

IVU.suite at LAMATA



MODERN OPERATIONAL CONTROL SYSTEM FOR NIGERIA



INITIAL SITUATION

Lagos, the largest city in Africa, is one of the fastest growing cities in the world. With officially estimated 18 to 21 million inhabitants, the transport sector is at the centre of the political and economic interests of this megacity. Before the turn of the millennium Lagos was characterised by a permanent infrastructure overload due to rapid urbanisation.

In 2002, Lagos State government set up the Lagos Metropolitan Area Transportation Authority (LAMATA) to centrally coordinate all transport programs in the metropolitan area. This laid the foundations for the LAGOS Bus Rapid Transit (BRT), which opened on March 17, 2009 and since then traverses a section of the city that covers a distance of 35 kilometers, thus laying the foundation for further development of public transport in Lagos.

OVERVIEW

Employees	150 at LAMATA and over 1,000 VOC drivers
Vehicles	Approx. 430
Transport services	180,000 passengers per day, on a line of 35 km
Operations	Urban Transport, BRT
Objectives	Integrated planning process Setup of a transport plan Centralised network and timetable planning by the authorities Vehicle working scheduling and vehicle planning by the bus operators
Special features	First Introduction Reorganisation of Public Transport
IVU products	IVU.plan (IVU.timetable, IVU.run, IVU.duty), IVU.fleet, IVU.cockpit, IVU.box, IVU.realtime, IVU.control

OBJECTIVES

In order to minimise traffic congestion and to enable efficient BRT operations, LAMATA decided to introduce the first ITS (Intelligent Transportation System) for the bus operator PRIMERO. LAMATA was looking for a central solution for the integrated planning and scheduling of all its resources. It was important that a regular timetable be established and implemented with fixed intervals services. In a typical transit environment, the individual bus operator would handle the vehicle working scheduling, the vehicle planning as well as the operational steering, while network and timetable planning would be centralised at Transit Authority (LAMATA).

SOLUTION

Following a comprehensive bidding process in 2016, LAMATA commissioned the IVU Consortium consisting of IVU Traffic Technologies, IVU's South African partner ICT-Works and Nigerian local partner, OAK Telecom and Technology Consulting, to implement the integrated standard products of IVU.suite. These products had already been successfully implemented in BRTs in similar terrain in major cities such as Lima and the Colombian city of Cali, meaning IVU's project delivery capabilities and mix were fit for the task.

Applying the planning products, IVU.timetable, IVU.run and IVU.duty, the consortium was able to implement a timetable and duties in compliance with the requirements. In future, the planners from LAMATA and the bus companies can create stable and needs-based vehicle workings and duty schedules as and when required.

The fleet management system IVU.fleet helped the authorities to set up a new control centre to monitor traffic events live, enabling them to intervene in the event of an emergency. In addition, the consortium installed IVU.box.touch on-board computers with a driver display and the IVU.cockpit operating system in all vehicles, providing drivers with up-to-the-minute information. The system is able to transmit the data to the control centre and to the passenger information system, IVU.realtime. With this, all collected real-time data is supplied to the control centre displays that were set up at the stops.

A smartphone app "Lagos BRT", based on the IVU.realtime.app, informs passengers about current departure

times and enables individual travel planning. The basis for the timetable is the actual number of passengers, which is centrally stored in the new IT system.

OUTCOME

The IVU.suite now enables LAMATA to create, for the first-time, different timetable variants. The system enables the bus operating company to optimise their fleet based on the passenger demand profiles, i.e. morning and afternoon peak periods, which helped to increase the overall efficiency of bus operations.

Thanks to the IVU solution, LAMATA has taken a first step towards introducing technology in operations. As a result, the agency now has a powerful system for managing what has been, hitherto, very chaotic traffic of the metropolis to orderly paths and for sustainably improving the supply and demand of transportation in the city. LAMATA is on the right path to providing the inhabitants of the metropolis with reliable, efficient and affordable public transport in the future.

"Thanks to IVU's experience in similar markets, the implementation of IVU.suite at LAMATA has been smooth and very effective. We look forward to your continued support of the products that have been implemented."

Dr Desmond Amiegbegbor
LAMATA

"The introduction of the IVU system to this market will go a long way in assisting the management of Public Transport in Lagos. As the local partner in the consortium implementation, we are pleased to have worked successfully with international partners that broadens our capacity and ability to successfully launch the first ITS implementation in Nigeria and West Africa. Partnering with LAMATA allows for opportunities to upgrade transport linkages using technology."

Lanre Kuye
OAK Telecom and Technology Consulting

"We have learnt valuable lessons from the ITS implementation and are excited at the prospect of continuing to work with our partners in customising the product offering towards addressing the unique requirements of the African market."

Nosipho Pambuka
ICT-Works