



State Comptroller's Report | December 2025

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# **The Metro in Gush Dan – Special Report**





## The Metro in Gush Dan – Special Report

### Background

A mass transit system or a high-capacity passenger transport system (the MTS) is a system that includes an entire network of lines, main stations, and maintenance and operation sites, designed integratively with current and planned land uses and with other public transportation systems. The network's lines form a skeleton of routes for a high-capacity transit system. The underground railway system (Metro) is the foundation for an advanced mass transit system in metropolitan cities around the world that are similar in size to the Tel Aviv metropolitan area. Metro systems are characterized by electric propulsion and full separation from other means of transport, typically operating on underground alignments.

In 2016, the Strategic Plan for the Development of Public Transport in the Tel Aviv Metropolitan Area (the 2016 Strategic Plan) was devised, and the main conclusion that emerged was that in order to enable good mobility throughout the Tel Aviv metropolitan area, there is a need for at least three metro lines which will provide the level of service, accessibility, coverage, and capacity needed to achieve the strategic goals set by the Ministries of Transport and Finance.

In August 2016, the Israeli government adopted Resolution 1838, according to which, NTA – Metropolitan Mass Transit System Ltd., should be tasked with advancing the planning of those metro lines. In August 2021, the Israeli government adopted Resolution 200, "National Preparedness for the Development of a Metro Network in the Gush Dan Metropolitan Area," in which it determined, among other things, that immediate preparations must be made for the execution of the Metro Project, that the Metro Project is to be considered a national project, and that the Project's budget will be up to NIS 150 billion.

The Metro Project is the largest infrastructure project in the State of Israel and one of the largest infrastructural projects in the world. According to a publication by the Prime Minister's Office "Infrastructure for Growth 2025", which presents all infrastructure projects in Israel advanced by government ministries and auxiliary units, whose execution cost is over NIS 100 million, the investment in the Metro Project will be about one-third of the state's total investment in infrastructure in the coming years.

The Metro is planned to operate in 24 local authorities, where more than 3 million residents live. An infrastructure project of such broad scope and geographic distribution poses major challenges to the entire Israeli economy at multiple levels: complex planning and statutory approvals, civil engineering works on a massive scale and the associated logistical challenges, supply of equipment required for the works, recruitment of manpower in Israel and abroad, adjustment of the electricity sector, complex infrastructural coordination amongst multiple infrastructure owners, and provision of the necessary funding for the project.



Advancing the project requires coordination amongst governmental ministries, various governmental authorities and bodies, governmental companies, local authorities, water corporations, and private sector companies. As stated, in August 2021, the government adopted Resolution 200, which served as the basis for the Underground Railway (Metro) Law, 2021 (the Metro Law), first published in November 2021 and amended as part of Amendment 4 from August 2024. The law granted special powers to the parties in charge of the project and defined its financing methods, including special taxes and levies.

This audit report reflects the importance of the Metro Project as the largest infrastructure project advanced by the State of Israel, and it was conducted following the publication of initial tenders for the launching phase, including a pre-qualification (PQ) tender for bidders prior to the tender for the execution of infrastructure works for all lines (Infra 1).



## Key Figures

### **NIS 150 billion**

The Metro Project budget enshrined in the "Metro Law"

### **1/3 of state investments**

The Metro budget is about one-third of all state infrastructure investments according to the Prime Minister's Office report – "Infrastructure for Growth 2025"

### **150 km of double underground tracks**

The length of the three planned Metro lines passing through 24 local authorities where about 3 million residents live. 109 Metro stations will be built along the lines' route

### **NIS 34 billion**

The expected annual economic benefit from the Metro in 2040 according to the main scenario of the Ministries of Finance and Transport

### **29 years**

NTA operates without a framework agreement with government ministries

### **3 years**

The time that elapsed from the date the search committee was established (June 2022) for the purpose of selecting the director of the Metro Authority until he was selected and approved by the government (May 2025). It should be noted that as of the audit completion date, it was reported that the Authority director resigned from his position in October 2025

### **NIS 27 billion**

Linkage differentials between the approved estimate of the Metro Project as specified in the Law and the estimate linked to 2025 prices

### **NIS 35 billion**

Revenues from the financing levy out of approximately NIS 89 billion of the total expected revenues will be obtained over 30 years following the Metro's activation – a major timing difference between project expenses and revenues for which a bridging mechanism has not yet been established in the state budget.



### Only 50% of GDP

Inventory of transport infrastructure in Israel, compared to 71% in OECD countries. This is a gap of NIS 400 billion

### 16 years

will pass from the date on which the government decided to advance the Metro Project in 2021 until its planned activation in 2037, and 21 years will pass from the formulation of the strategic transport plan for Gush Dan in 2016 until its planned activation

### A shortage of 4,500 engineers

According to estimates made by an inter-ministerial team in 2020, there has been a shortage of up to 4,500 engineers in Israel, and the shortage is expected to reach 8,000 in the coming years. This leads to difficulty in recruiting engineers for national projects

### An addition of 16,000 foreign workers

In order to advance the Metro Project, up to 16,000 professional foreign workers will be required to operate about 20 TBM machines and additional engineering equipment

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## Audit Actions



From August 2024 to April 2025, the Office of the State Comptroller examined the preparedness of government ministries and governmental companies for the establishment of the Metro network in Tel Aviv metropolitan area. The audit was conducted at the following bodies: the Ministry of Transport and Road Safety, the Ministry of Finance, and the Metropolitan Mass Transit System (NTA) company. Supplementary examinations were conducted at the Planning Administration.

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## Key Findings



**The National Importance of the Metro in the Tel Aviv Metropolitan Area** – The Tel Aviv metropolitan area is the business and financial heart of the State of Israel, and it accommodates a major part of the economic activity and is responsible for most of the economy's GDP. Approximately 44% of Israel's population lives in the metropolitan area, about 50% of the work places are located there, and approximately 62% of the country's



business GDP is produced there. A study on the Gush Dan Metro, conducted in 2020 by a research team led by Dr. Niv Sharav, in cooperation with consultants who specialize in strategic planning in the fields of transportation and transportation economics, academics, and teams from NTA and Ayalon Highways in collaboration with the Ministry of Transport, the Ministry of Finance, and the National Economic Council (the 2020 Metro Study), found that if a metro is not established by 2040, congestion in the Tel Aviv metropolitan area will worsen even relative to 2018. In the absence of a metro network, the occupancy of the light rail lines (the Red Line operating since August 2023 and the Purple and Green lines which are under construction) will reach 150%–250% of capacity by 2040. In light of the above, the road network will be characterized by extreme congestion, estimated at 456 million vehicle hours in congestion compared to an estimate of 143 million hours in 2018, and accordingly, the cost of lost time in Gush Dan will reach NIS 25 billion in 2040 compared to about NIS 10 billion in 2018. According to the aforementioned study: "The high capacities, travel speed, advanced technology, and full separation of routes make the Metro network the only solution that can provide a high level of accessibility and mobility for the entire population, while meeting the transportation system goals as set in the strategic plan".

**📌 Deficiencies in the Infrastructures of the Mass Transit System in the Tel Aviv Metropolitan Area – Status Report** – It was found that as of the audit completion date (April 2025), the mass transit system in the Tel Aviv metropolitan area almost entirely lacks the "system's skeleton". This skeleton includes transportation infrastructures of metro lines, light rails, and lanes designated for high-capacity buses traveling along public transport lanes and receiving traffic priority. These infrastructures are designed to create a continuous and efficient connection between the metropolitan cities.

In metropolises of similar size in developed countries, inhabited by about 4 million residents, there are metro networks that serve as the basis for a mass transit system (MTS). The Tel Aviv metropolitan area is exceptional in this respect, and it is also characterized by exceptional traffic congestion. As early as 2012, within the framework of a strategic plan for the development of public transportation, it was noted that gaps had developed over the years due to low investment in public transportation, and service measures were established and objectives were set to improve these measures. However, by the audit completion date in April 2025, only one light rail line had been operated in the Tel Aviv metropolitan area, there had been a decline in the key measures, and the objectives set by the Ministry of Transport were even further away from being met. Data from the 2016 strategic plan for the development of a mass transit system in the Tel Aviv metropolitan area (Tel Aviv Mass Transit Plan 2016) showed that the gaps between targets and implementation continued to grow. For example, the travel speed of public transportation decreased by about 6% from 17 km/h to 16 km/h compared to a target of 25 km/h; the rate of public transportation trips decreased by about 17% from 24% to 20% compared to a target of 40%. If there is no change in the current situation and public transportation services are not improved, the negative trend may continue and the public's benefit will be compromised.



**📌 The Economy's Abilities to Execute Transportation Projects** – The audit found that as early as 2012, the limited ability to execute public transportation projects was known to the Ministry of Transport and the Ministry of Finance, and that by the audit completion date, in April 2025, approximately 13 years after the said strategic plan was prepared, certain aspects of planning were addressed, powers were granted to the Metro Authority and to the Metro Project's Regulatory Council, and coordination amongst various infrastructure bodies was improved. However, the Ministry of Transport and other ministries did not address some of the economy's limitations affecting various aspects of managing transportation infrastructure projects, and these still affect the ability to execute projects in the field of public transportation in general and the Metro in the Tel Aviv metropolitan area in particular. For example, limitations, such as shortage of manpower, lack of physical execution capabilities, shortage of equipment for underground works and the professional expertise required to operate it, centralization, and lack of metropolitan powers are still evident. These limitations may lead to schedule delays, which will lead to increase in costs, as well as compromise the benefit derived from the operation of future mass transit system lines.

**📌 The Preparedness of NTA, the Metro Authority, the Ministry of Transport, and other Government Ministries to Deal with the National Challenges of the Metro Plan** – The complexity of the Metro Project is reflected in its scope – an underground route of 150 km (double tracks with a total length of 300 km), 109 stations, and passing through 24 local authorities – presenting the state with engineering, economic, transportational, and other challenges. The experience gained from excavating tunnels with a cumulative length of 16 km along the Red and Green lines of the light rail in the Tel Aviv metropolitan area shows that these challenges may be national-economic challenges that will affect the lives of millions of residents within the metropolitan area and beyond it.

- **Shortage of Engineering Equipment** – The audit found that the inventory of equipment available in Israel is insufficient for the construction of the Metro Project, and the equipment required for performing work that involves technologies that have not been tested in Israel, such as ground freezing equipment, is not available in Israel at all. TBM machines (Tunnel Boring Machine) required for excavating the Metro tunnels, have already been used in several projects in Israel, but they were all brought in and operated by foreign contractors and are not available in Israel. It was further found that NTA has not yet completed the preparations for the tenders designated to select the contractors who will operate the machines. Furthermore, other items of unique equipment, such as machines for constructing slurry walls and relevant devices, can be found in Israel, but NTA does not exactly know the level of their availability in the market and estimates that their availability is low. According to a report of the fourth quarter of 2024 by the inspection body that supervises NTA's activities on behalf of government ministries: "Shortage of equipment and construction materials such as iron and concrete, as well as logistical



difficulties in shipping materials to work sites and removing surplus soil... might lead to low output, high costs, and schedule delays." It was also noted in the report that as of the date of its preparation, the issue is still "in process."

- **Soil Laboratory Testing** – The audit raised concerns that the Israeli economy is not prepared for the challenge of performing test drilling and soil laboratory tests on the scale required for the Metro Project. According to documents from NTA and the government's inspection body, the supply of laboratory services and test drilling services is low and does not meet the overall demand in the market. If these concerns materialize, the shortage of laboratory services and soil drilling services may delay the completion of soil investigations, and consequently prevent the completion of the Project's planning on time, which might potentially affect the timetables. Alternatively, the state might reduce the scope of tests during the project site clearance phase under its responsibility and hand over these areas to contractors with only partial mapping. In such a case, the contractors' level of certainty regarding ground conditions will be lower, and this too may be a cause for schedule delays. Partial mapping could also lead to additional work and costs if unexpected ground conditions are found.
- **Shortage of Workers at Project Sites** – The audit found that a shortage of local working hands is a significant barrier to the Project's progress. Furthermore, the security situation in Israel affects the willingness of foreign contractors to work in Israel, which may further exacerbate manpower shortage. Additionally, hiring thousands of foreign workers requires finding accommodation for them in city centers near the Metro Project sites. In recent years, progress has been made regarding recruitment of foreign workers for the infrastructure sector, including through Government Decisions 1527 and 175, which may allow entry of up to 7,000 workers; however, their number is smaller than the number needed for the Metro Project, which alone requires the employment of about 16,000 foreign workers. NTA, the Ministry of Transport, and the Metro Authority have not yet completed the unique preparations required for the Metro Project vis-a-vis the ministries in charge of the foreign workers sector, including the Ministries of Labor, Foreign Affairs, and Justice, and the Population and Immigration Authority.
- **Shortage of Israeli Workers in the Field of Civil Engineering** – the audit found that in June 2020, the Planning and Budgeting Committee of the Council for Higher Education (PBC) set a target – an increase of 300 undergraduate students in civil engineering, 60 students of master's degree with a thesis, and 20 doctoral students, and that it decided that any institution showing an increase of at least 10 students compared to the previous year should receive financial compensation for each of these 10 students according to the plan. In the first year (2020) in which it was decided to provide a financial incentive, there was an increase from 4,232 to 4,544 students of civil engineering and architecture (about 7%); however, in the course of 2021–2024 there was a consistent decrease in the number of students down to 4,194, less than their number in the base year (2019–2020). In the the



course of 2020–2024, there was an increase in the number of students studying civil engineering in colleges, but at the same time, there was a decrease in the number of students studying this subjects in universities, and as a result, there was no change in the total number of students. In November 2024, the PBC decided to continue the implementation of the original plan from 2020, even though it does not lead to the desired result of a continuous increase in the number of civil engineering students.

The audit further found that the Ministry of Transport has no programs to encourage civil engineering studies that are parallel to the Ministry of Defense's Academic Officers Program (which encourages candidates for security service to study for an academic degree in subjects required by the IDF) or the Ministry of Health's "Ofakim" and "Ilanot Negev and Galilee" programs, which encourage medical studies. This is despite the fact that the shortage of civil engineers and other professionals is growing, and the Ministry of Transport was even required to address the issue as early as 2012 as part of the 2012 Public Transport Development Plan.

- **Employment of Experts outside of Israel** – The audit found that according to estimates made in Israel, the recruitment of 10,000–16,000 non-Israelis, of whom about 2,000 are international professionals, is an essential condition for the Project's success. Recruiting senior professionals in the field of infrastructure is a significant challenge as it is, and it is further intensified given the security situation prevailing in Israel since the beginning of the "Swords of Iron" war in October 2023.

The audit also found that there is no unique regulation adapted to the Metro Project for the purpose of providing licenses to foreign engineers in Israel. Although the Engineers and Architects Law includes a mechanism that allows for employment of engineers from outside of Israel, the existing mechanism is not designated for the Metro Project and has certain limitations. Under these circumstances, there is room to examine the adaptation of the existing legal mechanism to the Project's needs; however, the Metro Authority and the Ministry of Transport have not yet established working teams with the relevant ministries, and the preparation for the absorption of foreign professionals has not been completed yet.

- **Traffic Signage Authorities during Construction** – The audit found that the Ministry of Transport has not yet established a dedicated local traffic signage authority for the Metro Project. The Metro route passes through 24 local authorities, which also serve as the traffic signage authorities throughout the Project's route. Advancing the Project within rigid schedules while reducing traffic lanes and adding 72,000 truck trips per month in densely populated centers will require full coordination between the executing company and the local authorities, allocation of resources by the authorities to meet the needs of the executing company in accordance with Project schedules, and extensive involvement of the National Traffic Inspector pertaining to approval of specific arrangements and coordination



with Israel Police for enforcement purposes. The multiplicity of entities involved in signage and the Project's dependence on them may hinder the Project's advancement. It should be noted in this context that as part of the Light Rail Project in the Tel Aviv metropolitan area, NTA serves as the traffic signage authority in certain areas along the rail route in various local authorities. The Metro Project is broader and involves a greater number of authorities; therefore, it is important to establish a regulatory framework of the signage issue for the entire Project.

- **Traffic Management at Project Sites and the Need to Establish Logistics Centers** – the presence of thousands of trucks and heavy vehicles, in areas characterized by lanes closures and restrictive traffic arrangements may further exacerbate traffic congestion in the center of the metropolitan area. It should be emphasized that even now, prior to the outset of the Metro works, traffic volumes in the Tel Aviv metropolitan area are very high, and the level of service of the roads is low, reaching level F, the lowest on a scale of six levels of service ranging from A (the highest level) to F (the lowest). It was found that as of audit end date, in April 2025, there is still no agreement between the Ministry of Transport, the Metro Authority, and the infrastructure companies regarding preparations for centralized traffic management at the Project sites.

The audit further found that a logistics report conducted for NTA, included a recommendation to integrate logistics centers in the Metro Project, and nine potential sites were suggested for this purpose. Four of the proposed sites were disqualified, and the review of the others has not yet been completed. If logistics centers are not established, deliveries to project sites may be carried out around the clock, which could increase traffic volumes and exacerbate road congestion. Furthermore, without the use of logistics centers, short and long-term storage of equipment and goods will take place at the relatively crowded Project sites, which might lead to shortage of storage space and impair the efficiency of the works.

- **Adjustment of the Electricity Sector** – The audit found that according to the estimates of NTA and Noga – the company that manages the electricity system in Israel (hereinafter, Noga), the electricity consumption of the Metro Project during rush hours will be approximately 320 megawatts, which is about 2% of the market's production capacity, and that the Metro will be connected to the national electricity grid through eight private substations with a connection to a high voltage of 161 kW. Seven of these stations were statutorily approved within the framework of NIP (National Infrastructure Plan) 101/A, 101/B, 102, 103 pertaining to the construction of the Metro Project. The location of one of the stations was changed, and therefore a complementary statutory process is required (NIP/103/G). As of the audit completion date, this process was still underway, and therefore the eighth station in Kiryat Arye, Petah Tikva had not yet been statutorily approved. Of the seven stations that were statutorily approved, Noga completed and approved the planning of only four stations.



**Framework Agreement between NTA and the State** – The framework agreement between the State and the executing company of the Metro Project is intended to regulate the company's ongoing operations within the framework of the Project, including: the employment relations between the company and state authorities, primarily the Metro Authority. The audit found that although two government resolutions from 2010 and 2016, Resolution 2569 and Resolution 1838 respectively, stipulated that the Ministries of Transport and Finance must sign a framework agreement with NTA and although agreements on the matter were even formulated – only one agreement in principle regarding NTA was signed between the government ministries, to which the company is not a party. Although the company's board of directors and the Government Companies Authority approved the draft agreement as early as 2020, even after approximately 29 years of NTA's activity, the government, through the Ministries of Transport and Finance, has yet to sign the framework agreement with it. Moreover, the Office of the State Comptroller commented on this matter in its reports regarding NTA's activities in 2013, 2018, and 2022.

**Adjusting the Organizational Structure of the Metro Authority and NTA and Establishing the Regulatory Council** – The Ministries of Transport and Finance, appointed by the government to advance the Metro Project, selected the head of the Metro Authority through a Search Committee only in March 2025, and his appointment was approved by the government only in May 2025, approximately three years after the date on which the Search Committee was established. The Authority itself was only partially established and it operates as a small pilot team of only about five employees; it also appears that there has been high turnover in the team's filled positions. Furthermore, the Regulatory Council has not yet been established, and a chairwoman was elected for it only in July 2025. The Metro Law grants the Regulatory Council a variety of powers, including the authority to resolve certain disputes and to instruct infrastructure companies to carry out actions related to the Metro Project. According to the law, in the meantime, NTA is fulfilling the role of the executing company, even though a development agreement has not been signed with it. In other words, most of the main entities that are supposed to lead the national project of establishing the metro in Tel Aviv metropolitan area are operating in a partial or temporary capacity, or have not yet been activated at all. It should also be noted that after the audit completion date, it was reported that the director of the Authority resigned from his position in October 2025.

**Infrastructure Coordination between NTA and other Infrastructure Companies** – The audit found that the Metro Authority, which acted until June 2025 in a limited capacity as a pioneer team, carried out a variety of actions to advance coordination with government ministries. For example, NTA, in cooperation with the Authority, reached an agreement with Israel Electric Corporation pertaining to infrastructure relocation. However, interfaces with other entities have not yet been regulated:



- **Coordination with Telecommunications Companies** – The audit found that the coordination between NTA and the telecommunications companies has not yet been settled. The relocation of communication infrastructure may lead to delays of many months in the schedules of work along various project segments, including the Metro Project.

The Metro Authority and NTA conducted ongoing negotiations and discussions with the telecommunications companies and the Ministry of Communications, which is responsible for the regulation of these companies. Although a long time has passed since the contact between the parties was established, the discussions held did not lead to the signing of SLA agreements with the telecommunications companies, in which agreed-upon working conditions would be established, similar to the agreement signed with Israel Electric Corporation. In the absence of such agreements, the infrastructure companies lack contractual tools that would grant preference to infrastructure projects in accordance with the legislative intent of the National Infrastructures Law.

- **Coordination with Water Corporations** – The audit found that despite the fact that coordination between NTA and the Water Authority had been taking place for many months, at the very least, from April 2024, on audit end date, NTA still did not have a signed agreement of principles with the Water Authority, and the company had not received information as to whether the guidelines agreed upon between the Water Authority and NTA were actually communicated to the water corporations and became legally binding.

- 📌 **Increase in Project's Costs** – The Metro cost estimate is enshrined in law and totals NIS 150 billion as of November 2021. According to the Metro Law, 50% of the Project's costs will be funded from the state budget, and 50% will be funded through revenues from various sources specified in the law, based on the economic and urban benefits generated by the Project, such as a financing levy and revenues from congestion charges.

It emerged that upon the audit completion date, NTA was examining the project cost estimate, which had not yet been approved by the Ministries of Finance and Transport. Nevertheless, the possibility is already emerging that the Project's estimate will increase by up to approximately NIS 12 billion, compared to the estimate enshrined in the Metro Law, which totals NIS 177 billion after linkage. Upon the audit completion date, reviews were being conducted with the aim of reducing various costs in order to meet the budget stipulated by law. In the absence of an updated Project estimate, it is impossible to complete the planning of activities required to meet the Project's approved budget, nor is it possible to make data-driven decisions regarding changes to the Project's budget or scope.

According to the planned funding framework, half of the Project's cost, approximately NIS 88.5 billion, will be funded by the state budget, and the other half will be funded by



charges and levies designated for the Metro Project. However, the Project's funding framework, including the mix between the budget based on designated revenues and the state budget, has not yet been finalized, and the matter is being handled by the Budget Department and the Accountant General's Department at the Ministry of Finance. According to the Ministry of Finance, the Project's funding framework is expected to be finalized by the end of 2025.

**📌 Uncertainty Regarding Revenues from Designated Charges and Levies** – the Metro Project is a complex project which is based on a unique model of mixed budget resources for its financing – between the state budget (50%) and a budget based on designated revenues (50%). The revenue-based budget is uncertain and depends on the public's conduct. For example: betterment tax at an estimated volume of NIS 25–30 billion, which is imposed upon the realization of building rights or the sale of real estate located in the Metro's area of influence. This estimation reflects a decrease in the revenue estimate amounting to approximately NIS 2 to 13 billion, after reducing the tax rate from 35% to 32% and setting a reduced rate of 20% if the rights are realized by 2030. A financing levy at an estimated volume of NIS 25–35 billion is imposed on built-up areas, both current and future, and its volume therefore depends on the scope of future construction. The volume of congestion charges collection, estimated at hundreds of millions of NIS per year, which will be imposed on vehicles entering the Tel Aviv metropolitan area, will be determined by their number.

Preparing a budgetary plan for a project of this magnitude requires the completion of preliminary planning and significant progress in engineering design. The audit found that the Budget Department and the Accountant General's Department under the Ministry of Finance have not yet completed the budgetary planning of the designated revenues. Although a delay in completing the budgetary plan does not necessarily mean a delay in the Project's execution, as the budgets required for contracts to advance the Project have been allocated, it is highly important to complete the planning as soon as possible, especially in light of the efforts to adhere to the original budget and the possibility of a future update of the estimates and scope of the designated revenues. Reflecting the emerging situation by the professional level to the decision-makers in the government in real-time may assist the government in making operational decisions regarding the Project.

**📌 Bridging Timing Gaps between the Required Investment and the Expected Income** – the audit found that the Project's cash flow is uncertain. According to the available documents, additional reviews of the Project's estimate by NTA, the Metro Authority, and the Ministry of Finance are required, and the Ministry of Finance is required to conduct an in-depth examination of the extra-budgetary resources for the Project and their distribution over the years. According to preliminary estimations, government funding for an interim period, amounting to tens of billions of NIS will be required. It was further found that bonds backed by a budgetary resource or institutional financing were proposed as bridging methods, and that these estimates are premature



and require a re-examination of the underlying assumptions through a strategic work led by the Ministry of Finance. It should be noted that given the aforementioned budgetary scope, any financing method decided upon is liable to burden the overall budget of projects in the field of transportation and infrastructure, and therefore requires advance preparation. The Budget Department and the Accountant General's Department under the Ministry of Finance have yet to formulate the approach they will adopt for the Project's financing needs. These are large bridging amounts that have a significant impact on the state's liabilities for the coming years. This impact is intensifying in light of the increase in government debt following the "Swords of Iron" War and the interest costs derived from the increase in government debt.

**Actual Advancement of the Metro Project** – The Project's Steering Committee adopted the proposal of the Metro Authority and government ministries regarding the timelines and determined that the first phase of the Project will become operational at the end of 127 months from the start of the engagement with the line managers, i.e., in 2034, and that the full system will become operational in 2037, at the end of 160 months from the start of the engagement. The Committee also approved the Metro Authority's recommendation to conduct a validation of the schedules before issuing the first Infra 1 tender. Upon the audit completion date, in April 2025, the committee was not discussing changes to the general Project's schedules. The following are several points regarding which deadlines were not met:

- **The Hiring of Lines Management Companies began with a Four-month Delay** – The audit found that due to the complexity of the tender process for contracting with line managers, which included many clarifications for the groups that applied, the actual engagements between NTA and the line managers began only in January 2024 and not in September 2023 as planned at the time the schedules were approved. Since the approved activation date of the Metro is directly derived from the start date of this engagement, the delay in the engagement alone is sufficient to lead, with high probability, to a delay of about four months in the Metro's activation date.
- **Coordination between the Various Lines** – The audit found that in its report for the last quarter of 2024, the inspection body supervising the project on behalf of the Ministries of Transport and Finance presented many discrepancies between the Project's schedule presented by the line managers and the schedule set with the network manager and NTA, and a lack of synchronization between line M2 and line M3. Such lack of coordination may lead to delays in the schedules for activating the lines.
- **Correction of Station Entrance Plans** – The audit found that an error occurred in the planning of the entrances to the stations of the three Metro lines, and that the stations were planned with a single entrance instead of at least two entrances. This planning is inconsistent with the approved plan and therefore cannot be



approved. Under these circumstances, NTA is forced to redesign the stations, which involves additional time and costs.

- **Delays in Performing Soil Drilling** – The audit found that there is difficulty in advancing drilling by the certified laboratories at the required scope. The difficulty arose as a challenge during the preparations for the Project and was even identified as a critical condition for its success as early as 2022. Even in the early stages of Project execution, the issue of drilling repeatedly arises as a barrier to Project's progress. An analysis of the data in the inspection body's report regarding the drilling on the three lines shows that out of approximately 1,360 drillings, only about 610 drillings (45%) were carried out between 2020 and 2024, even though NTA presented in its report to government ministries in July 2022 that the goal was to complete the drillings by the end of the first quarter of 2026. In light of the pace of drilling progress in the years 2020–2024, and given the ongoing complex security situation in the State of Israel, it appears that the drilling will not be completed by the set target date.

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## Key Recommendations



In view of the shortage of public transportation infrastructure in Tel Aviv metropolitan area, and in particular, the insufficient connectivity between adjacent metropolitan cities, and given the exceptional traffic congestion in the metropolitan area compared to the situation in other metropolitan cities in developed countries, and the economic costs imposed as a result on the economy, estimated at NIS 25 to 50 billion per year, it is essential that the Ministries of Transport and Finance, which are responsible for the matter, act in cooperation with governmental and local entities to promote and complete all projects for the establishment of the MTS system in general, and of the Metro in Tel Aviv metropolitan area in particular. To this end, the Office of the State Comptroller recommends that the Ministry of Transport formulate a strategic plan to advance the removal of barriers and constraints affecting the ability to advance projects in the field of transportation infrastructure. It is recommended, among other things, to make use of the State Comptroller's recommendations on these matters, as presented in previous reports as well as in this report.



The Ministries of Transport and Finance, who are responsible for the Project on behalf of the government, must act promptly to complete the establishment of the Metro Project's organizational structure at all levels: the Metro Authority in its full format and a Regulatory Council, as well as to complete the engagements with the executing company, in accordance with the provisions of the Metro Law.



It is recommended that NTA act as soon as possible to complete the estimation of the number of machines required for the Project ahead of the publication of the tunneling tenders, and it is also recommended that NTA check the availability in Israel of the unique equipment required for the establishment of the Metro Project and the ability to procure the equipment through suppliers in Israel and abroad in order to identify barriers, if there are any, and remove them in advance. Furthermore, it is recommended that the Ministry of Transport and the Metro Authority, in collaboration with NTA, examine whether the current law provisions allow NTA to reinforce soil laboratory testing through laboratories abroad, and if there is a need for this, they should approach the Israel Laboratory Accreditation Authority and the Ministry of Economy and Industry. It is also recommended that NTA examine whether laboratories outside Israel are willing to incorporate in Israel and conduct soil testing activities for the Metro Project. Expanding the supply will also allow for the creation of a certain redundancy in the scope of the tests, which will reduce the formation of a "bottleneck" related to this matter.



It is recommended that NTA, the Ministry of Transport, and the Metro Authority prepare for the bringing in of non-Israeli workers, utilizing the tools granted through legislation and government decisions. Furthermore, it is recommended that NTA, the Metro Authority, and the Ministry of Transport, in collaboration with the Ministry of Labor, the Population and Immigration Authority, the Ministry of Foreign Affairs, and the Ministry of Justice, promote additional and dedicated regulatory arrangements regarding new entry visas for workers who will be employed in the Metro Project, in order to address the exceptional number of foreign workers required for the Project (up to 16,000 workers). It is also recommended to examine the scope of foreign workers needed for the Metro Project relative to the approved number of visas, as well as relative to the other needs of the economy. It is also recommended that the Ministry of Transport and the Metro Authority, in collaboration with local authorities, the Ministry of Construction and Housing, and the Ministry of Finance, start to promote housing solutions for foreign workers. Regarding foreign workers with special professional skills, it is recommended that the Ministry of Transport, the Metro Authority, and NTA, in collaboration with the Ministry of Labor and the Population and Immigration Authority, advance dedicated tracks for granting work visas to senior foreign professionals and their family members, and examine the current licensing regulations for foreign engineers and its suitability for the Project's needs. It is recommended that NTA, the Metro Authority, and the Ministry of Transport present the Metro's needs to the relevant ministries in order to formulate a joint and feasible policy. It is also recommended that they ensure that the living conditions comply with the provisions of the law.

Regarding training of engineering professionals in Israel, it is recommended that the PBC examine the effectiveness of the actions it has taken so far to encourage enrollment in civil engineering study programs, formulate follow-up plans, and promote them to help the economy meet the demand for professionals in this field. Furthermore, it is recommended that the Ministry of Transport, in collaboration with professional entities in the field of higher education, encourage demand for civil engineering studies by creating dedicated study tracks and providing scholarships and employment guarantees in national transport



infrastructure projects upon completion of studies, as is done in the Academic Officers Program and in various Ministry of Health tracks.



It is recommended that the Ministry of Transport, in collaboration with NTA and the Metro Authority, establish a comprehensive policy regarding the authorization of Traffic Signage Authorities in the Metro Project, including determining whether the executing company will be authorized as the Traffic Signage Authority along the line routes and in station areas, as well as defining the boundaries and areas where the executing company will serve as the Traffic Signage Authority, if so decided. As part of establishing the policy, it is recommended to place special emphasis on the balance between the Project's needs, which are well known to the executing company, and the needs of the residents in the short and medium term during the works, which are well known to the local Traffic Signage Authority.



It is recommended that NTA, the Ministry of Transport, and Ayalon Highways examine the establishment of a traffic control center for traffic to and from Project sites, including examining the allocation of resources required for this purpose. Furthermore, it is recommended that NTA establish work procedures for contractors involved in the Project, reduce the number of trucks entering and leaving the work sites during rush hours, and additionally, it is recommended to map routes to shorten truck travel distances in congested areas.

In this context, it is recommended – similar to the recommendations of the consulting firm on behalf of NTA that dealt with the matter and similar to experience from projects abroad, such as the Crossrail Project in London – to increase the volume of transport to and from the Project sites via freight trains. It should be noted that the Office of the State Comptroller recommended actions to increase the volume of transport by freight trains in the audit report on "Cargo Transport by Train"<sup>1</sup>.

NTA, the Metro Authority, and the Ministry of Transport must complete the examination of the need to establish logistics centers for the Metro Project, and if it is decided to establish them, the examination of their location must be completed without further delay in the schedules. If it is decided to establish the logistics centers and their location is determined, the Office of the State Comptroller recommends establishing the centers as soon as possible, prior to the beginning of the intensive phase of the works on site, in the course of 2027–2028.



It is recommended that NTA, the Metro Authority, and the Ministry of Transport, in cooperation with the Ministry of Communications if necessary, complete the negotiations and, as much as possible, reach agreements with the telecommunications companies regarding service level agreements (SLA) between them and NTA, in accordance with the principles agreed upon by the inter-ministerial team that dealt with the matter, and similar to the agreement with Israel Electric Corporation which regulates the schedules, the




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<sup>1</sup> State Comptroller, **Annual Report 70A** (2020), pp. 823–902.



transfer of information, and mutual reporting processes. Promoting cooperation between the transport companies and the telecommunications companies may shorten the schedules of the Metro Project, reduce the number of delays, and bring forward the realization of the potential benefit to the economy.

Furthermore, it is recommended that NTA, the Metro Authority, and the Water Authority sign the principles agreement as soon as possible, and that the Water Authority distribute guidelines regarding the preparation of the water corporations for the Metro Project. It is further recommended that NTA sign SLA agreements with the corporations as soon as possible, based on the principles that will be included in the agreement between the Water Authority and NTA. Furthermore, it is recommended that NTA report to the Metro Authority on the progress in the preparation of the water sector entities, in accordance with the coordination requirements sent by NTA in December 2024.

-  The Ministry of Finance, the Ministry of Transport, and NTA must examine the various estimates based on the information currently available against the existing budgetary resources and examine possible reduction of the Project scope in order to meet the approved expenditure framework. In a national and strategic infrastructure project, appropriate budgetary preparation in advance may reduce the uncertainty of potential investors and contractors and of the economy as a whole, and thereby contribute to the efficient advancement of the project. It is of great importance to complete the budgetary planning as soon as possible, particularly in light of the possibility of an update that will lead to a significant change in cost estimates and certain updates to the scope of designated revenues.
-  It is recommended that the Ministry of Finance, in collaboration with NTA and the Metro Authority, complete the strategic work regarding the methods for bridging the expected cash flow timing gaps in the Project. This necessitates clarification of the working assumptions regarding the volume of revenues and the timing of their reception, as well as the volume of investments and the expected timing of their execution, and requires acting toward the approval and implementation of the strategic work concerning the bridging of financing gaps. According to the Office of the State Comptroller, it is highly important to finalize and approve the financing model and to bridge the timing gaps. The earliest possible approval of the Project's financing method may provide investors with regulatory and economic certainty at least at the level of Israel's sovereign credit rating.
-  In order to promote the ongoing advancement of the Project, NTA must complete the adjustment of the internal procedures in accordance with the Metro Law and the Law for the Promotion of National Infrastructures, 2023. The recommendations of the Office of the State Comptroller regarding the signing of service agreements with infrastructure companies were presented above. Implementation of the aforementioned recommendations may assist in removing barriers, some of which are even defined as critical.



## Mapping of the Main Entities Involved in the Metro Project





### Evolution of Project Estimates\*, 2019–2024 (in NIS Millions, Excluding VAT)

|  | SYSTRA Estimate** 2019 | SYSTRA index-linked Estimate 2023 | System Management Company Estimate 2024 | Inspection Body Estimate 2024 |
|--|------------------------|-----------------------------------|---|-------------------------------|
| <b>Infrastructure relocation</b>                 | 5,054                  | 5,736                             | 1,453                                   | 1,453                         |
| <b>Tunneling</b>                                 | 21,511                 | 25,584                            | 20,987                                  | 21,564                        |
| <b>Stations</b>                                  | 38,880                 | 45,628                            | 60,985                                  | 56,240                        |
| <b>Elements</b>                                  | 3,884                  | 4,558                             | 27,748                                  | 26,241                        |
| <b>Depots</b>                                    | 1,480                  | 1,762                             | 3,400                                   | 3,664                         |
| <b>Mobile Fleet</b>                              | 5,206                  | 6,367                             | 8,093                                   | 8,093                         |
| <b>Systems</b>                                   | 10,171                 | 12,470                            | 16,154                                  | 11,470                        |
| <b>Planning, Management, and Quality Control</b> | 11,635                 | 13,783                            | 15,293                                  | 15,040                        |
| <b>Unexpected Expenses</b>                       | 39,128                 | 46,355                            | 35,312                                  | 38,618                        |
| <b>Total cost</b>                                | <b>136,949</b>         | <b>162,243</b>                    | <b>189,425</b>                          | <b>182,383</b>                |
| <b>Cost per km</b>                               | <b>913</b>             | <b>1,082</b>                      | <b>1,263</b>                            | <b>1,216</b>                  |

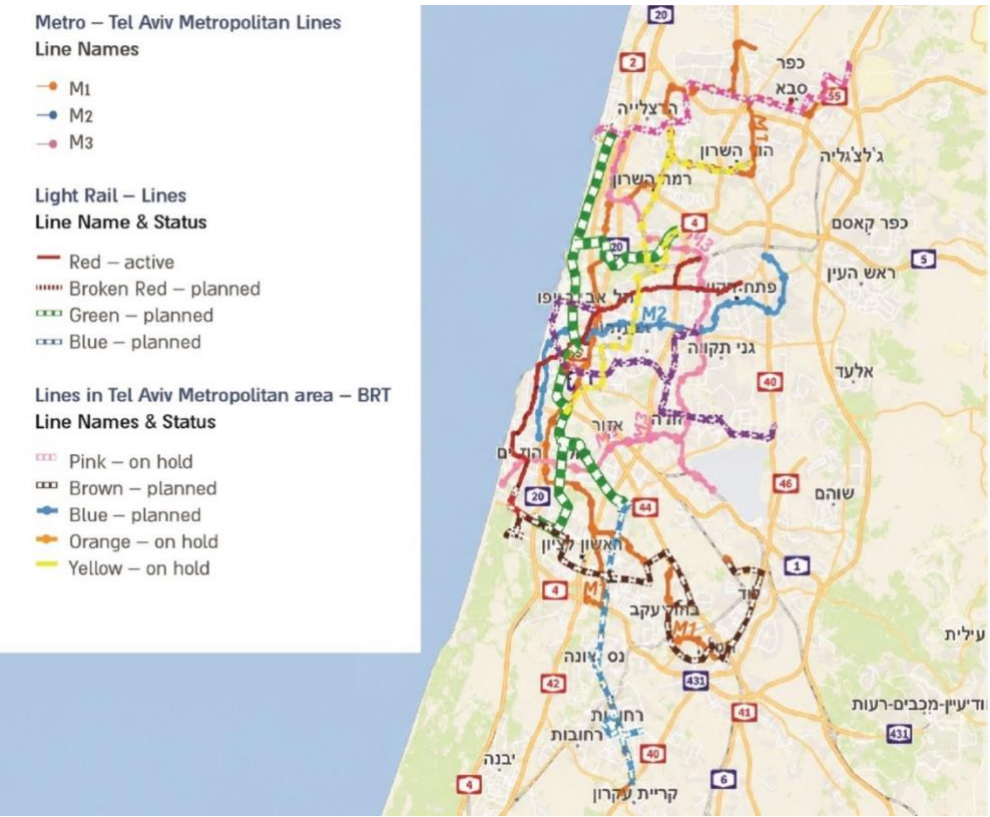
According to the data of the financial model of the System Management Company and of NTA – February 2024, the financial model review report of the inspection body – July 2024, processed by the Office of the State Comptroller.

\* These assessments are work-in-progress evaluations and are not approved estimates. They reflect an ongoing review of the estimates, a standard practice in infrastructure mega-projects.

\*\* SYSTRA is a consulting firm that examined the feasibility of the Metro Project and prepared a preliminary budgeting model.



## Map of the Planned Mass Transit System in the Tel Aviv Metropolitan Area



According to data from the Ministry of Transport's "Hatzav" GIS system, processed by the Office of the State Comptroller.



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## Summary

The Metro Project is the largest infrastructure project in the State of Israel and one of the largest projects in the world. According to the Prime Minister's Office report "Infrastructure for Growth" for 2025, which presents all infrastructure projects in Israel, the investment in the Metro Project will be about a third of the state's total investment in infrastructure in the coming years. The Metro is planned to operate in 24 local authorities, where more than 3 million residents live. An infrastructure project of such wide scope and geographical distribution presents the entire Israeli economy with a significant challenge in a variety of aspects: complex planning and statutory approvals, massive-scale civil engineering works and the associated logistical challenges, supply of the equipment required for the works, recruitment of manpower in Israel and worldwide, preparation of the electricity sector, complex infrastructure coordination among many infrastructure owners, and providing the funding required for the Project's execution.

The audit found that several important preparatory actions were carried out for the purpose of advancing the Project, including: legislation of the Metro Law, establishment of designated bodies to advance the Project, and the signing of an SLA between NTA and Israel Electric Corporation. However, preparations have not yet been fully completed, and gaps are evident in several areas: actions taken to improve coordination with local authorities and infrastructure companies have not yet been completed, the bodies established under the Metro Law are still operating in a limited capacity or have not been staffed at all, no solutions have been found for the shortage of foreign workers and the shortage of professional Israeli and foreign workers, and preparations for receiving the equipment required for the project have not yet been completed. That is to say, the shortage of economic resources is still evident, even though the issue has been known to the Ministry of Transport and other government ministries for more than a decade. The effects of these economy's constraints are already becoming apparent in the early stages of the Project.

The audit raised three material financial risks which are currently evident: gaps amounting to billions of NIS in the Project estimate compared to the updated approved budget, which amounts to NIS 177 billion after linkage; a decrease in revenues from betterment tax and others – revenues from betterment tax are estimated at NIS 25–30 billion according to the Ministry of Finance's current estimate. This assessment reflects a decrease in the revenue estimate amounting to approximately NIS 2 to 13 billion, following the reduction of the tax rate from 35% to 32% and the setting of a reduced rate of 20% if the rights are realized by 2030. There is concern regarding a decrease in revenues from additional resources such as the financing levy relative to the initial planning; as well as gaps in cash flow and government funding for an interim period until the collection of dedicated Project revenues, amounting to tens of billions of NIS. These material risks require tight and comprehensive supervision and control, and the provision of budgetary and cash flow solutions by the Ministry of Finance and the Ministry of Transport. The extraordinary financial scope of the Metro Project and the financing method that combines the state budget and a budget from designated resources



require special preparation by all parties involved in the matter, with an emphasis on the Ministry of Finance. However, the Project's estimate is under review and its update has not yet been approved, the Budget Department at the Ministry of Finance has not yet presented the government with a funding allocation framework for the Project's budget, and the examinations regarding the methods for bridging the cash flow timing gaps between the expected expenditures and the expected revenues from designated funding sources have not yet been completed.

In November 2022, the Project's steering committee approved its schedules, and it was determined that its partial operation will begin in 2034 and its full commercial operation will begin in 2037. In view of the delays in establishing the Metro Authority and the Regulatory Committee, the delays in the engagements between NTA and the line management companies, the delay in signing SLA agreements between NTA and various infrastructure companies, given the need to update the number of station entrances and perform planning adjustments in stations in whose adjacent areas residential building permits were granted, and given the shortage of workers, laboratory tests, and equipment, partly due to the security situation in Israel, the Project's schedules may not be met. However, at this stage, the Steering Committee is not discussing postponing the Project's schedules. On the contrary, it is examining different ways that will allow the current timelines to be met.

The Metro Project is a national project and therefore requires special attention from all relevant government ministries, as well as maximum coordination, resource mobilization, and managerial attention from a variety of entities. According to Ministry of Finance estimates, the benefit the economy will derive from the Project is expected to amount to tens of billions of NIS per year, while failure of the Project will harm the quality of life of millions of residents and result in economic damages of tens of billions of NIS. Effective cooperation among all relevant entities, alongside the implementation of the recommendations raised in this report, may assist in completing the preparations and transitioning to the execution stages of the Metro Project. In light of the importance and complexity of the Metro Project, the State Comptroller recommends that the Ministers of Finance and Transport closely monitor the Project's progress, including through periodic discussions of the Social-Economic Cabinet, for the purpose of identifying operational or budgetary barriers and providing solutions in advance.