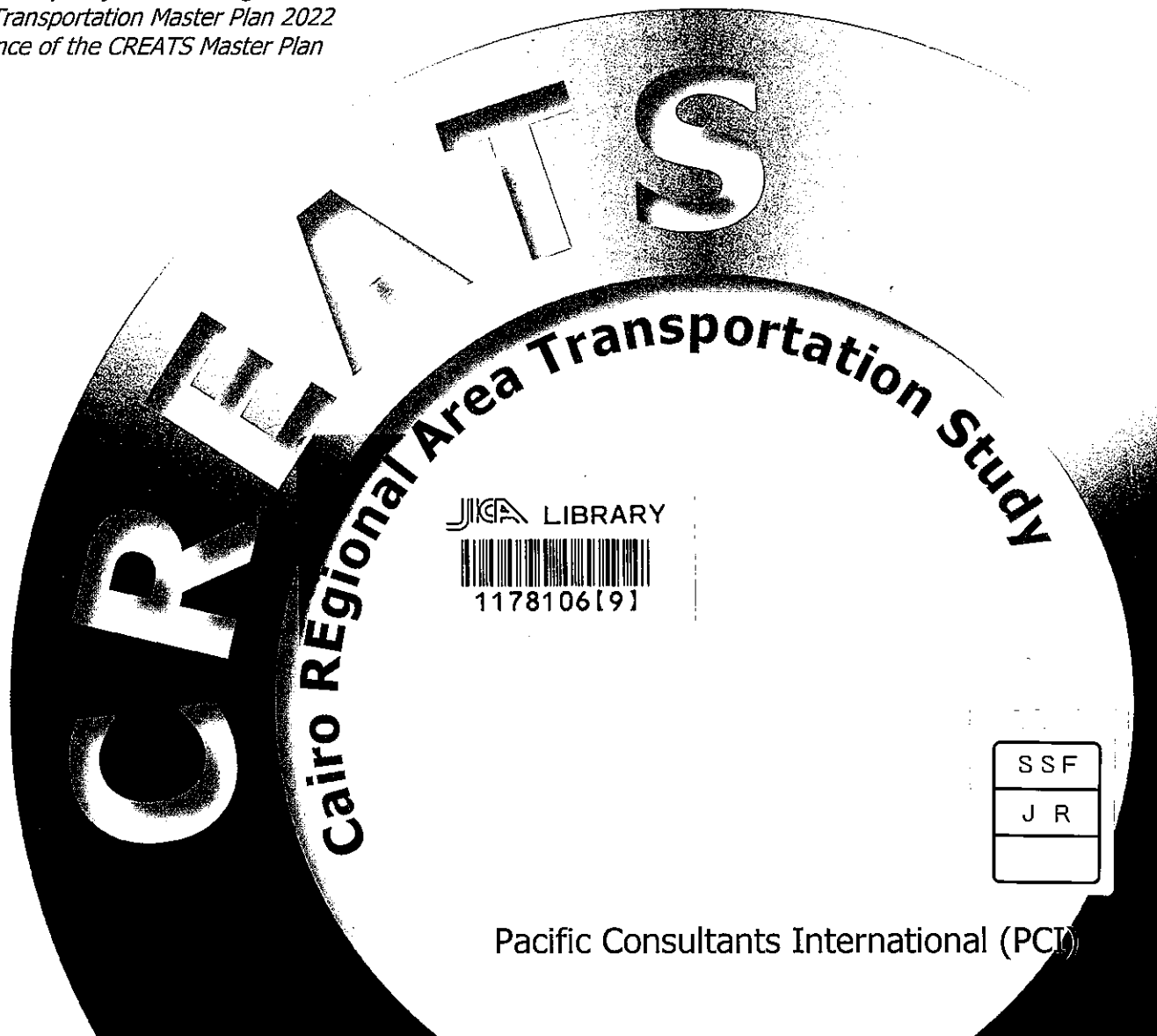


# Transportation Master Plan in Greater Cairo Region

## Summary Brochure

- *How is and will be the Cairo Urban Transport*
- *If do nothing, what will happen*
- *Visions, Missions and Strategies*
- *CREATS Priority Projects and Programs*
- *CREATS Transportation Master Plan 2022*
- *Performance of the CREATS Master Plan*



# How is and will be the Cairo Urban Transport...?

## Greater Cairo will Enjoy a Moderate Socioeconomic Growth in the Long-Term ...

The Study Area, encompassing the Greater Cairo Region (GCR) and new communities, has a population of 14.4 million as of 2001, which will increase to be 20.7 million in 2022 at the average growth rate of 1.7 % per annum. The number of households is 3.5 million as of 2001, and will increase to be 5.1 million in 2022 at the average growth rate of 1.8 % p.a.

It is assessed that the GCR economy is endowed with a potential to achieve the medium growth scenario. The per capita GRDP will increase at about 2.9% p.a. during the period between 2001 and 2022, which implies that the per capita income of Cairo people will be 1.86 times as much as the present level.

## Motorization will Progress Faster than the Economic Growth

The total number of "cars" registered in GCR is estimated at about 1.05 million as of 2001, and that in 2022 will be about 2.5 million, an average annual growth rate of 4.2 %, which is higher than the growth rate of per capita income, 2.9%.

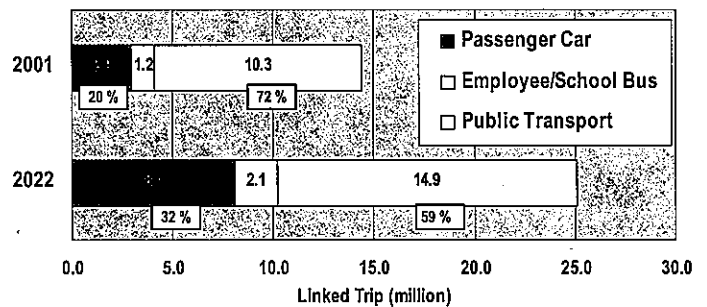
The CREATS survey reveals that only 30 percent of the households have access to individual vehicles at present. Naturally, the higher income households feature higher accessibility. It is noted that even given such a rapid motorization process, the households without private car access will still be the majority, sharing 55 % of the total even in 2022.

### Socioeconomic Perspective 2001 to 2022

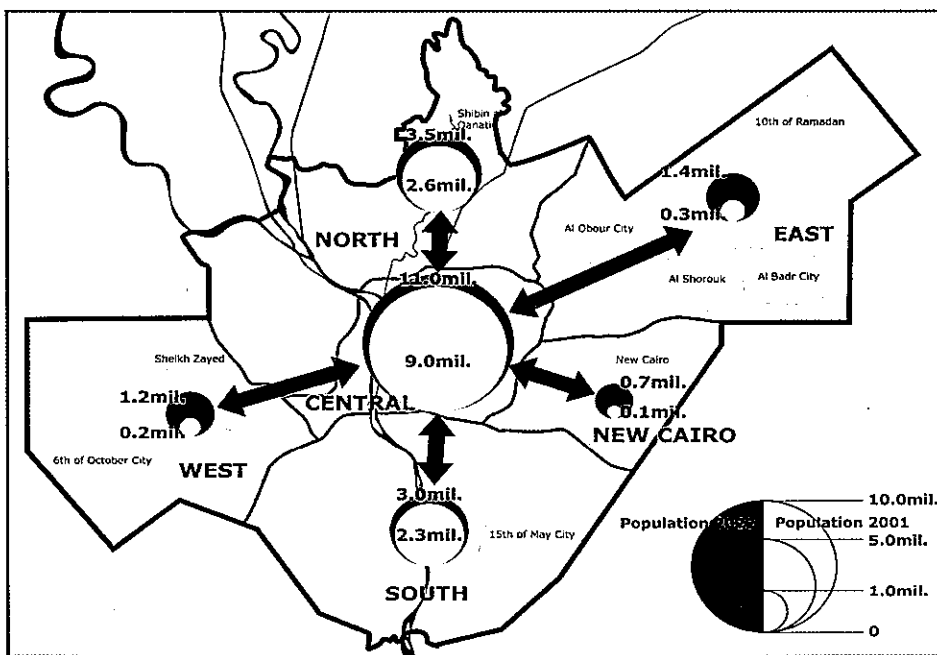
<b>Population:</b>	14.4million to 20.7million
<b>GRDP:</b>	Increase at 4.6% p.a. on the average
<b>Per Capita Income:</b>	Increase at 2.9% p.a.

### Trip Generation 2001 - 2022

<b>Car Ownership will grow at 4.2 % p.a.</b>	from 1.05million	to 2.5million
<b>Households with access to car</b>	from 30%	to 45%



Motorized trip Generation: 2001 and 2022



Population Distribution in 2001 and 2022

## Future Urban Growth in the Greater Cairo

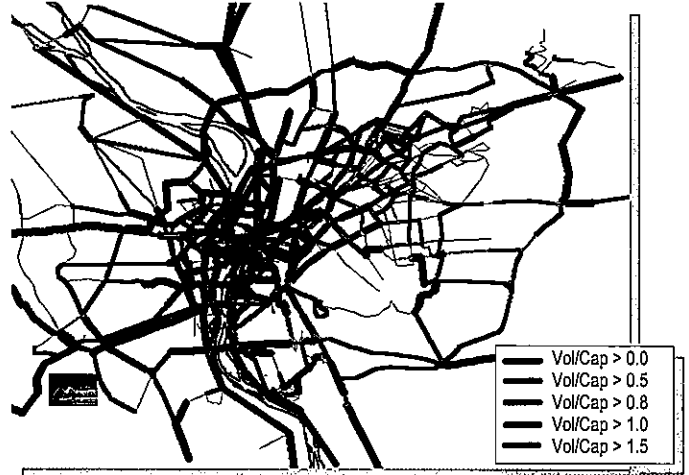
The progress of new community developments will be a key to structure a new urbanization pattern in the future. The 10th of Ramadan in East, the 6th of October in West and New Cairo in Southeast will be accommodating new residents accounting for about 3.3 million people in 2022. The Central Area will further concentrate the population from 9.0 million (as of 2001) to 11.0 million in 2022. Without accelerating the East-West corridor development, congestions in the central area would be more serious, thereby bearing a huge economic loss in the Cairo society.

# If do nothing, what will happen ....?

## How will the Greater Cairo Transport be ....?

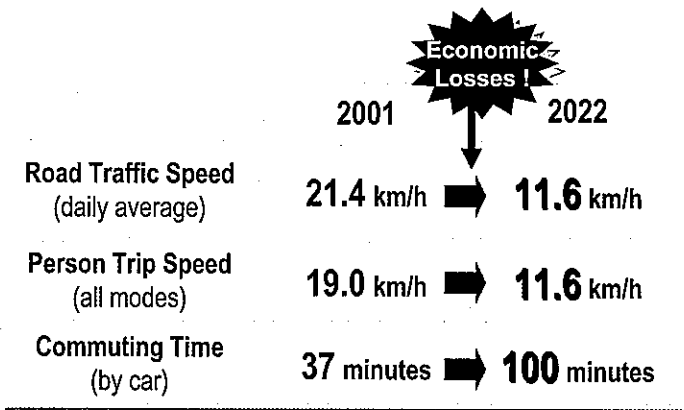
Given only currently committed projects in the road and public transport sectors and given nothing more than the committed efforts, the traffic situation of GCR in 2022 will be chaotic. This was simulated by the CREATS transport model. It is assumed that the committed public transport projects include a number of on-going road improvement projects and those included in the Five Year Plan (2002-2007) in the road sector, and Metro Line 3, extension of Metro Line 2 and minor enhancements of the Heliopolis metro/CTA tram in the public transport sector.

The CREATS model reveals that under such a transport condition only with the committed projects, the trip speed on the average of all modes will be as low as 11.6 km/h in 2022, compared to the current trip speed of 19.0 km/h. Major roads will be fully congested all day, as shown in the right figure indicating the volume/capacity (Vol/Cap) ratios. More than 1.0 of Vol/Cap stands for a "congested" situation and more than 1.5, a saturated condition.



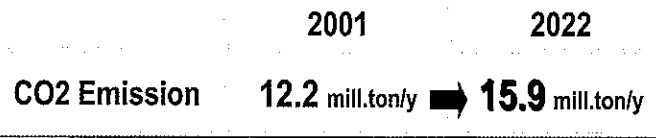
## Bearing Huge Economic Losses and Social Costs ...!

A home-based work trip takes about 37 minutes by car on the average at present, while it will take more than 100 minutes by car in 2022. This means that given such a condition in the future, car commuters shall suffer from enormous time and economic losses. It is projected that the economic savings of LE 7.5 billion would otherwise be lost every year, due to the traffic congestion.



## Increasing Negative Impacts on Global Environment ...!

Vehicle transport generates CO<sub>2</sub> which affects the global warming. An environment-friendly transport system, integrating with public transport modes, must be considered, otherwise Cairo would increase CO<sub>2</sub> emission by 30% from 2001 to 2022.



## Creating a Vicious Circle of Poverty due to Low Accessibility to Public Transport ...!

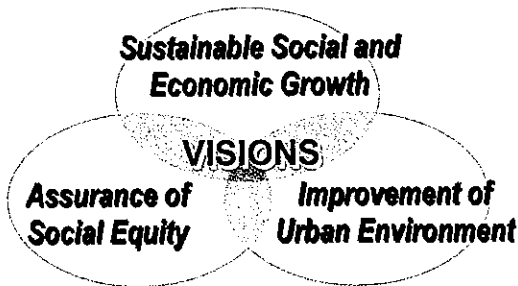


Low accessibility can significantly reduce the prospects of people's employment. This particularly affects people living on the periphery of the city, where the disadvantage of having a low income is often aggravated by poor connections to the main radial routes on lack of public transport service. If poor people live in a peri-urban area, the lack of public transport can be a major cause of unwanted isolation, which in return is a major cause of continued poverty.

# Visions, Missions and Strategies

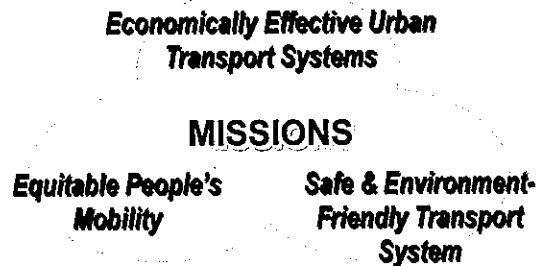
## Goal and Visions

CREATS aims at a social goal to ultimately achieve three visions, each of which is the vital factor to improve the Egyptian People's Quality of Lives



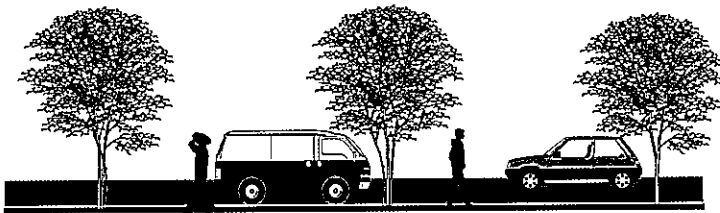
## Missions of Transport

The transport sector shall play a significant role to materialize the above three social visions. In the line with them, the Cairo urban transport should be developed to satisfy the three missions



## Key Strategies

In response to the three missions of transport, five key strategies are proposed towards making Cairo Transport innovative over the next two decades.



**Improvement of People's Mobility**

**Optimal Infrastructure Development**

**Accessible Transport for All**

**Safe and Comfortable Transport**

**Sustainable Institutional and Financial Mechanism**

Enhance Public Transport System to improve "People's Mobility"

Integrate Different Public Transport Modes

Alleviate Social Exclusion (including Gender, Handicappers Urban Poor)

Enforce Environmental Measures

Organize a Single Authority for Policy Integration and Coordination

Meet with Urban Development (Needs-driven Transport)

Structure A Functional Road Network for Passengers and Cargo

Improve Traffic Management and TDM

Facilitate the Human Factors (Awareness of safe traffic & Training of operators)

Strengthen the Financing Mechanism for Capital Investment and Sustainable O&M

**Planning Issues**



# CREATS Priority Projects and Programs

## List of the Priority Projects and Programs

CREATS proposes a total of 59 projects and programs to realize the five key strategies embedded in the Master Plan for achieving an integrated transport system. Priority activities are given to those that will initiate the proposed strategies to formulate an integrated transport system, including programs for institutional reform and human based development as well as projects for infrastructures. **CREATS strongly recommends that the Metro Line 3 project be implemented with the highest priority as soon as practical.**

	Proposed Measure and Project/ Program	Short	Mid.	Long
<b>Improvement of People's Mobility</b>	<b>Integrated Public Transport</b>			
	Committed Projects	■■■■■	■■■■■	■■■■■
	Hierarchy of Modes	■■■■■	■■■■■	■■■■■
	Improvement of Strategic Intermodal Points/ Facilities	■■■■■	■■■■■	■■■■■
	Development of "Park and Ride System"	■■■■■	■■■■■	■■■■■
	Complementary Routes Structure for PT	■■■■■	■■■■■	■■■■■
	Introduction of an Integrated Ticketing System	■■■■■	■■■■■	■■■■■
	<b>Traffic Demand Management ★</b>			
	Introduction of Measures and Policies	■■■■■	■■■■■	■■■■■
	Truck Traffic Control (Generalized Truck Ban)	■■■■■	■■■■■	■■■■■
<b>Optimal Infrastructure Development</b>	<b>Rail-based Public Transport</b>			
	Metro Line 1 Improvement ★	■■■■■	■■■■■	■■■■■
	Metro Line 2 Extensions ★	■■■■■	■■■■■	■■■■■
	Metro Line 3 (Committed) ★	■■■■■	■■■■■	■■■■■
	Other Committed Projects	■■■■■	■■■■■	■■■■■
	Metro Line 4 Development ★	■■■■■	■■■■■	■■■■■
	Heliopolis Metro and Tram Upgrading ★	■■■■■	■■■■■	■■■■■
	Supertram Introduction ★	■■■■■	■■■■■	■■■■■
	ENR Suburban Line Improvement	■■■■■	■■■■■	■■■■■
	East-West Wing Lines to New Communities ★	■■■■■	■■■■■	■■■■■
	Intermodal Facilities Development	■■■■■	■■■■■	■■■■■
	<b>Road-based Public Transport</b>			
	Improvement of Public Bus Facilities	■■■■■	■■■■■	■■■■■
	Public Bus Fleet Improvement ★	■■■■■	■■■■■	■■■■■
	Priority Bus Facility Development	■■■■■	■■■■■	■■■■■
	<b>Roads and Highways</b>			
	Committed Projects	■■■■■	■■■■■	■■■■■
	Primary/ Secondary Roads Development	■■■■■	■■■■■	■■■■■
	Grade Separation Works ★	■■■■■	■■■■■	■■■■■
	Expressway Network	■■■■■	■■■■■	■■■■■
Ring Road (on Maryooteya Road) ★	■■■■■	■■■■■	■■■■■	
<b>Cargo Transport</b>				
Truck Terminal Development (3 locations)	■■■■■	■■■■■	■■■■■	
Expansion of Existing Rail and River Terminal ★	■■■■■	■■■■■	■■■■■	
Sector Restructuring ★	■■■■■	■■■■■	■■■■■	
<b>Accessible Transport for All</b>	<b>All Citizens ★</b>			
	Public Transport Route Structure	■■■■■	■■■■■	■■■■■
	Safe and Comfortable Amenities	■■■■■	■■■■■	■■■■■
	<b>The Poor ★</b>			
	Social Welfare Policy for Transport	■■■■■	■■■■■	■■■■■
	Targeted Subsidy	■■■■■	■■■■■	■■■■■
	Area-Specific par Transit Operation	■■■■■	■■■■■	■■■■■
	<b>Gender-Based</b>			
	Provision of Clean and Safe Bus Service	■■■■■	■■■■■	■■■■■
	Establishment of a "Gender Auditing System"	■■■■■	■■■■■	■■■■■
<b>Handicapped</b>				
Improvement of Barrier-Free Facilities at Stations	■■■■■	■■■■■	■■■■■	

	Proposed Measure and Project/ Program	Short	Mid.	Long
<b>Safe and Comfortable Transport</b>	<b>Traffic Management &amp; Control ★</b>			
	Improvement of Intersections/ Signal System	■■■■■	■■■■■	■■■■■
	Policy Zoning System for Parking Management	■■■■■	■■■■■	■■■■■
	Development of Parking Lots	■■■■■	■■■■■	■■■■■
	Improvement of Bus Safety Facilities	■■■■■	■■■■■	■■■■■
	Public Transport Information Dissemination	■■■■■	■■■■■	■■■■■
	Introduction of Traffic Information System	■■■■■	■■■■■	■■■■■
	<b>Human Resource Management ★</b>			
	Establishment of Egyptian Traffic Safety Council	■■■■■	■■■■■	■■■■■
	Traffic Safety Education & Information Program	■■■■■	■■■■■	■■■■■
	Coordinated Enforcement for Driver's Licenses	■■■■■	■■■■■	■■■■■
	<b>Environmental Measures</b>			
	Enforced Environmental Monitoring System	■■■■■	■■■■■	■■■■■
	Increased Use of CNG and Unleaded Gasoline	■■■■■	■■■■■	■■■■■
	Enforced Transport Regulations & Operations	■■■■■	■■■■■	■■■■■
Enhanced Vehicle Inspection System	■■■■■	■■■■■	■■■■■	
Introduction of Alternative Fuels/Hybrid Cars	■■■■■	■■■■■	■■■■■	
Environmental Awareness Campaigns	■■■■■	■■■■■	■■■■■	
<b>Sustainable Institutional and Financial Mechanism</b>	<b>Institutional Arrangement ★</b>			
	Establishment of COTGCR (Central Organization of Transport for Greater Cairo Region)	■■■■■	■■■■■	■■■■■
	<b>Sustainable Financial Mechanism ★</b>			
	Rationalization of Subsidy Policy and Revision of Public Transport Fare Structure	■■■■■	■■■■■	■■■■■
	Introduction of "User Pay System"	■■■■■	■■■■■	■■■■■
	Stepwise Privatization of Bus Public Transport	■■■■■	■■■■■	■■■■■
	Introduction of "Earmarked Taxation"	■■■■■	■■■■■	■■■■■
	<b>Justifiable Investment Human Resource</b>			
	Legalization of PPP Scheme for Transport Investment	■■■■■	■■■■■	■■■■■
	Facilitation of Public Awareness of "Safety and Environment"	■■■■■	■■■■■	■■■■■
	<b>Improvement/ Restructuring of Operators ★</b>			
	Capacity Building of Operators for "Good Practice"	■■■■■	■■■■■	■■■■■
	Restructuring CTA	■■■■■	■■■■■	■■■■■
	"Area Franchising System" for Shared Taxi	■■■■■	■■■■■	■■■■■
	Establishment of "Suburban Rail Service Corporation" and "Expressway Development Corporation"	■■■■■	■■■■■	■■■■■

- Blue Letter represent "institutional, organizational and/or human-based program"
- solid/ dotted line in phasing blocks stands for a relative magnitude of investment/ activity of the corresponding project/ program, that is, solid line is more.
- ★ stands for "high priority infrastructure project"
- ★ stands for "high priority institutional and humanware program"

# CREATS Transportation Master Plan 2022

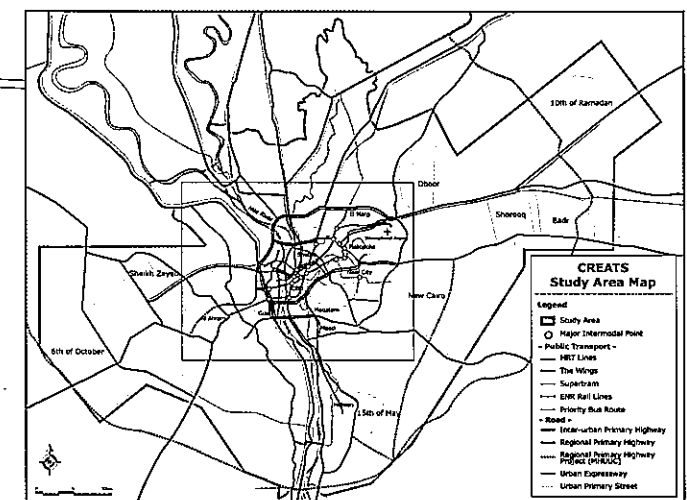
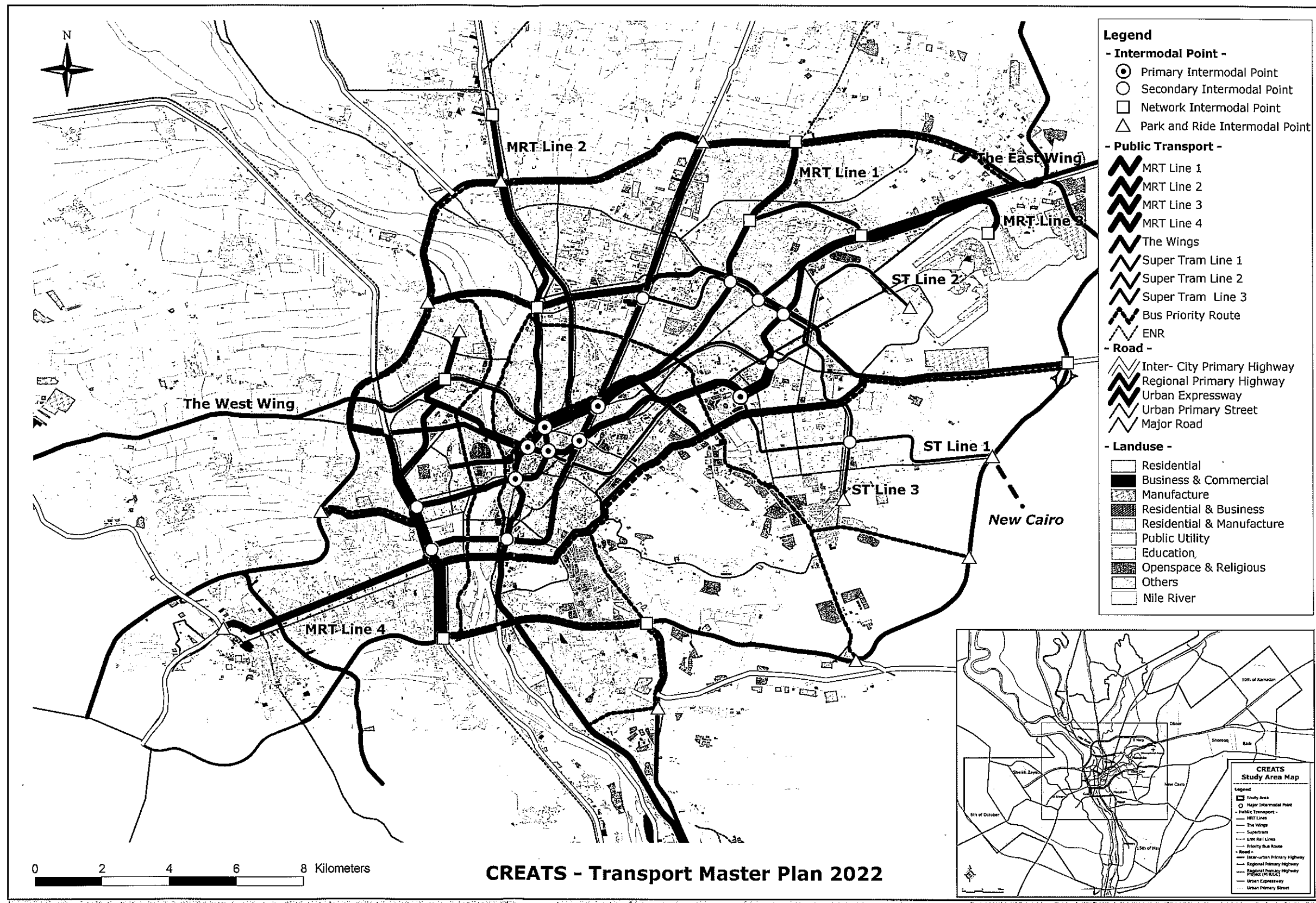
## Projects and Programs

The proposed CREATS Master Plan requires a total of **LE 59.8 billion** (at 2002 prices) over the next twenty years up to the year 2022, out of which **LE 18.2 billion** are allocated for the committed projects, which have been budgeted in the Five Year Plan (2002-2007) or are about to be constructed in a few years, and **LE 41.6 billion** are necessary for newly proposed infrastructure development in addition to the committed projects. It is noted that **Metro Line 3** is included in the committed project package.

The economic evaluation of the LE 41.6 billion investment was justified through a cost-benefit analysis as shown below:

- **B/C ratio** (at 12% discount rate): 1.77
- **EIRR** (Economic Internal Rate of Return): 20.1%

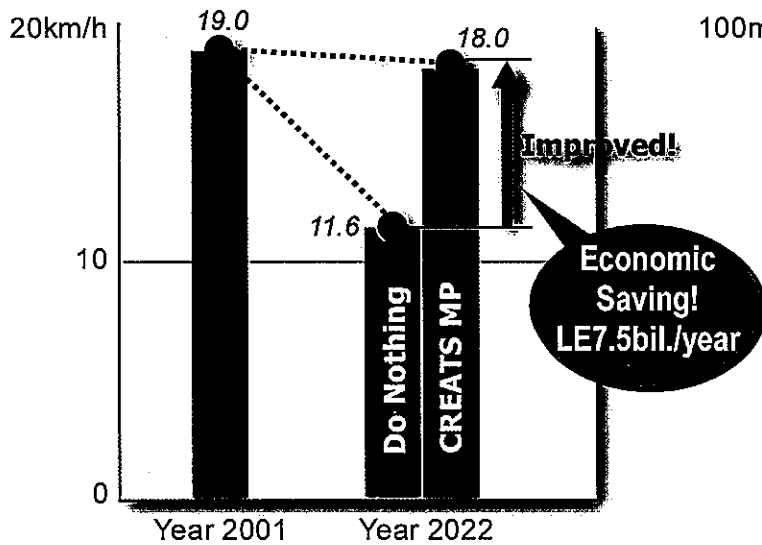
Since this EIRR is much higher than the social discount rate in Egypt, 12 %, it can be evaluated that the CREATS Master Plan is economically feasible, in other words, the Plan is worth being implemented to benefit the national economy.



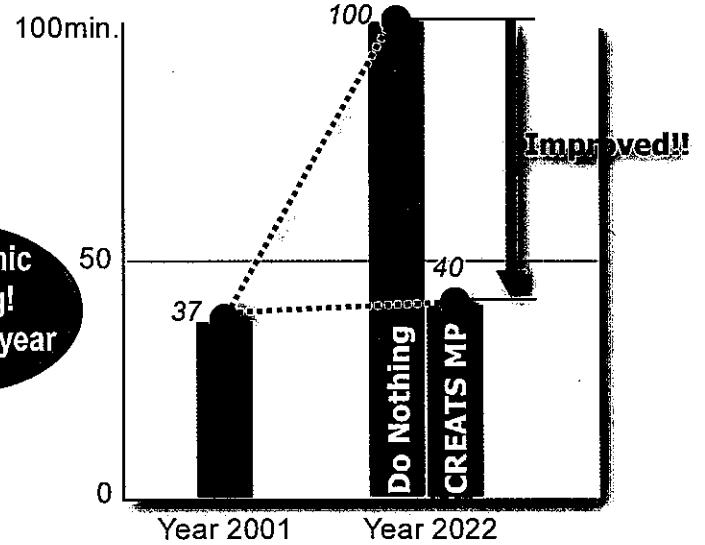
# Performance of the CREATS Master Plan

The Implementation of the CREATS Master Plan will improve People's Mobility significantly in terms of performance in trip speed

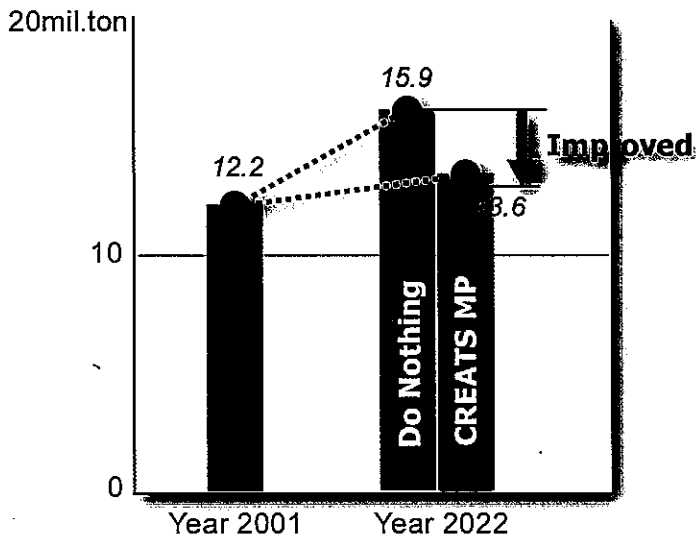
 **Person Trip Speed (all modes)**



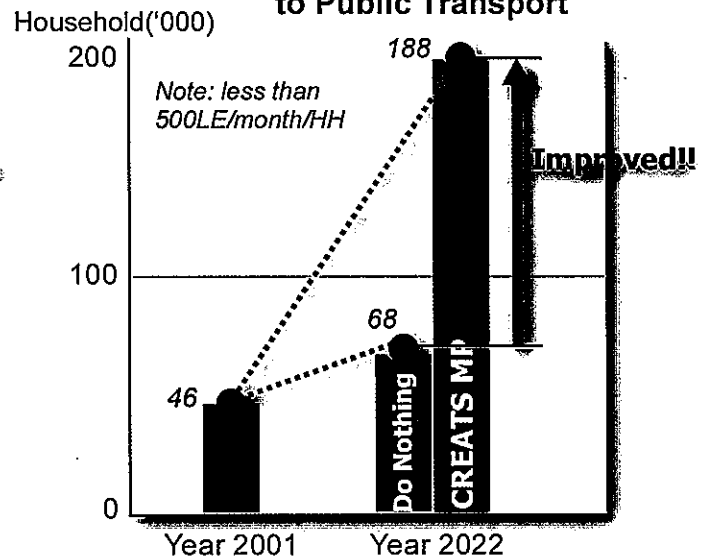
 **Commuting Time (by car)**



 **CO<sub>2</sub> Emission**



 **Low Income Household Accessible to Public Transport**



**Contact Address:**

The CREATS will be periodically monitored and reviewed by the Egyptian National Institute of Transport (ENIT) that is designated as the responsible body for this purpose. Any person, organization, academic institute or private entity, who are interested in the CREATS, may contact ENIT to obtain necessary technical information related to the CREATS. ENIT is ready to supply various types of technical services based on the CREATS database.

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