CITY OF CAPE TOWN'S TRANSPORT RESPONSE TO COVID-19 REGULATIONS AND DIRECTIVES

L VAN DEN BERG

City of Cape Town, 12 Hertzog Boulevard, Cape Town 8001
Tel: 021 400 4882; Email: lee.vandenberg@capetown.gov.za

ABSTRACT

The sudden declaration of a State of Disaster in South Africa at the end of March 2020, and the subsequent regulations governing the transport sector in how to respond to and mitigate the spread of the COVID-19 disease, caught all levels of government off guard in terms of ensuring that the transport fraternity complies with the provisions of the State of Disaster.

The Western Cape Provincial Government and City of Cape Town (the City) very swiftly established a joint Transport Coordinating Committee (TCC) to respond to the ever-changing transport regulations and to monitor compliance in the public transport sector during the State of Disaster. With no prior disaster as a point of reference, it was literally a case of building the plane, whilst flying it for both spheres of government in dealing with the transport response during the pandemic.

The work done by the TCC and several other transport reports received from within the City, other external role players as well as parastatals, were combined in a daily Transport Dashboard to reflect different alert level scenarios and informants, vehicular movement and accidents on the freeways, any incidents on the network and road infrastructure, passenger usage of subsidised services, minibus taxi services and infrastructure, COVID-19 compliance at facilities and on vehicles, the Urban Mobility Directorate's staff working status and the Transport Information Centre performance in terms of public enquiries as a result of the COVID-19 Disaster. The purpose of the dashboard, was to provide the Political and Administrative leadership in the City, responsible for transport related matters, a regular snapshot of the situation on the ground during the pandemic.

1. BACKGROUND

The COVID-19 Disaster (the Disaster) was announced the evening of Sunday, 22 March 2020 by the President of South Africa and came into effect on Friday, 27 March 2020. All 3 spheres of government in South Africa thus had four (4) days in which to prepare themselves to deal with an avalanche of Disaster Management Regulations affecting the citizens of South Africa, and in particular public transport users. The effect of the regulations on the public transport sector, which carried those travelling to work on a day to day basis was severe.

At the onset, there were no specific alert levels and just what was referred to as "*hard lockdown*", with regulations and directives developed and issued in a very conservative and rather haphazard manner. These did not take cognisance of the operational and very practical impacts thereof on the public transport operators found across the different types of public transport services. Minibus taxi and subsidised bus services (MyCiTi and Golden

Arrow Bus Services (GABS) in the City of Cape Town (the City) were the most severely affected by the operational restrictions put in place to protect the passengers making use of these two particular modes of public transport against the spread of the COVID-19 virus (the Virus).

The Department of Transport and Public Works (DTPW) in the Western Cape and the City thus had to react fast to ensure that public transport facilities, operators, their staff and passengers adhered to the prescripts of the transport directives and, in so doing, curb the spread of the Virus.

2. PROBLEM STATEMENT

The DTPW and the City had to find a way to jointly monitor the performance of public transport operators and the facilities the operators and passengers use and to then act on any non-compliance in a swift manner. The reason for joint monitoring lies in the fact that the GABS subsidised services and regulation of public transport resides under the DTPW and the MyCiTi and all infrastructure used by the different operators resides under the City.

3. INITIAL MONITORING AND REPORTING RESPONSE

3.1 Transport Coordinating Committee

The DTPW and the City established a COVID-19 Transport Coordinating Committee (TCC) to deal with the then current 21-day lock down period but, also with any possible extensions. The TCC established an operations centre at the Western Cape Disaster Management Centre at the Tygerberg Hospital. The operations centre was manned by both DTPW and City officials in shifts from 05:00 in the morning until 22:00 at night. Even though these were "*core*" operations centre hours, contact was constantly kept between TCC members, and subsidiary groups monitoring on the ground, in terms of any eventualities well beyond these hours, 7 days a week - including public holidays.
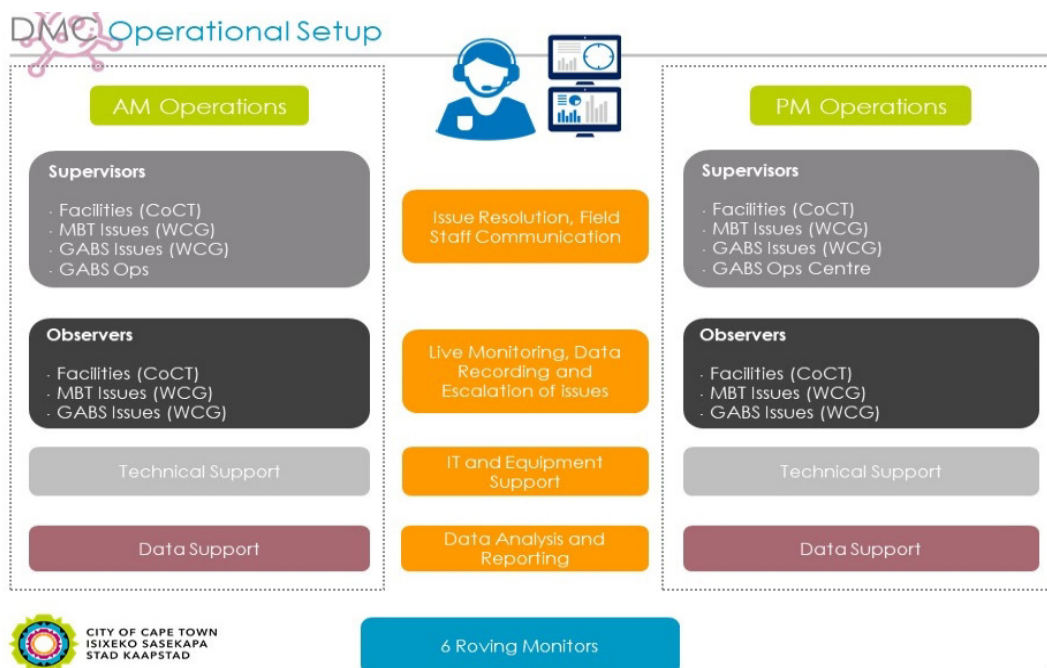

Figure 1: Operational Centre set up

	Index		
	Priority		
	Bad	**Average**	**Good**
Operational Status			
Number of Pax Waiting	Over-crowded conditions with no queue movement	Long queues, but queues moving steadily	Short queues moving fairly fast
Number of MBT's/Buses Operating	No service operating	Some services operating, but not adequate to meet demand	Adequate services operating to meet demand
Security Assessment	Civil unrest making operations impossible ie riots/looting	Some disruption, but services still able to operate	No disruption of services
Compliance with Gazetted Restrictions			
Operating Hours Adherence (05:00–10:00 & 16:00-20:00)	Not adhering to operating hours at all	Some services not adhering to operating hours	Complete adherence to operating hours
MBT Load Adherence	Most vehicles carrying more than 50% seated capacity	Some vehicles carrying more than 50% capacity	No vehicles carrying more than 50% capacity
Bus Load Adherence	Significant standing on buses observed - ≥ 80% of buses	Some standing on buses observed - 50% of buses	No standing on buses observed ≤ 20% of buses
Sanitising of Ranks/Terminus	No evidence of sanitising noted	Some evidence of sanitising	Facility is being sanitised regularly
Sanitising of Vehicles	No evidence of sanitising noted	Some evidence of sanitising - 50% of vehicles	Facility is being sanitised regularly - 80% of vehicles
Hand Sanitiser available on Vehicles	No sanitiser available	Sanitiser available on some vehicles - 50%	Sanitiser available on most vehicles - 80%
Drivers/Marshals Wearing Mask	No masks being worn	Some people wearing masks - 50% of vehicles	Most people wearing masks - 80% of vehicles

	Index		
	Priority		
	1	**2**	**3**
Facility			
Sanitising of the Facility/Ranks/Terminus	**No evidence** of sanitising	**Some evidence** of sanitising	Facility is being **sanitised regularly**
Provision of sanitisers or other hygiene dispensers	**No sanitiser dispensers** within the Facility/Ranks/Terminus	**Some sanitiser dispensers** within the Facility/Ranks/Terminus but not enough	**Adequate sanitiser dispensers** within the Facility/Rank/Terminus
Requirements of social distancing of at least 1.5 meters	**No measures** to ensure social distancing apparent	**Some measures** to ensure social distancing in some areas of the Facility/Rank/Terminus	**Clear measures** to ensure social distancing within the whole Facility/Rank/Terminus and while passengers are queuing for transport
Employees at Facility/Rank/Terminus (incl. any marshal or security officer who interacts with members of the public) **wearing masks**	**Less than 70%** of employees wearing masks	Some employees wearing masks - **at least 70%**	**All** employees wearing masks
Adequate enforcement of the public to **wearing a mask**	**No visible enforcement** of the public wearing masks	**Some** members of the public allowed in without a mask	**No members of the public** allowed in without a mask

	Index		
	Priority		
	1	**2**	**3**
Public Transport Operators			
Operators (including drivers) at Facility/Rank/Terminus and any related staff **wearing masks**	**Less than 70%** wearing masks	Some wearing masks - **at least 70%**	**All** wearing masks
Measures in place to **adhere to social distancing**	**No measures** to ensure social distancing apparent by Public Transport Operators	**Some measures** to ensure social distancing by Public Transport Operators	**Clear measures** to ensure social distancing by Public Transport Operators
Operators ensure the **public use sanitiser before and after using the transport**	**No evidence** of operators ensuring that the public use sanitiser	**Some evidence** of operators ensuring that the public use sanitiser	**Clear evidence** of operators ensuring that the public use sanitiser
Local Travel - **Maximum Capacity Restrictions**	**Most vehicles** carrying more than 100% licensed capacity	**Some vehicles** carrying more than 100% licensed capacity	**No vehicles** carrying more than 100% licensed capacity
Long Distance Travel - **Maximum Capacity Restrictions**	**Most vehicles** carrying more than 70% licensed capacity	**Some vehicles** carrying more than 70% licensed capacity	**No vehicles** carrying more than 70% licensed capacity or **no long-distance travel operating**
Public Transport Users			
Public transport **users wearing masks**	**Less than 70%** wearing masks	Some wearing masks - **at least 70%**	**All** wearing masks

Figure 2: Monitoring Matrix

3.2   Initial Public Transport Facility Monitoring and Reporting

In order to monitor the Disaster Regulations and Directive compliance of facility managers, operators as well as passengers, the DTPW developed an application that allowed monitors on the ground and passengers to capture their observations and experiences through two different platforms of the application. The application was accessible via Android or any smart phone.

Due to large numbers of vehicles and passengers, moving through the public transport facilities it was impossible to capture the behaviour of each operator and passenger individually and the application operated on a matrix of items which scored either a good, average or bad and these three scores were colour-coded to make the dash board reporting simple.

The City, in turn, provided 30 handheld devices and 25 monitors deployed at the 13 key facilities with underutilised facilities being closed. The morning monitoring commenced at 05:00 and ended at 10:00 in the morning and again between 16:00 and 21:00 in the afternoon in terms the directives then governing the hard lock down.
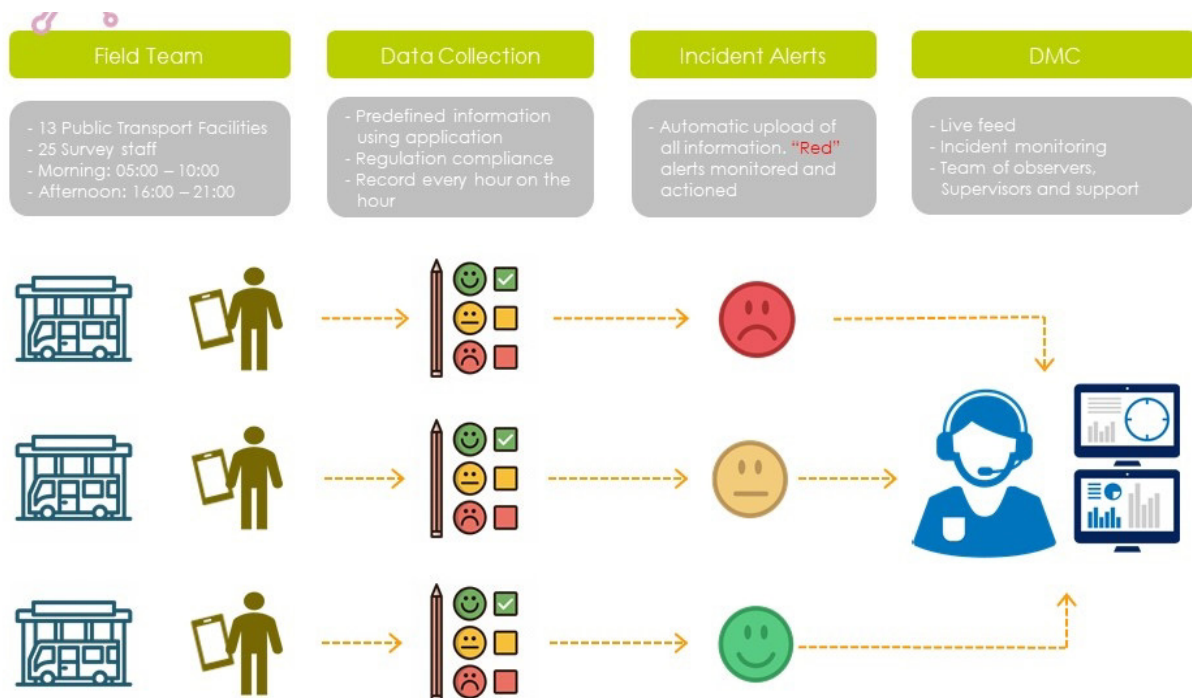

Figure 3: Facility Monitoring Information Flow

The information captured by the monitors was available in real time and reflected as and when the information was punched into the system on the screens installed in the operational centre. The application also had the ability to capture any incidents at the facility with an alert being raised at those in the operations centre as indicated in Figure 4 below. The information was also summarised graphically for ease of reporting back to different Disaster Management structures set up in the City as well as DTPW as illustrated in Figure 5 below.
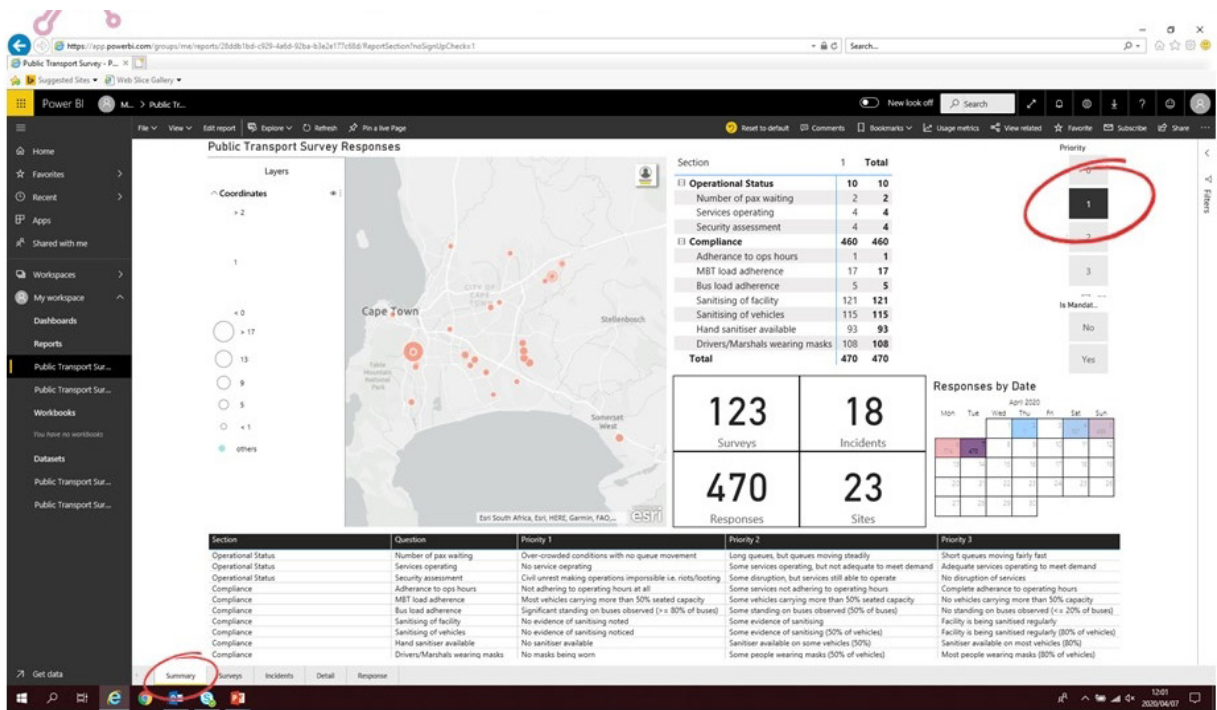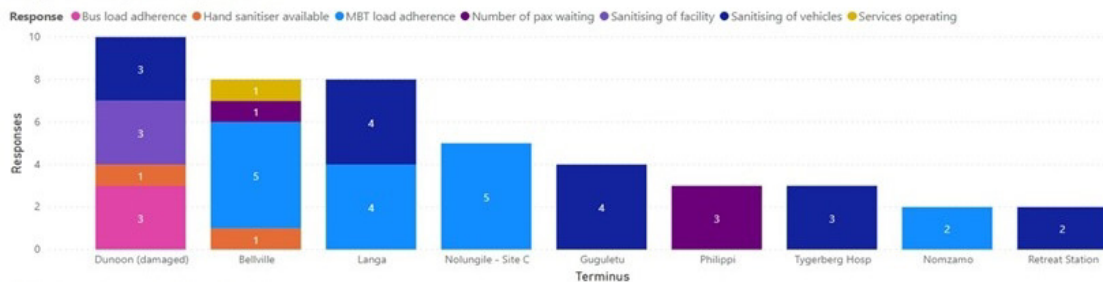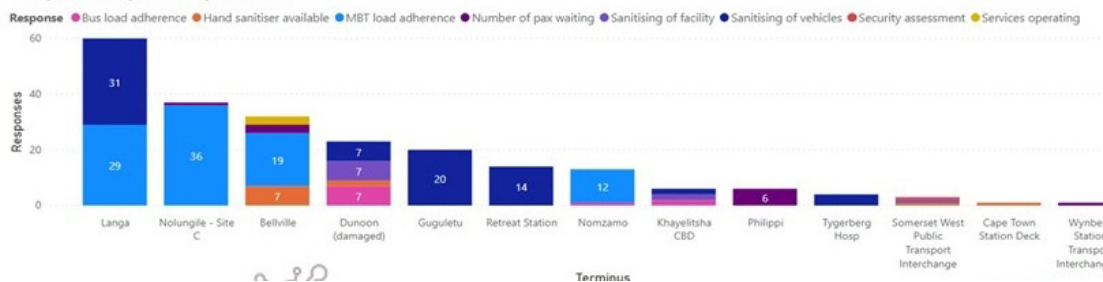
Figure 4: Facility Monitoring Dashboard

Figure 5: Facility Monitoring Dashboard

4. MATURING IN PUBLIC TRANSPORT MONITORING AND REPORTING

With the Disaster being extended beyond the initial 21 days of hard lock down, and different alert levels with unique regulations and directives being issued, it was realised that COVID-19 was here to stay and that more extensive reporting to administrative and political principals was required.

The initial rather rudimentary facility, operator and passenger monitoring was expanded to include more informants and transport operational data. This enabled the City and DTPW to monitor and report back on other transport modes that came back on stream as disaster

risk levels fluctuated allowing more travel opportunities. A fully flexed COVID-19 Transport Response Dashboard (the Dashboard) was then created for this purpose. The subsections below, expand on the key sections of the dashboard and their context in terms of setting up the Dashboard.

4.1   Informants and Scenarios

The first section of the dashboard sets the scene in terms of the alert levels. It indicated what impact the different economic sectors would have on the percentage and the actual number of public transport passengers expected to return to the transport system during each level. As illustrated in Figure 6 below, this information was then plotted to graphically reflect alert levels and the affect it would have on the transport system and how transport service providers should respond.
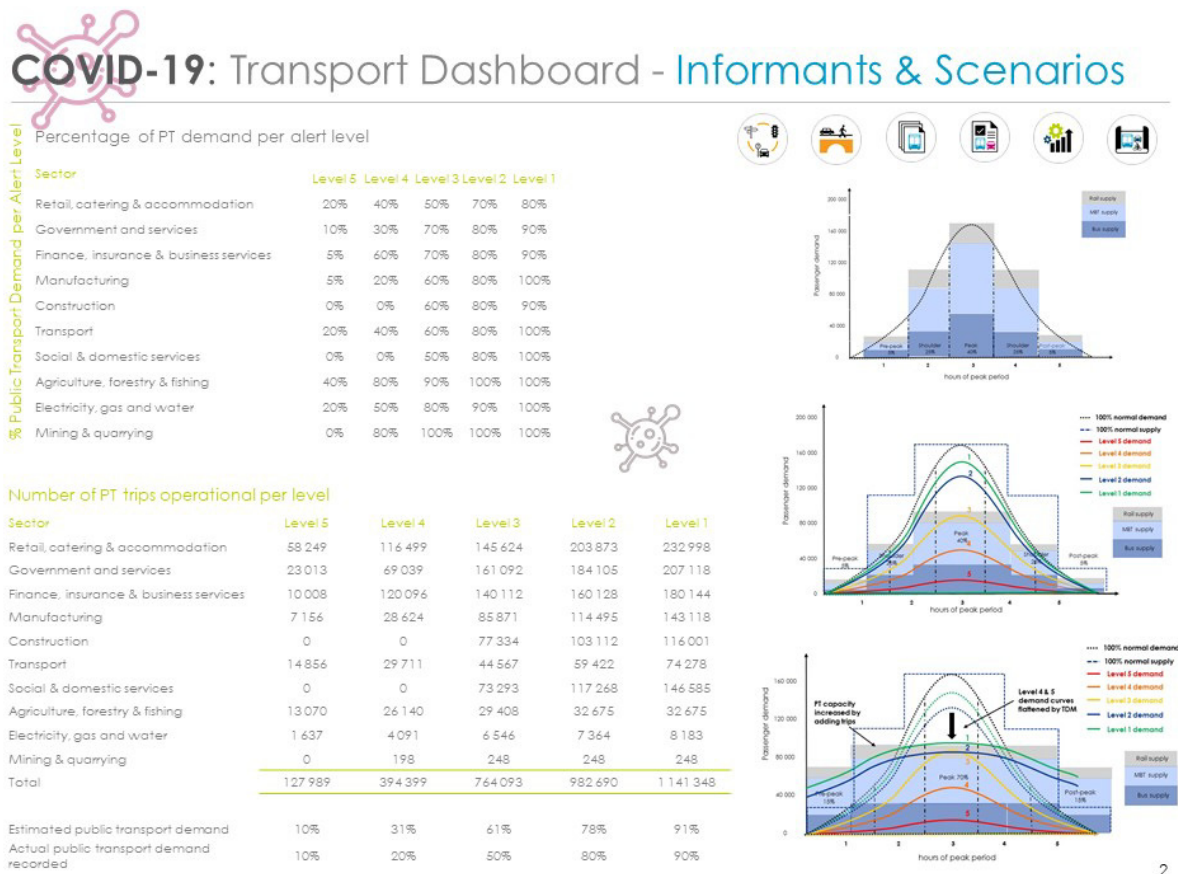
COVID-19: Transport Dashboard - Informants & Scenarios

Percentage of PT demand per alert level

Sector	Level 5	Level 4	Level 3	Level 2	Level 1
Retail, catering & accommodation	20%	40%	50%	70%	80%
Government and services	10%	30%	70%	80%	90%
Finance, insurance & business services	5%	60%	70%	80%	90%
Manufacturing	5%	20%	60%	80%	100%
Construction	0%	0%	60%	80%	90%
Transport	20%	40%	60%	80%	100%
Social & domestic services	0%	0%	50%	80%	100%
Agriculture, forestry & fishing	40%	80%	90%	100%	100%
Electricity, gas and water	20%	50%	80%	90%	100%
Mining & quarrying	0%	80%	100%	100%	100%

Number of PT trips operational per level

Sector	Level 5	Level 4	Level 3	Level 2	Level 1
Retail, catering & accommodation	58 249	116 499	145 624	203 873	232 998
Government and services	23 013	69 039	161 092	184 105	207 118
Finance, insurance & business services	10 008	120 096	140 112	160 128	180 144
Manufacturing	7 156	28 624	85 871	114 495	143 118
Construction	0	0	77 334	103 112	116 001
Transport	14 856	29 711	44 567	59 422	74 278
Social & domestic services	0	0	73 293	117 268	146 585
Agriculture, forestry & fishing	13 070	26 140	29 408	32 675	32 675
Electricity, gas and water	1 637	4 091	6 546	7 364	8 183
Mining & quarrying	0	198	248	248	248
Total	127 989	394 399	764 093	982 690	1 141 348
Estimated public transport demand	10%	31%	61%	78%	91%
Actual public transport demand recorded	10%	20%	50%	80%	90%

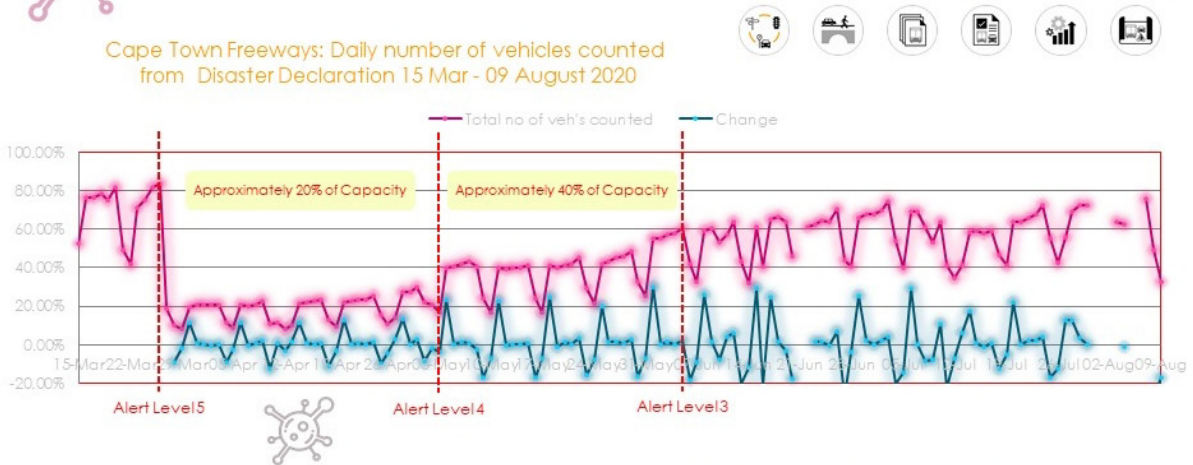**Figure 6: Informants and Scenarios**

4.2   Road Network and Infrastructure Management

One of the most interesting sections of the dashboard, presented graphically, relates to how the City's road system responded to the different COVID-19 alert levels (Alert Levels) in terms of usage, congestion levels and crashes. As indicated in Figures 7 and 8, it also reflected the traffic signal information as vandalism and theft increased significantly during the initial hard lock down and subsequent higher alert levels thereafter.

Due to the high risk unsanitary conditions resulting from the spread of the Virus, it was very important to monitor the City's road infrastructure performance during the different alert levels. Blocked storm water inlets, littered retention ponds, sewer/grey water seepage or overflows and flooding posed a real health risk to those residing in close proximity had to be attended to as and when needed. Other infrastructure challenges such as potholes

and stolen storm water grids and covers were reported, including reports relating to the fact that these could not be promptly attended to due to limited availability of road repair staff given the Disaster return to work restrictions.

Figure 7: Road Usage and Congestion

Figure 8: Incidents and Crashes

4.3   Subsidised Operations

As indicated elsewhere in the paper, the City is responsible for the MyCiTi bus and Dial-A-Ride services and the DTPW for the GABS services. As illustrated in Figures 9 and 10, the usage of these services due to the strict directives governing the times during which these services could operate, was monitored very closely to ensure the services operated optimally within the prescripts and that passengers using these services complied with the COVID-19 regulations and directives.
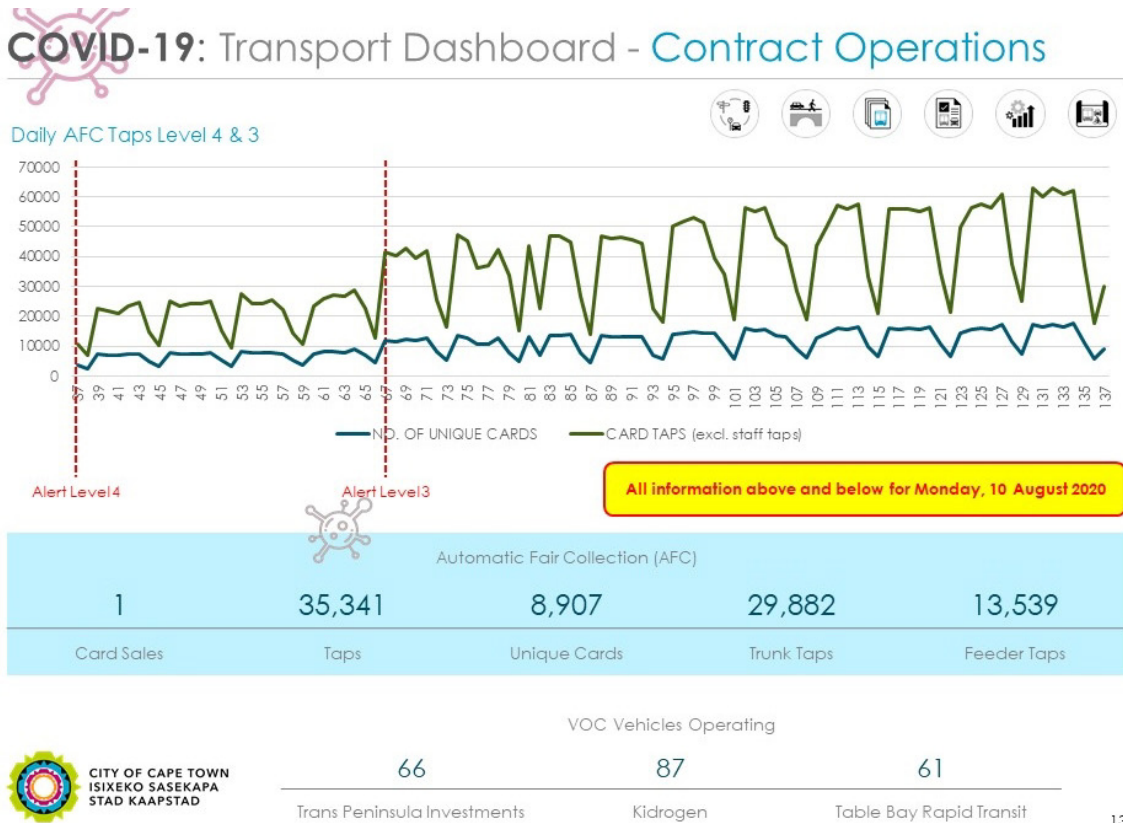

Figure 9: MyCiTi Operations

Figure 10: GABS Operations

4.4   Public Transport Infrastructure Performance

Public transport facilities, which include minibus taxi ranks, bus termini and stations had very strict prescripts as part of the regulations and directives to adhere to in order to ensure a hygienic and safe passage through the facilities. It is important to note here that public transport facilities are where large numbers of passengers congregate to board a minibus taxi or bus or to transfer between different modes of public transport on their way to work or back home. It was therefore of paramount importance to ensure that the facilities, vehicles, operators and passengers complied with the Disaster prescripts in the COVID-19 Regulations. This was achieved through physical distancing demarcation and awareness campaigns as well as extensive sanitising at all public transport facilities and in vehicles that were operational during the Disaster.

As indicated in Figure 11 below, apart from monitoring passenger numbers of the subsidised service, minibus taxi vehicle and passenger numbers were also closely monitored in the morning, inter and afternoon peak.
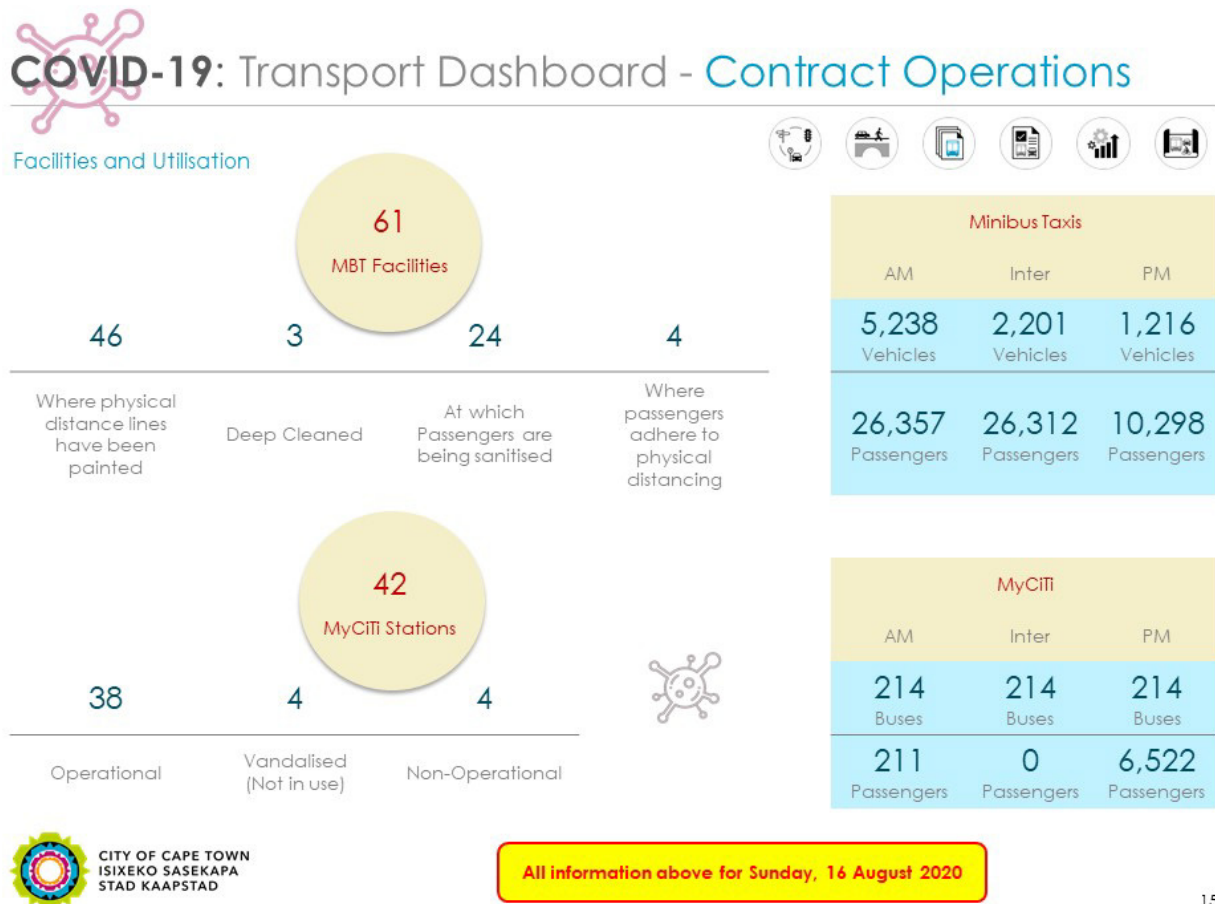

Figure 11: PT Infrastructure Performance

4.5   Rail Services

Limited rail services only came back on stream in the third quarter of 2020 and were subjected to very stringent COVID-19 Disaster prevention compliance criteria set down by the National Rail Regulator. This criteria, made it virtually impossible for the rail service to operate let alone optimally or for any profit. As shown in Figure 12 below, due to continued vandalism of rail signalling equipment and cables, the rail service was crippled on many

days and has never recovered to any acceptable level due to the extensive vandalism, theft and damage of infrastructure, cables and equipment during the Disaster.

COVID-19: Transport Dashboard - **Joint Transport Coordinating Committee**

PRASA and Metrorail Operations

Date	Scheduled Trains	Cancelled Trains	Actual Trains	On –Time %	Remarks/Comments
7 August 2020	34	0	34	41%	Delays due to signals, manual authorizations
8 August 2020	14	0	14	36%	Delays due to signals, manual authorizations
9 August 2020	0	0	0	0	No train service (Public Holiday)
10 August 2020	0	0	0	0	No train service (Public Holiday)
11 August 2020	34	0	34	41%	Delays due to signals, manual authorizations
12 August 2020	34	10	24	15%	Delays due to signals, manual authorizations & fibre cables vandalized between Kuilsriver and Bellville and stolen at Peter Barlow Bridge.
13 August 2020	34	0	34	53%	

Date	Day	Scheduled Trains	Actual	Revenue %	Revenue		Tickets	Comments
2020/08/07	Friday	34	34	11%	R	12,429	1,449	
2020/08/08	Saturday	14	14	2%	R	1,748	195	
2020/08/09	Sunday	0	0	0	R	0	0	No Service
2020/08/10	Monday	0	0	0	R	0	0	No Service
2020/08/11	Tuesday	34	34	21%	R	23,408	1,489	
2020/08/12	Wednesday	34	24	3%	R	3,842	477	
2020/08/13	Thursday	34	34	11%	R	12,342	1,510	

Source: PRASA and Metrorail

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Action Plans

- Resumption of services from Simons Town and Fish Hoek stations towards Cape Town and Cape Flats line;
- Resumption of service on North;
- Service resumption plan to be drafted approved and communicated when all regulatory, operational and risk related submissions have been addressed;
- Customer Services readiness for service resumption to be tested;
- Currently no actions are taking place due to all stations been closed with security and station personnel, resulting in zero fare evasion on trains;
- Fare recovery meetings and plans to be activated;
- Engage M&C to assist with creating demand driven marketing strategies;
- Analyze service monitoring reports submitted to us by Marketing;
- Short term solution for transport is critical to our success;
- Security deployment on late trains to be resolved; and
- Ongoing inspections by Inspectorate to highlight and deal with non-conformances.

37

Figure 12: Rail Operations

4.6   Airport Performance

Air travel only commenced during lock down level 3, making a very slow recovery of mostly domestic travel within South Africa and facilitation of limited repatriation flights returning foreign nationals to their countries of origin.

Although air travel did not have a direct impact on the daily commuter movement in the City like Metrorail, GABS, MyCiTi and minibus taxi services: it was important to keep track of the COVID-19 compliance measures in place at the Cape Town International Airport in the interest of the limited air travelling public.

4.7   Transport Information Centre

The City's Transport Information Centre (TIC) played a critical role in dealing with day to day enquiries from members of the public in terms of scheduled bus service and train schedules - bearing in mind that these at the onset of the Disaster changed frequently as alert levels changed and impacted the scheduled bus services in particular significantly. As illustrated in Figure 14 below, the lack of passenger, operator and infrastructure compliance in terms of the disaster management regulations and directives were also reported through this forum and then disseminated for the necessary action to be taken.

Figure 13: Air Operations

Figure 14: TIC Call and Case Reporting

5. CONCLUSION

The Disaster caught the different spheres of government, and the broader public in South Africa for that matter, off guard with all having to respond to the lockdown in their own unique way rather quickly and efficiently.

The collaboration between the DTPW and the City in the form of the TCC allowed a quick and decisive response in the public transport sector to ensure facility, operator and vehicle compliance as well as passenger protection against the spread of the Virus.

This collaboration ensured a regular information flow between the two spheres of government making it easy to report on how the transport sector was responding to the different challenges during the implementation of the regulations and directives. This collaborative information flow made reporting to administrative and political principals in the WCG and the City easy, and any critical issues could be highlighted and addressed swiftly between the WCG and the City.

From the above, it is clear that a collaborative approach, adequate monitoring, innovation in responding to mitigate the risks of a never before experienced pandemic and a succinct and very graphical reporting mechanism, ensured that both the DTPW and the City kept their finger on the pulse at all times during the course of the pandemic.

6. REFERENCES

City of Cape Town, Freeway Management System (FMS) Monthly Operations Report (No Date).

City of Cape Town, Transport Information Centre (TIC) Daily Report (No Date).

Passenger Rail Agency of South Africa (PRASA), Weekly Rail Report (No Date).

South African Government Novel Coronavirus COVID-19 - Disaster Management Act, Regulations, Directions and Guidelines (Several Dates). Available at: https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19?gclid=EAIaIQobChMI_qnqqLf_9wIVCj-RCh2ofAu4EAAYASAAEgLcvPD_BwE

Western Cape Government: Department of Transport and Public Works, Daily COVID-19 Report (No Date).