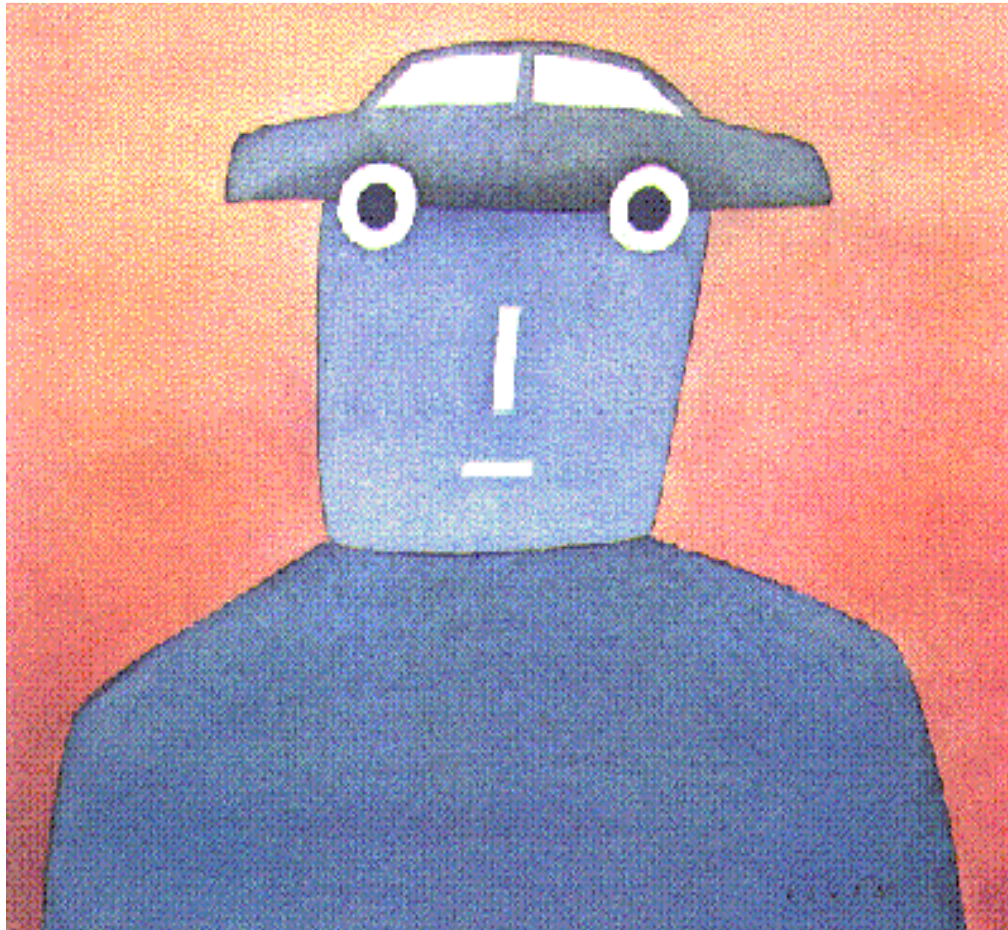


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## **The Use of Technology Foresight for Sustainable Transport**

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# Technology Foresight for Transport

## *Context and Basic Principles*

### Definition

- ✓ Toolbox for Forward-Thinking in Transport and Sectoral Policy Integration

### Basic principles

- ✓ Emphasis on efficient management of transportation system, not only on development (construction)
- ✓ Proper handling of transport sector conflicts, exploitation of both positive and negative characteristics of it
- ✓ Avoid unsustainable transport solutions
- ✓ Joint development of transport and other sectors (land uses, new technologies, environment etc.)

### Scenario-writing process

- ✓ Precautionary future – the one of Limited Mobility
- ✓ Learning process future – the one of Sustainable Mobility
- ✓ Visionary future – the one of High Quality in Mobility (or else the full scenario)

# Technology Foresight for Transport

## *The Visionary Future (or Full Scenario)*



## High Quality in Mobility

- ✓ Reduction of dependency on motorized transport, especially individual car usage
- ✓ Promotion of effective combined transport
- ✓ Development of transport-autonomous residential areas
- ✓ Optimum utilisation of relevant technologies
  
- ✓ Pre-requisites:
  - ✓ New social structure, citizens far more open to changes
  - ✓ Sufficient public transport infrastructure and services
  - ✓ Partial or full traffic restriction in major urban areas



# Line 2 Southbound Extension to Hellinikon

## *The project and the principles of foresight*



- ✓ Emphasis on efficient management of transportation system, not only on development (construction)
  - Choice of “below surface solution” not at surface level, as initially planned, abandoning solution of elevated bridge along Vouliagmenis Avenue
- ✓ Avoid unsustainable transport solutions
  - The “below surface” solution avoids demolition of existing pedestrian bridges, destruction of green area and trees, inconvenience to the residents
- ✓ Joint development of transport and other sectors (land uses, environment etc.)
  - The “below surface” solution avoids noise and visual intrusion as well as changing image of the area along Vouliagmenis Avenue

# Line 2 Southbound Extension to Hellinikon *Towards Visionary Future?*

## The expected impacts fulfil the visionary scenario conditions

- ✓ Reduction of dependency on motorized transport, especially individual car usage
  - Increase in PT share (attract 80,000 passengers on a daily basis), decrease in road traffic (by 50,000 vehicles/day).
- ✓ Promotion of effective combined transport
  - Provision of bus transfer facilities for passengers residing in the southern suburbs and park and ride facilities.
- ✓ Development of transport-autonomous residential areas
  - Provide high-quality transport services to many densely populated areas. Near stations approximately 34,000 people reside and 18,000 people work
- ✓ Optimum utilisation of relevant technologies
  - TBM-EPB tunnel boring machine, mitigating any impact to near buildings and infrastructure

# *New Line 4 from Alsos Veikou to Maroussi*

## *The project and the principles of foresight*



- ✓ Emphasis on efficient management of transportation system, not only on development (construction)
  - A new autonomous U-shaped Line 4, instead of branches/extensions on the existing Lines (1&2), as initially planned
- ✓ Proper handling of transport sector conflicts, exploitation of both positive and negative characteristics of it
  - Special funding scheme, securitization of future toll revenue of Attiki Odos to cover U line cost (road transport pays PT transport)
- ✓ Avoid unsustainable transport solutions
  - The initial plan had important construction and operational deficiencies (interruption of line operation, complex construction, high cost, frequency of trips, etc.).

# ***New Line 4 from Alsos Veikou to Maroussi Towards Visionary Future***

## **The expected impacts fulfil the visionary scenario conditions**

- ✓ Reduction of dependency on motorized transport, especially individual car usage
  - Increase in PT share (expected to serve 400,000 passengers on a daily basis)
  
- ✓ Promotion of effective combined transport
  - Increasing Metro branches and in turn transfer stations, consequently facilitating transfers among the Metro Lines.
  - 'Decongestion' of the existing Metro stations
  - Provision of bus transfer facilities for passengers, park and ride facilities.
  
- ✓ Development of transport-autonomous areas
  - Transportation service of many new densely populated areas of the city (Galatsi, Kypseli, Pangrati, Kaissariani, Zografou, areas adjacent to Kifissias Avenue, etc).
  - Service of many important facilities, such as Hospitals, University Foundations and Courts.

# Conclusions

In terms of Test Cases: **Both fulfil the visionary scenario conditions**

In terms of foresight usefulness: **The best way to foreseen the future is to create it**

- ✓ Foresight scenario-writing allows the reporting and organisation of contested views in such a way as to allow their further analysis towards the identification of compromise solutions, which is what policy is ultimately about in democratic societies.
- ✓ Therefore, alternative scenarios can from a useful tool for decision-makers (at a local, regional or national level) when setting their vision, and in turn objectives and strategies