

## GPDRT: OCTOBER 2021 TRANSPORT MONTH

**ATTENTION: PG Students  
Faculty of Science  
Department of Transport & Logistics**

Transport Month is an annual National event held throughout the month of October to promote public transport, road safety and environmental awareness.

Contribute to creating a green transport solution for South Africa by being part of a Datathon hosted by the Department of Transport and UJ.

PG students will have the opportunity to present their innovative ideas and stand a chance to win a prize.

Participation is restricted in line with covid protocol. Transportation to and from the CSIR will be provided.

Register here: [lkwange@csir.co.za](mailto:lkwange@csir.co.za)

Kindly complete information form: <https://forms.gle/rt6r33B3PsbCotY67>

### THE DATATHON

The smart mobility hackathon is aimed at raising awareness on the effects of climate change and promoting cleaner mobility within the transport sector. It also encourages economic growth and innovation within the green economy and road safety awareness.

The Department of Transport is committed to making a significant impact in reducing Greenhouse Gas (GHG) emissions and contributing to the reduction of South Africa's total GHG emissions by committing to a 5% reduction of emission in the transport sector by 2050. The transformations that are required in the transport sector are challenging, but the benefits will be a more efficient, less congested road network and improved air quality and public health.

**DATES: 26 – 27 October 2021**

Participants will include academics, government and municipal officials, public transport operators, commuters and entrepreneurs.

### DATATHON THEMES

#### 1. Create Public Transport Patronage

Can the public transport system in Gauteng be transformed into an efficient, safe, affordable, reliable, modern and attractive mode of choice?

How can we enhance the public transport experience for commuters and encourage private car users to make the shift to public transport during peak hour and short distance travel?

#### 2. Road Safety

What are the causes of fatalities on our roads and what can be done to mitigate this and make our roads safer for all?

How can we encourage responsible driving on our roads?

### 3. **Reduction of Carbon Emissions**

Are current legislation and policy documents effective in reducing the transport sector's carbon foot print?

How can Government, Private sector business and the general public work together to reduce our carbon foot print in the transport sector and mitigate the effects of climate change.

How can we grown the economy and create opportunities for townships?

### 4. **Transformation of the Taxi Industry**

The Taxi industry is the major transporter of commuters in our Province. How would you transform this industry to enhance the commuter experience and expand business operations for the industry?

### 5. **Non-Motorised Transport**

Can Non-Motorized Transport be integrated into our Public Transport system?

The role on Non-Motorised Transport in creating access to education and economic opportunities in townships and rural areas

### 6. **Maintaining Public Transport Facilities and Road Infrastructure**

Sustainable and environmentally friendly solutions for building, maintaining and upgrading our road infrastructure and public transport facilities.

### 7. **Technology and Innovation for the Transport Sector**

How would you improve current transport systems to make it efficient, reliable, affordable and environmentally friendly?

### 8. **Freight Transport**

Is the current transport freight system efficient?  
What would you change?

## **CURRENT STATUS**

Public transportation systems are transforming to increase ridership confidence and overall sustainable travel post-pandemic:

#### 1. Digital Monitoring

The potential of digital applications and solutions for public transit is endless. Sensing devices technology are becoming more robust and low-cost, providing useful data for municipalities, fleet managers and even riders.

Telematics technology is also becoming a way to provide transportation fleet managers with real-time data to help identify and address things like temperature control, fuel levels, optimal driving routes, operating efficiencies and more. Predictive analytics allows for quick maintenance and better energy management, which is critical to addressing environmental impact.

In addition, riders can benefit from sensing technology and data analytics. Commuters can use this data to better plan their journeys. However, not everyone can afford to plan their commute according to when a bus is less crowded. That's why innovation in air cleaning technologies is needed to ensure that even full buses can be safe.

### 2. Air Purification Systems

At the height of the Covid-19 pandemic, transit agencies put certain protocols in place (mandatory mask-wearing, social distancing, frequent sanitization procedures, activation of ventilation systems) to help passengers feel safer.

However, all these procedures still might not guarantee that the air is free of airborne pathogens that could cause illness. Air purification technologies can help address concerns about contaminants in the air that potentially make it less healthy. They can also help reduce certain volatile organic compounds (VOCs) in the air that contribute to bad odours, therefore creating a better and more comfortable passenger experience.

The pandemic has certainly helped accelerate indoor air quality innovation for buildings and other indoor spaces, but the transportation sector can also benefit. There's a caveat, of course the environment inside a public transit vehicle, including how the air circulates, can be very different from that of an office or restaurant. Due to the high occupant density, these spaces are also extremely vulnerable to the transmission of airborne diseases.

### 3. Electrification of public transport systems

The environmental impact of transport systems is also important when promoting healthier, sustainable transit. Cleaner and more energy-efficient transit is a result of two actions: When there is less car travel due to increased public transport usage, and a transition from fossil fuels to alternatives like electric powertrains.

Electrifying the bus sector can also help drive more equity among communities and improve general public health. For clean air policies and electrification initiatives to take effect and be impactful, however, an increase in ridership is also required. After all, a full bus is friendlier to the environment than an empty bus.

It is sustainable innovation and advancements like digital monitoring, air purification systems and electrification along with greater access that will help increase public transport usage and accelerate cities' carbon neutral efforts. We also need to better communicate what is being done to ease fears and rebuild confidence in mass transit as a safe, environmentally responsible way to commute.

