



## Highlights - Urbanlogue - S02 E05 - 17th June, 2020 at 3pm IST

### Integrated digital fare collection for formal and informal public transit

#### Summary ([Link to full Video](#))

Ms. Shreya Gadepalli, Institute for Transportation and Development Policy (ITDP) South Asia Programme Lead, led the session by welcoming the speakers, panellists, and participants and inviting Mr. Kunal Kumar IAS, Joint-Secretary, Smart Cities Mission (SCM), Ministry of Housing and Urban Affairs (MoHUA) to give the opening remarks.

The two presentations were by: Ms. Shreya Gadepalli on 'Reforming Public Transport through Digital Fare Payment'; and Mr. Justin Coetzee, Founder & CEO of GoMetro on 'Fare collection lessons from Africa - formal and informal transport reform'. The presentations were followed by a panel discussion and Q&A session, moderated by Ms. Shreya Gadepalli with Ms. D Thara IAS, Joint Secretary (A, L&E), Ministry of Housing and Urban Affairs, Government of India, Mr. Prasanna Patwardhan, President, Bus & Car Operators Confederation of India, and Mr. Nikhil Agarwal, Consultant, Transport Practice India, The World Bank, and Co-founder & ex-COO, Chalo as panellists.

**The fifth episode had nearly 1000 registrants from over 150 Indian cities and 25 International cities.** The participants from various universities, organizations, media houses, and city corporations raised over 100 questions. This webinar is the fifth one in the series organised by the Smart Cities Mission in collaboration with the ITDP India Programme aimed to help Indian city officials develop robust transport solutions in response to the pandemic. The Transport & ICT Group of the World Bank and Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) are knowledge partners of the webinar series.

#### Introduction - Mr. Kunal Kumar IAS, Joint Secretary, Smart Cities Mission, Ministry of Housing and Urban Affairs ([Link to Video](#))

- Digital fare collection is a crucial dimension of Public Transport (PT) - Huge opportunity for PT systems to move towards automated and digital payment systems.
- Local wallets and debit payments have now become popular. In India, 11 transport agencies are using the National Common Mobility Card (NCMC).
- Bengaluru Metropolitan Transport Corporation (BMTCL) has started using QR codes - this is a smart

and tactical way to enter the technology domain.

- Large scale deployment of technology will bring down costs - a huge business opportunity for transport operators.
- While state governments should increase subsidies to transport undertakings, they must consider novel ways of generating revenues. Digital payment will also allow the government to directly transfer subsidies to commuters.

### **Reforming Public Transport through Digital Fare Payment - Ms. Shreya Gadepalli, ITDP South Asia Programme Lead ([Link to Video](#))**

- Four categories to public transportation in India -
  - a. Government-owned and operated - State Transport Undertakings (STUs)
  - b. Government managed private operations - Under a Gross Cost Contract (GCC) services
  - c. Private operations - Under a route license, Net Cost Contract (NCC)
  - d. Privately operated unregulated and informal services - Share autos,Digital solutions will be different in all these categories, depending on the actors, incentives, and barriers
- India has ~35,000 buses in the first two categories, ~10,000 buses in the third category, and a whopping 3-4million vehicles in the informal services

#### **To consider**

- **Commuters** - The benefits of going digital and if it will lead to cheaper, better services.
- **Equitability of newly deployed solutions** - While there is significant penetration of mobile telephony, a large number of people do not know how to use technology.
- **PT Operators, especially under the last two categories** - Multiple types of support can be provided by the government.
- **Operator** - Needs to earn a minimum amount of wage and if this transition ensures a better quality of life.
- Market solutions are great, but market solutions should not replace or decide public policy questions.

### **Fare collection lessons from Africa - formal and informal transport reform - Mr. Justin Coetzee, Founder & CEO of GoMetro ([Link to Video](#))**

- GoMetro works in the areas of paratransit data collection, data-driven transport reform, and payments and fleet management.  
**South Africa Formal Sector: Fare Collection Experience**
- Cost of Intelligent Transport Systems (ITS) can be quite high, ranging from 15 to 40 percent of total fare revenue. This money could be better used for job creation, service expansion and quality improvement, but is trapped in technology costs.
- While there were good intentions of interoperability, integration, and the creation of a national database, the implementation of many large ITS projects in South Africa has not been successful.
- Reasons for failure - choice of technology, the complexity of the technology being underestimated, and following global best practices not suited for local contexts. There was an expectation that the

banking system would play a big role which did not happen, leaving cities to play the role of banks.

- To ensure success, all stakeholders need to play their role, with consequences if they don't.

#### **South Africa Informal Sector**

- In the informal sector, it is possible to introduce the right amount of technology to incrementally implement payments. It is important to focus on both front-end (QR codes, card readers, in-app payments etc.) and back-end systems (loading, maintenance, and customer service).
- GoMetro has a five stage model: Tracking and fleet management, Smart payments - Mobile and Card, Staff transport - New business, Core service improvements, and Finance and Leverage.

#### **Paratransit Reform**

- Started with data for service optimisation - rationalisation of routes and schedules
- Resulted in better business performance and better outcomes for customers, operators, drivers, and the environment - 50% fewer vehicles, 50% less fuel, and no job losses

#### **COVID-19**

- Check-in procedure for all minibus/taxis to ensure ease of contact tracing - Check-in with QR code on any electronic device.

**Key points discussed in the Panel Discussion and the Q&A session** ([Link to Panel Discussion Video](#))

*Ms. Shreya Gadepalli, ITDP South Asia Programme Lead, (Moderator)*

- Digital payments have taken off in many areas, but not in public transport. We need to look at the primary hurdles, and how they can benefit multiple groups, whether they are users, operators, drivers.
- There is an important question of who is the custodian of the data collected from digital solutions and how the government can use it to make decisions and improve service. The government could potentially step in and provide targeted support to users.
- Digital solutions could be exclusive. Some users might not have access to digital technology. And there is a need to ensure that they are inclusive.
- The value of the NCMC might be more in interoperability between multiple operators within cities than between different systems across cities.

*Mr. Justin Coetzee, Founder & CEO of GoMetro*

- In legacy transport systems, the bus operator has all data and information, and he controls the system. The city government often does not know much about the operations and ridership.
- In the African context, when you start collecting data on transport, you start breaking down the information asymmetry and putting facts on the table. First, there is denial from the operators, which turns into acceptance and finally, acceleration of this data to inform decisions.
- In Africa, we have moved from the city being the observer to now driving the agenda. The operator and the city then realise that resources are limited and they need to work together for the benefit of the public.
- Data changes the dynamics in the urban mobility sector. Data that is kept in the dark creates a

distorted market. Too much data leads to a breakdown of trust and reliability.

- The key in urban mobility reform is to get every stakeholder to benefit from the same data set. Data can be collected and curated by the state, influenced by the operator, and should benefit the rider. Data is the first place to change the balance and to ensure everyone moves in the same direction.
- In South Africa, we have been working on the National Rail Passenger app for the last 7 years and we service 4 million passengers for train schedules and fare payment. The deep-dive study into the proliferation of technology showed that -
  - a. Within the working sector, proliferation of smartphones is high but travelling with a smartphone is low. Only half of smartphone owners use data.
  - b. Thus, interventions should reflect this, so that they don't exclude the majority of people.
  - c. Our strategies - USSD technology can bring smartphone experience to feature phones. When governments make USSD for transport free, the technology is more efficient than a smartphone app.
  - d. By eliminating cash, there is a need for paper tickets or card systems, which require infrastructure, and large investment. The investments should be precise and cater to the users who do not have such resources, by offering subsidies.

*Ms. D.Thara IAS, Joint Secretary (A, L&E), Ministry of Housing and Urban Affairs, Government of India*

- The National Common Mobility Card is one card for every mode, and can help people travel but also offer other access to additional services.
- First, it is important to look at what form the card can take, a physical card, or a digital version that can be accessed through a smartphone or similar device.
- Second, what can be the reasons for people to choose such a card. Other services can also be provided, like access to healthcare, public distribution system.
- We need to look at making transport work for the people through digital systems and also giving value to the lives of poor people.
- Paratransit needs to be organised. This card can be used to integrate and organise the whole transport sector.
- If we can separate the digital payment system from the operators, and create a common and integrated platform for all modes, then the data will be unique, uniform, and accessible in one place.
- NCMC was a step in the direction of bringing one common system of payment for mobility across the country.
- A regulation has been put in place to ensure that there are no cards introduced in mobility that are not compliant with the NCMC. Transit operators are not grappling with how to comply with that.

*Mr. Prasanna Patwardhan, President, Bus & Car Operators Confederation of India*

- All data of public transport operators should come on to a single platform, with a fixed protocol by the Central Government.
- Customers need additional incentives to use the NCMC, such as discounts for retail options. The discount amount can be converted into travelling miles which people can use to travel for free in public transport. The NCMC can also give access to multiple services.

- Informal operators need to be brought under one umbrella. Only then can the data be brought together, and utilized for planning, scheduling, location-based advertisements, and creating on-demand services. It will also increase the efficiency of services.
- STUs can also become aggregators to this process - by collaborating with private operators, it will be easier to integrate services for last-mile connectivity, metro, rail, and buses.
- Some platforms are already using technology to show the no. of passengers in a bus stop and inside the bus. But in city buses, this information is very dynamic and hard to keep track of.
- We should create awareness in private operators about the benefits of digitisation and create an area-wise system based on value additions for customers as well as operators.

*Mr. Nikhil Agarwal, Consultant, Transport Practice India, The World Bank & Co-Founder and ex-COO, Chalo*

- To look at digital payments in public transport, we need to look at both sides of stakeholders: the bus operators and the users.
- A card such as NCMC, that addresses the convenience of payment while also allowing for the design of ticketing products aligned to user behaviour can be a winning combination for adoption.
- Data from digital systems that can improve planning efficiency and service delivery resulting in lower costs or higher revenues can be an incentive for transport service providers to adopt them.
- There has to be an incentive for people to make a shift. This can be in the form of discounts, additional services, or transfer of benefits.
- The World Bank has been working extensively on an Open Data Policy to increase access to transport data for people, and other agencies who may be able to use it to improve service.
- Cities like London have adopted a policy that makes data available to private enterprises. There are almost 400 that utilise London's transport data to create tools for mapping, journey planning, and ticketing to improve consumer benefits.
- Data is in two parts: sensitive data that can be identified to a particular user which is dangerous from a privacy perspective; data of large user groups has limited privacy concerns.
- 80-90 percent of data can be shared for planning and scheduling public transport without privacy concerns. The remaining is very specific, and we need to be concerned about who owns this data and how it is shared.
- Cards as a mode of payment became much more successful than mobile phones, despite significant mobile phone penetration. This is a much higher cost from an infrastructure and distribution perspective, but there are some smart ways around that. The solution has to solve multiple issues and give people the option early on in the digitisation process.
- It is possible to go entirely cashless but it will require some difficult decisions from cities and transport agencies. It requires a lot of thought for each mode of transport in each city based on their user profile and from a system perspective.
- Digital ticketing can have an impact on ridership. If the process of getting a bus pass can be digitised, more people would travel if they have already prepaid for a period. In India, tier-II cities can get to about 40-50 percent digital penetration over the period of one year.
- The time is right to introduce these changes, with many of the stakeholders supporting a transition to digital systems.