Policy Brief 25
The Social Dimension in Transportation Planning

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Public transportation is a main player in Egyptians' daily lives. It links production and consumption areas in many vital aspects, including economy, construction, and social development. Accordingly, the accessibility of citizens to public transportation and its services has been adopted as a social dimension for it in this paper, as it affects the lives of many segments of Egyptians.

Problem Statement

The general status of Egypt's public transportation system is fragmented and chaotic. This status hinders the commuters from having a full access and benefit from the services and its current improvements. The public transportation system in Greater Cairo has an urgent need for a policy that uses digitization to enhance its accessibility through connecting all transportation modes in one place where commuters can find routes, timings, and available options that suit their needs for planning daily commuting trips.

This policy brief addresses the question:

How can we improve the accessibility of Egyptian public transportation and its modes using?

Background

Accessibility is an important term that is employed in public transportation. The researchers combined relevant elements from different definitions and defined 'accessibility' in this policy paper as:

"The degree of availability, ease of access of the public transportation system and switching between its modes in Greater Cairo where major opportunities exist due to its centralization to the broader population."

The current status of the Egyptian public transportation system:

There are policies that have been advanced by the Ministry of Transportation (MOT). Many of them were responsive to problems such as: regulating overlapping authorities, reduced accessibility, and reliability of public transportation and to elevate its performance level, as following:

• **Regulatory Policies for the Transportation Sector in Egypt:**

A. A policy recommended establishing Greater Cairo Transport Regulatory Authority to counter the overlapping authorities in transportation in Greater Cairo. It was replaced by establishing the Authority of Regulating Domestic and International Land Transport.
B. A policy recommended a master plan as a result of Cairo Regional Area Transportation Study to regulate the public transportation modes in Greater Cairo by 2022. It was suspended.

• **Policies for the Transportation Sector in Egypt with a Prominent Social Aspect:**

A. An applied policy that provides free tickets for senior citizens above 70, and 50% discount for those who are above 60 in all public transportation modes.
B. A new implemented policy based on an initiative called "Safe Route/ السكة الحديد أمان" provides many ways for women to report sexual harassment cases that they counter in railway stations and trains.
C. Availability code for people with disabilities (PWDs) as a policy is considered in the construction of the 3rd Metro line. Another financial policy is implemented to provide 50% discount for PWDs and their assistants in all public transportation modes.

• **Policies for Infrastructure Development in the Transportation Sector in Egypt:**

A. New policies applied integrating Mwasalat Misr and Shrouk City bus routes into Google Maps to ease locating and accessing them by the commuters through smartphones.
B. A policy under studying by MOT to apply smart payment card for all the public transportation modes.
C. New policies by MOT that implements line extensions for metro, buses, and establishing new stations for monorails, and electric trains.

The main observation is that **the system is still fragmented and chaotic.** On a micro scale, a commuter could access a single public transportation mode and navigate through it easily. However, on a macro level, merging between different transportation modes and switching between them is still a challenge because of the fragmented system.

"Integration and connectivity of transportation is one of the foundations of sustainable development" – Dr. Karim Hussein.

A fragmented public transportation system hinders development because it aggravates commuting to vital destinations for citizens such as education, work, health services, etc. Citizens would face a difficulty in the whole process of commuting when he/she rides and switches between a mode to another without having a proper platform that enables to them to do so easily. This system could be interpreted as socially not accessible for all the segments because being disconnected hinders accessibility. *"There is a revolution in digitization in Egypt"* – Dr. Khaled El-Saqty

The Ministry of Transportation (MOT) under the leadership of Minister Kamel El-Wazeer has started to study and implement digitization of the transportation sector to facilitate the accessibility to the MOT services and raise its efficiency. Thus, it is considered as window of opportunity for a solution.

Relevant Stakeholders:

The prominent identified stakeholders for the problem statement were public transportation users, the Ministry of Transportation as the prominent designer of public transportation system, operators of the public transit, and residents around the transportation hubs. Stakeholder analysis is based on a literature review, in-depth interviews and a focus group discussion, and observation by the researchers.

Policy Alternatives:

The following four policy alternatives would bridge the gap between the advanced policies in the public transportation specifically and enhance accessibility as a social dimension as previously defined:

1. Launching a mobile application that provides the whole network of public transportation routes, stations, and possible timings to facilitate commuting and switching between different modes of transportation modes in a convenient way ("you are one tap/click away").
   The mobile application aims to connect and ease transitioning between different types of public transportation modes (including private partnerships such as Mwasalat Misr busses) in Greater Cairo, by providing available options of modes, price, and timing to commute from point A to B.

2. Launching the network of public transportation modes on Google Maps to locate routes and stations (Mwasalat Misr offers a model of this).

It aims to ease searching and finding about available options of routes and stations of the public transportation modes on Google Maps to help commuters in planning the trip in Greater Cairo.

3. Build a new integrated station with an embedded digital system and infrastructure that provides different transportation modes in one place on the west side of Greater Cairo (6th October City) (Adly Mansour station as a model to follow). The integrated station aims to provide a hub with a digital system that connects different modes of public transportation in one place in West side of Greater Cairo.

4. Provide digitally interactive visual/audio maps in each transportation method station that indicates other possible public transportation commuting options near the station exits.

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The digital visual and auditory interactive maps aim to provide help for commuters in the exists of public transportation stations to be aware of the other public transportation choices to reach a specific destination in Greater Cairo.

Policy Analysis & Criteria:

The four policy alternatives were analyzed based on five selected criteria: economic, equity, technical, political and administrative because they address the main aspects that are taken in consideration when proposing a policy rel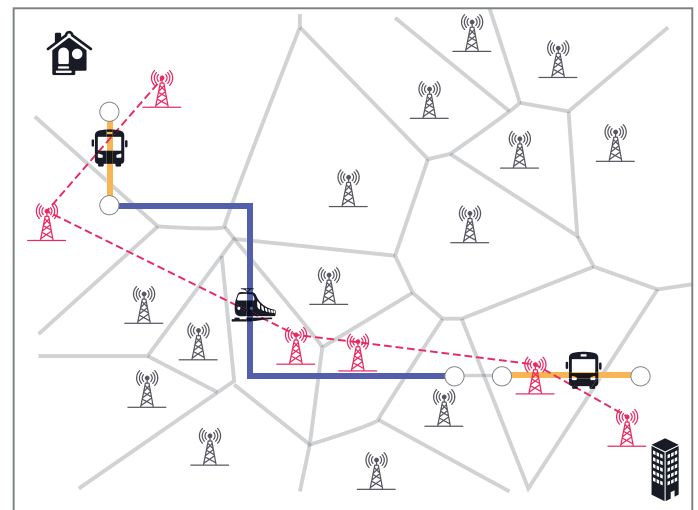ated to digitization according to the in-depth interviews. Political and technical feasibility were the main criteria for the decision rule to select the optimum policy alternative, then comes equity and economic criteria as a tie, then lastly administrative criteria.

Recommendations:

We recommend policy number one **'Launching a mobile application that provides the whole network of public transportation routes, stations, and possible timings to facilitate commuting and switching between different modes of transportation modes in a convenient way.'**

The decision rule was taken based on the alternative that would effectively amend the fragmented system of public transportation modes in Greater Cairo and provide accessibility to it for a broader population of commuters. The policy fits to the current Egyptian digital transformation agenda and is technically feasible. It increases the social inclusion in the public transportation system and is cost effective with a higher revenue. It provides a long-term scalable solution and has a great window of opportunity to be implemented.

interviews, it provides a better access to transportation service and eases commuting process that facilitates wide segments of citizens' lives.

It is the best alternative that addresses the problem statement as a digital tool that connects all the public transportation modes in one platform where commuters can find routes, timings, and available options that suit their needs for planning daily commutes. It also connects and facilitates switching between different modes of public transportation in Greater Cairo based on intermodal mode (for example, taking a bus to arrive to a metro station to take the metro to reach another bus to reach the destination, as shown in the picture below). According to the in-depth

The implementing parties include the Ministry of Transportation (MOT), the Authority of Regulating Domestic and International Land Transport, the Ministry of Communication and Information Technology (MOCIT), and the Japanese University (outsourcing digitization projects with MOT).

The expected limitations and obstacles for the suggested policy are allocating budget and return on investment (ROI), an urgent need for a master plan in Greater Cairo, and a consideration of marginalized communities such as people with disabilities and women.

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