مركز البحـــــــــــث في تهيئـــة الاقـلـيـــــــــم

International symposium: Rethinking public transport for sustainable and inclusive mobility
January 14-15, 2025

Introduction

In an era of metropolization and rapid urban development, the question of mobility and transport is a pressing one, and one that looks set to take on even greater importance in the years to come. Travel within our major cities is becoming increasingly difficult due to road congestion. As well as causing spatial discomfort, congestion is responsible for a number of economic and environmental damages. 23% of greenhouse gas emissions are directly linked to road congestion. Road transport is also responsible for 73% of emissions and energy consumption. As a whole, urban transport is responsible for around a quarter of CO2 emissions (The World Bank, 2018). On another level, countries such as Lebanon, would suffer annual losses in excess of 2 billion dollars, equivalent to 5 to 10% of GDP (The World Bank, 2018).

The challenge of ensuring efficient, inclusive and sustainable mobility has become crucial, even vital. The context of global warming and dwindling energy sources, in which the cities of tomorrow will evolve, require States to reconsider their policies and strategies in terms of planning, design, and management of mobility and transport.

Transport is a major instrument in the deliberate organization of space. It plays an important role in structuring space through its external social, economic, environmental and urban effects. According to Cucu, "The notion of sustainable transport suggests a heightened concern for infrastructures and means of transport" (Cucu, 2012, p35). As a result, today's cities are trying to develop new modes of travel in order to perfect their urban dynamics, stemming more from ecological, aesthetic, comfortable, silent and for-all (PMR) mobility concepts.

The recent integration of the concept of sustainable mobility into the political, technical, scientific and civic vocabulary marks a new qualification test. There is every reason to believe that this turning point in terms of political and social orientations towards the management of space and time, and the introduction of new public transport lines as a model of sustainable mobility, goes far beyond travel problems (Stambouli, 2007, p1).

Today, mechanical traffic is increasingly a priority issue in major cities. It is becoming urgent and fundamental to consider new organizations and new modes of transport for better public service and city sustainability.

At both national and local level, new modes of public transport represent a challenge that can help put an end to the chaos that degrades the daily image of big cities. This means integrating

different modes of transport into a single system that is efficient, easily accessible, safe and environmentally friendly.
Global data show that a large proportion of the energy consumed comes from fossil fuels: coal, natural gas, oil and so on. As a result, pollution and global warming through the greenhouse effect are becoming a threat to public health and the ozone layer.
Climate change resilience strategies have become essential for cities and road infrastructures. The energy context is also becoming a priority for the mass transit sector, for its efficient, ecological and sustainable aspects. One example is the dominance of photovoltaic panel technology, which has become the main source of electricity in developed countries. This energy source is widespread in the Sahara and southern regions, where sunshine is guaranteed on a daily basis.
Algeria is a predominantly urban society, with an urbanization rate estimated at 70% in 2018 by the national statistics office (ONS), a rate that is set to rise to 85% by 2050. It has a sizeable fleet of vehicles, estimated at 6.4 million in circulation in 2018, or 151.7 vehicles/1000 inhabitants. Private cars account for almost 90% of domestic traffic (passengers and goods). The number of vehicles on the road has grown significantly over the last ten years: in 2008, it reached 3.9 million (112.4 vehicles/1000 inhabitants, respectively +64% and +35%). The motorization rate is highest in the big cities: 433 vehicles/1000 inhabitants in Algiers, 229 in Oran and 472 in Constantine (Ministry of Transport, 2020).

Background

The study of urban transport can be seen as a motive for understanding the transformation of cities. An introspection of the Algerian city, in particular its public and private transport systems, seems necessary. Over the last few decades, the Algerian government has drawn up a plan to develop the country's transport system, improving the supply of mass transit systems considered to be structural, and encouraging the introduction of new modes of transport with different capacities, such as the metro, tramway, high-speed train and gondola. These projects are considered as structuring projects.
The metro is present in the capital Algiers, the gondola is present in major cities (Algiers, Skikda, Tizi Ouzou, Constantine, Oran, Tlemcen), the tramway is present in most major cities (Algiers, Oran, Constantine, Sétif, Mostaganem, Ouargla... etc.). Other public transport systems are also in place, such as the "Coradia" high-speed train, or the hybrid train (diesel and electricity) that links the wilayas of Béchar and Oran with the wilayas of Algiers and Béjaïa. In addition, the development of road infrastructure on a national scale aims to boost the performance of the road network through the construction of the East-West freeway and the North-South freeway (known as the Highlands freeway), as well as maintenance and modernization operations on existing national roads (Harkat, 2023).
Since the Bruntland report in 1987, the concept of sustainable development, which takes the environment and nature into account, has encouraged respect for a socio-economic system for present generations without sacrificing that of future generations. This is why sustainable transport policies are moving in the direction of integrating sustainable development into the transport sector.
The introduction of new information and communication technologies (NICT) and BIM in public transport systems is now a priority for decision-makers and specialists in the sector. New

technologies are having a major impact on public transport, making it more efficient, safe and sustainable. However, public transport applications incorporate advanced algorithms to calculate the fastest and most efficient routes, taking into account real-time traffic and user preferences. What's more, passengers can now track vehicle locations, delays and timetables accurately in real time, thanks to mobile apps and display panels at stations. And advances in autonomous technologies are paving the way for the introduction of autonomous public vehicles, such as buses and metros, which can potentially improve operational efficiency and reduce accidents. To this end, the adoption of technological information systems (TIS) during the planning phase to regulate the movement of users is becoming crucial (Harkat, 2023).

Against this backdrop, the present issue focuses on the various public transport systems, their impact and their impact on the city. The organizers of this symposium invite researchers from a variety of disciplines to contribute to its activities and enrich thinking on the subject of sustainable transport and mobility.

To this end, we need to answer the following questions:

- ✓ How can the concept of sustainable mobility and new modes of public transport be incorporated into city-building strategies?
- ✓ What impact would the introduction of renewable energies in transport systems have on climate change?
- ✓ Is sustainable development, as a planning objective and approach, a tool for controlling transportation?
- ✓ How can advances in renewable energy technology contribute to the energy transition and environmental sustainability?
- ✓ What are the best practices in sustainable urban design to promote resilience in the face of climate change?
- ✓ How can new technologies help sustainable urban development, particularly in the planning, construction and management of transport infrastructures?
- ✓ How can we help those involved in the planning, construction and management of built assets to integrate new technologies, particularly BIM?

With this in mind, the aim of the symposium is to illustrate the issues surrounding mobility and transport in Algeria, drawing on global experiences in the field. The meeting will showcase current projects and approaches, with the aim of contributing to the perception of transport in Algeria. The aim is to develop a pragmatic, forward-looking vision for the transport sector.

Keywords: Cities, structuring projects, sustainable mobility, public transport, sustainable development, inclusion, NTIC

Symposium themes

- City identity and development through sustainable mobility;
- A cross-section of experiences in sustainable mobility;
- Renewable energies and public transport systems;
- Contribution of NTICs, GISs and BIMs to public transport systems;
- Integration of transport and traffic plans into urban planning instruments;
- Management of public transport policies and projects.

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The paper proposal must include the following information:
- Title
- Last name(s) and first name(s)
- Affiliation, E-mail and telephone number
- Five key words
- Thematic axis
- The subject of the contribution and the corpus mobilized
- Bibliographical references.

For further information, please contact us: tpmd.crat2025@gmail.com

IMPORTANT DATES

Conference launch: July 01, 2024
Deadline for submission of abstracts: August 30, 2024
Scientific Committee opinion: September 15, 2024
Submission of extended abstracts: October 19, 2024
Final notification: November 21, 2024
Conference dates: January 14 and 15, 2025.

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- 5,000 DA (30 euros) for doctoral students

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