

MINIBUS TAXI IMPROVEMENT INITIATIVES IN THE WESTERN CAPE

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ABSTRACT

Minibus taxis transport the vast majority of public transport passengers in South Africa, and the minibus taxi industry is critical to the functioning of the country's economy. However, the services provided by the industry are generally of a low standard and there is a need to improve service quality while formalising the industry and addressing issues of violent conflict. This paper provides a case study review of two innovative minibus taxi initiatives implemented by the Western Cape Department of Transport and Public Works (DTPW), namely Red Dot Taxi and Blue Dot Taxi, as a knowledge contribution to the sector. The paper was developed by core members of the DTPW team, who conceptualised and implemented these initiatives, and is based on their experiences and understanding of these projects. The first project, Red Dot Taxi was established during the first wave of COVID-19 to support the fight against the pandemic by providing related transport services. Based on the strong working relationship established between DTPW and the provincial taxi industry through Red Dot, the Blue Dot Taxi pilot project was later implemented as an incentive programme to improve service quality and safety. The pilot became operational in May 2021 and was successful in achieving its objectives and in laying the groundwork for further improvements to minibus taxi services. The paper lays out the results and lessons learnt from the pilot.

1. INTRODUCTION

In response to the urgent need to improve the quality and safety of minibus taxi services, the Western Cape Government's Department of Transport and Public Works (DTPW) implemented two innovative minibus taxi initiatives, known as Red Dot Taxi and Blue Dot Taxi. This paper provides a case study review of these initiatives as a knowledge contribution to the sector, with a focus on the Blue Dot Taxi pilot project. The pilot is described, and the results and lessons learnt are discussed. The paper was developed by core members of the DTPW team, who conceptualised and implemented these initiatives, and is based on their first hand experiences and understanding of these projects.

2. PROBLEM STATEMENT

It is widely accepted that public transport in the Western Cape is in crisis. Rail has all but collapsed (Liedtke, 2021), formal bus services are limited and under regular attack and

violence in the minibus taxi industry is at a record high (Naidoo, 2022). This is having a devastating impact on the economy of the Western Cape, undermining competitiveness, and constraining socio-economic development at a time when it is needed most. The lasting socio-economic impact of the COVID-19 pandemic has deepened the need for inclusive development and job creation, which requires a safe, reliable, dignified, and affordable transport system (Smit, 2023).

In the midst of this crisis, the use of minibus taxis has increased, and it is now the largest mode of public transport in the Province (Statistics South Africa, 2013; Statistics South Africa, 2020), as observed in Figure 1, and it is critical to the functioning of the economy. Almost one million passengers now rely on these services to get to and from work, education, and to access services and recreational opportunities (Statistics South Africa, 2020). While every effort must be made to restore rail, continue the implementation of MyCiTi and protect and improve Golden Arrow Bus Services (GABS), it is clear that the citizens of the Western Cape will continue to rely on minibus taxis as the main mode of public transport for many years to come. Therefore, it is imperative for citizens who rely on minibus taxis to be able to get from A to B, and for the economy of the Province, that Government implements measures designed to improve the safety, service quality and stability of this service.

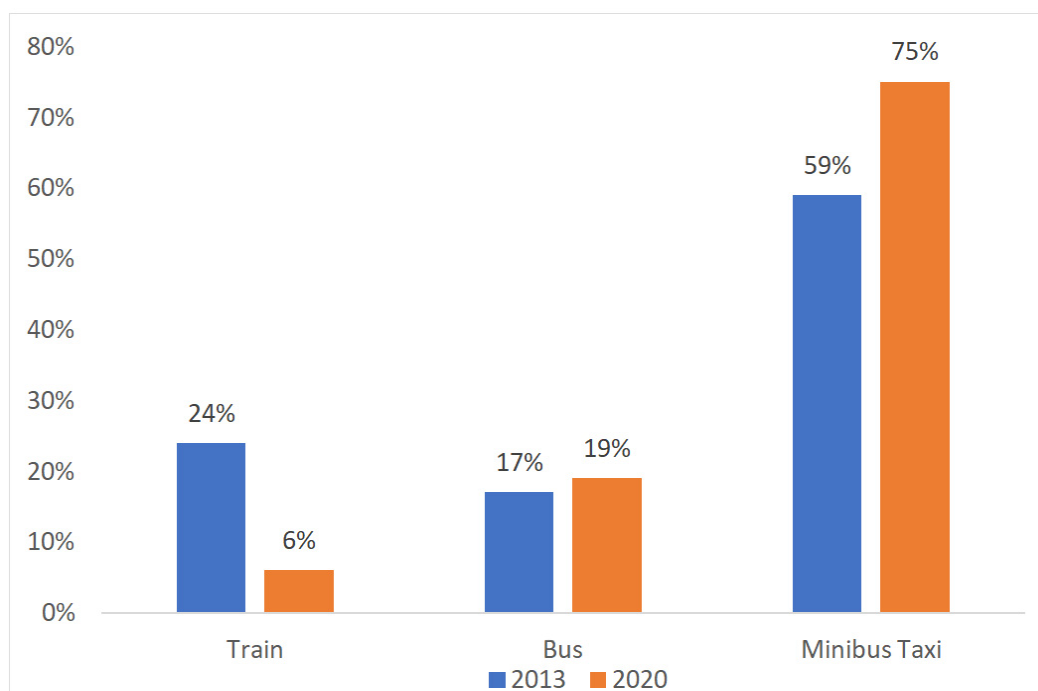


Figure 1: Public transport mode share in the Western Cape

Minibus taxis deliver an essential service that is vital to the functioning of the economy. However, these services also experience substantial challenges, including safety and quality issues, illegal operations, and violent conflict. These issues are driven by the industry's economic fundamentals which incentivise fare chasing, overloading, destructive competition, recruitment of illegal operators, and route contestation. This is further exacerbated by a lack of Government support and investment in the minibus taxi industry, which only receives about 1-2% of public transport funding nationally (Competition Commission South Africa, 2021).

3. WESTERN CAPE MINIBUS TAXI INITIATIVES

In response to key issues such as fare chasing, and the quality and safety of services, the Western Cape Government's Department of Transport and Public Works (DTPW) implemented the Blue Dot Taxi Pilot Project (Blue Dot), a ground-breaking initiative that included the participation of 500 operators and 800 vehicles, distributed across all regions of the Province, in a new incentive programme to reward improved driving behaviour and service quality, while progressing the formalisation of the industry. Rollout of the pilot was endorsed by the Western Cape Cabinet in September 2020 and operations commenced on 15 March 2021 to test the effectiveness of the approach. Blue Dot was built on the strong working relationship between DTPW and the provincial taxi industry established through the Red Dot Taxi Service (Red Dot).

3.1 Red Dot Taxi – Laying the Groundwork for Blue Dot

Red Dot was an innovative initiative implemented during the height of the COVID-19 pandemic (May 2020) through a collaboration between DTPW, the Western Cape Department of Health (DoH) and the provincial taxi industry. The service was initiated to provide transport services in support of the fight against COVID-19 (The Department of Transport and Public Works, 2021).

The Western Cape Government (WCG) implemented various measures in response to the pandemic. This included the provision of public quarantine and isolation facilities (Q&I facilities) across the Western Cape to house COVID-positive or at-risk individuals who were unable to quarantine or isolate safely in their own homes. This was intended to limit community spread.

Based on the DoH's projections, it did not have the vehicle capacity within its ambulance and HealthNET (non-emergency health transport) fleet needed to transport these individuals. It was also recognised that these vehicles would be better utilised for the transport of critical patients to hospitals. As such, DTPW was tasked with managing the transport of individuals to and from Q&I facilities through the establishment of a dedicated and safe service that came to be known as Red Dot, named after the red sticker branding applied to participating vehicles.

The Western Cape branch of the South African National Taxi Council ("SANTACO") formed a private company called Umanyano Travel Service Proprietary Limited ("UTS"), which provided the service under contract to DTPW with a dedicated fleet of minibus taxis stationed across the Province. The key features of the service were:

- A dedicated fleet of minibus taxis each fitted with a protective screen - to prevent transmission of COVID-19 from passengers to the driver, a tracker, and branded with a Red Dot sticker.
- Each vehicle could carry a maximum of 50% of its capacity, in line with COVID-19 regulations.
- Strict safety protocols were followed with each vehicle cleaned and sanitised regularly, hand sanitiser available on board and safety training provided to drivers.

The original focus of Red Dot expanded in response to the additional transport requirements which emerged during the course of the pandemic. An early additional service was the transport of healthcare workers.

The transport of nurses and other public sector healthcare workers using Red Dot was initiated on 18 May 2020 due to the restrictions placed on public transport operating hours by the national COVID-19 regulations. These restrictions made it extremely difficult for healthcare workers to get home in the evening after their shifts ended. One of the key objectives of the service was to ensure that healthcare workers had access to safe transport to and from the hospital. This was to ensure that the provincial healthcare system could continue to function and maintain its capacity while the COVID-19 pandemic unfolded and placed unprecedented pressure on the system. Therefore, even after the regulations which governed public transport operating hours were relaxed, the service continued to operate to provide safe transport to healthcare workers to minimise their risk of contracting COVID-19 while travelling on public transport and to protect them from any risks associated with the public stigma against healthcare workers.

The service grew to transport 1,100 staff daily across 25 facilities in the Cape Town Metro until 15 December 2020, whereafter the service focused its efforts solely on transporting staff to and from the Brackengate Hospital of Hope, a dedicated COVID-19 intermediate care facility, which is located in an area without adequate public transport services (The Department of Transport and Public Works, 2020).

As the pandemic continued, the following services were added:

- **Vaccine Recipient Transport:** To provide free transport for those eligible to receive COVID-19 vaccines to and from vaccination sites across the Western Cape. This was particularly important for those who could not access or afford transport to vaccine sites.
- **Hospital Discharges:** The transport of discharged hospital patients to their homes to free up hospital bed space for COVID-19 patients across the Western Cape.

Red Dot continued to provide these services until May 2022 when it was clear that the worst of the pandemic was over. The service completed 290,000 healthcare worker trips, 31,500 patient trips to and from Q&I facilities, 11,700 passenger trips to and from vaccination sites, and 6,300 trips for discharged hospital patients (The Department of Transport and Public Works, 2022).

3.2 Overview of Blue Dot Taxi Pilot

Blue Dot was built on the foundations established through Red Dot, as DTPW and the provincial taxi industry jointly identified the opportunity to continue working together and build on their successful Red Dot partnership to improve minibus taxi services more broadly in the Western Cape.

Blue Dot had two core objectives: to improve passenger service quality and safety and to begin a province-wide process of formalisation and empowerment of the minibus taxi industry. The pilot also aimed to put in place processes and structures to begin addressing the related challenges of violent conflict and illegal operations.

Blue Dot was designed to be the beginning of a broader process of incremental change, establishing the first building blocks needed to later introduce further improvements to services, including vehicle renewal, collective operational management, electronic ticketing and integration into integrated public transport networks.

While Blue Dot included numerous components, at its core was an incentive mechanism to shift behaviour and incrementally improve minibus taxi services for the passenger. The pilot was a voluntary, rewards-based programme designed to address the key economic drivers of poor service quality.

In recognition of the important role played by each industry stakeholder, the pilot included the participation of all parts of the provincial taxi industry, including SANTACO Western Cape (represented by UTS), the eight regional taxi councils of the province, associations, operators and drivers. Through the pilot, eight new regional companies were established by the province’s regional taxi councils, each owned by the constituent associations of that region (The Department of Transport and Public Works, 2021).

To be eligible to receive an incentive payment, each participant had to meet a set of rigorous criteria. Only once these criteria had been met could the participants then work to earn an incentive based on their performance against standards set and monitored by DTPW. The eligibility criteria and performance standards are detailed in Table 1 below.

Table 1: Eligibility criteria and performance standards for participant levels within Blue Dot

Participants	Eligibility Criteria & Performance Standards Monitored
UTS & Regional Companies	<ul style="list-style-type: none"> • Formalisation of the industry into companies based on representative industry structures and shareholding. • Corporate Governance requirements to ensure executive structures operate in accordance with shareholding agreements and each company’s memorandum of incorporation. • Demonstration of immediate intervention in response to industry –related violence. • Accountable for eligibility and performance of drivers and operators through roll-up of driver and operator performance. • Registration on Government’s Central Supplier Database – requiring tax compliance, no conflict of interest and a valid bank account.
Operators & Drivers	<ul style="list-style-type: none"> • Valid operating licence (OL) and roadworthy vehicle. • Branded Blue Dot vehicle and display of required passenger information. • Valid driver’s licence and Professional Driving Permit (PrDP). • Driver and Operator training programme completion (<i>Training provided by DTPW</i>). • Onboard vehicle telematics installation and functionality (i.e. tracker). • Minimum daily kilometres travelled on licensed routes. • Technology-based passenger and road user feedback. • Automated monitoring of habitual poor driving behaviour, including speeding and harsh braking, cornering, and acceleration. • Passing a vehicle safety inspection and availing vehicles for periodic safety inspections. • Registration on Government’s Central Supplier Database – requiring tax compliance, no conflict of interest and a valid bank account.

Performance was monitored using the on-board tracker, on-the-ground field monitors, and a bespoke technology system developed by DTPW. Performance was measured using a 5-star rating system - the more stars a participant achieved, the higher the incentive payment. At the end of each day, participants received a performance update by SMS and through a purpose-built app, available to those participants with smartphones. This enabled participants to adjust their performance accordingly.

Participants could earn up to R400 per vehicle per day, if they achieved a 5 star rating. The maximum incentive that could be earned was R10,000 per vehicle per month. Average earnings per vehicle averaged R6,000 per month during the operational months of 2022.

While the eligibility criteria included several legal requirements, such as the possession of a valid operating licence, both the criteria and the performance standards went significantly beyond compliance to require, amongst others, improved passenger service quality (as determined by passengers themselves through the user feedback system described further in Section 4.1), improved ride comfort, a minimum level of daily service, driving training, and the sharing of data with government.

Performance improvements were further incentivised through the rollup of rewards, for example the performance of the driver affected the operator incentive, and the performance of all operators and drivers within a region affected the Regional Company incentive. This encouraged provincial and regional leadership structures to take proactive steps to improve performance amongst operators and drivers for the benefit of passengers.

The design of Blue Dot was influenced by DTPW's experience of implementing the George Integrated Public Transport Network (IPTN) and the lessons learnt through the implementation of other public transport initiatives, such as MyCiTi, in the Western Cape and across the country. While Blue Dot aimed to shift the underlying economics of the industry and required the formalisation of the industry into companies, the business model remained largely unchanged, with taxi owners continuing to own vehicles and collect fares via their drivers. This, combined with the voluntary nature of the programme, lowered the risk of participation, negated the need for protracted industry negotiations, which are a feature of IPTN implementation in South Africa, and eased implementation of the pilot.

4. RESULTS OF THE PILOT

The operational phase of the pilot came to an end on 30 November 2022. After 18 months of operations, DTPW considered the pilot to have successfully achieved its core objectives to improve passenger service quality and safety and progress the formalisation and empowerment of the industry in the Western Cape.

4.1 Improved Passenger Service Quality and Safety

A key objective of the pilot was to improve the safety and quality of participating minibus taxi services for the benefit of passengers. Blue Dot was not designed to achieve an immediate change in behaviour, but rather to incentivise and support gradual behaviour change over time.

Through a combination of the pilot's financial incentives, regular communication with participants, and ongoing training and capacity building, Blue Dot aimed to improve performance over time, working toward safer minibus taxi services for the citizens of the Western Cape.

Each vehicle was fitted with onboard telematics systems which measured speeding, harsh acceleration, braking, and cornering events. Thresholds for each Performance Standard were set, and when a vehicle breached this threshold, an event would be triggered and recorded. Through the course of the pilot, a 50% reduction in average daily speeding events per vehicle was recorded, as observed in Figure 2 below. Average daily harsh events, including harsh braking, cornering, and acceleration, were reduced by 40%.

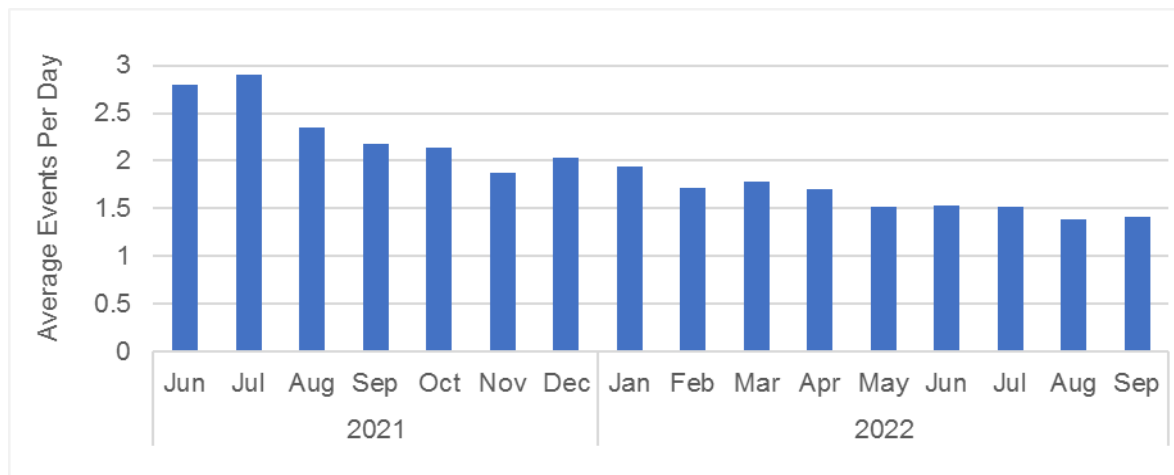


Figure 2: Average daily speeding events recorded per vehicle between June 2021 and September 2022

A key feature of Blue Dot is the user feedback platform. Minibus taxi passengers and other road users were able to provide feedback on the service by cell phone. As one of the performance standards, this feedback was a determinant of the incentive payment to participants. This unique mechanism ensured that minibus taxis were accountable for the quality and safety of the service they delivered, empowering passengers and other road users to drive change.

During the implementation period, two cell phone-based platforms were developed: a free-to-use USSD number and a WhatsApp portal. The USSD number was positioned on the sides and back of each participating minibus taxi as part of the required branding, and both the USSD and WhatsApp numbers were shown on posters fitted to the interior of each vehicle. Users could rate the service from very good to very bad.

The user feedback system was well received. From 15 May 2021 (go-live) to November 2022, DTPW received over 34,000 user ratings, 51% of which were from passengers and 49% from road users. Interestingly, the ratings received from passengers were better than those from other road users. Over time, the average passenger rating¹ improved 25% from average to good, while the road user rating improved by 84%, as observed in Figure 3. Some regions were able to improve further and achieved an average very good rating from passengers by the end of the pilot.

¹ The overall user scores were calculated using all ratings for all vehicles in all regions in a given month.

	All regions		
	Nov '21	→ Nov '22	Increase
Passenger rating	3.2	4.0	25%
Road user rating	1.5	2.7	84%

Ratings	Score
Very good	5
Good	4
Average	3
Bad	2
Very bad	1

Figure 3: Average user feedback score across all regions between November 2021 and November 2022

In a survey of 400 Blue Dot passengers conducted in September 2022 it was found that:

- 82% felt safer when travelling with a Blue Dot Taxi.
- 78% agreed that a Blue Dot Taxi is a better taxi.
- 88% agreed that the Western Cape needs more Blue Dot Taxis.

Collectively, the above is evidence that Blue Dot achieved its objective of improving minibus taxi services and demonstrating the potential for financial incentives to shift behaviour.

4.2 Industry Formalisation and Empowerment

To support this objective, DTPW worked with the industry to establish 8 new regional companies, representing all 8 MBT regions in the Province, and put in place clear corporate governance requirements that each company had to adhere to. These companies played a critical role in the pilot, particularly in the management of operator and driver participation and performance.

The companies were structured to mirror the leadership of the industry to prevent the emergence of competing centres of power and to ensure that the regional companies remained strongly linked to industry structures. Therefore, each regional company is owned by its constituent local associations, and the company directors mirrored the executive committee of the regional taxi council.

DTPW worked with the regional taxi councils to register their companies with the Companies and Intellectual Property Commission (CIPC), identify shareholders, draft memoranda of incorporation and complete the other processes needed for company establishment. A list of the regional companies and the associated regional taxi councils is provided in Table 2 below.

Table 2: List of regional companies established

Regional Taxi Council	Regional Taxi Company
Boland	Umanyano Boland (Pty) Ltd
CATA	CATA Transport and Logistics (Pty) Ltd
CODETA	Shanike Investments (Pty) Ltd
Eden	S Manye Travel Services (Pty) Ltd
Greater Cape Town	Ububambano (Pty) Ltd
Mitchells Plain	Mitchells Plain Investment Holdings (Pty) Ltd
Northern	Northern Region Transport Solutions (Pty) Ltd
Two Oceans	Insight Travel Services (Pty) Ltd

DTPW also worked closely with the participating companies, developing their management capacity through training and ongoing corporate governance support to ensure compliance with relevant legislation and best practice.

The benefits of formalisation are numerous, including improved governance and decision-making processes, greater transparency and improved relationships between different groupings within the industry, who had to work together as company directors and shareholders. Company formation also enabled the industry to better pursue business and empowerment opportunities and enter into legal partnerships with stakeholders, such as government and the private sector.

DTPW continues to work with and support these companies, with a focus on the development of value chain and other business opportunities required to develop these companies into sustainable enterprises.

5. LESSONS LEARNED

Through the implementation of the pilot, DTPW learnt several important lessons which will inform ongoing and future efforts to work with and support the industry.

5.1 Industry Compliance

There is a widespread lack of compliance in the industry in terms of valid operating licences and PrDPs, tax, and vehicle roadworthiness. To participate in Blue Dot, participants were expected to meet strict eligibility requirements as set out in Table 1. Together with UTS and the Regional Companies, DTPW provided significant support to participants to meet these compliance criteria, resulting in a substantial increase in compliance levels. 800 vehicles, 500 operators and 900 drivers successfully met the eligibility requirements to participate in the pilot. The level of effort and time required to achieve this improvement was greater than initially expected by DTPW.

All participants in the pilot were required to register on the Government's Central Supplier Database (CSD), which houses details of individuals and businesses who are allowed to provide a service to Government. To register on the CSD, each participant had to be tax compliant, have a valid bank account and be without a conflict of interest. DTPW provided both regional companies and operators with extensive support to become CSD compliant through, for example, numerous information roadshows and the establishment of dedicated facilities where operators could receive assistance in resolving CSD issues. A significant number of operators were not tax compliant, and support was provided to address these issues, where possible. This included the establishment of a special process with the South African Revenue Service (SARS). As a result, tax compliance amongst participating operators increased from 46% to 94% (The Department of Transport and Public Works, 2022).

Given the number of participants and the well-known compliance challenges in the industry, this was a complex and time-consuming administrative exercise. However, it was also an important and necessary step towards the formalisation of the industry and resulted in a substantial increase in tax compliance amongst the participants.

5.2 Communication Between Government and Participants

At the beginning of the pilot, DTPW engaged primarily with UTS and the Regional Companies through regular meetings to discuss project progress, challenges and solutions. DTPW relied on the companies to pass on relevant information to participating associations, operators and drivers. However, some messages didn't filter down effectively to the operator and driver level. While taking steps to improve the flow of information, in parallel DTPW initiated regular operator engagements, bringing together the regional companies, operators and DTPW to share key messages and project updates with a wider audience and directly engage on and address any concerns or queries raised by operators. A key focus of these engagements was on how operators and drivers could improve performance and, thereby, increase both service quality and their incentive earnings.

5.3 Driver Incentives

Behaviour change at the driver level was crucial for the success of the pilot, however, DTPW was unable to provide direct driver incentive payments. DTPW strongly encouraged operators to pay a portion of their incentive payment to their drivers. Anecdotally, it was noted that operators who chose not to award drivers for their efforts often earned poorly in relation to the maximum Blue Dot incentive amount, or not at all.

To further address this issue, DTPW created driver awards, which included both a financial and non-financial component, to recognise the best-performing drivers and incentivise improved driver behaviour. Two rounds of driver awards were successfully implemented during the pilot.

5.4 Driver Compliance with Onboard Technology

One of the requirements to earn an incentive was for a participating driver to insert the driver tag issued to them by DTPW into the Blue Dot Taxi he/she would operate for the day. This was done to ensure the driver of the vehicle was a registered, trained participant with a valid Driving Licence and PrDP. If this was not done, it was not possible to earn an incentive for the day.

Initially, ensuring compliance with this requirement was a challenge. However, DTPW, together with the regional companies, implemented various measures, such as SMS communication to participants, to address this issue and driver tagging improved substantially over the course of the pilot. In addition, the issue was raised in DTPW's regular engagements with UTS and the Regional Companies, and the companies were provided access to Business Intelligence Platforms to better manage operations within their regions.

5.5 Public Sentiment

Some members of the public expressed negative sentiments towards the pilot through social media and other communications channels. Their prevailing view was that a Blue Dot Taxi was no different to any other taxi and that poor driving habits endured. As mentioned above, Blue Dot was not designed to result in immediate behaviour change but rather sought to encourage and incentivise incremental improvements in behaviour over time. As shown in Section 4.1., this objective was achieved during the course of the pilot.

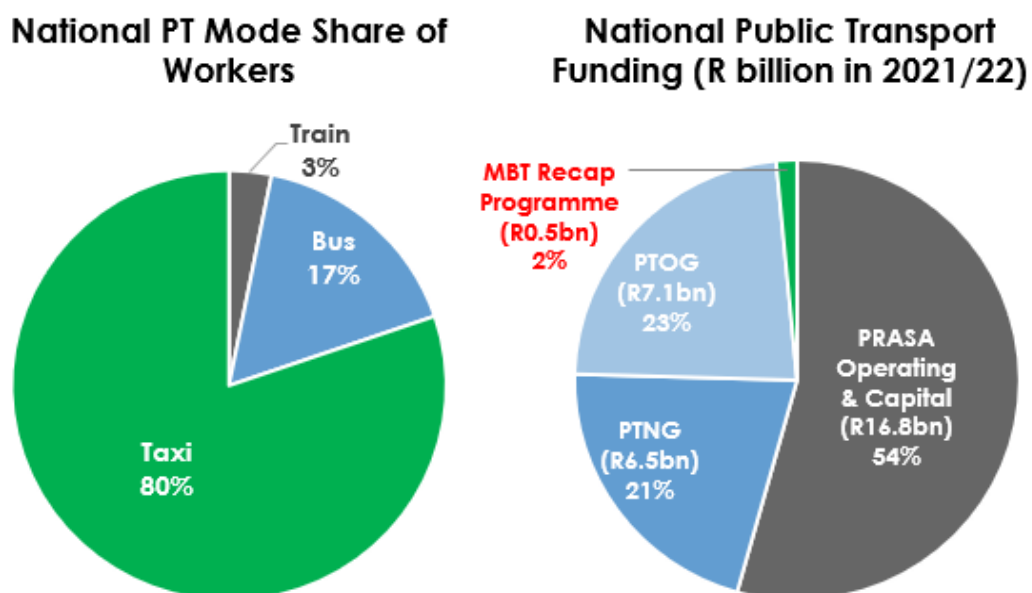
However, communicating this complex message to the public proved to be a challenge which was exacerbated by the minority of Blue Dot participants who continued to drive poorly.

6. FINANCIAL AND FUNDING CONSIDERATIONS

Improving minibus taxi services in South Africa will require a substantial financial investment and ongoing support. Across the globe, and in South Africa, quality public transport services require funding support and subsidy from government. There is no reason to believe that the minibus taxi industry is any different. This was recognised in the declaration of the National Taxi Lekgotla, which stated that an industry empowerment model “must be anchored on formalization which includes establishment of business entities, subsidization of the industry and partnerships with government on the rollout of public transport infrastructure and IPTNs” (National Department of Transport, 2020).

In the 2021/22 financial year, National Government allocated approximately R30 billion in operational and capital subsidies to public transport (see Figure 4), with the vast majority of this (98%) allocated to rail, BRT and bus services (National Treasury, 2021), which carry relatively few passengers when compared to the unsubsidised minibus taxi industry (Statistics South Africa, 2020). One option to fund minibus taxi improvement initiatives, such as Blue Dot, is to reallocate a portion of these funds towards the mode of transport carrying the greatest number of passengers to ensure better value-for-money. As was the case with Blue Dot, this would be tied to clear requirements for service quality improvements.

In line with the funding required to support rail, BRT and bus in South Africa, and public transport globally, Blue Dot does require a substantial funding contribution, especially at scale. However, based on the lessons learnt from the pilot, there is scope to adjust the design and parameters of the pilot to improve impact, value-for-money and scalability.



National Treasury, 2021; Statistics South Africa, 2020

Figure 4: National public transport funding and modal share split

7. CONCLUSION AND WAY FORWARD

The operational phase of the pilot came to an end on 30 November 2022. However, DTPW continues to work with the provincial taxi industry to leverage the strong relationships established through Blue Dot to identify and implement further incremental improvements to MBT services and support industry formalisation and empowerment.

Given the many successes of the pilot – including successfully demonstrating the principle of shifting behaviour with financial incentives, DTPW is working to secure funding for the resumption and expansion of Blue Dot and believes it can serve as a model for minibus taxi improvement in South Africa.

Blue Dot was not designed to be an end point, but rather the beginning of a broader process of progressive change, establishing the initial building blocks needed for continued collaboration, including:

- The collection of vast amounts of invaluable data, gaining unparalleled insight into MBT operations. This data has been and will continue to be analysed to develop a deeper understanding of MBT services and how they can be improved.
- Strengthened relations between DTPW and the industry and a demonstration of what can be achieved through co-operation.
- The establishment of formalised collective structures i.e., UTS and the regional companies.
- Improved levels of compliance amongst those who participated in the pilot.

These building blocks were intended to provide the foundation for further incremental change in the future, possibly including:

- Analysis of data to identify service / route improvements.
- A passenger subsidy and/or contracted services.
- Options for enhanced vehicle renewal, to address challenges related to vehicle financing and safety.
- Supporting the integration of minibus taxi services into IPTNs.
- The introduction of additional technologies to improve service quality, such as electronic ticketing, e-hailing and on-board Wi-Fi.

The MBT industry plays a crucial role in delivering public transport in the Western Cape and across South Africa, and there remains an urgent need for government at all levels to design and implement initiatives, such as Blue Dot, to improve these services for the benefit of passengers.

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