly impact land-use allocation required to accommodate them, such as Park and Ride facilities, kiss-and-ride drop-off lanes, and transfer hubs. Against this backdrop, a matrix of desirable connections must be established across varying road classifications, public transport tiers, freight transport modes, and related infrastructure.

3. Integration of Stakeholders

A transportation plan, at any level, must always be presented against the backdrop of intersecting plans at corresponding levels from other sectors - such as land-use and housing, employment, economic development, and energy - and must address economic and urban policy issues as outlined above.

4. Integration of Transportation Modes

Every transportation plan, even if focused on a defined or specific scope, must address the full spectrum of transportation system components. For example, a master plan for a road network must ensure compatibility and integration with public transport modes appropriate to the hierarchy in question; similarly, a plan for freight terminals must evaluate the capacity of access roads utilized by heavy transport vehicles. This requirement applies regardless of whether a corresponding intersecting plan currently exists.

5. Analyzing Core Components of Plans

Every plan, at any level, must include a detailed breakdown of all its core components, including component boundaries, land availability, the level of planning detail, and relationships with other plan components. It is insufficient to merely draw "lines on a map".

The determination of what constitutes a core component, as well as the required level of detail, depends on the type of plan:

- In a Strategic Plan: A core component is a foundational building block of the plan, requiring a more conceptual level of detail.
- In a Master Plan: A core component is any project of systemic significance, requiring an



initial level of detail.

- In an Implementation Plan: Every project is considered a core component, requiring full and comprehensive operational detail.

The plan must evaluate the interrelationships among various components, identifying which are competing, complementary, or mutually independent. Alongside standard analyses, every plan should proactively address the most common criticisms it is expected to encounter. This analysis will clarify whether alternative approaches exist to address the underlying problem.

2.4. Key Organizational Recommendations

Several areas require organizational changes by the Ministry of Transport to enable the implementation of the Comprehensive Strategic Plan for Transportation in Israel 2050. These focus areas include strengthening inter-departmental integration, enhancing policy leadership capabilities, and fostering a culture of innovation.

These changes are expected to promote more efficient operations across the Ministry and its divisions, streamline project delivery, achieve deliverables without unnecessary delays, and maximize economic and transport efficiency. Collectively, these factors will directly impact the Ministry's ability to successfully achieve its short-, medium-, and long-term strategic objectives.

This chapter outlines the organizational principles and mechanisms designed to align the Ministry with the implementation of the Comprehensive Strategic Plan for Transportation in Israel 2050, categorized by the identified focus areas.

Key areas requiring organizational changes for plan implementation include:

1. Integration

a. Integration at the Ministerial Level

National-Level Planning Integration: Coordination between the Ministry of Transport and intersecting entities in long-term planning must be strengthened to achieve alignment across goals, objectives, and outcome indicators. This requires active coordination and synchronization in the planning, prioritization, scheduling, and execution of projects with all relevant policy and infrastructure bodies, including: the Planning Administration, the National Economic Council, the Ministry of Construction and Housing, the Israel Land Authority (ILA), the Ministry of Economy, the Ministry of Energy, the Ministry of Environmental Protection, state infrastructure companies, local authorities, and others. Establishing coordination across long-term strategic planning, multi-year planning, and annual work plans - thereby enabling



synchronized national decision-making regarding physical planning - will be driven by an empowered organizational mechanism within the Ministry of Transport: the Transportation Strategy Team (as detailed in Section 2 below).

Internal Strategic Alignment: A unified framework and language must be adopted across the Ministry's strategic planning, as presented in this Comprehensive Strategic Plan, to drive convergence toward shared goals and joint performance measurement. Using this standardized framework will establish a cohesive overview, foster cross-plan alignment, and define clear outcome and process indicators to support effective monitoring and evaluation of various programs.

The core challenge in maintaining a unified planning language lies in its implementation across numerous stakeholders within the Ministry of Transport, its operational agencies, and government-owned corporations. This document addresses this challenge in two ways: first, through the unified framework principles outlined in Section 2.2 above (grounded in international best practices); second, through an empowered organizational mechanism within the Ministry of Transport, detailed in Section 2 below.

Infrastructure Project Integration: Coordination among stakeholders within the transportation ecosystem, including operational agencies, infrastructure corporations, planners, execution bodies, local authorities, and utility providers must be strengthened to streamline workflows and accelerate project delivery timelines. Execution delays result in ongoing operational inefficiencies, worsening congestion and safety concerns across transit networks, and inflict heavy economic costs. Furthermore, project prioritization must be integrated: optimal prioritization requires a broad, Ministry-wide perspective that accounts for a project's contribution to strategic goals, its readiness, and its engineering interdependencies. Currently, the standard prioritization framework relies on the Transportation Project Evaluation Guidelines, which is applied to some, but not all, transportation projects. There is a need to formulate a cohesive prioritization policy and determine the appropriate mechanism for Ministry-wide use in the coming years. This need will be evaluated as part of the multi-year implementation plan for "Transportation Strategy 2050," as detailed in Part 3 of this document.

b. Integration in Execution

Formal, robust mechanisms must be established or strengthened to resolve conflicts within the Ministry of Transport, its operational agencies, and among external stakeholders. These structured mechanisms will enhance coordination and reconcile conflicting interests and disagreements across Ministry divisions, infrastructure companies, local authorities, and other



government entities in instances where standard coordination, synchronization, integration, and prioritization fall short or where competing considerations arise.

c. Integrated Performance Measurement, Monitoring, and Evaluation

Leveraging high-quality data and information enables the assessment of progress across the strategic plan relative to defined goals and outcome indicators. To ensure rigorous monitoring and evaluation of program advancement, process indicators must be defined within the plan, ongoing Ministry involvement in major project milestones must be maintained, and continuous data collection must be established.

Effective, ongoing monitoring requires both a dedicated organizational mechanism within the Ministry of Transport (as detailed in Section 2 below) and an upgrade in data capabilities and digital systems to provide real-time operational visibility. The requirements for this data transformation are expanded upon in the multi-year implementation plan for "Transportation Strategy 2050," set forth in Part 3 of this document.

In summary, integration represents one of the core focus areas identified in the "Comprehensive Transportation Strategy 2050" - an area where a major breakthrough is achievable in the short term, delivering transformative value to Israel's transportation sector. Executing this step-change relies on two primary mechanisms:

1. A Unified Framework: Core principles have been established and will be embedded across the workflows of all relevant entities.
2. An Empowered Organizational Mechanism: A dedicated mechanism within the Ministry of Transport that will operate continuously to implement and enforce this unified framework and drive inter-agency integration. This mechanism is detailed in Section 2 below



2. Establishing a Transportation Strategy Team

To execute the Comprehensive Strategic Plan, the Strategy Division must be significantly strengthened. The Strategy Division outlines the strategic planning framework for all Ministry units, drives integration across the entire organization, and operationalizes long-term planning through annual work plans. To this end, the Strategy Division must be bolstered with high-caliber talent possessing the following core competencies: 1. Expertise in guiding the formulation of strategic plans across land, air, and maritime transportation sectors; 2. Hands-on experience in leading the execution of complex, cross-cutting strategic projects within large-scale organizations, as well as tracking and monitoring their progress; 3. Deep familiarity with and direct access to cutting-edge global methodologies and best practices in strategic transportation planning across air, sea, and land domains.

One of the key pathways to achieving the transportation vision and high-level goals is the establishment of a Transportation Strategy Team, either internal or external. This team will manage the execution of the Comprehensive Strategic Plan for Transportation and assist the Ministry of Transport's executive leadership in advancing policy to fulfill its vision, goals, and targets.

The primary objectives of the team are to assist the Strategy Division in:

- a. Cross-Plan Integration**
- b. Monitoring and Oversight of Strategic Plan Development and Implementation**
- c. Data-Driven Decision Support for Resource Allocation**

The team will facilitate integration across all Ministry units including operational agencies, government corporations, and authorities as well as with relevant government ministries, such as the Planning Administration, Ministry of Construction and Housing, Ministry of Environmental Protection, Ministry of Finance, Ministry of Energy, and the Prime Minister's Office.

The team will address plans spanning all operational domains of the Ministry of Transport—including public transport, road infrastructure, rail networks, freight, aviation, maritime transport, traffic management, and emerging mobility.

The primary responsibilities of the Transportation Strategy Team include:

a. Strategic Planning, Alignment, Synchronization, and Integration

- **Inter-Agency Alignment:** Establishing coordination and integration between the Ministry of Transport, its affiliated agencies, government corporations, and relevant intersecting



entities across key government ministries in both long-term and short-term strategic planning.

- **Quality & Methodological Assurance:** Ensuring that strategic plans are formulated in strict accordance with required standards, including: alignment with strategic goals and targets; consistency across intersecting plans; application of a unified planning language; active integration of stakeholders throughout the drafting process; and the definition of robust implementation, monitoring, and evaluation indicators.

b. Performance Management and Implementation Tracking

- **Infrastructure & Execution Alignment:** Coordinating and synchronizing efforts between the Ministry of Transport and state infrastructure companies during the delivery of infrastructure projects and the implementation of strategic plans.
- **Periodic Plan Mapping & Harmonization:** Institutionalizing a periodic mapping process for all existing strategic plans to ensure continuous inter-plan compatibility. This mapping will enable progress tracking and oversight, ongoing synchronization across entities during both planning and delivery phases, and verification that core planning assumptions align with reality.
- **Milestone Tracking:** Translating all strategic plans into clear, actionable milestones, followed by rigorous tracking and monitoring against these milestones to ensure progress according to schedule.
- **Data & Information Management:** Identifying relevant information requirements, establishing data collection mechanisms, and implementing a centralized data system to support informed, data-driven decision-making.
- **Ongoing Target Monitoring:** Continuously monitoring progress toward targets, including gap analysis and post-implementation lessons learned.
- **Strategic Reporting:** Generating periodic status reports and performing strategic analyses to inform decision-making for the Ministry's executive leadership and Strategy Division.
- **Plan Adaptation & Reprioritization:** Executing necessary adjustments, scope revisions, or project reprioritization based on performance findings and evolving strategic needs.



c. Operation of an Automated System for Managing Strategic Plans and Core Projects

The system will serve as a shared platform for all national infrastructure entities, enabling both data input and cross-visibility into intersecting projects. The Transportation Strategy Team will manage the day-to-day operation of the system, actively tracking the implementation of various strategic plans, physical execution progress, and the execution of decisions made by the Ministry's executive management.

3. Enhancing the Ministry's Capability to Lead Policy Across All Areas of Responsibility

Strengthening the Ministry's capacity to fulfill its policy and regulatory mandate by reducing reliance on state infrastructure companies, transportation corporations, and affiliated agencies for data, information, and domain expertise. Fostering data independence will enable a comprehensive operational overview to drive effective policy formulation and implementation oversight.

In addition, evaluating the organizational structure of the Ministry and all its divisions to ensure institutional capacity for executing tasks aligned with the plan's high-level goals. This includes appointing clear technical policy leads within Ministry headquarters for core domains currently lacking definitive ownership—such as maritime transport, aviation, and multimodal connectivity. The specific organizational roles will be finalized as part of the Policy Paper on Human Capital in the Transport Sector, which will determine the optimal structure to achieve its strategic objectives.

4. Culture of Innovation

The Ministry must embed a culture of organizational and process innovation extending beyond purely technological solutions. The Ministry should encourage innovative thinking while leveraging Israel's vibrant innovation ecosystem and global best practices in transportation not only in technology, but also in processes, organizational structures, and managerial methodologies.

Cultivating an innovative culture across the Ministry will be driven by the following key measures:

- a. Driving Motivation for Innovation: Inspiring and incentivizing both management and staff.
- b. Fostering a Supportive Organizational Culture: Securing managerial commitment, embracing fundamental change, and cultivating a tolerance for calculated risk and failure.



- c. Establishing Support Mechanisms & Processes: Implementing innovation-enabling workflows and structures across the Ministry and its affiliated agencies.
- d. Building Knowledge & Innovation Capabilities: Developing tools, methodologies, and skill sets to propel continuous innovation.
- e. Forging Strategic Partnerships: Promoting internal cross-functional collaboration (internal innovation) and external partnerships (open innovation).
- f. Knowledge & Information Sharing: Facilitating seamless knowledge exchange among institutions, agencies, and industry professionals.

A comprehensive multi-year roadmap for embedding a culture of innovation across the Ministry of Transport and its operational agencies including an enabling organizational structure, dedicated role definitions, institutional mechanisms, process re-engineering, and process optimization—will be formulated within the Ministry's Organizational Readiness Plan.

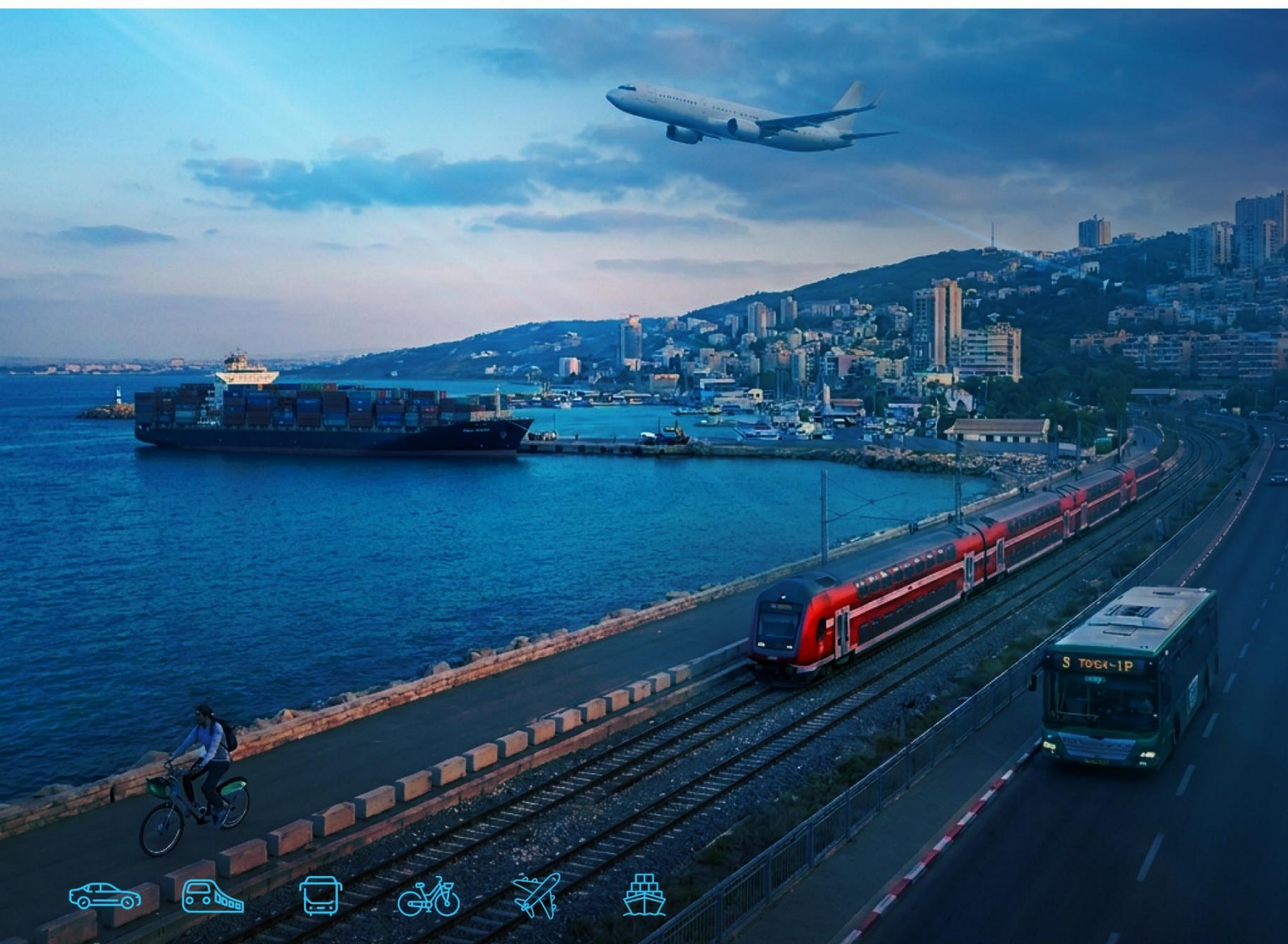
In conclusion, the "Comprehensive Transportation Strategy 2050" framework outlines a clear methodology and strategic plan, marking a paradigm shift in the Ministry of Transport's high-level goals for the coming decades, alongside necessary budgetary adjustments and defined performance indicators. Furthermore, the plan establishes actionable principles for a unified operational framework and an empowered organizational mechanism dedicated to driving inter-agency integration and alignment.

Executing these strategic shifts will require substantial executive leadership and staff work in the coming years, as detailed in the multi-year implementation plan in the following chapter.



Part III

The Multi-year Plan for Strategic Planning





As part of the strategic preparation for 2050, extensive policy and planning work is required to formulate and update domain-specific strategic plans across the maritime, aviation, and surface transportation sectors.

Accordingly, a comprehensive inventory of strategic plans, master plans, and policy papers has been defined to be prepared, updated, or evaluated for revision in the coming years. This list is non-exhaustive, and additional plans and policy frameworks may be integrated as needs arise. For each document, this chapter provides a detailed description outlining its rationale, core necessity, and required scope.

List of Documents:

#	Topic	Document Type
1.	Road Safety	Strategic Plan
2.	Data	Strategic Plan
3.	Smart Mobility	Strategic Plan
4.	Aviation	Strategic Plan
5.	Maritime Transport and Shipping	Strategic Plan
6.	Public Transport	Strategic Plan
7.	Transportation Investment Prioritization	Policy Paper
8.	Emergency Preparedness and Operational Continuity	Strategic Plan
9.	Principles for Project Execution	Policy Paper
10.	Regional Cross Border Transportation	Policy Paper
11.	Sustainability and Energy in Transportation	Strategic Plan
12.	Walkability	Strategic Plan
13.	Tel Aviv Metropolitan Area	Strategic Plan
14.	Jerusalem Metropolitan Area	Strategic Plan
15.	Haifa Metropolitan Area	Strategic Plan
16.	Be'er Sheva Metropolitan Area	Strategic Plan
17.	Judea and Samaria	Strategic Plan
18.	Climate Change Preparedness	Policy Paper



19.	Organizational Interfaces with Operational Agencies and External Bodies	Policy Paper
20.	Travel Demand Management	Strategic Plan
21.	Encouraging Remote Activity	Policy Paper
22.	Israel Railway	Master Plan
23.	Micromobility	Strategic Plan
24.	Traffic Management	Strategic Plan
25.	Transport of Freight	Master Plan
26.	Low-Altitude Vertical Aviation	Strategic Plan
27.	Autonomous Vehicles	Policy Paper
28.	Integrated Transport and Land-Use Planning	Policy Paper
29.	Meteorological Service	Strategic Plan
30.	Transportation Hubs	Master Plan
31.	Ports	Strategic Plan
32.	Urban Freight Transport	Policy Paper
33.	Human Capital in the Transportation Sector	Policy Paper
34.	Material Resources for Transport Infrastructure	Policy Paper
35.	Real Estate Assets of Transportation Entities	Policy Paper
36.	Vehicle Licensing and Emerging Technologies	Policy Paper
37.	Regulatory Framework	Policy Paper
38.	Customer Service and User Experience in Public Transport	Strategic Plan



Overview of Documents

1. Strategic Plan for Road Safety

The Road Safety Strategic Plan was formulated several years ago and has not been fully implemented. This plan seeks to update and modernize the national safety paradigm in alignment with Safe System principles and Vision Zero, integrating safe infrastructure, vehicle technologies, driver training, driving culture, smart enforcement, and advanced data architecture. The plan focuses on establishing a safe system to reduce fatalities and serious injuries, identifying high-risk locations, and prioritizing investments based on proven safety cost-effectiveness.

In infrastructure, the plan will address comprehensive upgrades to high-risk road corridors, including transitioning single lane roads to two lane divided roadways, designing grade-separated interchanges at major intersections, installing traffic calming and protective measures for pedestrians and cyclists, improving lighting, and implementing targeted safety interventions in high-accident clusters.

With regards to vehicles and technology, the plan will define sub-goals and strategic directions to achieve a technological leap, such as establishing mandatory minimum safety equipment standards and accelerating fleet renewal. Alternatives will be evaluated for regulatory alignment with leading global standards, focusing on enhanced vehicle maintenance mechanisms, periodic inspections, and supportive regulation for crash-avoidance and mitigation technologies. Linking advanced safety technologies directly with licensing and regulatory procedures will ensure effective deployment.

Regarding driver behavior and culture, the plan will explore targeted interventions to transform driving standards across Israel. These include a graduated driver licensing model, tailored training for high-risk demographics, traffic education curricula, preventive mechanisms for dangerous driving, and periodic refresher courses aligned with driver profiles. The goal is to enhance practical driving competence and foster a sustainable safety culture over time. Additionally, the plan will establish safety norms and regulatory frameworks for micro-mobility usage in urban environments.

The plan will outline a national smart enforcement framework powered by cameras, sensors, and analytical tools for real-time risk pattern detection. Enforcement will be targeted and evidence-based, leveraging data analytics to pinpoint high-risk locations, peak hours, and traffic density. Combining automated technological enforcement with targeted field presence will



enable systematic reduction of dangerous driving behaviors.

In data management, the plan will outline measures to improve safety intelligence, including the creation of an integrated, multi-agency data repository synthesizing inputs from the Israel Police, healthcare institutions, insurance providers, and other relevant bodies, while providing tailored data access to the public and stakeholders.

To optimize resource allocation, the plan will establish a formal framework for identifying and prioritizing high-risk locations. This mechanism will rely on a weighted risk index incorporating accident frequency, severity, road design conditions, travel speeds, and multi-variable risk indicators.

2. Strategic Plan for Data

The data section of the strategic plan revealed a present lack of updated, continuous data for decision-making across all levels of the Ministry of Transport, necessitating a strategic data plan to address existing gaps. Key emphasis will be placed on:

- a. **Outdated Foundational Data:** Long-standing gaps in fundamental baseline indicators, including travel demand and commuter behavior patterns that have not been updated for years.
- b. **Inconsistent Data Sources:** Discrepancies in data and conflicting indicators across different agencies and organizations.
- c. **Regional Data Deficits:** Insufficient data coverage in peripheral regions, including incomplete or missing documentation.
- d. **Interoperability & Integration Challenges:** Cross-referencing hurdles resulting from incompatible data formats and siloed systems.

Additionally, a structured framework must be established for ongoing data governance, maintenance, and system upkeep.

The Ministry of Transport is advancing a comprehensive initiative for cross-agency data synchronization and sharing, known as **Igra**. The Igra framework will serve as the foundation for this **Strategic Data Plan**, which aims to deliver more timely, up-to-date information over time, secure the necessary budgets for enhanced data collection, and define the organizational requirements to achieve these objectives.

Accordingly, the plan will encompass:

- Mapping the current data landscape across the Ministry, its operational agencies, state



corporations, and external entities (e.g., the Central Bureau of Statistics, Israel Traffic Police).

- Evaluating data availability, freshness, and accessibility to identify key analytical gaps.
- Defining policies for data collection, management, and governance.
- Developing robust data infrastructure and frameworks to advance data-informed decision-making.
- Analyzing international organizational models for data governance in transport ministries, evaluating derived alternatives, and delivering actionable recommendations for the Ministry.
- Translating the data strategy into a high-level operational implementation roadmap.

Beyond regulating long-term statistical data for strategic planning, the plan will address data collection and analytics for real-time traffic management, infrastructure maintenance optimization, safety enhancement, service quality improvement, user interface integration, simulation modeling (digital twinning), and academic research—ensuring seamless integration with the existing Igra program.

3. Strategic Plan for Smart Mobility

This plan seeks to establish an updated and continuously evolving national framework that will enable the development, integration and operation of smart mobility technologies and services in Israel. The goal is to create a professional, safe, and standardized environment that enables innovation to occur at the required pace, while safeguarding public interests and addressing the strategic plan's high-level goals: safety, sustainability, accessibility, and economic prosperity alongside the capacity to scale nationwide. Currently, the Ministry of Transport is actively engaged in promoting dozens of pilots in this field, and a dedicated plan on the subject is presently being formulated within the Ministry. It is necessary to evaluate which aspects are currently being advanced and which aspects need to be completed. This evaluation will constitute one of the primary tasks of the multi-year plan, as detailed below.

One of the central core areas that the plan will address is the creation of a national architecture for smart mobility. This architecture will define shared standards, uniform formats, and regulated APIs that will enable the planning and development of services and solutions based on a unified professional language. This infrastructure will enable companies, authorities, and



government bodies to work together in a coordinated manner.

The plan will also regulate collaboration mechanisms among the various actors in the system: the Ministry of Transport, operational agencies, local authorities, operators, and technology companies. The goal is to establish clear rules for data sharing, alignment on pricing, and operational integration between different transport services, providing the user with a seamless and unified experience.

On the regulatory front, the plan will define an innovation framework including a regulatory sandbox that will enable technology testing in a rapid yet controlled manner. Within this scope, safety, ethical, and cybersecurity protocols will be defined, along with rules for procurement, funding, and training, enabling a structured and secure transition from pilot scale to full implementation.

In the field of cybersecurity, the plan will focus on creating unified standards for protecting transport systems, including the integration of OT and IT management. Monitoring and response mechanisms will be established, including a sectoral SOC as well as recovery procedures alongside routine training plans for risk scenarios will be drafted. All of these will ensure the resilience of the transportation system against advanced threats.

In the area of demand management, the plan will formulate principles for dynamic pricing based on zone, time, and congestion levels, alongside smart parking policies and incentives for carpooling and the use of public and shared transit. Pricing and demand management will enable more efficient use of infrastructure and support congestion reduction. In addition, the plan will address the advancement of ITS infrastructure and advanced connectivity, including V2X deployment, smart traffic signal management, and shoulder and curb management.

These tools will support the creation of a national control dashboard enabling real-time, data-driven decision-making. To evaluate the plan's progress and implementation, clear success indicators will be defined, such as travel times, service reliability, the implementation level of standards and API infrastructures, MaaS adoption scope, and occupancy factors. Regarding governance, an inter-ministerial transport innovation committee will be established, operating with the support of a PMO and Data Governance mechanisms. The plan will be implemented via a multi-year execution roadmap.

4. Strategic Plan for Aviation

Currently, a Master Plan for Civil Aviation from 2018 exists, as well as a Strategic Plan for the Regulation of Civil Aviation in Israel 2030 which was authored in 2024. However, there is



currently no national strategic plan for aviation that encompasses goals, objectives, and key performance indicators. Therefore, there is a need for a comprehensive plan to formulate these aspects, which will guide civil aviation activities in Israel alongside addressing several additional key issues:

- A. **Industry Competition** – The near-exclusive reliance on Israeli airlines for international flights has led to a sharp increase in ticket prices and abnormal profitability. Due to ongoing geopolitical instability, there is a concern that this situation may recur. Consequently, it is proposed that the Ministry of Transport, other relevant government ministries, and the Competition Authority prepare to prevent such excess profitability.
- B. **Functional Continuity** – The reduction in airline operations and potential closures of airspace leave travelers stranded, entailing significant costs and damages. The Ministry of Transport and other relevant bodies must prepare for potential future scenarios to minimize these damages.
- C. **Infrastructure** – In light of projected growth in international passenger traffic and the capacity limits of Ben Gurion Airport, it is proposed that alongside advancing the establishment of new airports, technological, regulatory, and economic measures be implemented to increase Ben Gurion Airport's effective capacity.
- D. **Aviation Personnel Training** – There are specialized aviation professions requiring lengthy and costly training, led by pilots. In pilot training, several key issues and trends require in-depth evaluation:
 - 1) The potential closure of Herzliya Airport and the provision of alternative infrastructure, analyzing the cost-benefit of various alternatives
 - 2) A continuous downward trend in scheduled and non-scheduled domestic aviation activity, which serves as a training ground for pilots transitioning to jet aircraft
 - 3) The future volume of Air Force pilots transitioning to civil aviation
 - 4) Arrangements for training Israeli pilots abroad
 - 5) The employment of foreign pilots by Israeli airlines, in line with global aviation standards
- E. **Sustainability** – The primary sustainability challenge is minimizing aviation emissions by advancing propulsion technologies and gradually transitioning to alternative fuels, including biofuels and hydrogen. In general aviation, there will be an increasing shift



toward electric propulsion. Additionally, addressing and reducing population exposure to aircraft noise will be required.

- F. **Technologies** – Technological developments aim to enhance aviation safety, increase airspace and ground capacity, strengthen security components, and improve the passenger experience. The Ministry must study the range of available technologies and prepare a long-term action plan, including mechanisms for implementation and monitoring.

5. Strategic Plan for Maritime Transport and Shipping

The vast majority of goods imported into and exported from the Israeli economy are transported via maritime routes through Israel's seaports. Approximately 98% of total import and export volume by weight is handled by sea. In terms of monetary value, roughly half of total imports and exports are transported by sea via cargo vessels, while the other half is transported by air via cargo and passenger aircraft. A minor fraction is moved via overland transport by trucks through land border crossings. Consequently, Israel effectively function as an "island nation," relying almost entirely on maritime transport and its seaports.

The total value of Israel's imported and exported goods stands at approximately \$150 billion annually. Demand for international freight movement is met on an ongoing basis by maritime and air transport assets - cargo ships, freight planes, and passenger aircraft - operated by both Israeli and foreign companies.

Israeli maritime shipping holds strategic significance during both routine periods and emergencies. Two primary issues related to the Israeli maritime sector require a strategic approach:

- A. **Maritime Professions and Seafaring Occupations** – There is a shortage of trained and experienced maritime personnel, posing a risk to future port operations. There is an essential need for pilots (experienced captains with decades of expertise required to maneuver ships into and out of ports), tugboat captains, and other specialized skill sets. The professional workforce required for maritime operations and coastal shipping lacks a sufficient reserve across all seafaring occupations, including professional regulatory bodies such as the Administration of Shipping and Ports, as well as the merchant marine fleet.



- B. **Shipping Companies and Vessel Ownership** – During emergency periods, particularly during wartime, foreign shipping companies refrain from transporting cargo to and from Israel due to security risks and related concerns. Currently, several Israeli companies control or own vessels, but only a single merchant ship flies the Israeli flag. Even during routine periods, maintaining a robust national maritime fleet—especially for an island nation almost entirely dependent on seaborne trade—provides critical strategic benefits by reducing reliance on foreign shipping and foreign interests, securing control over supply chains, and yielding other strategic advantages.

Although Israeli shipping may at times be more costly than foreign alternatives, it is essential to preserve and strengthen national maritime capabilities to safeguard these strategic advantages.

Therefore, a strategic plan for Israeli maritime transport must be formulated to outline an action plan for preserving and growing Israeli shipping capacity and maritime personnel in both the short and long term.

6. Strategic Plan for Public Transport

The previous Strategic Public Transport Plan was formulated in 2012. After more than a decade, this plan, which serves as a core pillar of the mass transit strategy supporting the 2050 Strategic Planning framework, requires validation and updating. Over this period, significant shifts have occurred within Israel's public transport sector. To drive another meaningful transformation, an updated plan must be established, addressing the following key aspects:

- A. Development of mass transit systems, including system types, target regions, and aligning system capabilities with demand scale and characteristics (incorporating a critical review of existing projects). Academic literature points to a global phenomenon of overestimating demand and underestimating capital expenditure. Consequently, decision-making processes heavily reliant on Cost-Benefit Ratios tend to be optimistic and biased. This reflects the reality observed in all major Israeli transport projects launched over the past decade - ridership numbers remain significantly below forecasts (e.g., A1 High-Speed Line to Jerusalem, Karmiel Line, Tel Aviv Light Rail Red Line), and anticipated congestion relief has failed to materialize. Against this backdrop, the Strategic Public Transport Plan must re-evaluate planned Israel Railways investments,



light rail expansion, and assess whether the promoted Tel Aviv Metro will yield its expected benefits.

- B. Addressing all passenger transport modes—from heavy rail, light rail (LRT), and metro, to buses and service taxis—encompassing:
1. **Line Hierarchy:** Categorized by trip purpose (inter-metropolitan, intercity, intra-city, etc.).
 2. **Line Specifications:** Defining station spacing, travel speed, capacity, vehicle selection, and operational parameters per category.
 3. **Feeder Services & Facilities:** Establishing feeder service standards, station amenities (e.g., Park & Ride), maximum transfer time thresholds, and cross-modal connectivity.
 4. **Operational Thresholds:** Defining minimum operational entry thresholds for each vehicle category.
 5. **Integrated Fare Strategy:** Pricing structures for multi-leg journeys (monthly passes, seamless transfer fares, etc.).
 6. **User-Centric & Goal-Oriented Optimization:** Network and route planning optimization aimed at shifting private vehicle users to public transport based on defined KPIs.
 7. **Operator Incentives & Enforcement:** Regulatory framework ensuring high service quality and driving ridership growth.
- C. Enhancing service quality and passenger satisfaction indicators as key drivers for expanding public transport adoption.
- D. Re-evaluating the current operating model to address structural barriers in market competition, route adaptation, and network responsiveness to changing demand patterns and infrastructure supply.
- E. Addressing inefficient resource allocation where standard bus services operate without economies of scale (particularly in rural areas, peripheral towns, and off-peak hours). Drivers' labor costs dominate total operating expenses relative to vehicle CapEx and fuel consumption, making bus size adjustment only a partial fix. A proposed approach is to define operational entry thresholds (e.g., based on energy consumption per passenger-kilometer vs. private vehicle impact or congestion contribution based on occupancy



factors) and provide effective, demand-responsive alternatives where traditional service is reduced (e.g., Micro-transit / Demand-Responsive Transport (DRT) in rural areas, or co-funding corporate shuttles open to the public).

- F. Workforce training, passenger transport licensing, insurance frameworks, driver compensation schemes, professional recruitment, and capacity building.
- G. Re-evaluating public transport subsidies (approaching ~17 Billion NIS in 2024) amidst declining transit mode shares. In addition, developing an alternative subsidy model through budget analysis, dynamic performance-based allocations (replacing rigid subsidies), eligibility thresholds, and financial incentives tied to service quality and ridership growth.
- H. Formulating operational planning guidelines aligned with long-term strategic infrastructure development programs.
- I. Evaluating sector governance, division of authority between central government and Metropolitan Transport Authorities (MTAs), and local authority socio-economic characteristics.
- J. Developing guidelines for safe, sustainable, and zero-emission public transport systems.
- K. Establishing a balanced, socio-economically equitable fare structure designed to incentivize modal shift, including macroeconomic benefit-cost analysis of free public transport models.

7. Policy Paper on Transportation Investment Prioritization

This policy paper will deal with presenting a structured framework for establishing multi-year prioritization and budgeting principles for transportation projects, alongside a macroeconomic framework that defines how transportation systems contribute to productivity, employment, GDP, and the cost of living. Its purpose is to integrate network-based thinking alongside the consistent and transparent measurement of economic and social contributions.

The section dealing with prioritization and budgeting will detail the need for a unified approach towards prioritizing projects from all transportation infrastructure sectors: road, rail, public transport, ports, and aviation. The document will clarify how a project's contribution to network performance, reliability, and resilience should be evaluated, and how to integrate aspects of regional and social equity, sustainability, execution risks, readiness, and maturity. Additionally, it will define the national project portfolio management program, describing the need for multi-year tracking of benefits and examining variances between planning and execution using



scenarios and sensitivity analyses. Furthermore, the prioritization methodology will address all investments and costs reflected in the Ministry of Transport's budget that affect the same subject, including investments in road infrastructure development projects, mass transit systems, public transport subsidies, smart transportation, demand management, and more.

The goal is a step-change in the integrative prioritization process among the many programs and projects promoted by the Ministry, according to the level of impact of the program/project, its importance, and its urgency. Additionally, the policy paper will address the contribution of a transportation program or project to the transport network as a criterion for prioritization over other projects.

The macroeconomic framework will deal with transportation's contribution to the economy: analyzing the linkages between transport infrastructure and services and labor productivity and GDP, its impacts on employment and the cost of living, and evaluating agglomeration processes - that is, the benefits of economic concentration and how transport accessibility shapes them. The paper will define the need for indicators and quantification frameworks - such as accessibility indicators, agglomeration benefits, Value Capture mechanisms, and logistics indicators - in order to establish a foundation for advancing the high-level goal of economic development.

In addition, the paper will describe the tools on which the policy will be based: combining cost-benefit analysis with multi-criteria evaluation; using scenarios and sensitivity analyses; and building indices for contribution to the network and socio-economic contribution. Within this context, the importance of addressing uncertainty in high-risk projects will be clarified. Finally, the paper will define the governance chapter: how institutional aspects of decision-making will be examined, including an inter-ministerial prioritization committee, the role of a national PMO body, control frameworks and reporting schedules, and public transparency for prioritization considerations and macroeconomic evaluation. It will also describe the need to embed a measurement framework so that the public sector can continuously learn and adapt evaluation and budgeting over the years.

An additional topic that the paper needs to address is a structured project financing policy, including a procedure for evaluating project suitability for PPP (Public-Private Partnerships).

8. Strategic Plan for Emergency Preparedness and Operational Continuity

A strategic plan for emergency management and business continuity is designed to comprehensively map the transportation system's level of exposure to extreme events such as war, cyberattacks, severe climate events, fires, natural disasters, and supply chain disruptions,



establishing a structured operational framework that builds readiness, ensures continuous functionality, and enables rapid recovery. Recent events, including the COVID-19 pandemic and the recent war, demonstrated the vulnerability of transportation infrastructure, digital systems, and all human and operational elements to unexpected crises. Therefore, a dedicated cross-sectoral document is required, encompassing planning, managerial, budgetary, and operational decisions.

The plan will apply to all layers of the transportation system: physical infrastructure (roads, railways, bridges, tunnels, ports, and airports), command and control systems, operational hubs, human resources, suppliers and subcontractors, and the logistical interfaces connecting them. It will also address prioritization and planning mechanisms: defining priority protocols during crises, allocating resources to sustain resilience, and establishing clear priorities among competing service levels during operational disruptions.

The plan will address transportation system operations during emergencies, including public transport, ensuring adequate service levels and reliability, addressing the impact of service deficits on public trust, and securing a sufficient pace of system recovery.

Furthermore, the plan will map critical assets and analyze interdependencies across fuel, power, communications, traffic signals, railway tracks, booking systems, operators, and contractors to identify critical zones. It will detail the types of assets to be mapped, their mutual dependencies, and the requirement to define redundancies and backups.

Another core component will focus on scenario planning: war, cyberattacks, climate events, fires, damage to control centers, supply chain paralysis, or extreme congestion. The plan will specify the types of scenarios to evaluate, the required service levels for each scenario, and key questions regarding priorities, operational repetition, congestion management under crisis, and support for emergency services—such as the military, fire department, and police—in terms of both staffing and logistics. Additionally, the plan will detail the continuity framework: remote system operations, controlled service reductions, alternative protocols during physical facility closures, and necessary contractual, operational, and staffing flexibility.

The plan will also address planning, budgeting, and prioritization domains: integrating resilience considerations into development plans, evaluating maintenance and preparedness budgets against risk profiles, and implementing mechanisms to reallocate resources between projects during emergencies. In addition, it will cover routine emergency operations: phased line activations, maintaining minimum service levels, prioritizing emergency movement and essential resources, congestion management, and public communication. It will define the



types of systems required to prepare, including information centers and operational hubs.

In summary, the plan will lay out a comprehensive framework for transportation emergency management and business continuity spanning every system layer: infrastructure, operations, planning, budgeting, personnel, suppliers, technology, cybersecurity, organizational communication, and public relations. In doing so, it will serve as a foundation for in-depth planning, risk assessment, and long-term systemic readiness.

9. Policy Paper on Principles for Project Execution

This policy paper will define the core framework for managing infrastructure works in an optimal manner. The paper will address, among other topics, the following areas:

- Balancing the advancement of vital development projects with the mitigation of impacts on traffic flow, accessibility, and public welfare. Over the past decade, the pace of urban and intercity transport construction has increased significantly. However, alongside this progress, severe congestion, delays, reduced service levels, and adverse effects on businesses and communities surrounding work sites have emerged. There is a need to address execution phasing management, coordination between contractors and utility providers, incentive mechanisms, digitization, traffic management, and community relations.
- Execution management: phased implementation planning, work windows tailored to off-peak hours, evaluation of night works, and coordination among underground utilities, municipal services, transit operators, and subcontractors. Currently, coordination processes lack uniformity and often lack a common operational language among entities; therefore, the plan will clarify the required planning domains to be formulated.
- Incentives and contracting, which constitute a critical component of work efficiency and project progression.
- Accounting for the time vector and preparing for execution budgeting in long-duration projects, including statutory and other delays that lead to cost overruns.
- Efficient life-cycle planning for every project, including securing ongoing maintenance to preserve infrastructure assets and establishing advance budgetary allocations through designated maintenance budgets.
- Expanding the contractor market supply by streamlining onboarding processes for foreign contractors, including foreign labor.



- Traffic management within work zones. The paper will detail the need for focused traffic management: planning alternative detours, early and clear signage, real-time monitoring, and interfacing between transport control systems and work sites. Many delays and risks arise from a lack of uniformity in planning and implementing traffic management schemes; thus, the plan will define the information, control, and coordination parameters that authorities and contractors must evaluate.
- Execution efficiency: utilizing BIM for infrastructure design and coordination, early risk management, and real-time execution tracking. These systems enable transparent, coordinated, and efficient project management, particularly suited for projects in complex urban environments.
- Community relations. In urban settings, prolonged execution affects businesses, public institutions, residents, public transport, and walkability. Therefore, the plan will define the areas to be evaluated: structured public updates, provision of public transport alternatives and pathways, business coordination, complaint management, and continuous communication channels.

The document will serve as a foundation for establishing a unified language among planning, execution, transportation, and local municipal authorities.

10. Policy Paper on Regional Cross-Border Transportation

A policy paper on regional transportation will address the opportunities and challenges arising from the Abraham Accords and regional geopolitical shifts, which open the door for cross-border transit corridors such as railways, freight corridors, connectivity between regional ports, and shared transshipment and storage hubs. Because Israel's territory is compact, congested, and spatially constrained, it is necessary to evaluate both the regional potential and the impact of congestion on Israel's domestic transportation network.

The paper will cover a comprehensive array of issues requiring evaluation: standard harmonization (railways, electrification, safety), operational coordination, integration of control systems and transit protocols, as well as defined security and customs mechanisms designed to enable controlled yet efficient movement of freight and passengers. All of these constitute an integral foundation for strategic discussion rather than operational components.

The paper will also focus on integrating regional freight movement with Israel's existing infrastructure. Every regional corridor must be evaluated against local bottlenecks: rail capacity, intercity road congestion, inland terminal availability, and the supportive capacity of Israeli



seaports. The document will define the need to understand systemic impacts, such as how increased freight volumes will affect the rail network, truck traffic, and load distribution among regional ports. An additional dimension encompasses the regulatory and security frameworks associated with border crossings. The plan will outline the necessity for formalized passenger and cargo transit protocols, regulatory alignment between safety and standardization systems, and full synchronization with customs and security authorities. Furthermore, the paper will address economic aspects and regional partnerships. Cross-border transportation involves cost- and revenue-sharing mechanisms, cross-border Public-Private Partnerships (PPP), and the development of international projects requiring multilateral cooperation.

This policy paper will serve as a foundation for regional initiatives such as the India-Middle East-Europe Economic Corridor (IMEC), regional trucking networks, and dry ports dedicated to regional traffic. The IMEC project is designed to shorten transit times and reduce freight transport costs by utilizing a railway line connecting participating nations, offering a significantly shorter overland alternative that bypasses the maritime route through the Suez Canal (approximately 2,000 km compared to 6,000 km), which currently serves as the primary shipping corridor between these regions (and suffers from security instability due to the rise of hostile entities along the route).

11. Strategic Plan for Sustainability and Energy in Transportation

This plan will address the integration of clean energy systems into the Israeli transportation sector. It will set a strategic framework in which the transition to electric vehicles, hydrogen, low-carbon fuels, and smart charging solutions drives systemic change affecting urban planning, the power grid, economy, environment, operations, regulation, and demand management. At the core of the plan will lie the understanding that sustainable transportation entails not merely reducing emissions, but altering how energy flows, is managed, and is distributed across spatial dimensions. Therefore, the plan will establish a strategic framework to coordinate the rollout of electric transport with power grid capacity, travel patterns, charging times, tariffs, and spatial needs. It will emphasize that the central questions are not merely where to locate charging stations, but how to construct a system where charging, traffic flow, power infrastructure, and urban planning mutually reinforce one another rather than creating grid congestion and resource inefficiencies.

The plan will define Israel's position within the global alternative fuels landscape, specifically highlighting hydrogen and clean fuels for heavy transport, maritime ports, and aviation as a strategic cornerstone of energy security and supply chain resilience. The plan will evaluate the



integration of the future fuel market with Israel's seaports, freight corridors, and major employment centers. Economically, the plan will frame the necessity for incentive policies, tariff structures, and financing models as mechanisms to guide long-term behavior. It will establish the distinction between short-term incentives designed to shift habits and structural tools such as time-of-use tariffs, congestion pricing, and commercial models for charging infrastructure.

Additionally, the plan will outline principles for inter-ministerial coordination. It will address a permanent national mechanism for alignment between the transport sector and energy, environmental, and local authorities; the assignment of responsibilities; the capacity to guide diverse regulators toward a unified policy language; and the bridge between national and municipal spatial planning.

12. Strategic Plan for Walkability

A national plan for urban walkability has been published. The plan must be reviewed for alignment with the comprehensive strategic transportation plan and updated as necessary.

13. Strategic Plan – Tel Aviv Metropolitan Area

A strategic plan for public transport development exists for the Tel Aviv metropolitan area. Additionally, a metropolitan transportation strategic plan is currently being advanced by the Transportation Planning Division at the Ministry of Transport. Alignment with the comprehensive 2050 Master Plan for Transportation must be ensured, with updates incorporated as necessary.

14. Strategic Plan – Jerusalem Metropolitan Area

A strategic plan exists for the Jerusalem metropolitan area. Alignment with the comprehensive 2050 Master Plan for Transportation must be ensured.

15. Strategic Plan – Haifa Metropolitan Area

A strategic plan for the Haifa metropolitan area is currently being advanced by the Transportation Planning Division at the Ministry of Transport. Alignment with the comprehensive 2050 Master Plan for Transportation must be ensured.

16. Strategic Plan – Beer-Sheva Metropolitan Area

A strategic plan for the Be'er Sheva metropolitan area is currently being advanced by the Transportation Planning Division at the Ministry of Transport. Alignment with the comprehensive 2050 Master Plan for Transportation must be ensured.



17. Strategic Plan – Judea and Samaria

A strategic plan for the Judea and Samaria region currently exists, prepared by the Jerusalem Master Plan for Transportation team. The plan must be updated.

18. Policy Paper on Climate Change Preparedness

In March 2024, a high-level policy paper titled "Israel's Readiness for Climate Change Adaptation – The Transportation Sector" was finalized and submitted to the Ministry of Environmental Protection.

As part of the Strategic Plan for Emergency Preparedness and Operational Continuity, a more detailed policy paper must be developed. This paper will provide comprehensive guidance for infrastructure companies and transport corporations on preparing for extreme climate events across three operational pillars: planning and design, infrastructure construction and retrofitting, and ongoing operations.

The policy paper will be formulated in close collaboration with the Israel Meteorological Service, state infrastructure companies, and public transport corporations.

19. Policy Paper on Organizational Interfaces with Operational Agencies and External Bodies

As part of the strategic process, the understanding arose that the Ministry must enhance its interfaces with its operational agencies, infrastructure companies, and state-owned corporations under its purview, as well as with external bodies. Consequently, internal organizational preparation within the Ministry of Transport is required for these interfaces. Formulating a working interfaces policy paper will enable strengthening the Ministry's ability to integrate transportation aspects into the long-term planning processes of other government bodies in general and planning authorities in particular.

- a. Improving coordination between Ministry units, transport corporations, and adjacent entities in plan preparation, design, and project execution.
- b. Reinforcing the Ministry's capacity to fulfill its policy mandate by designating a clear lead within the Ministry for core topics such as shipping, aviation, connectivity, and data.
- c. Placing significant emphasis on the Ministry's ability to lead organizational and procedural innovation among managers and employees.

The paper will include an evaluation of the Ministry's operating model and organizational structure regarding working interfaces with operational agencies and government companies,



guidance and oversight processes, and working methods. The paper will define the hierarchy between the Ministry of Transport and transport corporations regarding policy formulation, advancing development and investment plans, and transportation planning. The paper will be based on an international review, adapted as necessary, and interviews, including an examination of organizational changes these ministries underwent, successes, failures, and lessons learned for Israel's Ministry of Transport. The paper will include courses of action, alternatives, and recommendations for the above components, as well as an outline work plan for implementation and change management.

20. Strategic Plan for Travel Demand Management

The 2050 Comprehensive Strategic Plan identifies travel demand management (TDM) as a key tool for achieving the plan's goals. However, there is currently no structured policy regarding the implementation of economic and planning tools to support this effort. Therefore, a strategy must be developed to drive demand management and optimize private vehicle usage. Currently, a plan is being advanced to impose a congestion charge in the Tel Aviv metropolitan area based on fixed rings (addressing radial traffic to the core) with a rigid pricing structure (varying by time of day, but not dynamically by demand). A broader approach to demand restraint is required alongside high-level public transport alternatives to create genuine passenger behavior change. A national policy applied to all trips is needed, combining economic tools—such as tolls and incentives—with planning mechanisms:

- A. Principles for dynamic, spatially and temporally continuous demand management to maximize the benefits of TDM. This includes evaluating varied tolls based on origin, destination, and hour; mechanisms combining benefits for selecting congestion-easing routes and travel times; and an improved mix of vehicle taxation tools—purchase taxes, fuel/energy excise taxes, and road user charges.
- B. Formulation of a parking policy including:
 - 1. Defining optimal locations for parking supply, including Park-and-Ride facilities (specifying under what conditions and locations Park-and-Ride generates net passenger value)
 - 2. On-street and off-street parking pricing—establishing parking pricing policy as a potent demand management tool aligned with the strategic TDM plan
 - 3. Determining required parking capacities in residential areas
 - 4. Parking planning methodology aimed at minimizing on-street parking, including



maximum walking time standards to destinations

5. Binding specifications for indoor parking facilities in residential and employment buildings
 6. Determining the percentage of accessible parking spots out of total parking supply (addressing the current severe shortage), including location criteria for accessible spaces
- C. Strategies to increase vehicle occupancy, including taxation, incentives, ride-pooling, and shared mobility—particularly in light of emerging autonomous vehicles. Practice shows that demand-aggregation attempts often struggle, requiring an open-minded, innovative approach.
- D. Required scale of investment in the road network (expansion and upgrades), recognizing that commuting traffic is no longer as dominant as traditionally assumed, demand exists 24/7, and peak-period definitions are eroding.

Demand management will help improve service levels for the public and must be advanced in full coordination with supply-side alternatives—led by public transport, remote activities/telecommuting, and urban freight distribution.

21. Policy Paper on Encouraging Remote Activity

This policy paper will set out the necessary framework to understand, quantify, and establish the phenomenon of remote activity (such as remote work, virtual meetings, e-learning, telehealth, and public e-services) and its impacts on transportation, society, the economy, and digitalization. It will examine the potential for trip reduction, technological and regulatory requirements, and the barriers preventing widespread adoption of remote models.

The document will outline the current background: the return-to-office trend across many companies following the COVID-19 pandemic, alongside data showing the stabilization of hybrid models and the retention share of remote work. It will analyze global and Israeli dynamics on how organizations balance the need for physical collaboration with employee preferences for flexibility, and the expected long-term trends.

Furthermore, the paper will address the governmental integration required to approach remote activity as a systemic issue: the interrelationships among the Ministries of Transport, Communications, Health, Education, and Finance, and the need for a shared definition of indicators, a common professional language, and standardized methodologies for measuring impacts on traffic volumes, regional accessibility, and public services. The policy paper will also



examine the digital infrastructure layer such as fiber-optic deployment, 5G, cloud services, and advanced communication tools as a supporting framework evaluated not merely as a technological tool, but as a foundational component of the national capacity to drive remote activity.

Additionally, the paper will outline the core application areas of remote activity and examine how these domains integrate into the daily operations of households and organizations, the adoption levels observed in Israel and globally, and the characteristics of remote activity across each domain. Another section will be dedicated to regulatory aspects and standards: privacy, information security, accessibility, technological competence, and service quality. The document will detail the range of issues regulation must address to enable remote activity in a secure, accessible, and equitable manner.

Finally, the policy paper will define a measurement framework: the professional indicators required to understand the scope and impact of remote activity. Among others, these will include the number of remote workdays, types of services transitioned remotely, vehicle trips saved, quality of user experience, and technology adoption rates.

22. Israel Railways Master Plan

This plan aims to update the development and operational concept of Israel Railways, approximately a decade after the publication of the previous plan in 2017, particularly in light of the structural shift brought about by mass rapid transit (MRT) systems (light rail, metro, and other urban solutions). These systems are redefining the role of heavy rail within the national transportation network, positioning it primarily as a mode designed for long-distance intercity trips, with high capacity, and fast, reliable service. Consequently, an updated strategic document is required to re-evaluate the roles, targets, priorities, and the infrastructure, operational, and technological standards demanded of a modern railway.

A central component of the plan will focus on the various railway elements and their optimal integration: infrastructure development, operations and passenger service, procurement and rolling stock, maintenance, and freight. All of these will be examined through a comparative benchmark study against the characteristics of rail components in advanced countries and the trends of change within these components in recent decades.

The plan will also address the definition of Israel Railways' core roles: distinguishing between high-frequency intercity passenger movement and freight movement, and the corresponding need to adapt tracks, corridors, stations, and capacity according to the structural designation of the network. This issue becomes particularly urgent in light of projected demand trends:



growth in long-distance passenger travel, the development of employment hubs outside major cities, and the need to upgrade supply chains. The plan will clarify the core questions requiring discussion—where the railway is heading, what it serves, and the scope of resources to be analyzed under future scenarios.

The plan will tackle major infrastructure bottlenecks and provide a deep understanding of the constraints on Israel's rail network. It will detail which types of track infrastructure, stations, port connections, and freight corridors must be mapped and re-evaluated. A critical dimension of the plan will be dedicated to the level of service for passengers, including frequency, punctuality, connectivity to urban systems, and station accessibility. The expanding rollout of MRT systems widens the feeder gaps between heavy rail lines and light rail/metro, driving the need to formulate a unified plan for inter-system movement. The plan will define the integration issues between heavy rail and urban public transport — integrated ticketing, intermodal mobility, and Park-and-Ride facilities as part of the overall accessibility picture.

Another field the plan will address is the train fleet, its maintenance, and preparation for future technologies. Israel Railways is required to update its procurement, fleet management, and maintenance concepts in response to rising demand, the aging of the existing fleet, and the introduction of new technologies in digitalization, operational optimization, energy management, and real-time control.

Additionally, the plan must address the maximization of Israel Railways' assets and its long-term strategic plan for managing its real estate, stations, and land parcels.

23. Strategic Plan for Micromobility

The strategic plan for micromobility will address the role of light personal vehicles, conventional and electric bicycles, private e-scooters, and shared fleets within the urban environment. Over the past decade, micromobility has emerged as a major transportation alternative offering a high return on investment for urban infrastructure and planning, capable of reducing congestion, emissions, and accessibility bottlenecks in neighborhoods and city centers in the short term.

The plan will tackle infrastructure gaps, which represent one of the primary challenges limiting the sector's growth: a lack of continuous, dedicated lane networks, inconsistency among local authorities regarding parking and docking solutions, and a scarcity of charging stations for electric devices. Today's urban realm, designed primarily for pedestrians and private automobiles, struggles to accommodate the surge in light vehicles. The plan will define the parameters requiring review: lane quality and width, sidewalk interactions, right-of-way zones, connectivity to transit hubs and main public transport corridors, and the need for distinct



infrastructure standards tailored to small, higher-speed devices.

Building on this, the plan will analyze street cross-sections by mode of transit, street classification, adjacent land uses, intersection crossings, and related factors. The strategic plan will serve as the basis for engineering guidelines on urban street cross-section design, including modal space allocation and lane widths. Key components will include: defining urban roadways; classifying street types using set criteria; assessing the impact of land use on road classification; allocating micromobility parking spaces and establishing parking standards; and setting mandatory traffic regulations for left turns and street crossings by micromobility users.

In addition, the plan will examine regulatory and licensing gaps: varying speed limits, a lack of uniform technical standards, absence of mandatory insurance for certain device classes, and unclear liability frameworks in accident scenarios. The plan will outline the focus areas needed to construct a modern regulatory framework: device classification definitions, speed boundaries, identification and standardization mechanisms, insurance policies, user and operator liability, and oversight for shared fleets.

Safety challenges for both device riders and other road users form another core pillar of the plan. Light personal vehicles feature a unique combination of high speed, low weight, rapid maneuverability, and lack of structural protection, creating disparities between physical spatial design and real-world acceleration and risk factors. The plan will highlight the full range of safety issues, including conflict points with pedestrians, unregulated intersection crossings, complex interactions with buses and heavy vehicles, and enforcement difficulties. It will also outline safety measures for consideration such as speed limits, mandatory helmet usage, rider instruction guidelines, technological enforcement, and combining physical design with user behavior strategies.

Another vital area is the integration of micromobility with other transit modes. The plan will elaborate on issues such as integrated ticketing, station docking facilities, direct first/last-mile connections between hubs and destinations and linking shared services to pricing structures and passenger service quality. Furthermore, the plan will address the shared mobility sector: operator licensing, balanced fleet distribution across neighborhoods, data sharing to enhance urban planning, and managing impacts on pedestrians, sidewalk parking, and traffic flow. It will define the key questions for national policy evaluations such as monitoring mechanisms, fleet caps in congested zones, integrated pricing models, and municipal data sharing.

Finally, the plan will benchmark these issues against international best practices, examining how other countries manage the opportunities and challenges of micromobility to draw relevant



lessons for Israel.

24. Strategic Plan for Traffic Management

Efficient traffic management serves as a crucial tool for mitigating congestion, enhancing road safety, and reducing emissions. It is proposed to formulate a strategic plan focused on national recommendations for upgrading traffic signal systems, optimizing road network capacity, integrating technologies, and establishing principles for effective traffic management—including HOV (High-Occupancy Vehicle) and bus lane management, as well as infrastructure allocation between private vehicles and public transport.

This plan aims to establish a national framework for modern traffic management covering traffic signals, dedicated lanes, Intelligent Transportation Systems (ITS) infrastructure, public information systems, and real-time congestion management. Its goal is to outline the key focus areas, professional issues, and strategic components requiring evaluation as the urban and intercity transportation system faces growing congestion, technological fragmentation, and coordination gaps across different authorities. Traffic management is not merely a localized technical task, but a systemic infrastructure that directly impacts congestion, safety, reliability, and travel times. The plan will initially evaluate current traffic management tools in Israel and review how they are utilized.

At the core of the plan is upgrading traffic signals into a coordinated, smart, and data-driven system. Currently, significant heterogeneity exists among local authorities in such that some operate advanced systems while others rely on outdated systems that lack cross-intersection coordination. The plan will clarify the spectrum of issues to examine: technological uniformity, corridor coordination for private vehicles and transit, priority signaling for light rail, buses, and emergency vehicles, and the introduction of a unified control layer.

Another domain addressed by the plan is network capacity and road infrastructure optimization. Several tools exist, such as hard-shoulder running (HSR), reversible lanes, ramp metering, Variable Message Signs (VMS), and incident management. The plan will outline the need to understand how these tools interconnect, how they are managed in real time, and the professional principles that should govern their application. A major focus area is the management of Dedicated Bus Lanes and HOV lanes. Today, significant variation exists regarding operating policies, active hours, eligibility criteria, and particularly enforcement. The plan will define the key questions for review: transit prioritization principles, pricing or incentivization mechanisms, operational timeframes, smart enforcement integration, peak-hour freight restrictions, and cross-regional uniformity.



An additional section will cover ITS infrastructure, including sensors, data collection systems, control dashboards, and predictive modeling layers. The plan will outline the policy framework for uniform data collection, open APIs for public information, monitoring and control infrastructure, and the convergence of ITS with road safety, public transport, enforcement, and oversight. Finally, the plan will establish clear performance indicators for success such as travel times, reliability, safety, bus lane utilization, emissions, and overall system efficiency.

25. Master Plan for the Transport of Freight

This plan will update and complement the existing freight plan, covering the entire supply chain from the moment a vessel enters territorial waters, as well as freight transport management across urban and intercity environments for both civilian and military needs, alongside an evaluation of logistics operations, storage facilities, and transshipment hubs. This master plan aims to update and complete the national operational concept for supply chain management from port to end-customer. It will establish the systemic framework required to reduce costs, shorten transit times, streamline operations, and stabilize the logistical flow of raw materials and consumer goods across the full supply chain: from port entry, through unloading and exit gates, to inland terminals, logistics centers, distribution hubs, and urban centers. Given the Israeli economy's reliance on imports and international trade, as well as the bottlenecks and vulnerabilities exposed in recent years, a comprehensive plan is required to map processes, identify friction points, and establish necessary coordination among all stakeholders.

The plan will initially analyze bottlenecks at entry gateways: docking and unloading schedules, operational equipment availability, and queues at customs and security inspections. It will define the stages to evaluate as cargo moves from territorial waters through berthing, offloading, and gate exit—highlighting the interdependencies between maritime operations, cargo handling, inspection systems, and dockside operational resilience. The objective is to establish a complete understanding of every phase in the process. Additionally, the plan will review international best practices in supply chain management and its underlying processes.

Furthermore, the plan will detail the need for optimal connectivity among ports, rail, road, and inland terminals to eliminate congestion, waiting times, and operational uncertainty for carriers. It will clarify the interfaces requiring evaluation: truck appointment windows, terminal operator coordination, freight flow between rail and road, and the layout of strategic freight corridors. Digitization of the supply chain forms another core component. The plan will define foundational needs for system upgrades, digital appointment scheduling for trucks and other actors, end-to-end container tracking, real-time data sharing among ports, operators, customs, trucking companies, terminals, and service providers, alongside solutions to the heavy-vehicle



driver shortage. In addition, the plan will address the management of transit and storage facilities across the supply chain. Finally, the plan will define a national indicators framework needed to monitor, manage, and continuously improve the supply chain.

26. Strategic Plan for Low-Altitude Vertical Aviation

This plan will define the national strategic framework for the development of low-altitude vertical aviation, a sector set to impact logistics, transportation, infrastructure, and traffic across urban and intercity environments. Unlike traditional aviation, this domain relies on micro-to-medium-sized, often autonomous aircraft operating at low altitudes in populated areas. For this reason, and because the regulatory, operational, and safety landscape differs fundamentally from classical aviation, a standalone plan separate from the broader Aviation Strategic Plan is required.

The plan will initially address jurisdictional boundaries and regulatory frameworks. Currently, there is no formal division of responsibilities among CAAI (Civil Aviation Authority of Israel), local authorities, the Israel Police, defense entities, private sector regulators, and technology companies providing navigation and communication systems. The plan will define the scope of authority requiring evaluation: who is responsible for vehicle and operator licensing, who establishes flight procedures, who oversees urban airspace, and what the liability and insurance mechanisms should be. The framework will need to integrate air safety, cybersecurity, privacy, autonomous systems operation (such as U-space), and legal liability.

Additionally, the plan will address dedicated infrastructure, aerial corridors, charging and maintenance sites, communication and control systems, and urban interfaces. This infrastructure requires new urban planning paradigms, integration into public transport hubs, and the designation of takeoff and landing sites based on safety, noise, and privacy standards.

Another central component is workforce training and capacity building. Vertical aviation will require new professions: remote pilots, ops managers, control center operators, drone maintenance technicians, and more. The plan will outline required training fields and professional standards. The plan will also incorporate a risk analysis framework, which is essential for low-altitude operations in dense environments.

Finally, the plan will address the integration of vertical aviation into the broader transportation ecosystem. Vertical aviation does not exist as an isolated system; rather, it forms part of a multimodal transport network that must connect seamlessly with other transit modes. It requires bridging air and ground transportation data, pricing frameworks, customer service channels, and drone operations.



27. Policy Paper for Autonomous Vehicles

This document will address the national readiness required for the introduction of Autonomous Vehicles (AVs) onto public roads: ranging from regulatory frameworks to smart infrastructure readiness, data, cybersecurity, enforcement, and safety. The goal of the document is to outline the key domains required to understand the impacts of autonomous vehicles on travel patterns, safety, sustainability, congestion, parking, and connectivity to public transport, as well as to establish a unified professional language for pilots, phased deployment, and network integration.

The document will evaluate the impacts of autonomous vehicles on travel demand, congestion, parking, and urban dynamics. Under travel demand management (TDM), principles for dynamic pricing, ride-pooling incentives, and parking pricing will be discussed. Additionally, the plan will address the integration of autonomous vehicles into a multimodal transit network, including synchronization with mass rapid transit systems, Mobility as a Service (MaaS), integrated pricing and ticketing, and compatibility with dynamic/HOV lane models.

The document will focus on formulating a regulatory framework that includes defining autonomy levels, establishing guidelines for testing corridors versus commercial operations, licensing conditions for vehicles/operators/systems, incident management and investigation protocols, legal liability, and mandatory insurance. Furthermore, the document will address AV-related infrastructure, including standardized lane markings and signage, real-time map/roadwork update interfaces, V2X/5G connectivity deployment along priority corridors, dynamic lane management, signal priority, and the design of curbsides and drop-off/pick-up bays for short AV stops.

The document will also define the data and cybersecurity layer, including standards for APIs, Data Governance frameworks for sensing and driving telemetry, and privacy principles.

Finally, the document will define the new skillset required during the widespread adoption of autonomous vehicles, alongside insurance and liability frameworks—including the distribution of liability among manufacturers, fleet operators, vehicle owners, and software providers.

28. Policy Paper on Integrated Transport and Land-Use Planning

This policy paper will address the intrinsic connection between transportation and land use, treating them as a single integrated system that must be planned as a cohesive whole from the outset. In contrast to the existing state—where transportation planning reacts retroactively to physical land-use plans through late, supplementary solutions—the strategic approach embeds



transportation directly into national, regional, and urban master planning, from the street level to functional zones and up to the metropolitan area. The goal is to institutionalize a framework where transportation constraints, capacities, and opportunities serve as baseline considerations, thereby reducing motorized trips, enabling traffic-calmed zones, improving accessibility, and ensuring sustainable urban development. Developing the physical environment must incorporate principles of minimal vehicle miles traveled (VMT) from day one through highly efficient spatial design. Flawed spatial planning drives excessive traffic demand, creates over-reliance on motorized transit solutions, and inflates overall VMT.

The document will include an operational protocol for urban projects requiring systematic transportation integration: understanding anticipated mobility patterns, evaluating transit alternatives, mapping pedestrian and access nodes, and adjusting spatial plans according to the network's carrying capacity. The policy paper will also address the institutional imperative for inter-ministerial coordination. Currently, the Ministry of the Interior, the Ministry of Construction and Housing, and the Ministry of Transport operate through parallel workflows that often converge too late. The paper will outline the necessity for a national policy that incorporates multi-tiered coordination mechanisms (national, regional, and municipal) to ensure that urban planning, infrastructure deployment, public transport routing, and traffic arrangements are designed and evaluated together.

Furthermore, the policy paper will clarify the key deliverables required throughout the planning process—such as traffic simulation modeling to gauge systemic impacts, economic evaluations of mobility alternatives, identification of core infrastructure needs (cycling networks, transit lanes, pedestrian sidewalks, and parking facilities), and the formulation of design guidelines establishing structural standards for streets, intersections, and transit access points.

Finally, the policy paper will address reforming Traffic Impact Assessments within spatial planning, expanding their scope to rigorously incorporate public transport, mass rapid transit (MRT), walkability, and micromobility components.

29. Meteorological Service Strategic Plan

Intensifying climate change necessitates advanced monitoring and forecasting capabilities to prepare for global warming trends, extreme weather events, and shifting baseline climate patterns.

Weather directly impacts transportation planning and operations across air, sea, and land.



Obtaining accurate meteorological data is essential across all transportation domains, from the initial planning stages through daily operations.

Therefore, a strategic plan must be prepared for the Israel Meteorological Service (IMS). This plan will outline actionable directions to ensure a continuous flow of real-time climate data and high-accuracy forecasting. This will enable the most precise preparation possible for weather conditions at any given time—serving transportation operators (such as aviation, maritime shipping, railways, and road networks), road and transit users, planning authorities, and other relevant bodies.

30. Master Plan for Transportation Hubs

The Master Plan will establish a national framework for the construction, funding, planning, governance, and operation of transport hubs. These hubs seamlessly connect mass rapid transit (MRT) modes (light rail, metro, BRT, and heavy rail) with regional and urban public transport, micromobility, pedestrian networks, and private vehicles (including park-and-ride facilities). The core objective is to create a unified standard for constructing dozens of such hubs over the coming decade alongside the expansion of MRT projects ensuring that each hub is planned and operated as an integrated system rather than a collection of standalone facilities.

At the heart of the plan is connectivity: establishing guidelines for short, intuitive transfers between transit modes, aligning schedules where feasible, deploying integrated ticketing and fare structures, and managing pedestrian and micromobility flows. The plan will outline the essential design considerations for each hub, including platform and terminal topology, entrance and exit layouts, surrounding street design, and integration with adjacent activity centers to guarantee a quick, safe, and intuitive transfer experience.

Regarding land use, the plan highlights that these hubs serve as more than mere transportation infrastructure. It establishes a framework for mixed-use development—incorporating local and regional retail, public services, and employment centers—to complement the transportation function and enhance project viability. This integration will be evaluated under Transit-Oriented Development (TOD) principles: urban hierarchy, active frontages, high-quality public space, shading, and placemaking, without compromising safety or accessibility.

The plan will address financing and transaction models for the hubs: various Public-Private Partnership (PPP) frameworks, risk-sharing mechanisms between public and private entities, and secondary revenue generation. A key component will be Land Value Capture (LVC) surrounding the hubs, leveraging high-density land uses, mechanisms such as betterment levies, air rights or adjacent development rights, and channeling generated revenues toward



capital expenditure and operational costs.

A critical dimension of the plan is governance and institutional coordination. Integrated hubs involve numerous stakeholders, including government transportation agencies, rail and metro operators, local authorities, developers, regulatory bodies (safety, accessibility, environmental), and commercial operators. The plan will define governing principles: identifying the managing authority, structuring inter-agency agreements, managing ownership/maintenance/operations of various hub components, establishing decision-making protocols, and setting coordination procedures across the project lifecycle—from early design through ongoing operations.

Building on this, the plan will cover the operational and maintenance lifecycle, defining performance indicators such as service reliability, availability, transfer times, user satisfaction, non-farebox revenues, maintenance costs, and energy consumption/emissions.

31. Strategy Plan for Ports

Israel's port sector has undergone significant development over the past decade alongside structural reform, introducing new market players to spur competition, privatization, and regulatory oversight across various port entities. These steps have resulted in today's high port capacity. Furthermore, this competitive market structure has the potential to elevate service quality and reduce long-term costs.

Cargo throughput in ports is directly linked to national economic growth. Regional geopolitical dynamics, such as the India-Middle East-Europe Economic Corridor (IMEC) project, may generate additional demand for Israeli port services. Port infrastructure must ensure sufficient capacity to handle these volumes. Long-term infrastructure planning must consistently maintain a capacity surplus over demand, as well as operational redundancy and geographical dispersion to safeguard functional continuity.

Israel Ports Development & Assets Company (IPC), serving as the state's planning and execution arm for port infrastructure, formulated a Ports Master Plan in 2020 looking ahead to Israel's centennial (2048). This plan evaluates long-term infrastructure planning across all cargo categories to ensure readiness—supported by actionable planning tools—to meet national demand while maintaining redundancy. It outlines a series of follow-up planning actions that have been underway since. Promoting competition remains an integral principle in all IPC plans in line with its statutory mandates, while environmental and sustainability considerations are embedded into the company's planning and decision-making processes. The plan also considers trade potential with neighboring countries.



IPC's strategic plan for Israel's seaport development includes:

1. Infrastructure development planning within existing port basins, including the Port of Eilat.
2. Development planning outside existing basins in Ashdod, Yevul, and Hadera.
3. Hinterland development and port logistics operations.
4. Landside transport connections to the ports, including rail and road networks.
5. Inland ports / Dry ports.

The master plan must be evaluated for alignment with the high-level goals of the broader strategic plan, with cargo traffic forecasts updated by commodity type and geographic region—Haifa, Ashdod, and Eilat—according to emerging trends.

Furthermore, synchronization must be ensured between the Land Freight Master Plan and the Strategic Seaport Plan. Land transport connections to and from the ports, as well as port facilities themselves, must be fully aligned with one another and with anticipated cargo demand volumes.

The Ministry of Transport must approve the Strategic Seaport Plan and updated forecasts, which will serve as the baseline for IPC's future development plans.

32. Policy Paper on Urban Freight Transport

This policy paper will systematically frame the unique challenges of urban goods delivery and outline the necessary tools for managing freight movement within the urban environment. While a national freight master plan addresses trunk systems, logistics corridors, ports, freight rail, and inter-metropolitan connections, the urban sphere requires a dedicated, targeted approach. It is characterized by high density, constant friction with pedestrians and cyclists, a scarcity of parking and unloading zones, and high sensitivity to congestion, emissions, and safety risks. Formulating a targeted strategy focusing on "last-mile" logistics management is therefore essential.

The policy paper will highlight the need for clear regulation regarding delivery time windows, access zones, and vehicle classification permitted on key corridors. Currently, local authorities lack uniformity in entry hours, operational conditions, and licensing policies, creating operational uncertainty for carriers and directly contributing to unplanned congestion during peak hours. Furthermore, urban curbside infrastructure—sidewalks, short-term parking, loading bays, and charging zones—is managed partially or inconsistently, leading to inefficient and



unsafe spatial use. The paper will treat curbside management as a distinct system requiring structured allocation, usage rules, pricing models, and active oversight.

Another key component of the policy paper addresses the spatial integration between delivery networks, pedestrians, public transport, and cycling infrastructure. Uncoordinated urban freight creates critical conflict points and safety risks with vulnerable road users, such as children, the elderly, and micromobility users. The paper will map these key interfaces and advocate for an integrated approach where freight planning aligns with broader municipal mobility policies.

Additionally, the paper will explore technological and regulatory mechanisms that foster clean, innovative freight solutions. Electric delivery vehicles, light trucks, cargo bikes, and delivery drones currently face regulatory hurdles, incomplete safety frameworks, and a lack of dedicated charging and loading infrastructure. The paper will define key regulatory and technological questions—including licensing, liability, network integration, safety standards, and drone flight protocols—to establish a unified framework supporting technological adoption.

A vital aspect of this initiative is urban micro-logistics, incorporating urban micro-hubs, last-mile zones, pick-up/drop-off points, and localized charging infrastructure to alleviate congestion and optimize distribution routes. The paper will clarify the operational role of micro-hubs within the urban supply chain and differentiate them from large-scale metropolitan logistics centers.

Finally, the policy paper will outline the requirements for a data-driven urban monitoring, control, and enforcement ecosystem enabling real-time tracking of loading stops, unloading activities, route compliance, and curb space utilization. These data assets will empower municipal enforcement, support evidence-based planning, and drive continuous improvements in urban freight policy.

33. Policy Paper on Human Capital in the Transportation Sector

This policy paper presents the necessary framework for systematically addressing the ongoing workforce shortage across Israel's transportation sectors, including within the Ministry of Transport, its statutory authorities, and state-owned infrastructure companies.

The Ministry of Transport must evaluate its overall organizational structure including that of its operational agencies and infrastructure enterprises as well as the internal structure of all its divisions. This evaluation aims to align human resources with organizational mandates to advance Israel's transport sector toward the strategic plan's core goals.

Furthermore, across the national transportation landscape, severe shortages in core professions such as heavy vehicle drivers, inspectors, infrastructure operators, planning and



engineering personnel, and maritime and aviation specialists have emerged as major bottlenecks constraining growth. This challenge is compounded by rapid technological shifts, digitization, automation, artificial intelligence, cybersecurity, and advanced operations, all demanding an integrated approach that treats human capital as a strategic resource.

The paper will address professional supply-and-demand mapping through an in-depth analysis of required professions across all transport sectors, categorized by geographic distribution, skill level, technological requirements, and future demand forecasts. Current mapping remains partial, fragmented, and slow to reflect market shifts; therefore, the paper outlines the required data architecture defining parameters to measure, trend analysis models, and professional forecasting mechanisms to support budgeting and planning decisions.

Additionally, the paper will outline training, licensing, and skill requirements: identifying future-ready training pathways, designing flexible, modular training tracks, and defining professional standards in digital tools, AI systems, cybersecurity, control systems, and operations.

Another key focus is recruitment and retention challenges. The transport sector struggles with uncompetitive compensation, burnout, job insecurity, and a lack of appeal among younger demographics. The paper explores necessary policy inquiries—covering incentive structures, flexible employment models, and the impact of working hours and operational conditions on staff retention.

Finally, the paper highlights cross-sector partnerships. It underscores the critical need for collaboration between the education system, vocational training institutes, the IDF and defense sector, private industry, transit operators, non-profits, and regulatory bodies. It advocates for integrated frameworks that link training, licensing, employment, and specialized internships, providing collaborative models to sustain human capital growth.

34. Policy Paper on Material Resources for Transport Infrastructure

A comprehensive policy paper must be formulated to address the critical material resource requirements for transport infrastructure, primarily quarried aggregates, raw minerals, and concrete which serve as the foundational backbone for all infrastructure projects in Israel.

The Ministry of Energy and Infrastructure regularly conducts market analyses of quarry materials and energy resources to prepare for long-term demand. The Ministry of Transport must draft a dedicated policy framework to periodically evaluate its long-term resource requirements and collaborate closely with the Ministry of Energy and Infrastructure to ensure that projected demand is met seamlessly.



The coming decade is expected to witness an exceptionally high volume of infrastructure development, including the Tel Aviv Metro project, new railway corridors, highway networks, energy facilities, and large-scale commercial and residential construction.

Accordingly, the policy paper will define the primary material resources required across all infrastructure projects (such as aggregates, concrete, cement, asphalt, structural backfill, recycled materials, and industrial byproducts) and estimate the required quantities to sustain these initiatives.

35. Policy Paper on Real Estate Assets of Transportation Entities

This policy paper will establish principles for managing and leveraging real estate assets held by transportation entities in Israel, including the Ministry of Transport, its statutory authorities, state-owned enterprises, and regional authorities. Currently, hundreds of properties are scattered throughout the transport system including stations, disused rail corridors, operational yards, public rights-of-way, parking lots, terminals, and land adjacent to existing infrastructure. These assets remain underutilized, presenting a substantial gap between their economic potential and actual realization.

The paper will begin by establishing the background and necessity: over recent decades, transport authorities acquired land primarily for operational purposes, specifically for rail, station, and terminal infrastructure. However, shifting operational requirements, new transit alignments, evolving planning processes, and the rollout of modern infrastructure have left many previously critical sites neglected, unused, or underutilized. Lacking a structured framework for mapping, registration, valuation, and prioritization, these assets remain excluded from both the economic and urban spheres. This shortfall undermines potential revenue generation for the transport system while forfeiting opportunities to drive urban regeneration and deliver public value.

The document will outline core systemic gaps: the absence of a unified, up-to-date real estate database, the lack of a systematic methodology to evaluate alternative economic uses, and the disconnect between transportation mandates and spatial development goals. These gaps directly impact capital budgeting, future land reservations, and the integration of transport with urban growth. The paper will define mapping and planning horizons for the next 25 years - a timeframe enabling a comprehensive understanding of long-term mobility shifts, demographic changes, and urban expansion.

A subsequent section will examine management frameworks, evaluating whether the state should manage these assets through a centralized or coordinated model, what administrative



structures are required, the role of state-owned enterprises, and how to ensure transparency, oversight, and prioritization. Additionally, the document will address socio-economic dimensions, including real estate value creation, generating sustained non-farebox revenue streams for the Ministry of Transport, leveraging asset revenues to fund infrastructure, and fostering positive outcomes for the built environment—such as housing, retail, employment, urban renewal, and enhanced accessibility around transit hubs.

The paper will also establish parameters for measurement, prioritization, and planning: defining criteria for ranking assets by development potential, conducting cost-benefit analyses comparing operational retention against value enhancement, and identifying optimal points for integrating real estate assets into transit planning workflows. Furthermore, it will outline the policy's operational scope, including coordination with the Israel Land Authority, joint planning with local authorities, regulatory planning tools, frameworks for commercial partnerships, and long-term governmental support spanning multiple decades.

Finally, the policy paper will benchmark these strategies against international best practices among global transport ministries and authorities whilst analyzing advanced models for public value creation, private-sector engagement tools, and governance structures required to achieve a qualitative shift in asset management.

36. Policy Paper on Vehicle Licensing and Emerging Technologies

A comprehensive policy must be formulated to redefine licensing frameworks for next-generation vehicles and advanced mobility technologies, including autonomous vehicles, micro-mobility, electric vertical takeoff and landing (eVTOL) aircraft, drones, advanced electric vehicles, and integrated mobility systems.

The plan will focus on defining jurisdictional authority, updating licensing categories, clarifying liability models, establishing safety and insurance requirements, and standardizing operator certifications. The core objective is to create a unified regulatory framework that enables the safe, controlled integration of technological innovation, preventing new mobility solutions from being managed as ad-hoc exceptions.

37. Regulatory Framework Policy Paper

The transportation sector is undergoing profound transformations across infrastructure, technology, service models, and business frameworks, ranging from cybersecurity and data governance to shared mobility and demand management. In light of these developments, a comprehensive review is required to identify the necessary regulatory adjustments to establish



a modern, adaptive, and future-proof regulatory framework for the transport sector.

This document will analyze key shifts within the transportation ecosystem and their corresponding regulatory imperatives, highlighting strategic courses of action to address them.

38. Strategic Plan for Customer Service and User Experience in Public Transport

The Strategic Plan for Customer Service and User Experience in Transportation will address a fundamental shift across the entire transport ecosystem spanning land, air, and maritime operations, as well as licensing authorities, operating companies, and infrastructure managers.

Driven by technological acceleration, AI integration, digital passenger information systems, on-demand mobility services, and changing public expectations, the plan pivots from reactive management to a proactive, personalized, and seamless mobility experience. Modern passengers expect transportation services to mirror top-tier private-sector standards: transparent, accurate, predictive, and user-centric.

Key Pillars of the Strategic Plan

A. Transitioning to Proactive & Predictive Service

- **From Reactive to Anticipatory:** Moving away from a model that merely responds to complaints, delays, or disruptions toward predictive systems that identify congestion in advance.
- **Real-Time Guidance:** Providing proactive alerts, automated alternate routing, and contextual updates before a passenger even encounters a delay.
- **Uncertainty Reduction:** Enhancing system reliability and user confidence across transfer nodes, multi-modal connections, and arrival timelines.

B. User Segmentation & Tailored Mobility Solutions

- **Recognizing Diverse Needs:** Replacing "one-size-fits-all" service with structured segmentation tailored to daily commuters, occasional drivers, transit-dependent populations, micromobility users, tourists, seniors, freight operators, and families.
- **Custom Interfaces:** Adapting digital tools, physical station infrastructure, and communication channels based on digital literacy, travel patterns, and accessibility requirements.

C. Digital Transformation as a Service Engine

- **Integrated Information Ecosystems:** Centralizing real-time tracking, dynamic fare



structures, ticketing, disruption reporting, and occupancy mapping into high-accuracy digital platforms.

- **Operational Efficiency:** Streamlining customer support workflows, reducing call center loads, and delivering accurate, single-source-of-truth data to passengers.

D. Enhancing Human Touchpoints & Public Trust

- **Frontline Personnel Empowerment:** Upgrading training, technology, and service protocols for transit drivers, station attendants, inspectors, support center agents, and enforcement officers.
- **Building System Credibility:** Treating public trust as a core strategic indicator. Delivering transparent, consistent, and accessible service across all transit authorities and operators to improve everyday quality of life and user satisfaction.