



# NLCC CORRIDOR MONITORING:

ONE VERSION OF THE TRUTH

*Work Stream 2*



033 343 1007 | [enquiries@crickmay.co.za](mailto:enquiries@crickmay.co.za)



Enhancing Trade and Logistics Efficiency Throughout the Supply Chain



## Background

The National Logistics Crisis Committee (NLCC) has been established to address the ailing state of logistics in South Africa. Under Workstream 2, this report is shared, to highlight and address inefficiencies related to road transport operations and border transit.

The President chairs the committee and it meets every six weeks. The government is leading this effort in collaboration with business and social partners. In the long term, the government is also reforming South Africa's logistics system to enhance efficiency and competition. The NLCC is part of a broader effort to improve the performance of the freight logistics system in South Africa. Its mandate includes **(1)** upgrading equipment and infrastructure, **(2)** improving operational performance, **(3)** increasing the availability of rolling stock, and **(4)** securing the rail network. Under Workstream 2, this report is shared to highlight and address inefficiencies related to road transport operations and border transit.

Why is this important, you may ask? Well, logistics costs account for more than half of the average value of all commodities and products in South Africa. A contributing factor is the additional costs incurred due to port and border post inefficiencies coupled with dilapidated rail and road infrastructure, which isn't sustainable. South Africa's competitiveness is at stake, and the redirection of import and export freight to more efficient corridors poses a significant threat to the South African economy.

Our focus is to ensure security and address congestion on strategic road transport trade corridors and land borders and as such our goals are:

1. ***Safety:*** Improve freight transportation safety on the major South African corridors carrying road freight
2. ***Reduce the cost of doing business:*** Reduce the cost of logistics, making South Africa a global supply chain competitor
3. ***Freedom of movement:*** Reduce congestion, improve system efficiency and performance
4. ***Freedom of choice:*** Provide transportation choices and improve system connectivity for all freight modes

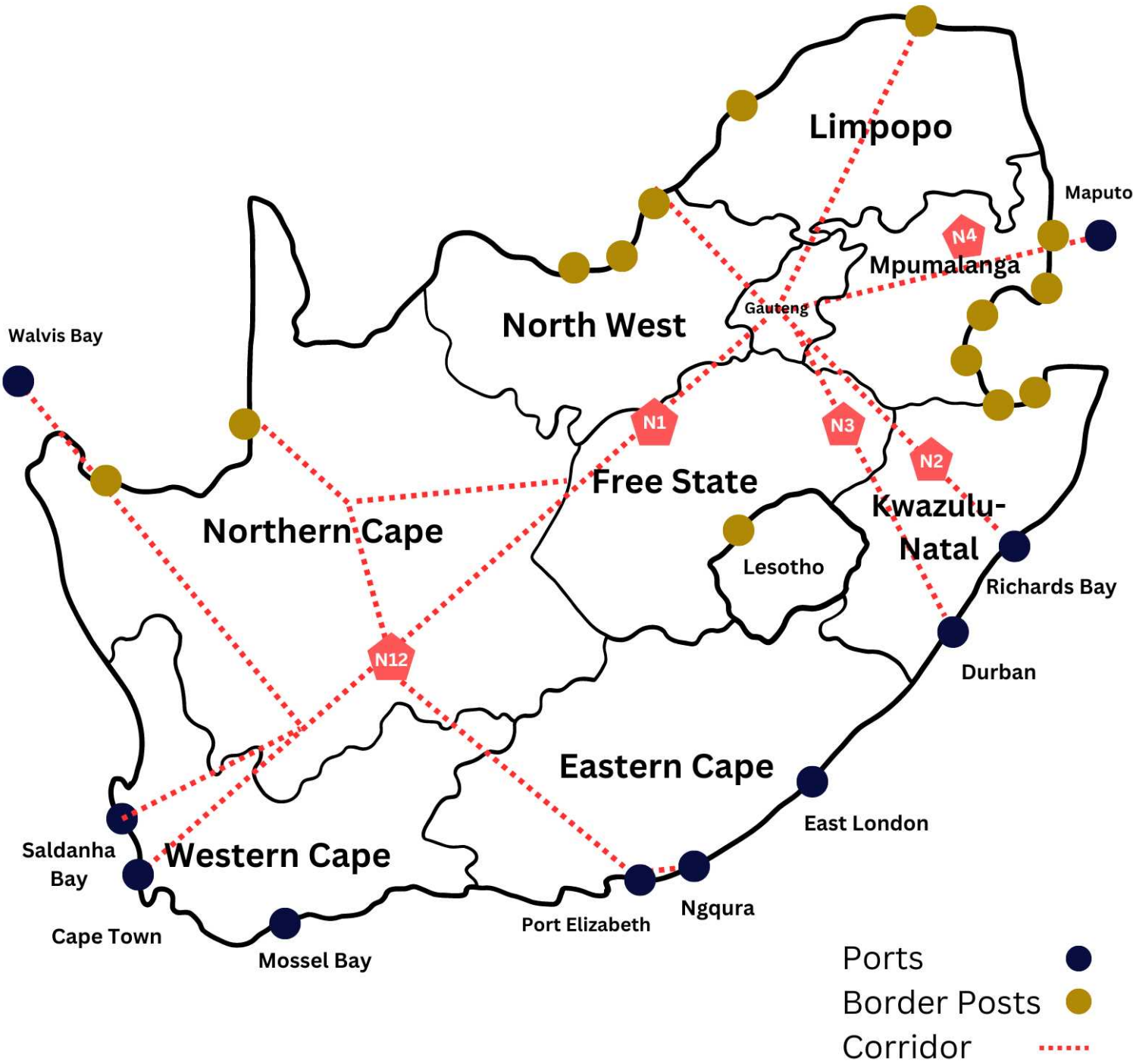
Five guiding principles have been identified to direct our collective work:

1. ***Supply chain corridors compete:*** Corridors are often avoided when the risk of using the corridor increases either, through poor behaviour by road users, increased transit times or an increase in costs.
2. ***Collaboration:*** A supply chain encompasses various diverse players who must collaborate. Each player within the corridor has the potential to positively or negatively influence each other, given the predominantly public and shared infrastructure.
3. ***Single version of the truth:*** To foster effective problem-solving and improvement, a unified understanding of the entire corridor is crucial, ensuring that discussions rely on agreed facts rather than emotions and that problems are not addressed in isolation. Furthermore, as all aspects are interconnected, any change will have widespread impacts, emphasising the importance of factual evidence as the basis for decision-making
4. ***Corridor visibility:*** Enhanced corridor visibility will facilitate the detection and resolution of blockages, leading to improvements in fluid ratio, safety, impact, and risk management. When coordination is founded on factual information and reinforced by accountability, it will pave the way for improved flow and utilisation of the corridor's supply chain.
5. ***Accountability:*** The principle of self-regulation and accountability is crucial because each player bears the responsibility to contribute positively to the corridor's supply chain performance and way of life, ensuring they neither add nor detract from its overall well-being

As you engage with this report, please send us your feedback. Consider it as an invitation to join hands with us as we work together in ushering a new era for South Africa and its citizens.

***Yours sincerely, the NLCC Workstream 2 Team***

## Areas of interest



As an indicator of our logistics network health we measure and monitor the following:

- ***Corridors:*** The average speed and duration to traverse a corridor. The higher the speed the shorter the transit time, which means more trips in a given period. On specific high volume corridors accidents and other road related incidents causing delays and congestion are also monitored.
- ***Borders:*** Are complex and reliant on export and import compliance procedures and as a result the time to cross a border and queues occurring at borders are measured as an indication of border efficiency
- ***Ports:*** Most corridors terminate at a port, a significant entry and exit point for any country. The average port call time is monitored, which is the time a vessel spends at a port. Time spent at the port by Heavy motor vehicles (HMV's) is also measured, together with vessel bypasses, both of which are an indicators of port congestion.

## Definitions used in this Report

- **% Change Last 7 Days vs Previous 7 Days:** compares the performance or value of a certain variable or indicator over the last 7 days to its performance over the previous 7 days, expressed as a percentage.
- **Baselines:** Based on performance and refers to the established benchmarks or standards derived from the performance data recorded in the year 2023.
- **Border queue length:** is the total distance (measured in KM) of the HMV queue at a border post waiting to cross. It is determined by analyzing sampled HMV GPS data. It measures the distance from the border post where these vehicles are congested and stationary. This data helps in assessing the extent of congestion and queuing at the border, allowing for better management of traffic flow and border operations.
- **Corridor incidents:** refer to reported cases of various events such as protest actions, accidents, and congestions that have been recorded along a specific route or area within a corridor.
- **HMV:** Stands for Heavy Motor Vehicle. This term is commonly used to refer to large trucks or vehicles used for transporting goods or materials on roads.
- **HMV RFA VCI 18 Annual Fixed Costs:** refers to the annual fixed costs as published by the Road Freight Association (RFA) for a Vehicle Concept 18 which denotes a flat-deck combination comprised of 7 axles.
- **HMV Fixed costs per km:** refers to the division of the RFA VCI 18 annual fixed costs, by the achievable annual mileage obtainable based on the measured duration it takes a HMV to traverse a corridor including terminal times, taking into consideration 15 working hours per day over 300 days in year.
- **HMV Terminal Time Cost:** refers to the total RFA VCI 18 annual fixed costs per hour incurred based on the total time taken at the terminal.
- **HMV Border Crossing Time Cost:** refers to the total RFA VCI 18 annual fixed costs per hour incurred based on the total time taken to cross a border.
- **HMV Port Penalty Cost:** refers to the total RFA VCI 18 annual fixed costs incurred using the average Port terminal time compared to the median (normal) port terminal time.
- **HMV Trip Penalty Cost:** refers to the total RFA VCI 18 annual fixed costs incurred on a round trip, using the average performance of a corridor compared to the median (normal) performance on a corridor.
- **HMV Border Penalty Cost:** refers to the total RFA VCI 18 annual fixed costs incurred using the average border crossing time compared to the median (normal) border crossing time. The border precinct could extend few kilometers from the actual border.
- **Inbound Flow:** Refers to the movement of traffic and goods along a corridor towards a specific destination, typically a port or terminal and denotes the direction of transportation.
- **OBC:** stands for On-Board Computer, and GPS stands for Global Positioning System. OBC/GPS data refers to the information collected and transmitted by OBC systems installed in vehicles or on equipment.
- **Port precinct:** refers to the area surrounding a port where various activities related to maritime trade and logistics take place. It encompasses not only the port facilities themselves, including docks, terminals, and warehouses, but also the surrounding infrastructure such as roads, rail lines, and storage yards.
- **Port Call/Total Days at Port:** Refers to the duration a vessel spends at the port, starting from the moment it arrives at anchorage until it departs from the berth. This encompasses the entire period within the port area, excluding any time spent at anchorage if the vessel does not proceed to berth.
- **Terminal Time:** is measured using sampled Heavy Motor Vehicle (HMV) GPS data to track when vehicles enter and exit designated zones or areas of interest within the terminal.

## Definitions continued

- **Road Freight Association Vehicle Cost Index (VCI):** The Vehicle Cost Index (VCI) provides vehicle operating costs based on averages calculated from data available in the public domain from suppliers, and from prescribed / statutory pricing. While every effort has been made to ensure comprehensive and accurate information, the Road Freight Association cannot accept any liability for omissions and errors. The VCI is derived by utilising freely available data sourced from the public domain, a set of assumptions (described on page A of the VCI) and a proprietary methodology designed by the Association, applied by an independent panel of experts. The VCI is not a price calculation tool and is not intended to, and does not, reflect or determine the actual prices that may be charged by RFA members or any transport company rendering transport services.

The Index is published for the use of any Member of the Road Freight Association (RFA), but is not intended to be, and nor should it be, utilised as a price calculation tool. To the extent that it is, the Association strongly recommends that any company so using the Index should do so without reference to any other company (competitor), taking unilateral pricing decisions and without any expectation that any other company (competitor) may or may not be using the Index in similar fashion. The RFA and the author of the survey wish to point out that price fixing is strictly prohibited under the provisions of the Competition Act, 1998. A common arrangement, understanding, agreement or expectation, however informal, even if not expressed, that any two or more companies who are competitors of one another will utilise any provision of this Index for the purposes of in any way aligning their prices (even by only using the costs contained in the survey as a price base), or any component of their price, would be highly illegal and a position not defensible in law.

This VCI may not be sold, copied, referenced or divided and sold onwards without the express written permission from the RFA. The concept, methodology and calculation process are the strict intellectual and product property of the RFA. Should you wish to enquire more about this specific aspect and how it is constructed and used, please contact the RFA at [enquires@rfa.co.za](mailto:enquires@rfa.co.za)

- **Southern African Association of Freight Forwards NPC (SAAFF):** is incorporated as a national non-profit company, in accordance with the Companies Act, 2008 and governed by the Memorandum of Incorporation in that Act. The main object of the company is to promote, encourage and protect the common interests of members, and keep abreast of matters that may reasonably be anticipated as being of relevance to the forwarding and clearing industry.

- **Vessel Anchorage:** refers to the duration a vessel remains at anchor in a port's designated anchorage area, often prior to entering the port.

- **Vessel Berth:** refers to the duration a vessel remains at the quayside during a port visit

- **Vessel Bypass:** The vessel anchors at the port but does not proceed to the intended berth; instead, it moves on without docking.

## Acknowledgements

The report has been put together through a collaborative effort comprised of business and government in support of Workstream 2 under the National Logistics Crisis Committee (NLCC). Special acknowledgement is given to the Council for Scientific and Industrial Research (CSIR), Mix-Telematics, N4 Trac, NetStar, South African Association of Freight Forwarders (SAAFF), The Road Freight Association (RFA) and many other individuals of Workstream 2 for their contributions. Thanks is also given to TradeMark SA, SSATP, The World Bank, SAAFF and BUSA for funding aspects of the Logistics Monitoring System over the past 7 years.

Sponsors such as Bryte are also acknowledged and more detail can be found on our about sponsors page.

Should you wish to gain access to even more detailed information, at either corridor, border or port level please email [enquiries@crickmay.co.za](mailto:enquiries@crickmay.co.za)



# Heavy Motor Vehicle (HMV) Congestion in South Africa Supply Chains

Congestion in the supply chain network can have significant implications, including increased costs, delays in delivery times, reduced customer satisfaction, and disruptions to the overall flow of goods and services.

Congestion can be indicative of several issues, including:

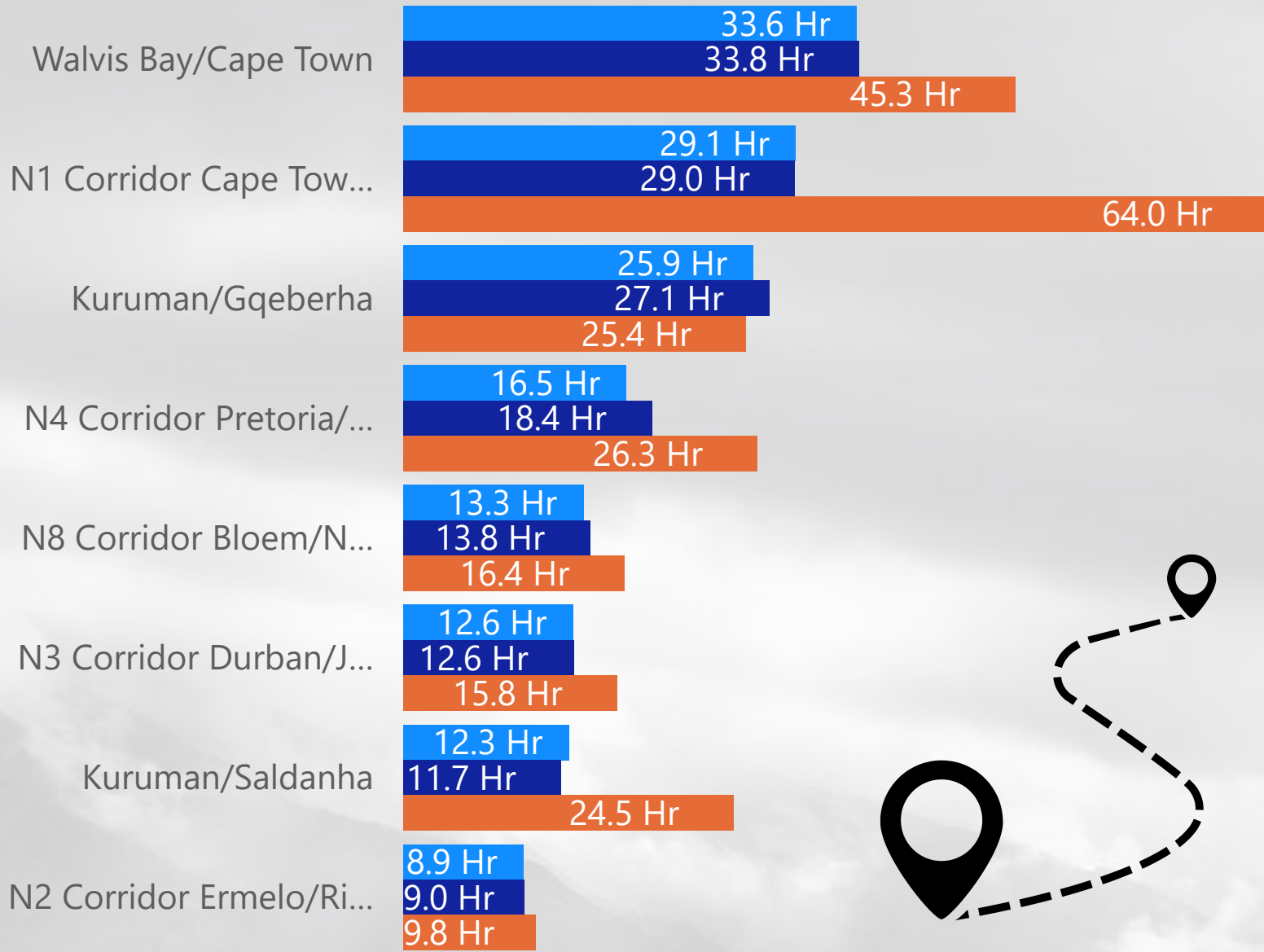
- Inefficiencies
- Capacity constraints
- Poor Planning
- Infrastructure limitations
- Force majeure

When measuring congestion in the context of corridor movements, border posts times, queueing, some key measurements include:

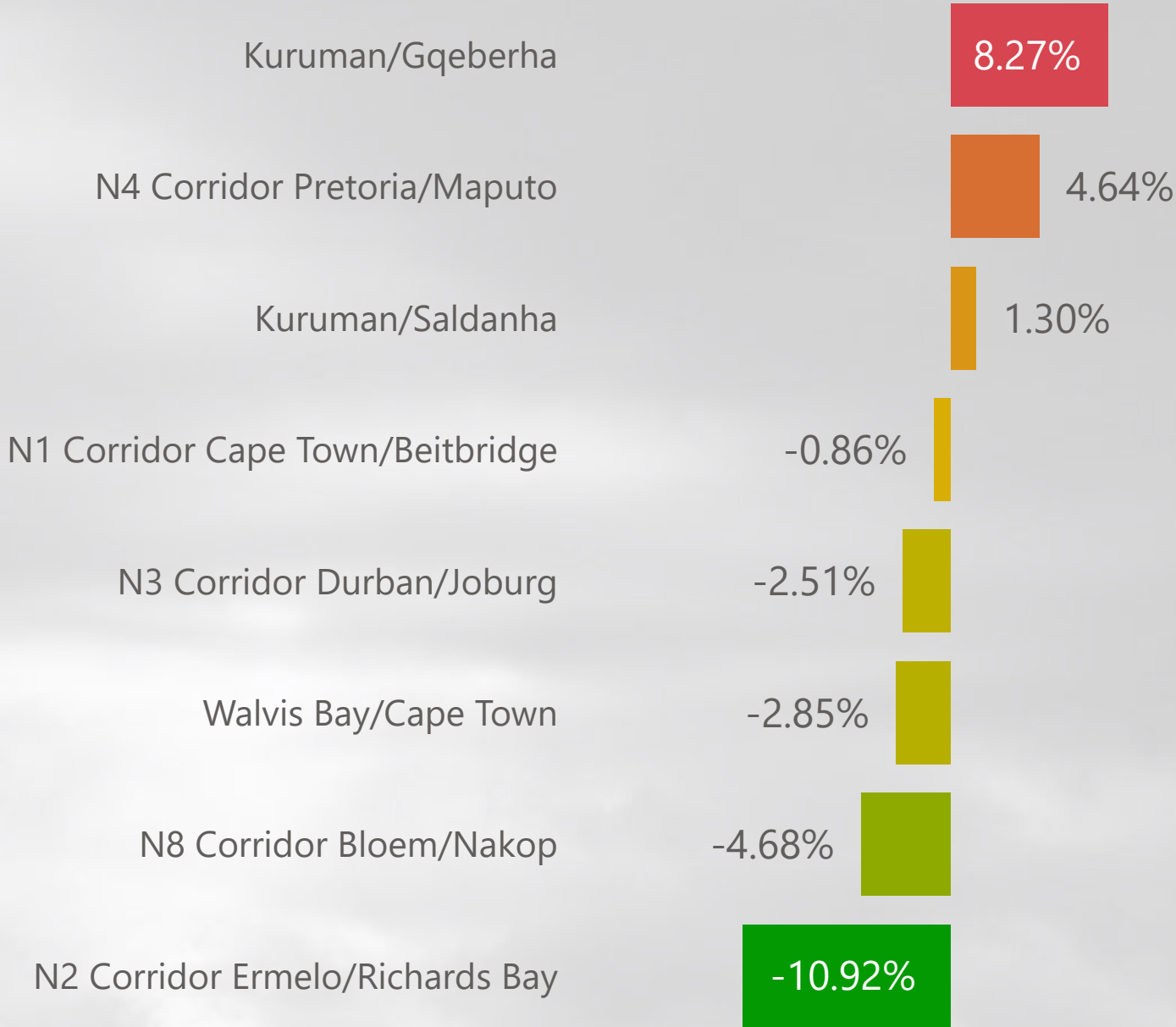
- Queue Length (*Measured distance from border using GPS data*)
- Queue Duration (*Expected processing time for Border queue*)
- Border Crossing Time (*Border crossing time*)
- Corridor Transit Time (*Total corridor time on corridor for HMV's*)

Reporting Period : Mon Jan 13 2025 - Sun Jan 19 2025

## Major Transport Corridor Transit Times



## Week on Week Percentage Change in Corridor Time

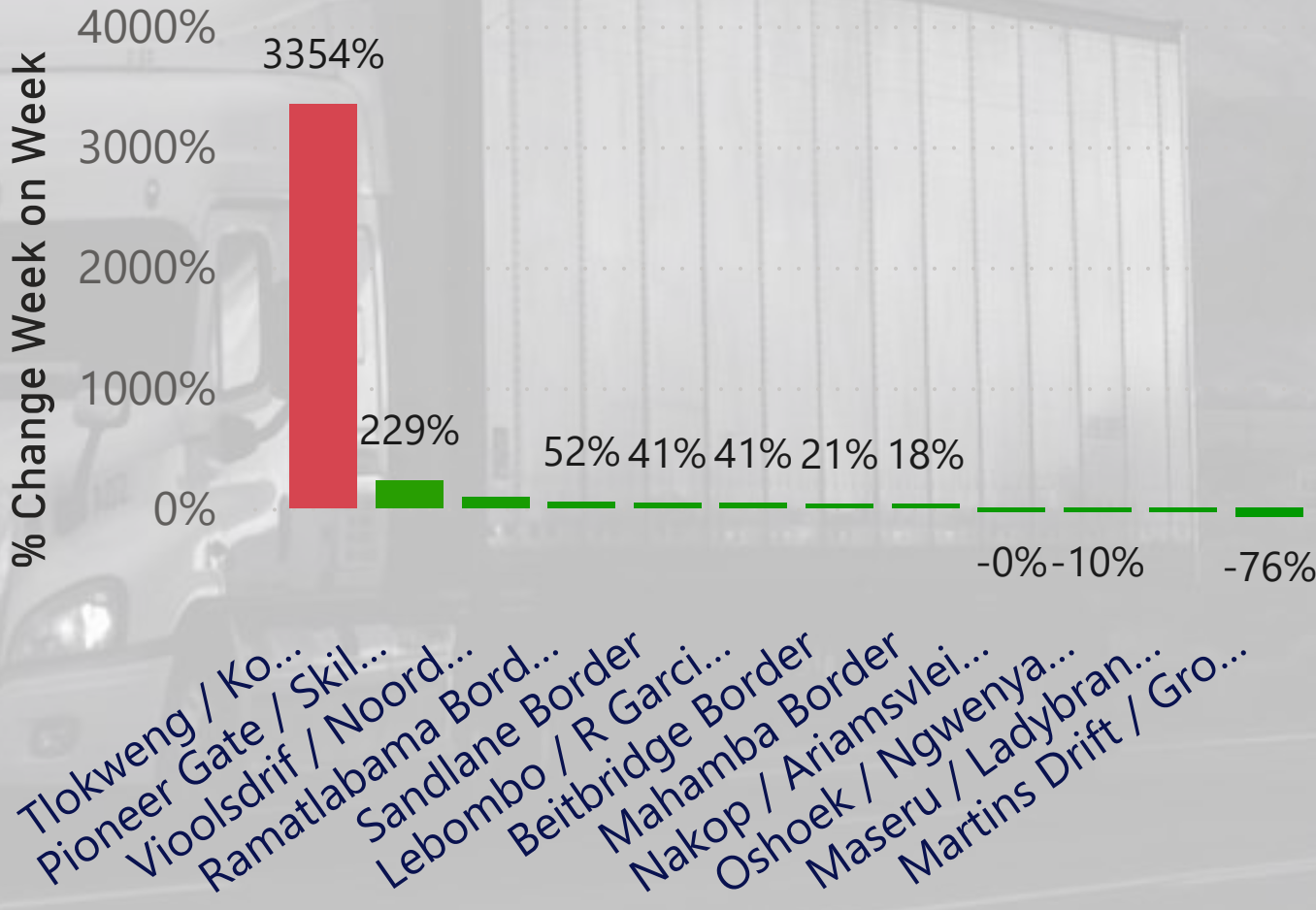


## Border Queues

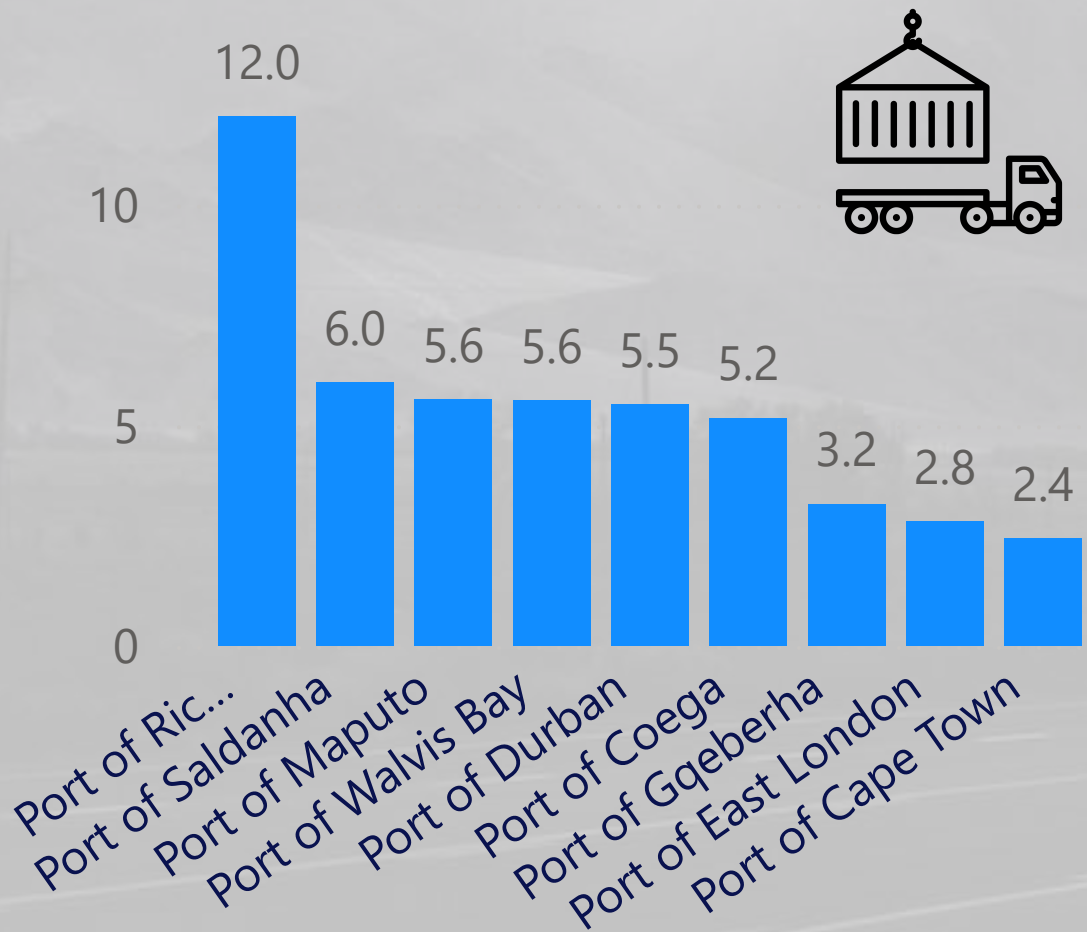
Last 7 Days



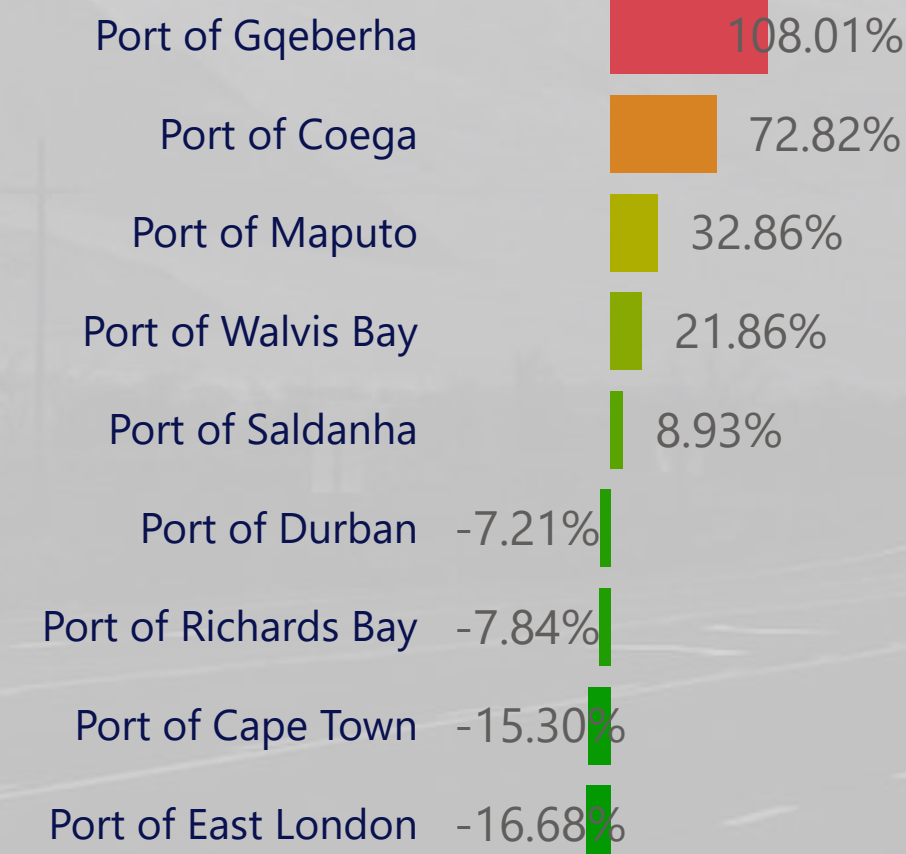
## Week on Week Percentage Change in Queue



## HMV Turnaround Time by Port (Hrs)



## Week on Week Percentage Change in HMV Turnaround Time by Port



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8 Corridors Monitored

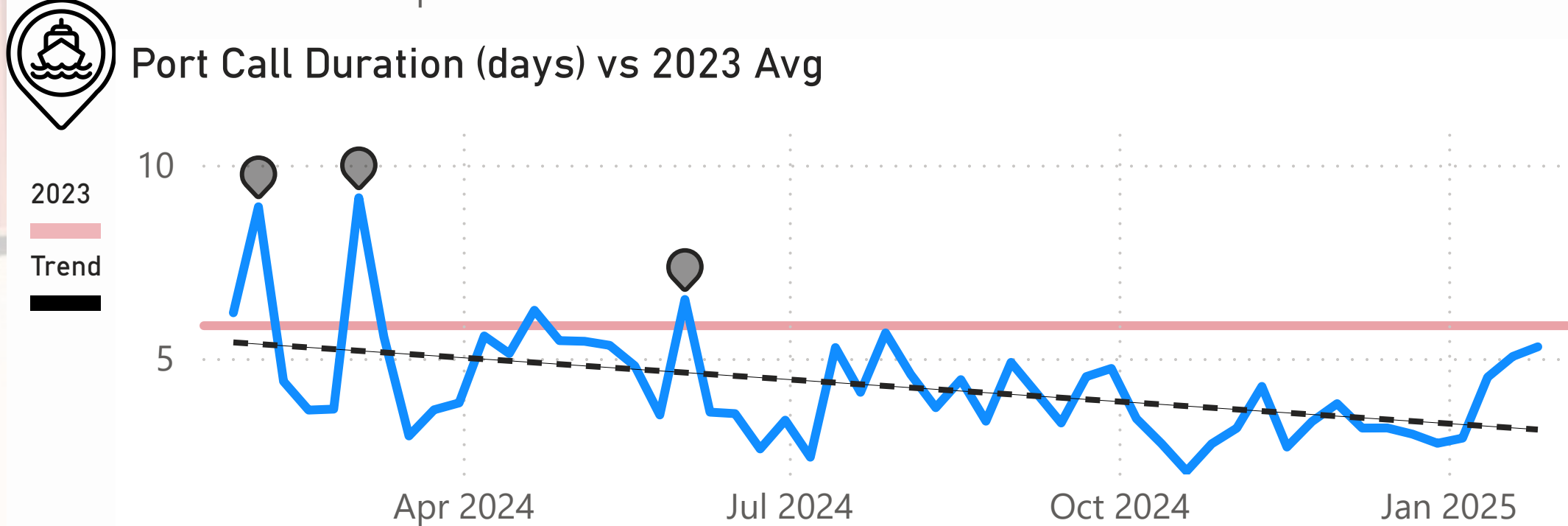
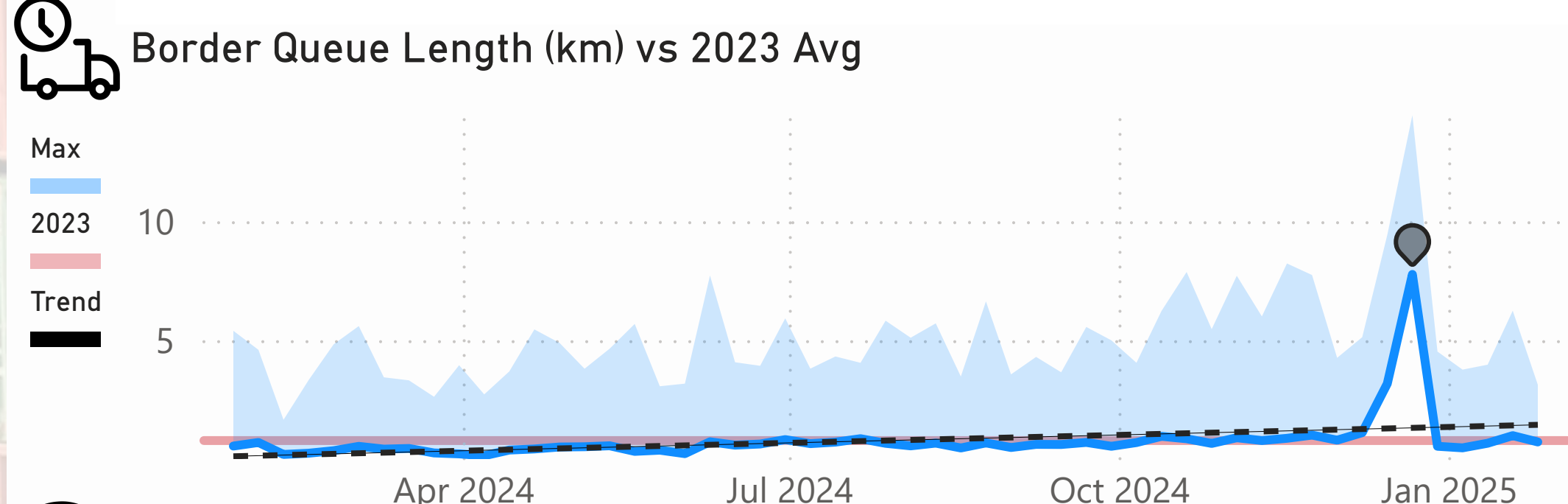
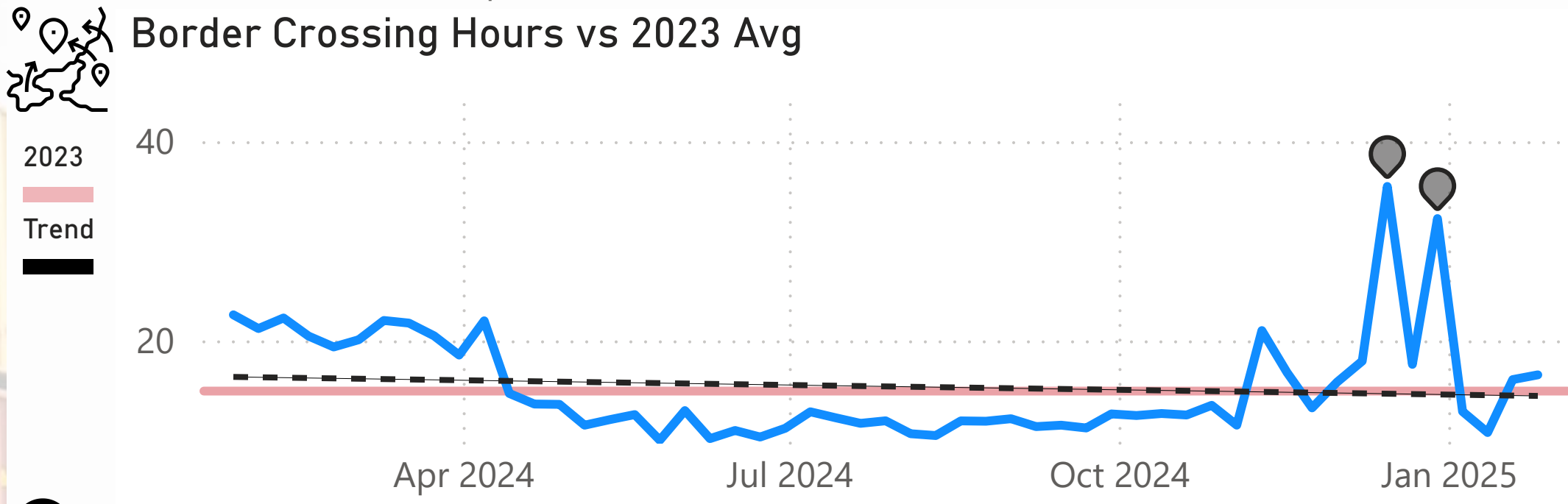
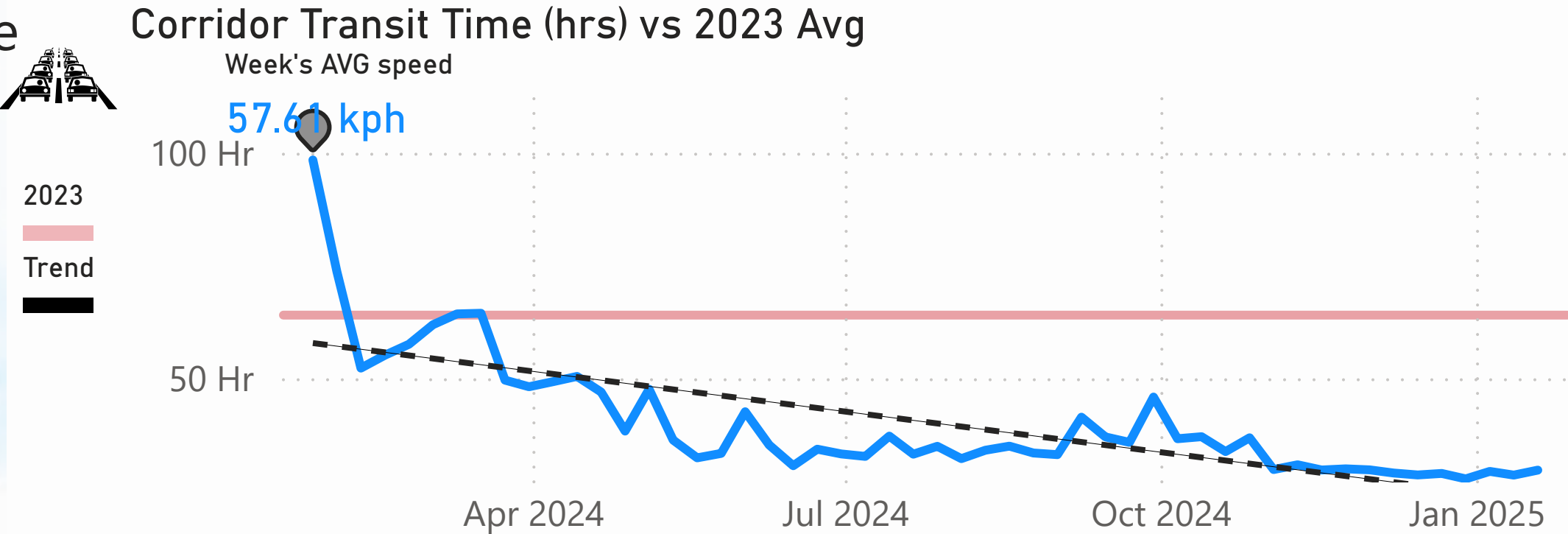
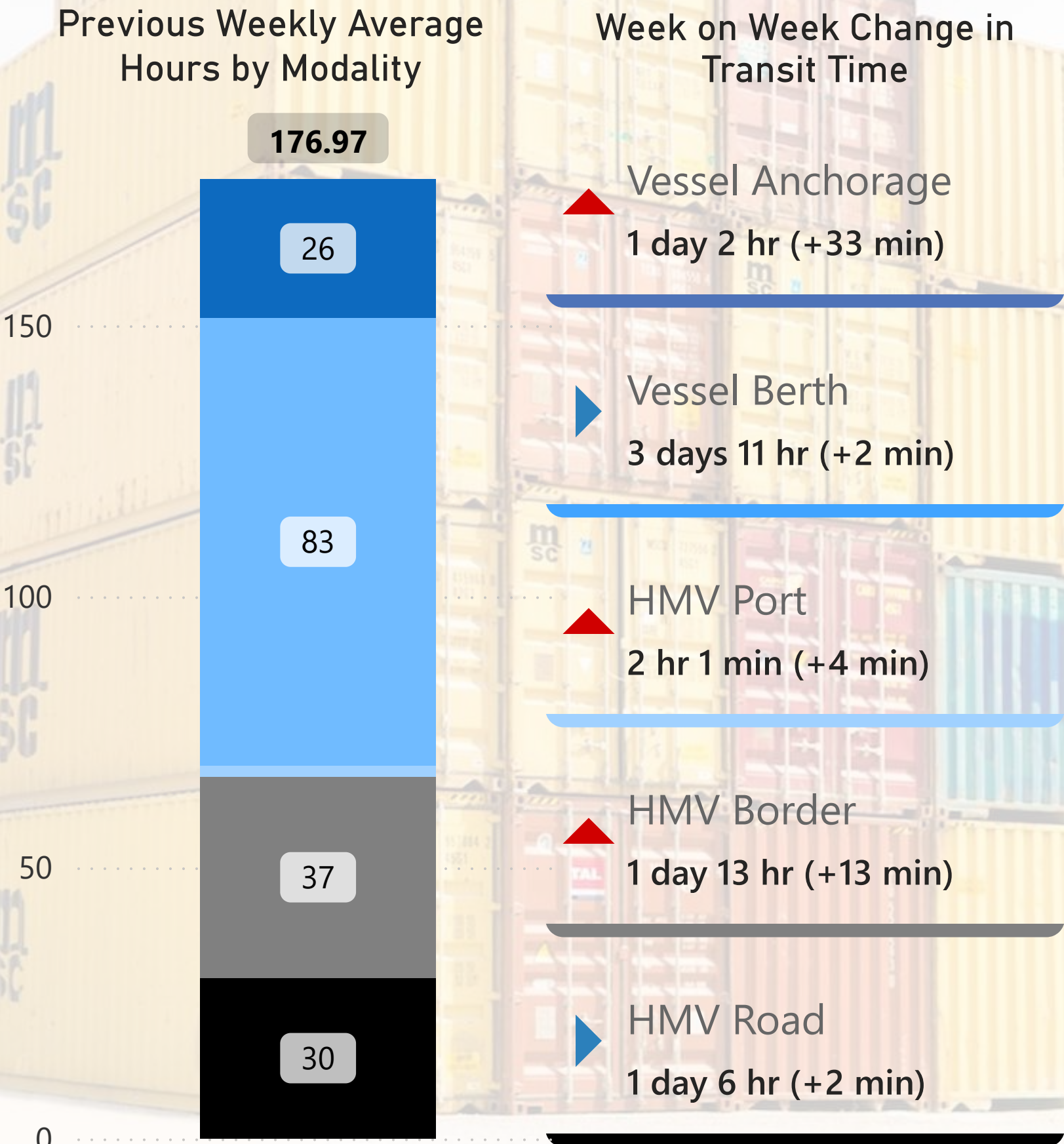
5311 Corridor Incidents Recorded

956052 Sampled Individual Trips

N1 Benchmark Performance - Cape Town to Beitbridge

Understanding the dynamics of transport corridors is crucial for optimizing supply chain operations and fostering seamless trade flows, driving economic growth and prosperity regionally and globally.

- This is explored by unpacking key elements such as:
- Corridor Travel Time by Heavy Motor Vehicle (HMV)
  - Modality Performance: eg. Port Call = Time Vessel Spend at Port
  - Key Infrastructure or logistics hubs: e.g. HMV time through Border Post



The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | R17,583.92 ↓                |
| Dec, 2024 | R18,055.37 ↓                |
| Nov, 2024 | R18,884.02 ↓                |

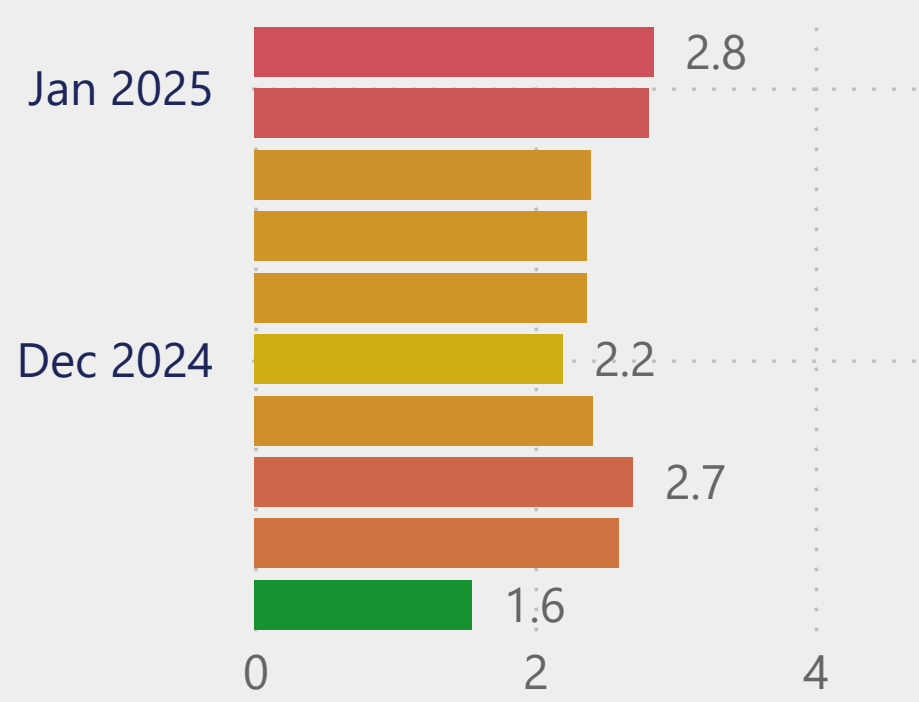
| Date      | HMV Border Penalty Cost |
|-----------|-------------------------|
| Jan, 2025 | R4,535.72 ↓             |
| Dec, 2024 | R6,914.94 ↑             |
| Nov, 2024 | R4,307.22 ↑             |

| Date      | HMV Port Penalty Cost |
|-----------|-----------------------|
| Jan, 2025 | R966.71 ↓             |
| Dec, 2024 | R1,092.14 ↑           |
| Nov, 2024 | R987.24 ↓             |

Split of Trade by Transport Mode

| Date      | Maritime | Road  |
|-----------|----------|-------|
| Nov, 2024 | 63% ↓    | 37% ↓ |
| Oct, 2024 | 65% ↑    | 35% ↑ |

HMV Port Turn Around Time



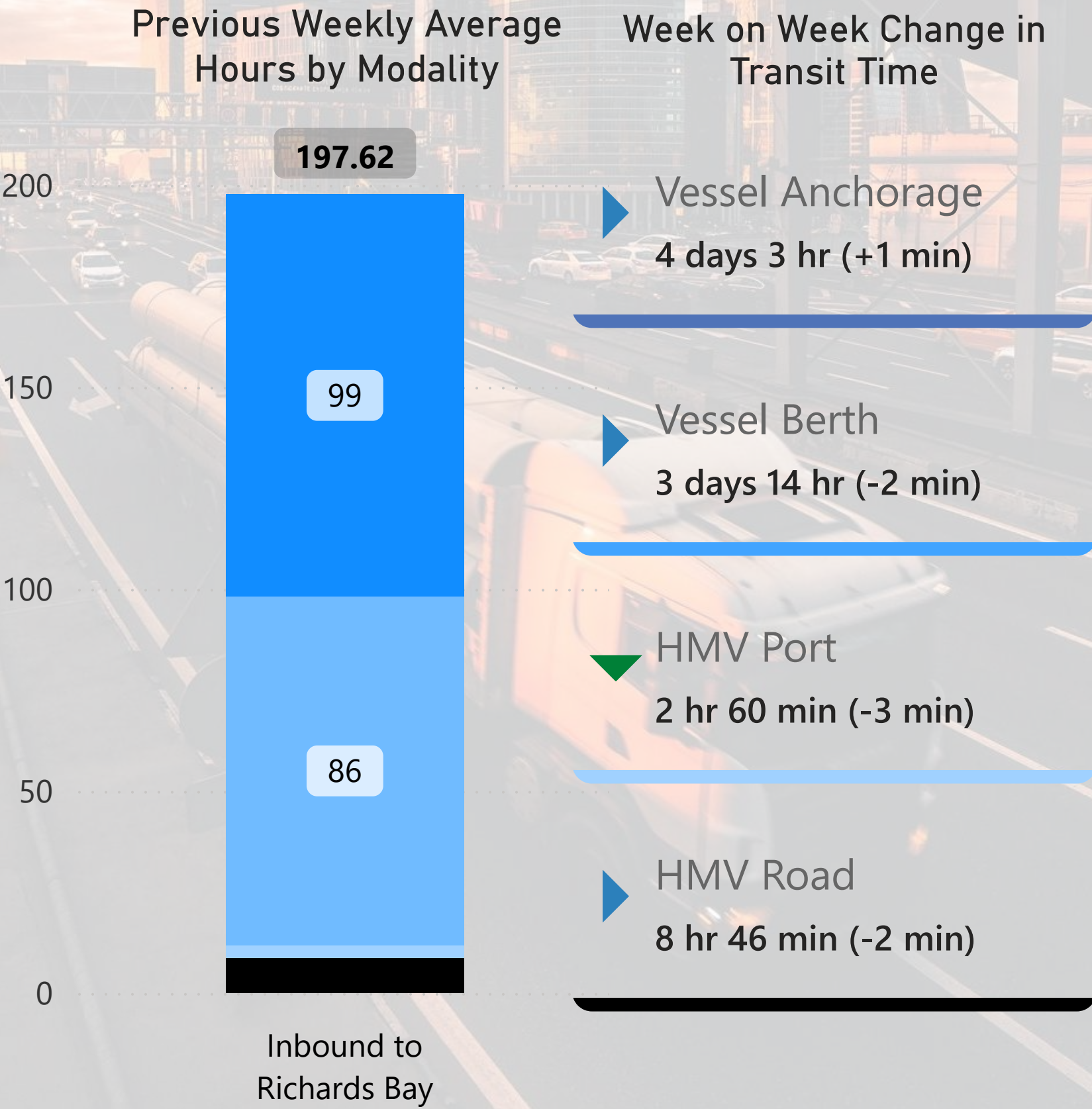
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# N2 Benchmark Performance - Ermelo to Richards Bay

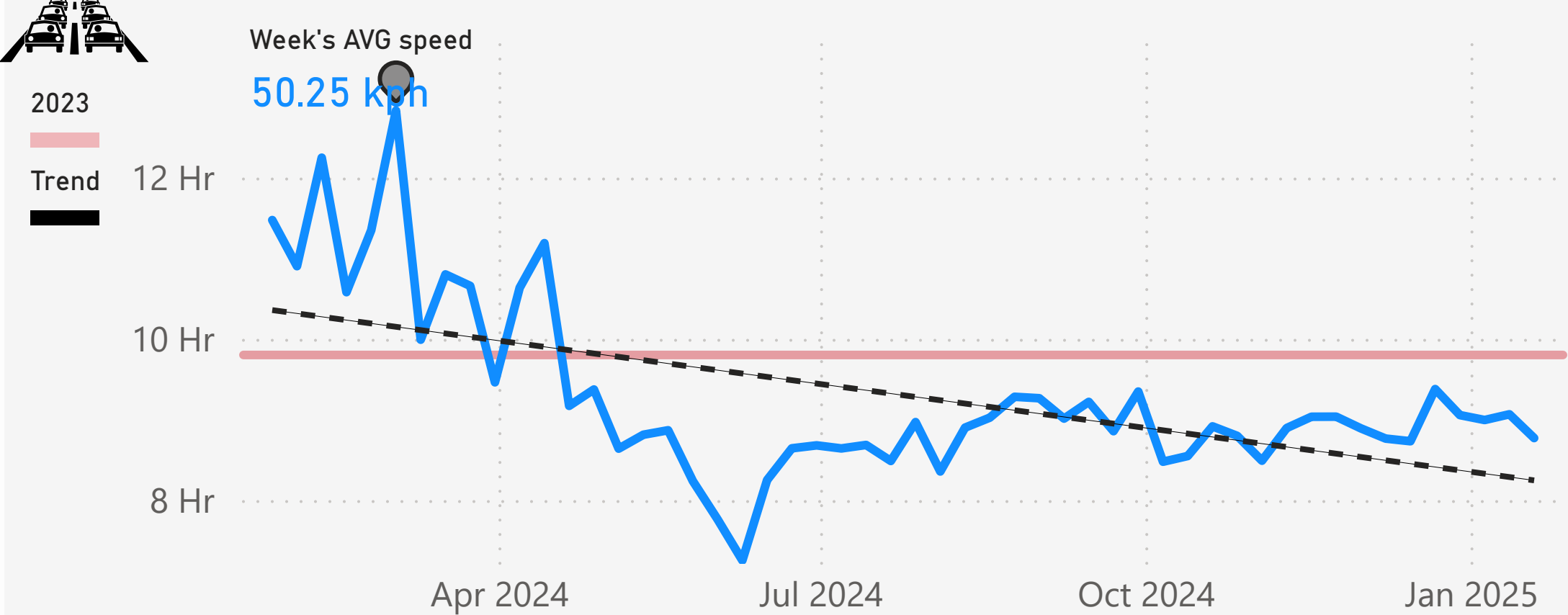
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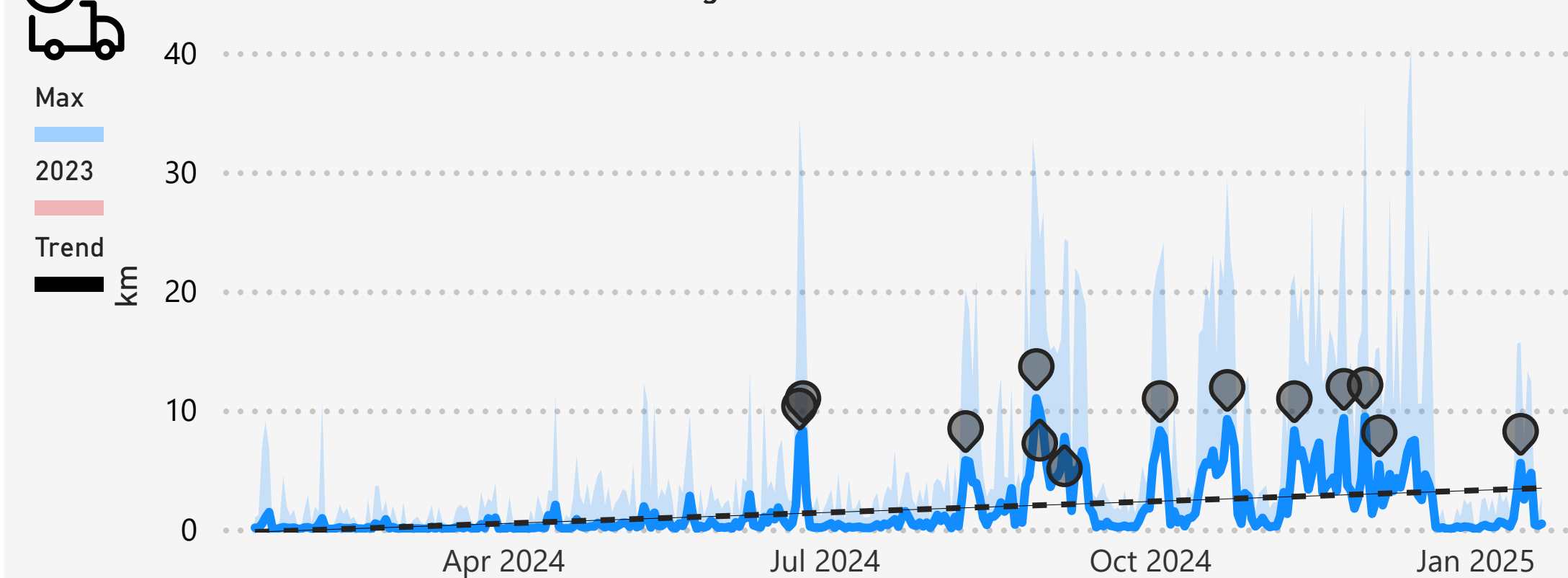
- Corridor Travel Time by Heavy Motor Vehicle (HMV)
- Modality Performance : e.g. Port Call = Time Vessel Spent at Port
- Key Infrastructure or logistics hubs : e.g. HMV time in Port precinct



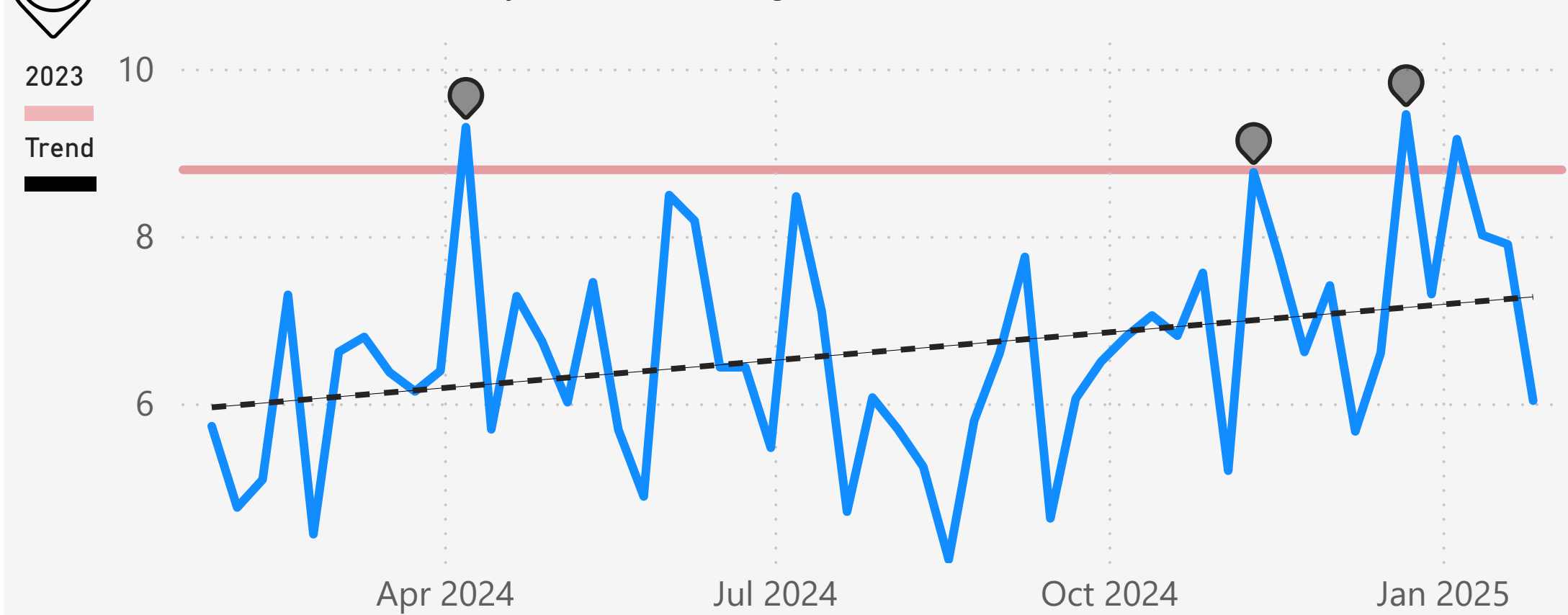
Corridor Transit Time (hrs) vs 2023 Avg



Southbound Inbound to Port Queue length (km)



Port Call Duration (days) vs 2023 Avg



The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

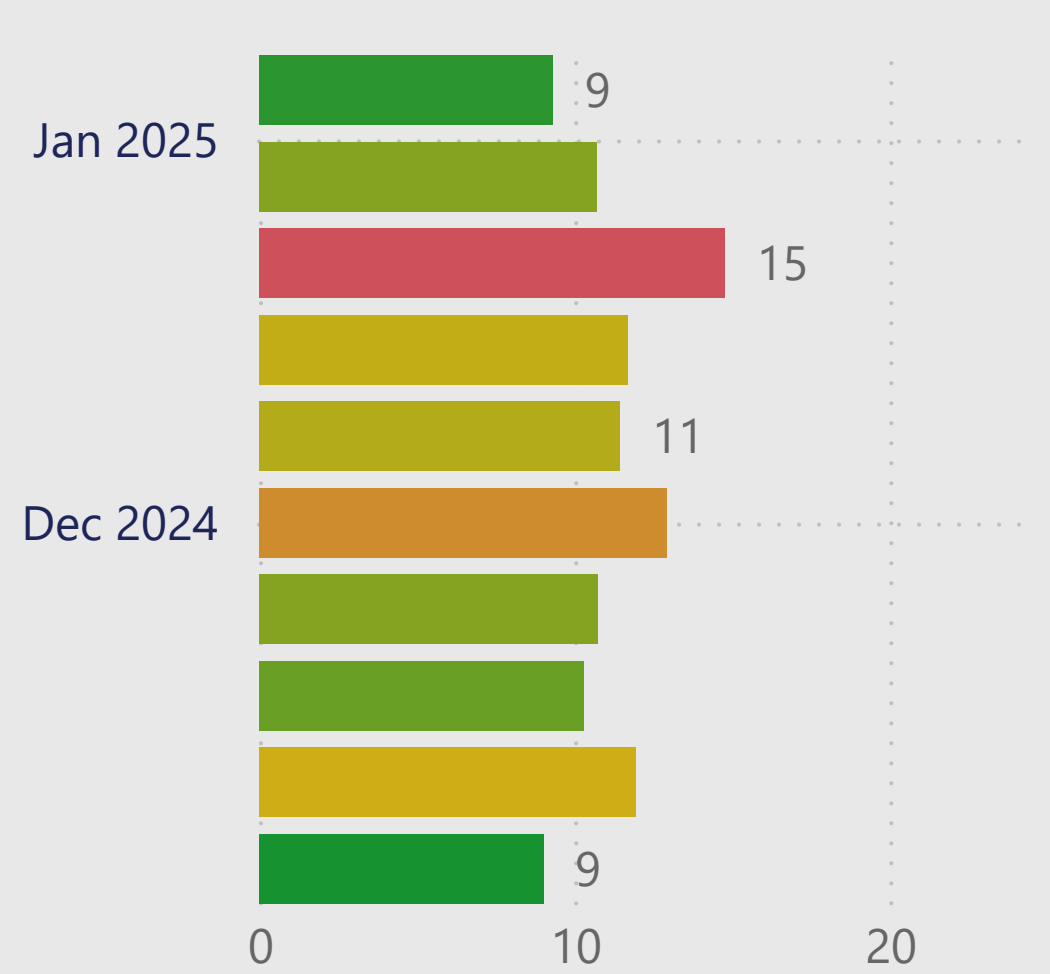
| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | R2,050.82 ↓                 |
| Dec, 2024 | R2,061.05 ↓                 |
| Nov, 2024 | R2,082.23 ↓                 |

| Date      | HMV Port Penalty Cost |
|-----------|-----------------------|
| Jan, 2025 | R1,432.02 ↓           |
| Dec, 2024 | R1,444.30 ↑           |
| Nov, 2024 | R1,367.76 ↓           |

Split of Trade by Transport Mode

| Date      | Maritime | Road  |
|-----------|----------|-------|
| Nov, 2024 | 88% ↓    | 12% ↑ |
| Oct, 2024 | 89% ↑    | 11% ↑ |

HMV Port Turn Around Time



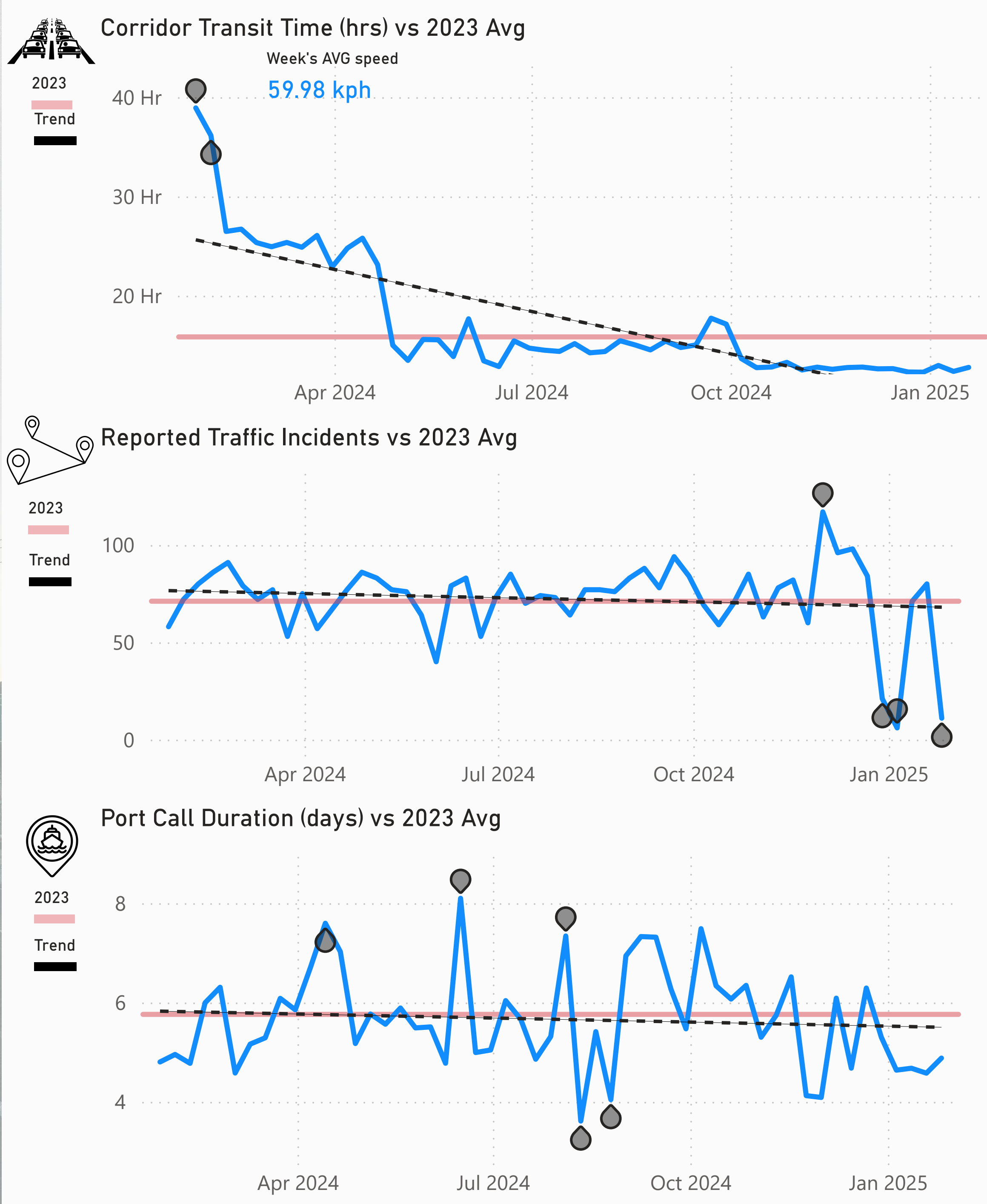
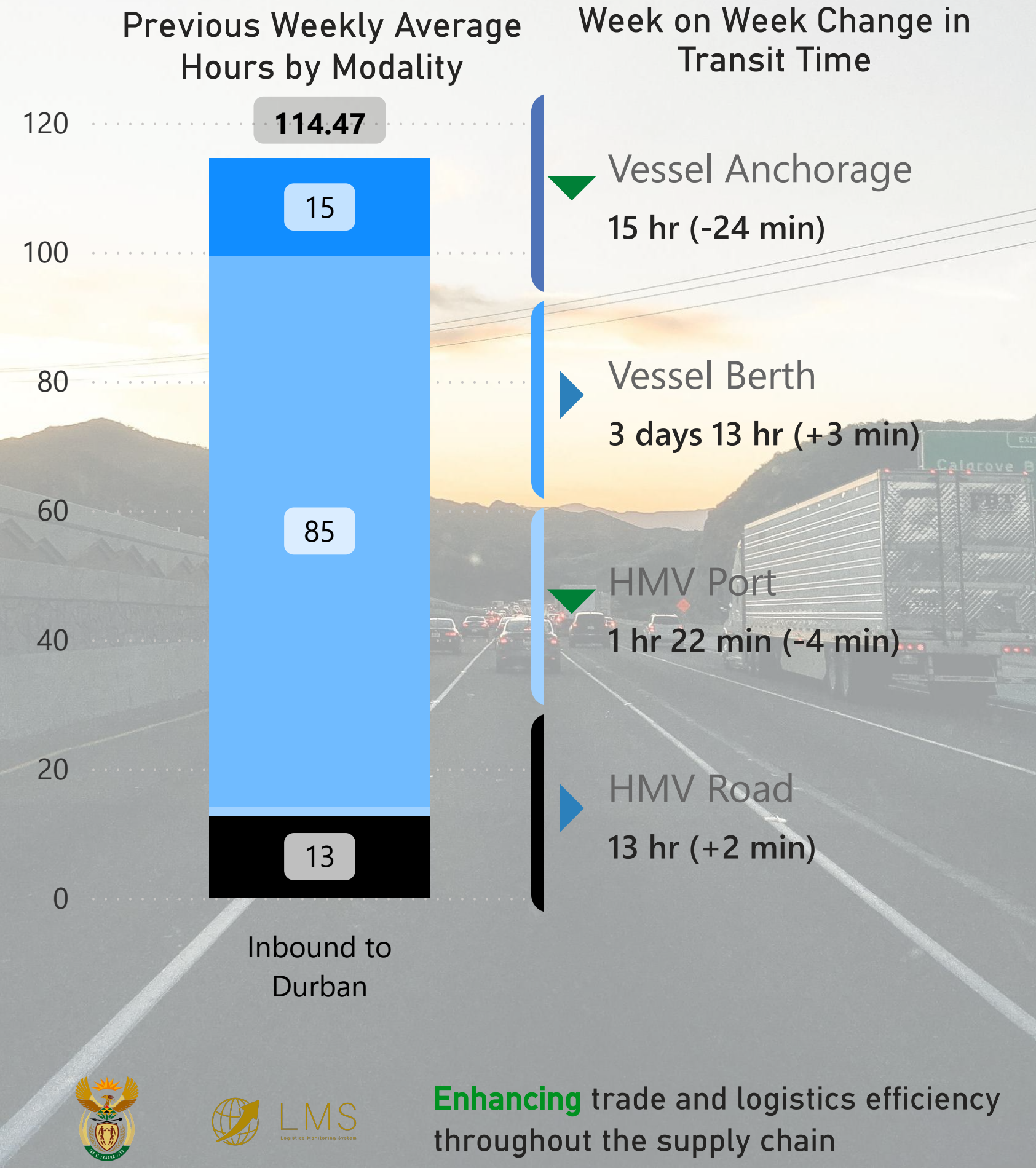
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# N3 Benchmark Performance - Joburg to Durban

Understanding the dynamics of transport corridors is crucial for optimizing supply chain operations and fostering seamless trade flows, driving economic growth and prosperity regionally and globally.

This is explored by unpacking key elements such as:

- Corridor Travel Time by Heavy Motor Vehicle (HMV)
- Modality Performance: eg. Port Call = Time Vessel Spend at Port
- Key Infrastructure or logistics hubs: eg. HMV time in Port precinct

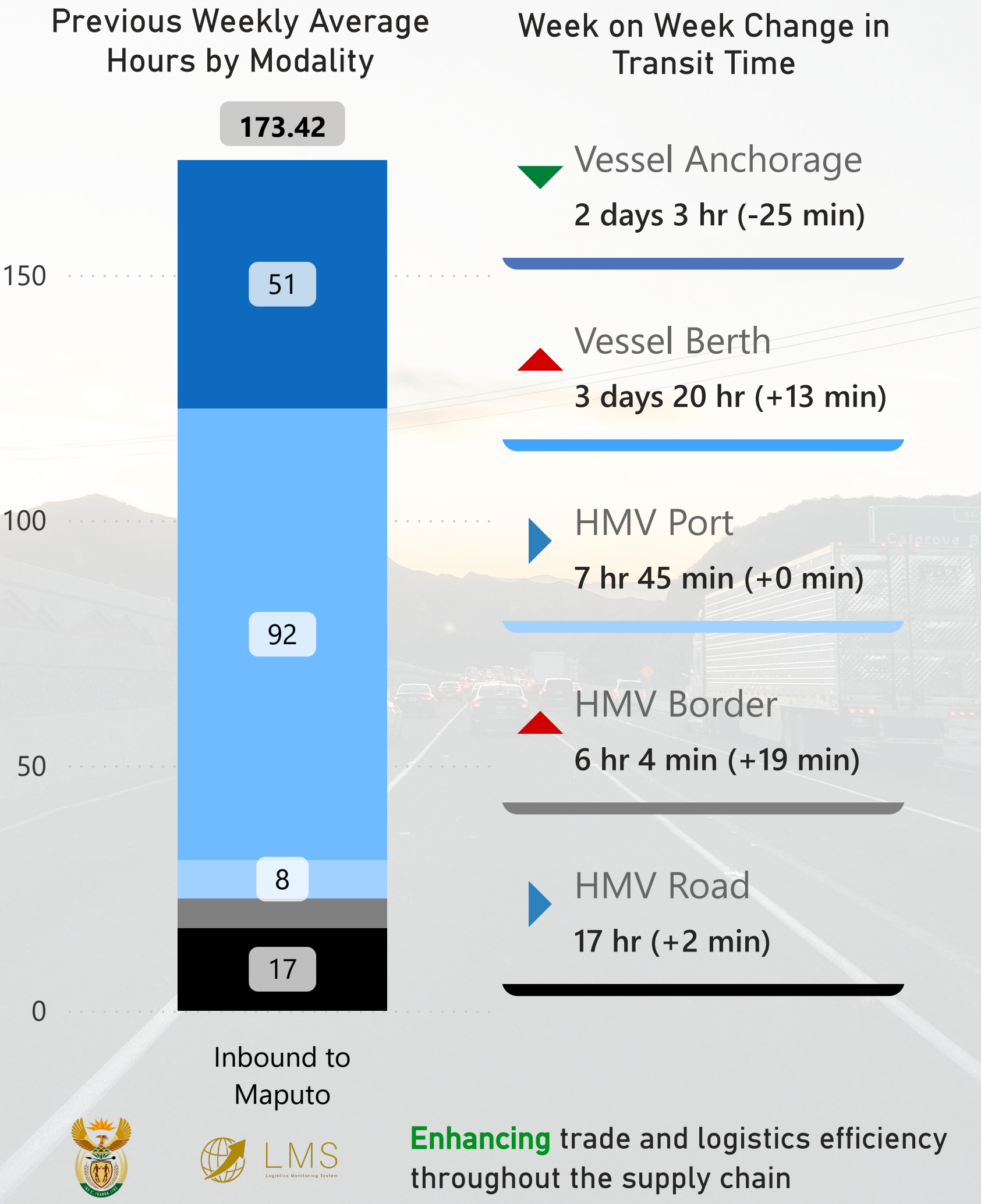


# N4 Benchmark Performance - Pretoria to Maputo

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This is explored by unpacking key elements such as:

- Corridor Travel Time by Heavy Motor Vehicle (HMV)
- Modality Performance: eg. Port Call = Time Vessel Spend at Port
- Key Infrastructure or logistics hubs: e.g. HMV time through Border Post

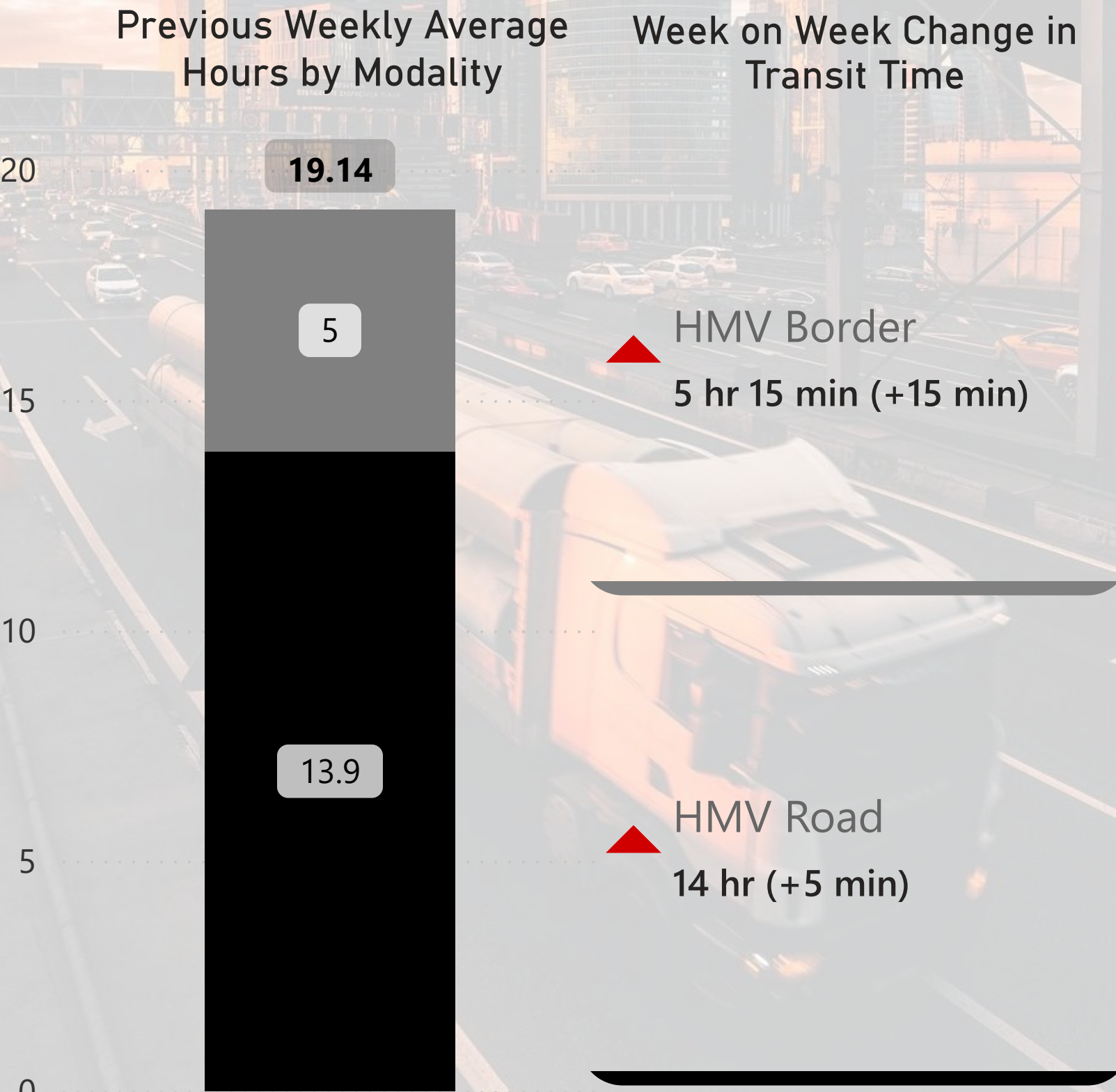


# N8 Benchmark Performance - Bloemfontein to Nakop

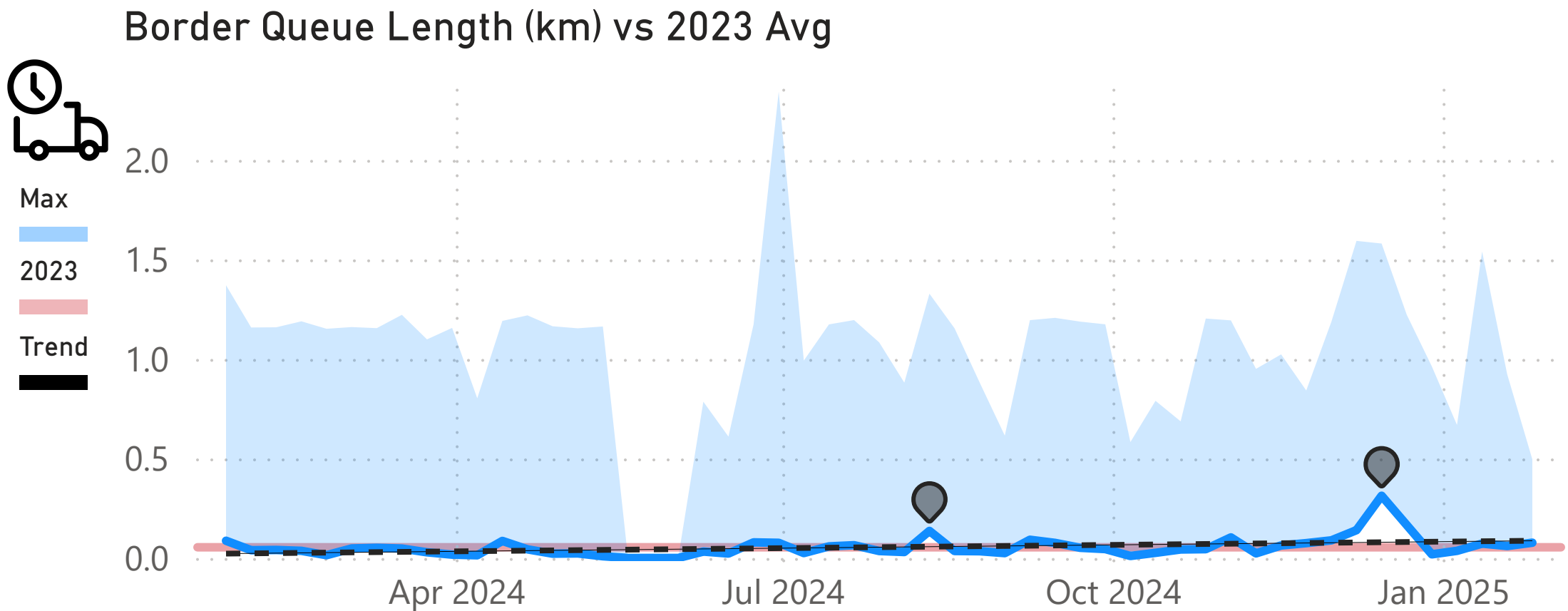
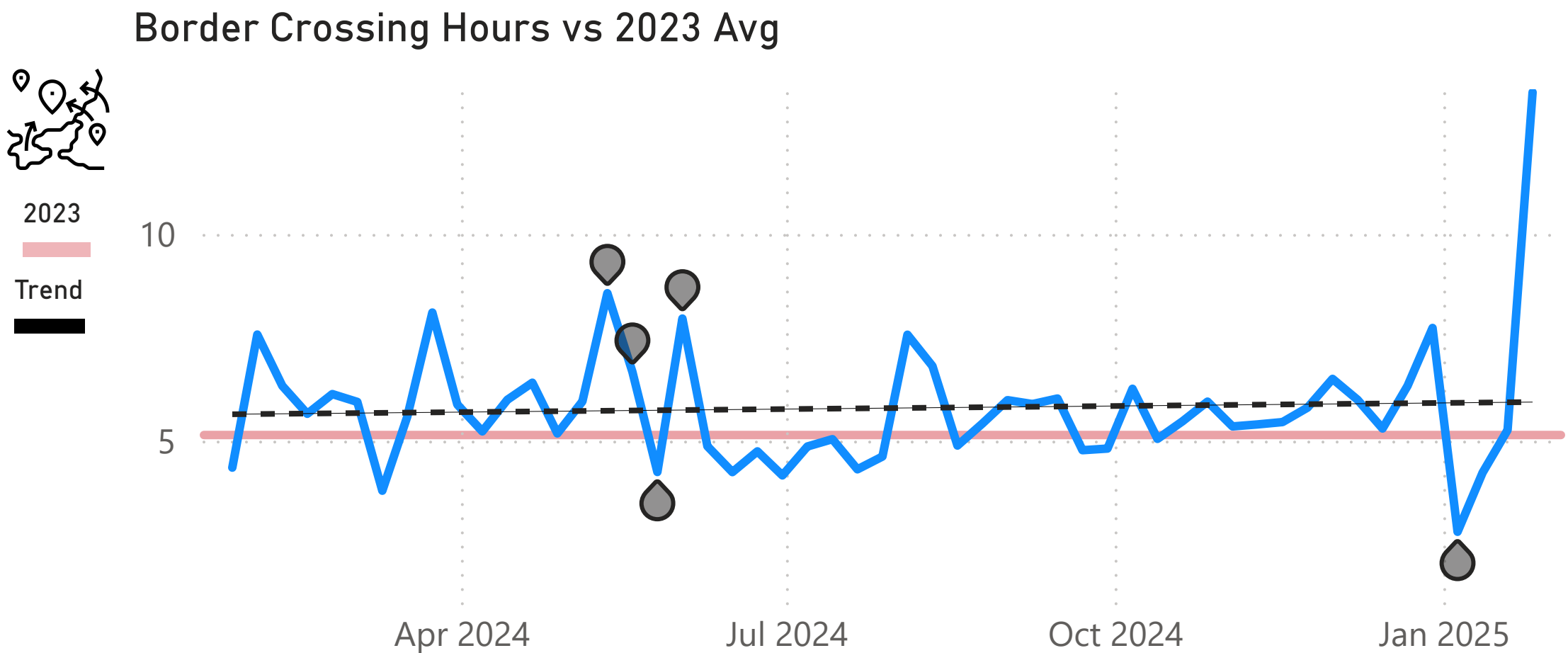
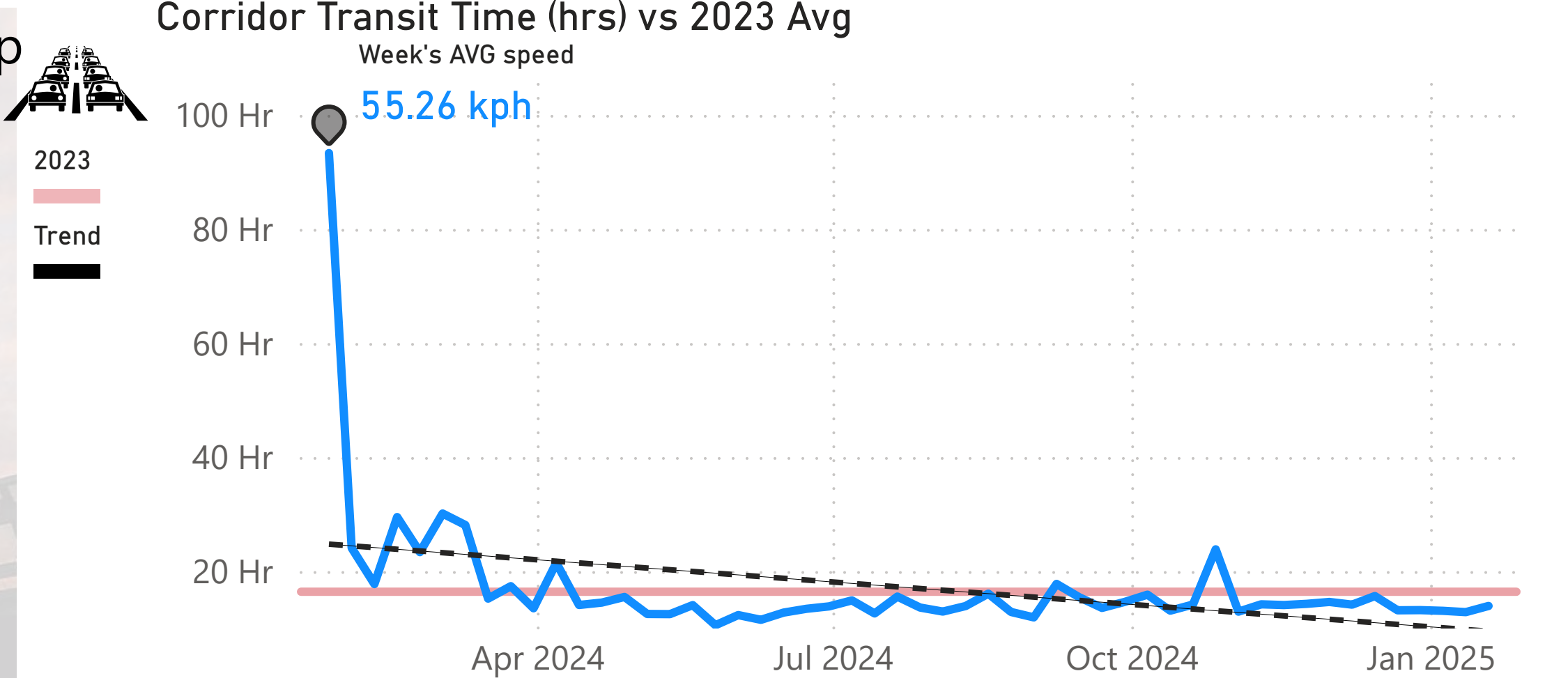
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The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

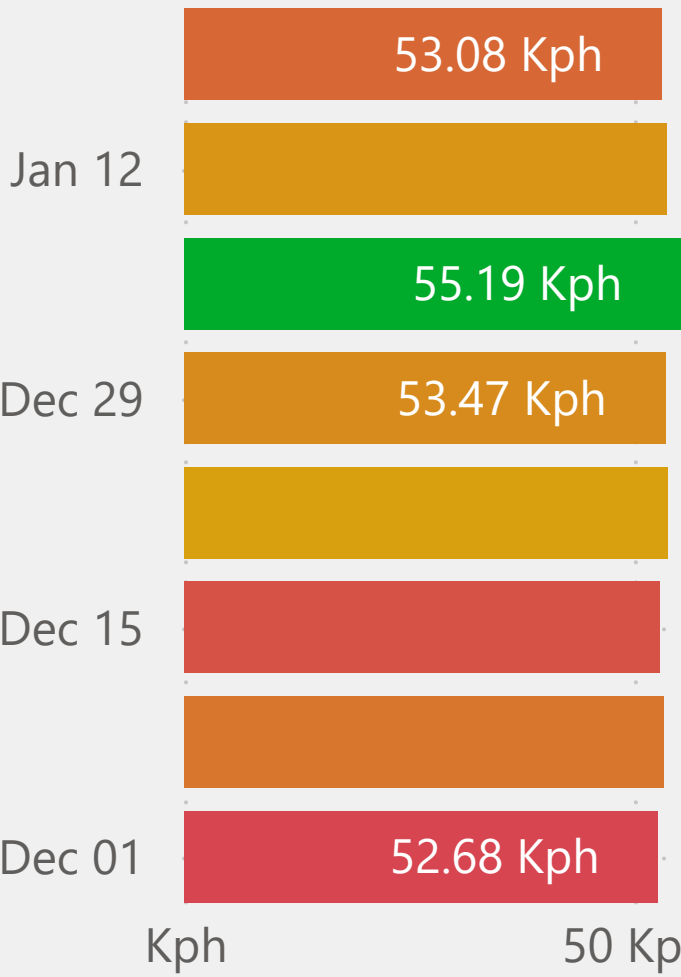
| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | -R957.97 ↓                  |
| Dec, 2024 | -R834.44 ↓                  |
| Nov, 2024 | -R656.70 ↓                  |

| Date      | HMV Border Penalty Cost |
|-----------|-------------------------|
| Jan, 2025 | R731.73 ↓               |
| Dec, 2024 | R866.49 ↑               |
| Nov, 2024 | R790.89 ↓               |

#### Split of Trade by Transport Mode

| Date      | Road   |
|-----------|--------|
| Nov, 2024 | 100% ↓ |
| Oct, 2024 | 100% ↑ |

#### Avg Corridor Speed

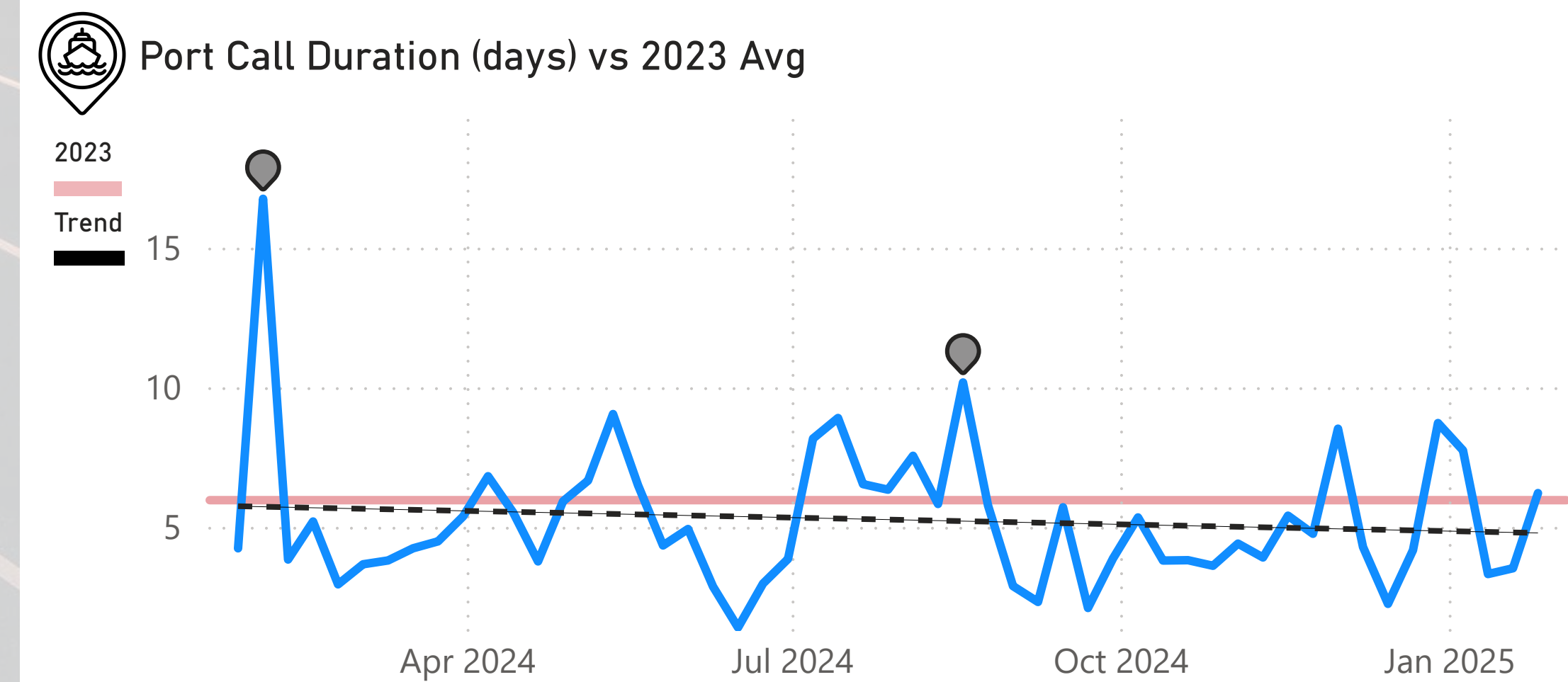
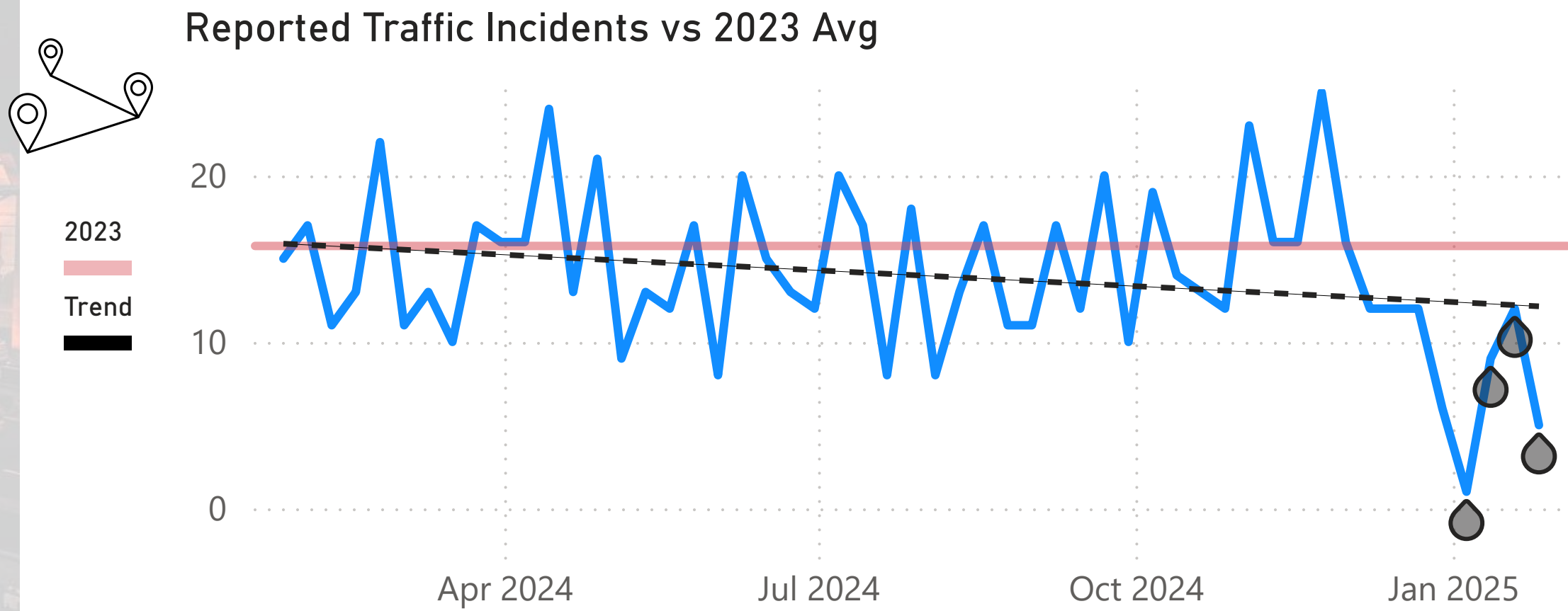
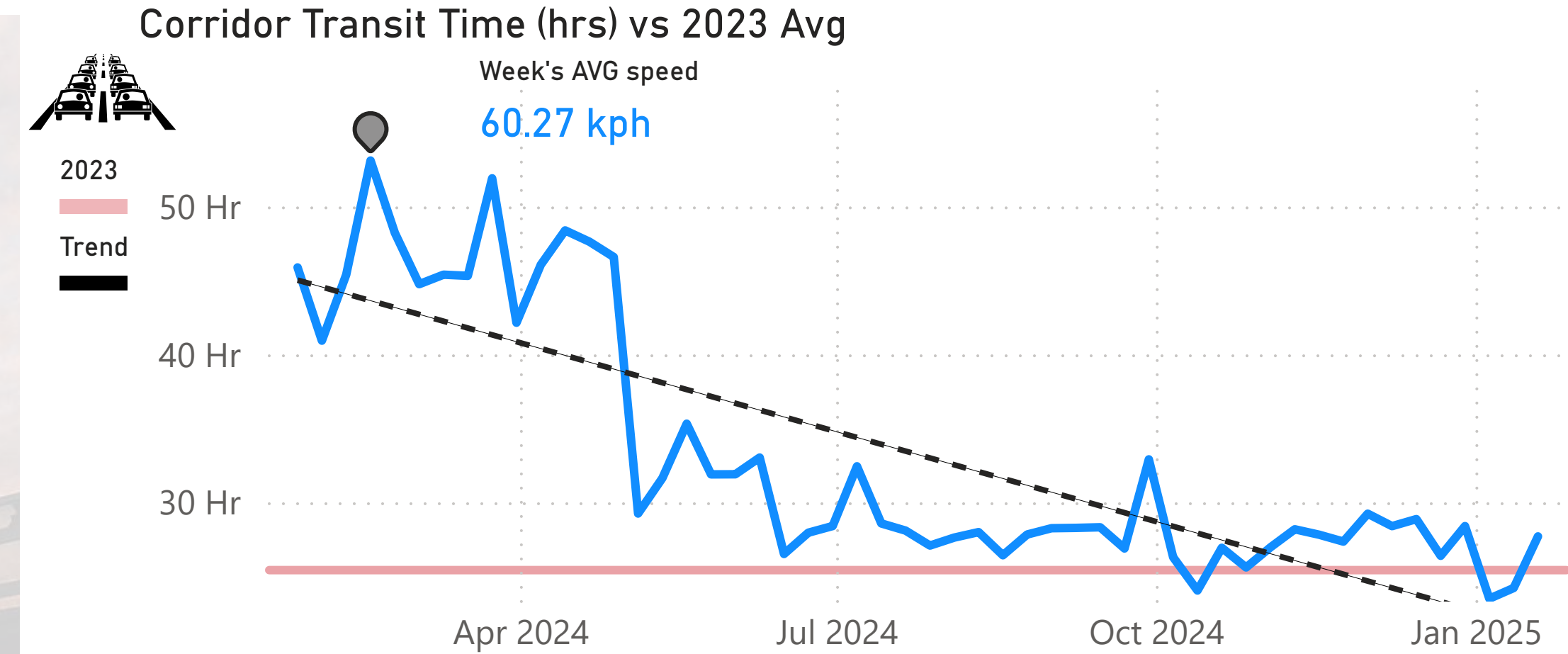
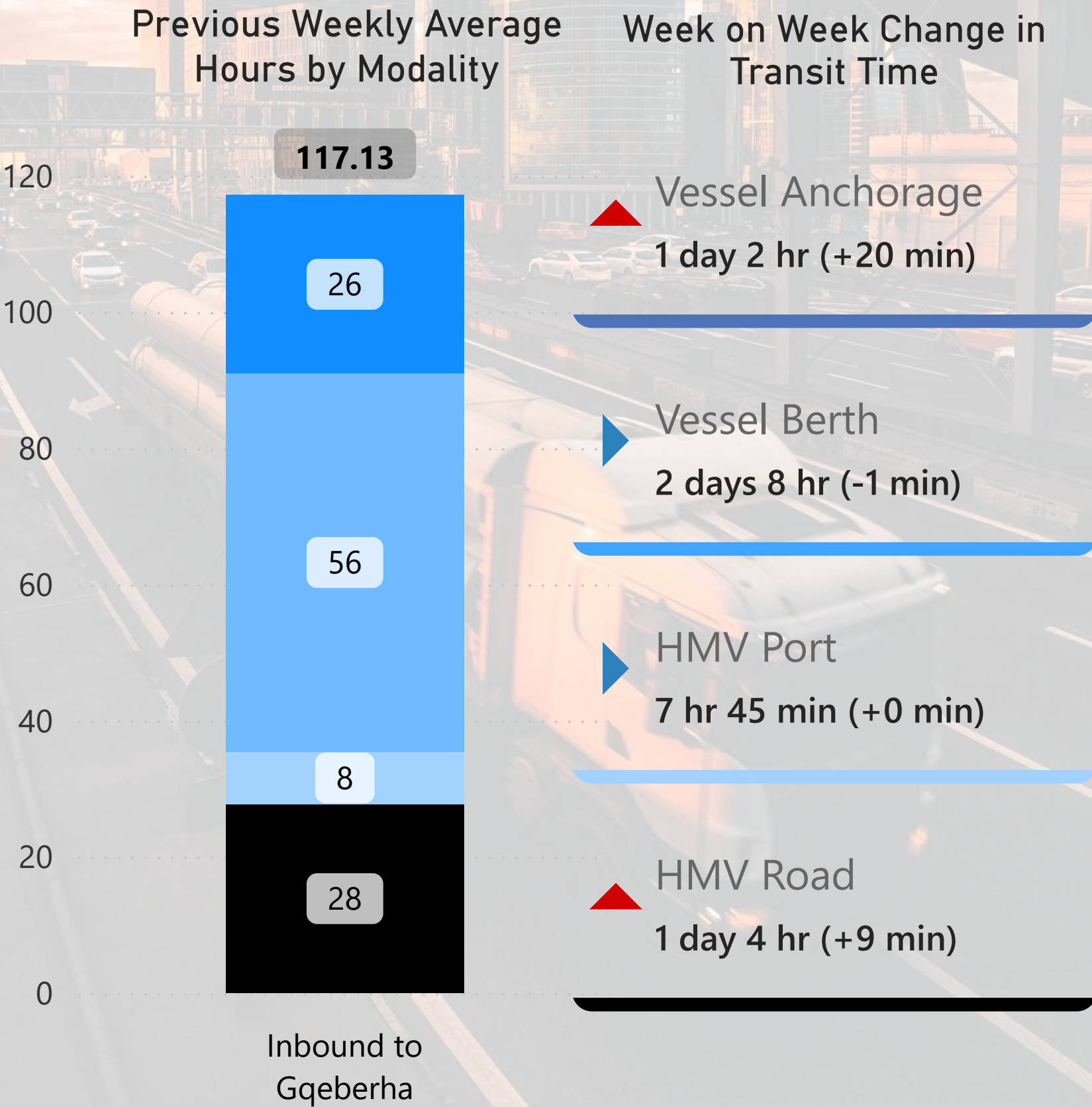


# Kuruman to Gqeberha - Benchmark Performance

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- Modality Performance : e.g. Port Call = Time Vessel Spent at Port
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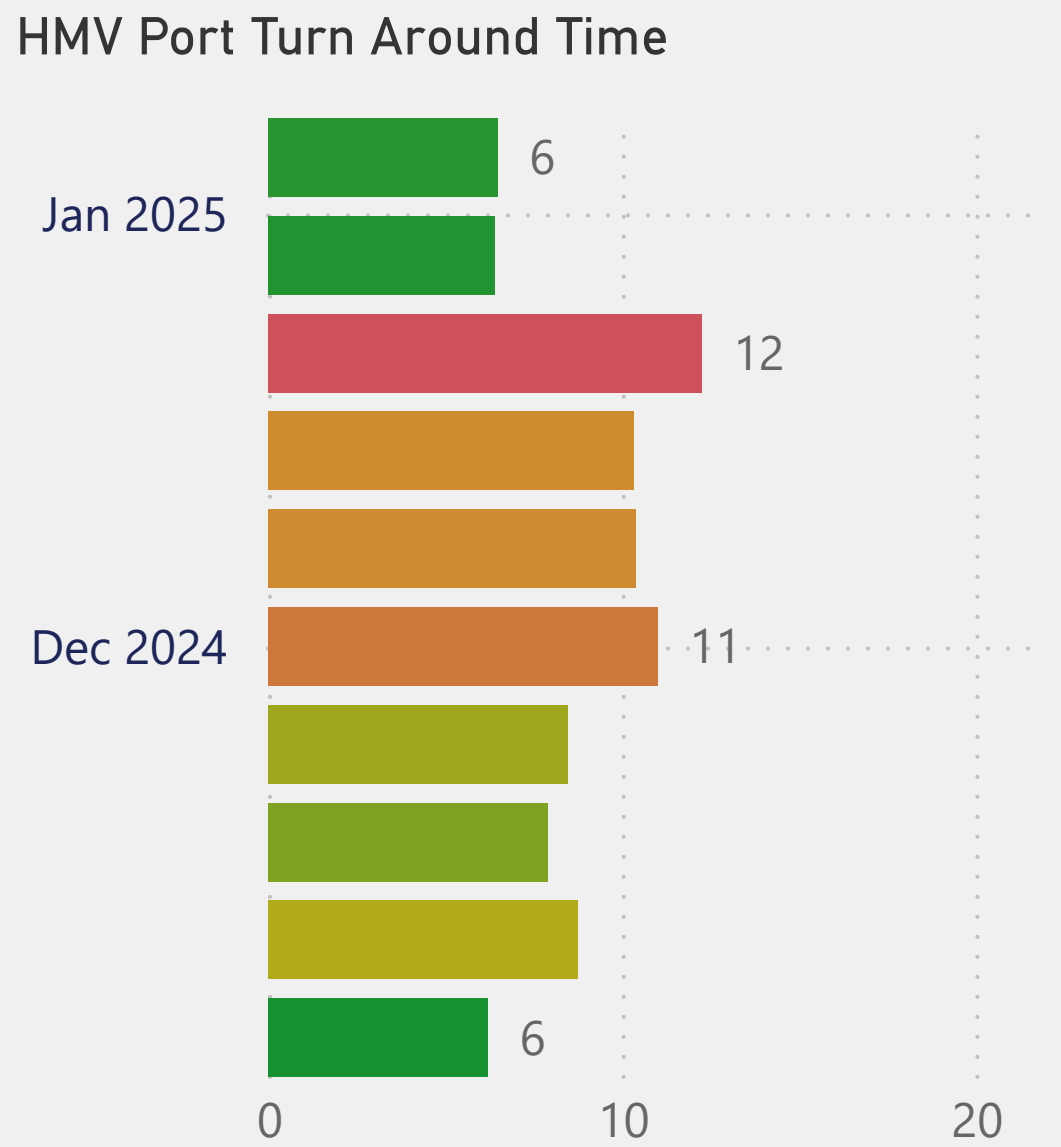
The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | R15,068.31 <span>↓</span>   |
| Dec, 2024 | R15,289.34 <span>↓</span>   |
| Nov, 2024 | R15,598.56 <span>↓</span>   |

| Date      | HMV Port Penalty Cost    |
|-----------|--------------------------|
| Dec, 2024 | R1,189.52 <span>↑</span> |
| Nov, 2024 | R896.29 <span>↓</span>   |

Split of Trade by Transport Mode

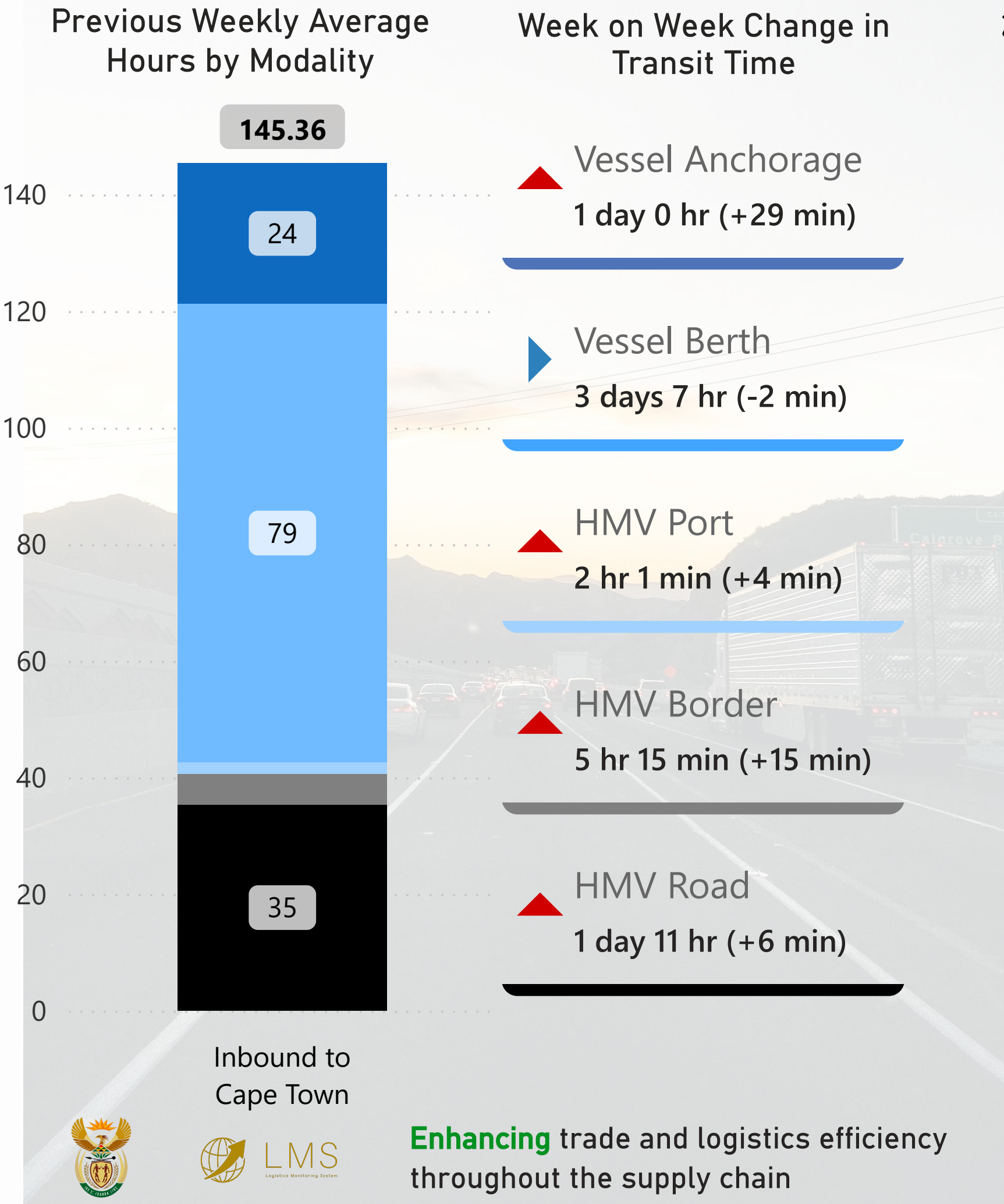
| Date      | Maritime             | Road                |
|-----------|----------------------|---------------------|
| Nov, 2024 | 99.9% <span>↑</span> | 0.1% <span>↑</span> |
| Oct, 2024 | 99.9% <span>↓</span> | 0.1% <span>↓</span> |



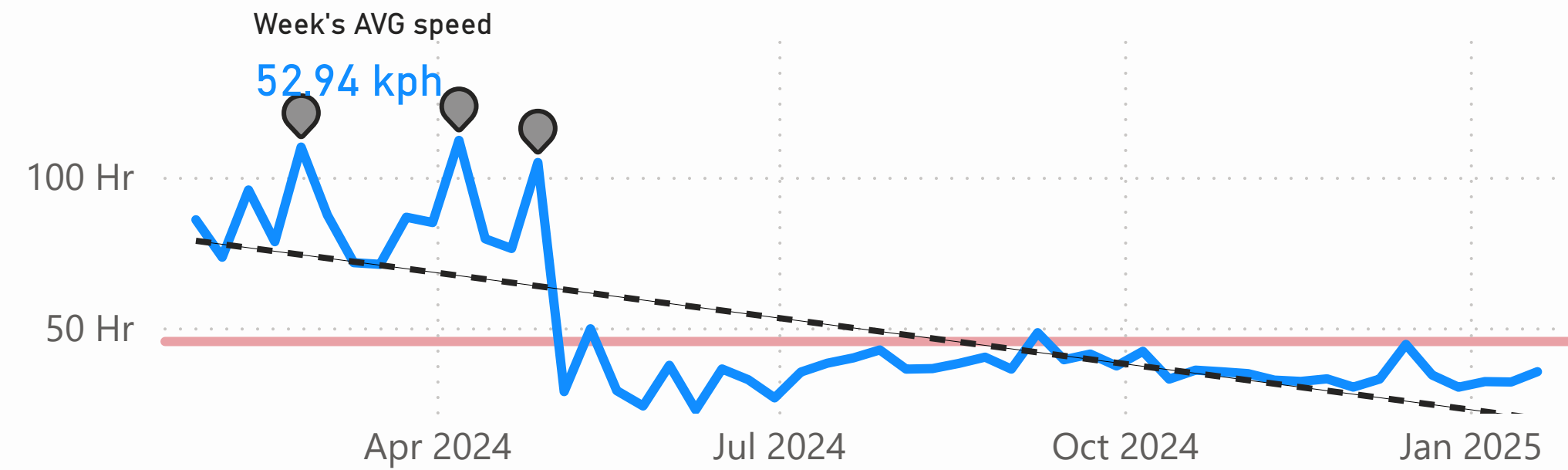
# Walvis Bay to Cape Town - Benchmark Performance

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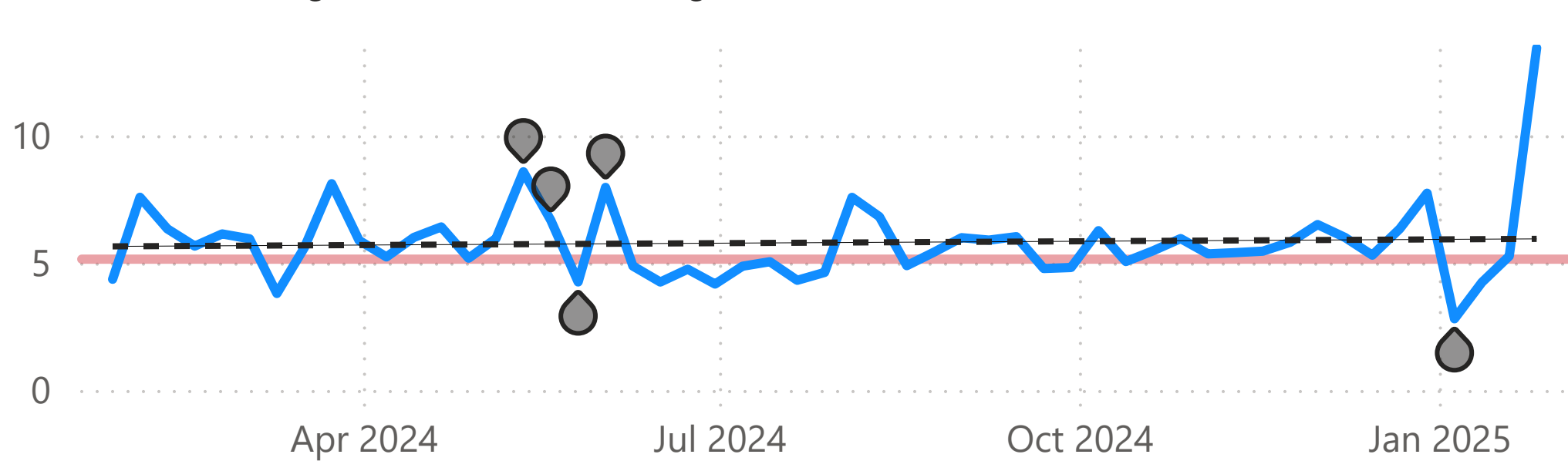
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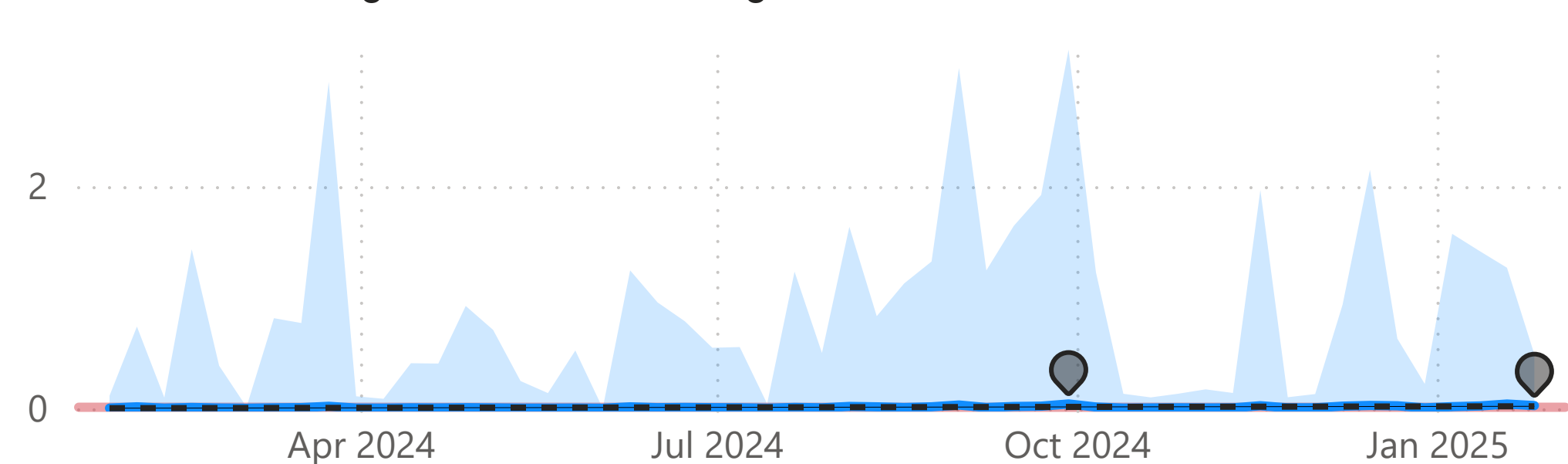
Corridor Transit Time (hrs) vs 2023 Avg



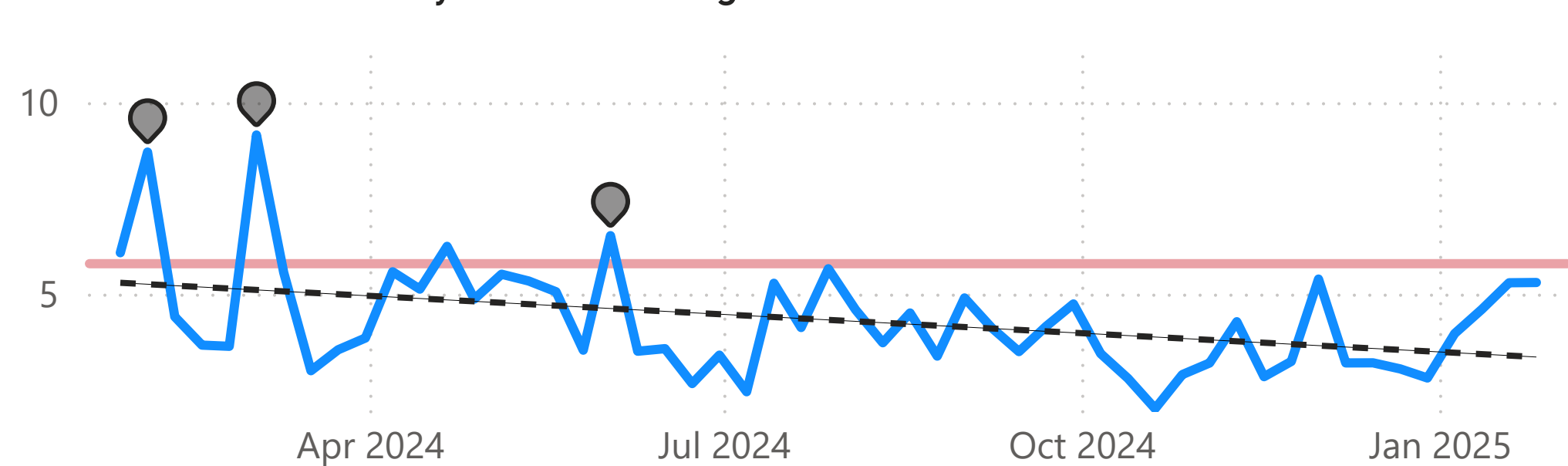
Border Crossing Hours vs 2023 Avg



Border Queue Length (km) vs 2023 Avg



Port Call Duration (days) vs 2023 Avg



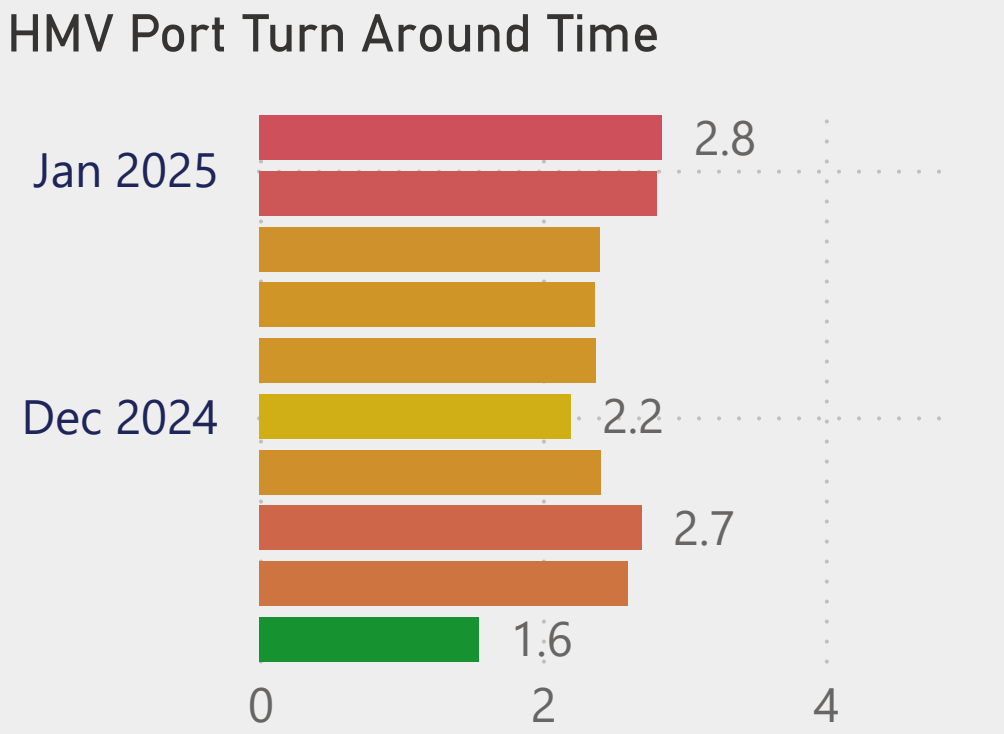
The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | R20,432.23                  |
| Dec, 2024 | R20,791.21                  |
| Nov, 2024 | R21,322.73                  |

| Date      | HMB Border Penalty Cost |
|-----------|-------------------------|
| Jan, 2025 | R731.73                 |
| Dec, 2024 | R866.49                 |
| Nov, 2024 | R790.89                 |

| Date      | HMV Port Penalty Cost |
|-----------|-----------------------|
| Jan, 2025 | R966.71               |
| Dec, 2024 | R1,092.14             |
| Nov, 2024 | R987.24               |

| Date      | Maritime | Road |
|-----------|----------|------|
| Nov, 2024 | 99.7%    | 0.3% |
| Oct, 2024 | 99.8%    | 0.2% |

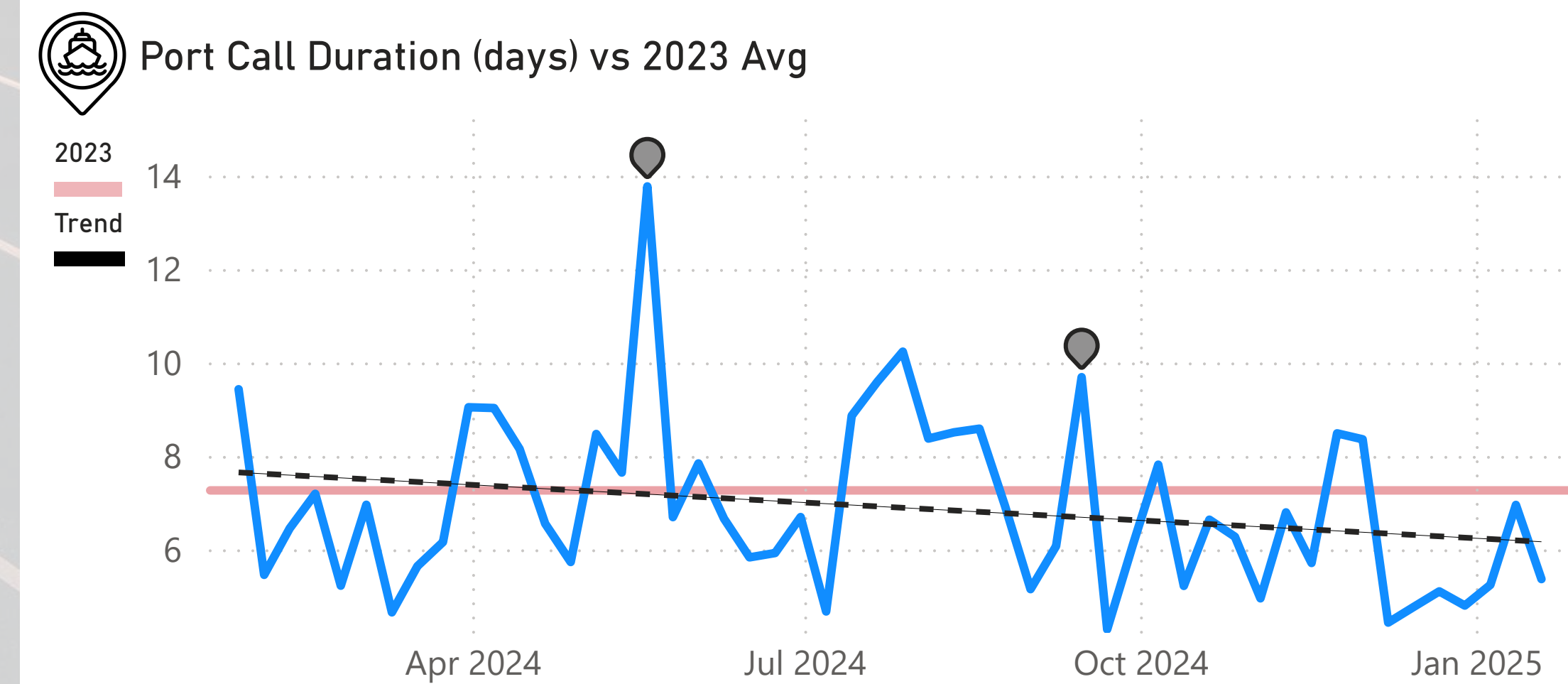
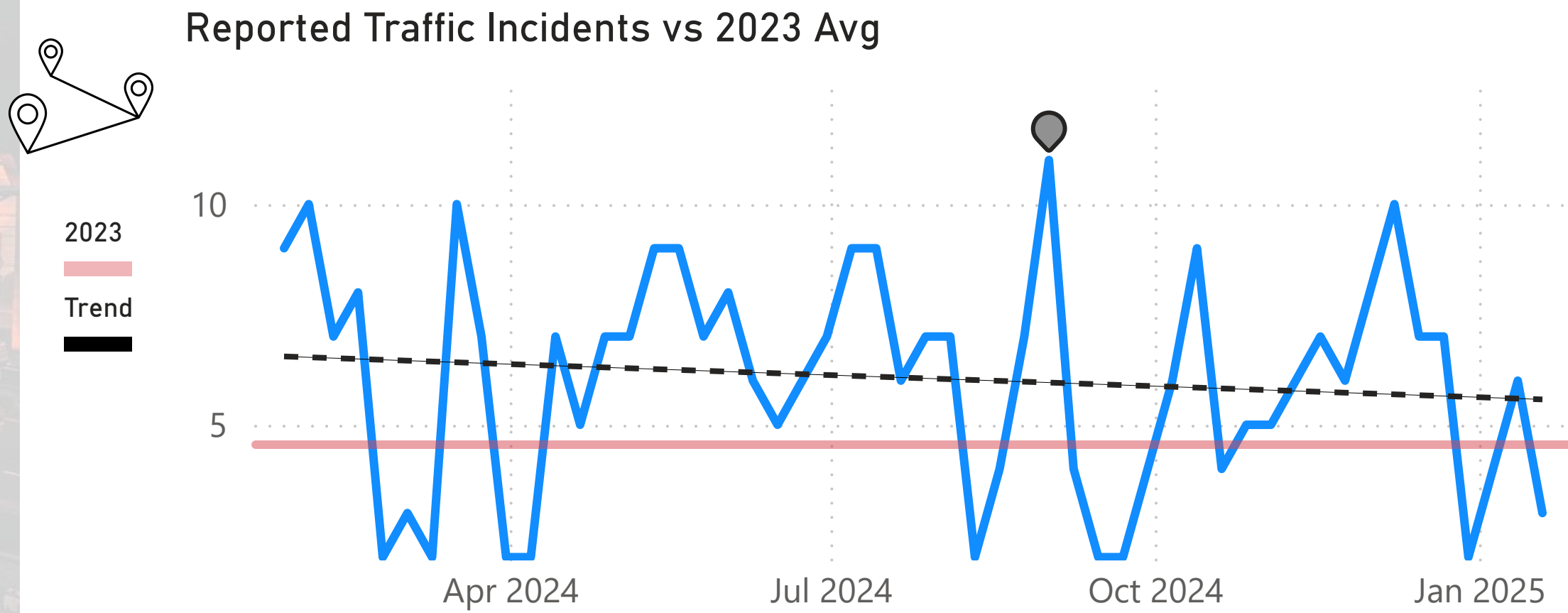
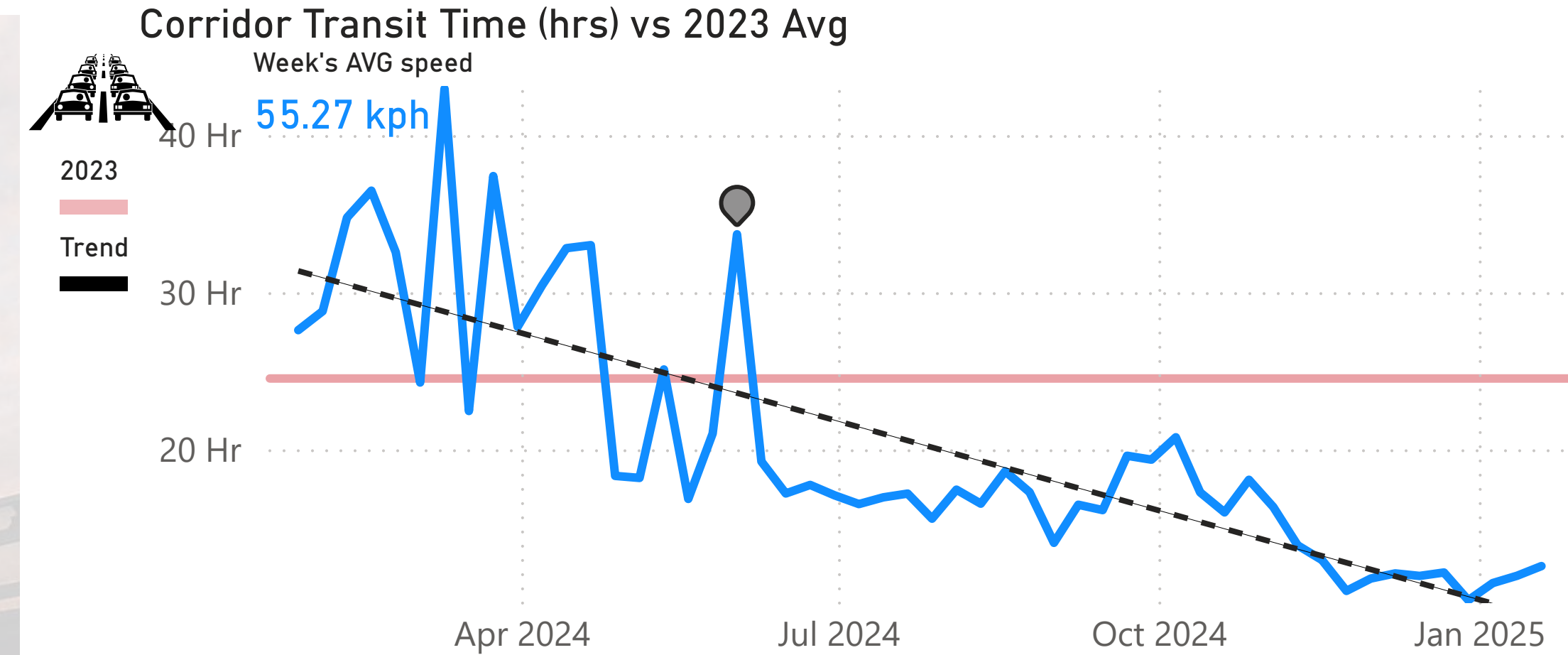
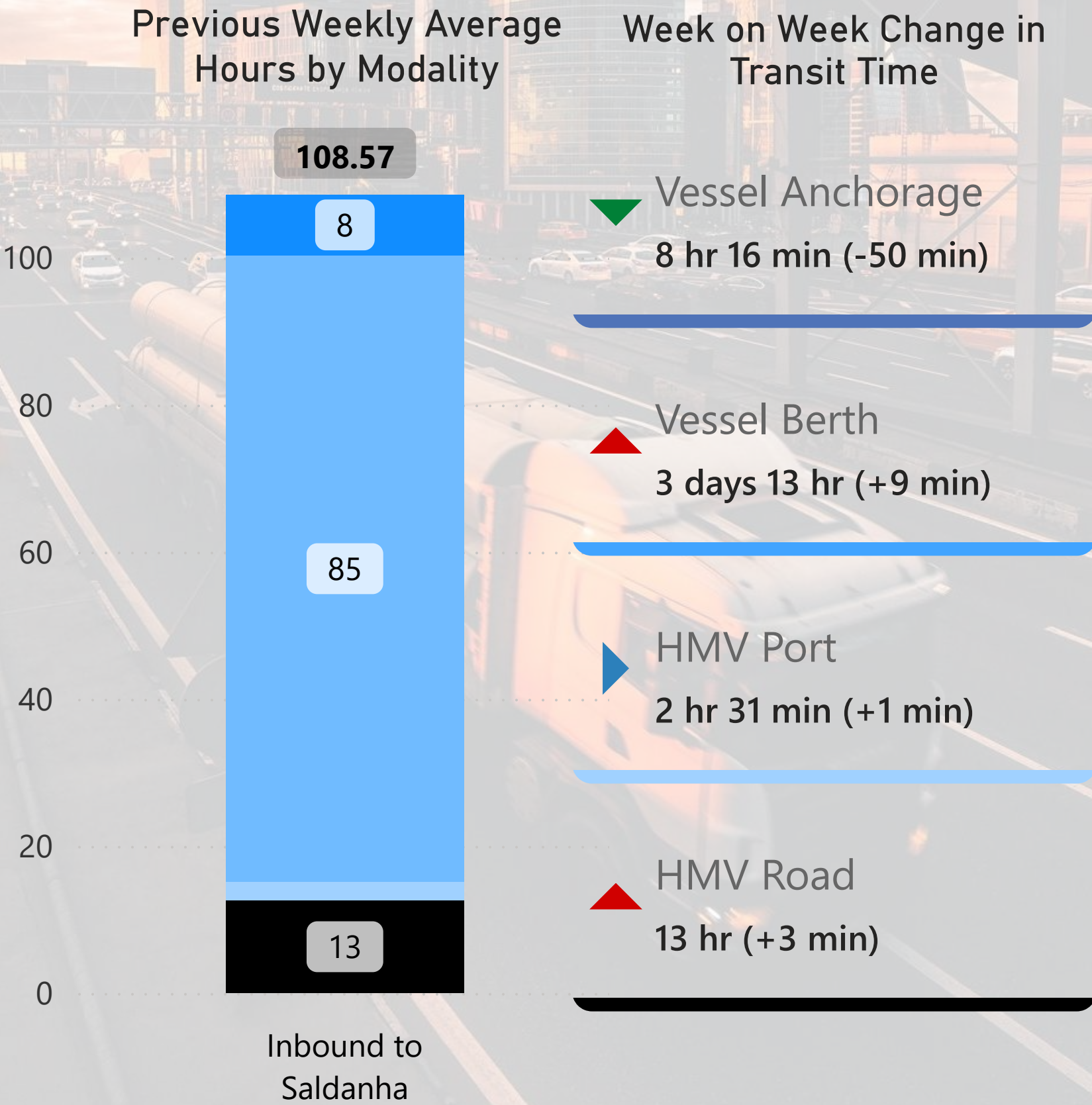


# Benchmark Performance - Kuruman to Saldanha

Understanding the dynamics of transport corridors is crucial for optimizing supply chain operations and fostering seamless trade flows, driving economic growth and prosperity regionally and globally.

This is explored by unpacking key elements such as:

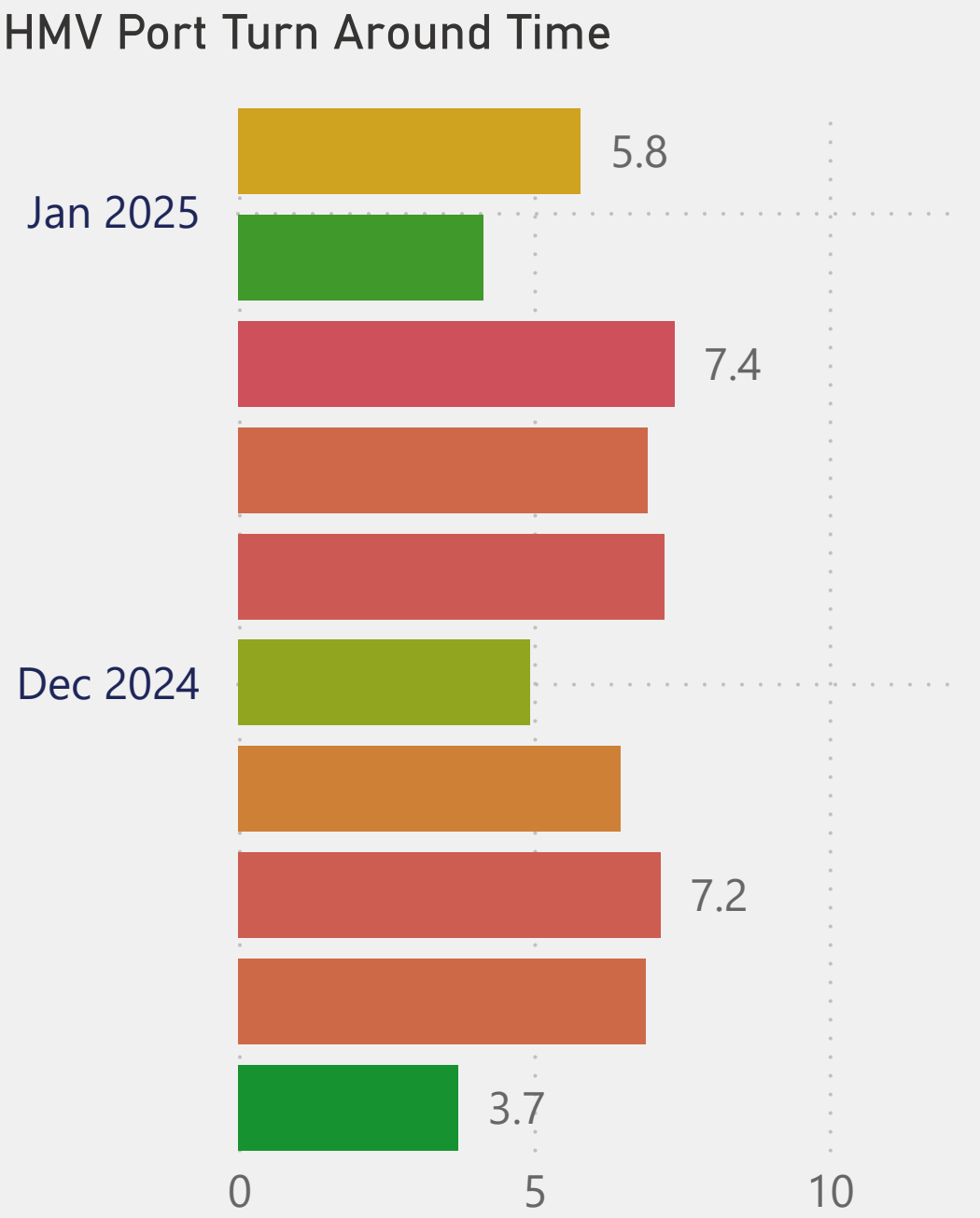
- Corridor Travel Time by Heavy Motor Vehicle (HMV)
- Modality Performance : e.g. Port Call = Time Vessel Spent at Port
- Key Infrastructure or logistics hubs : e.g. HMV time in Port precinct



The tables below reflect the penalty cost incurred in terms of HMV fixed costs using the RFA Vehicle Cost Index when comparing the average to the median achieved.

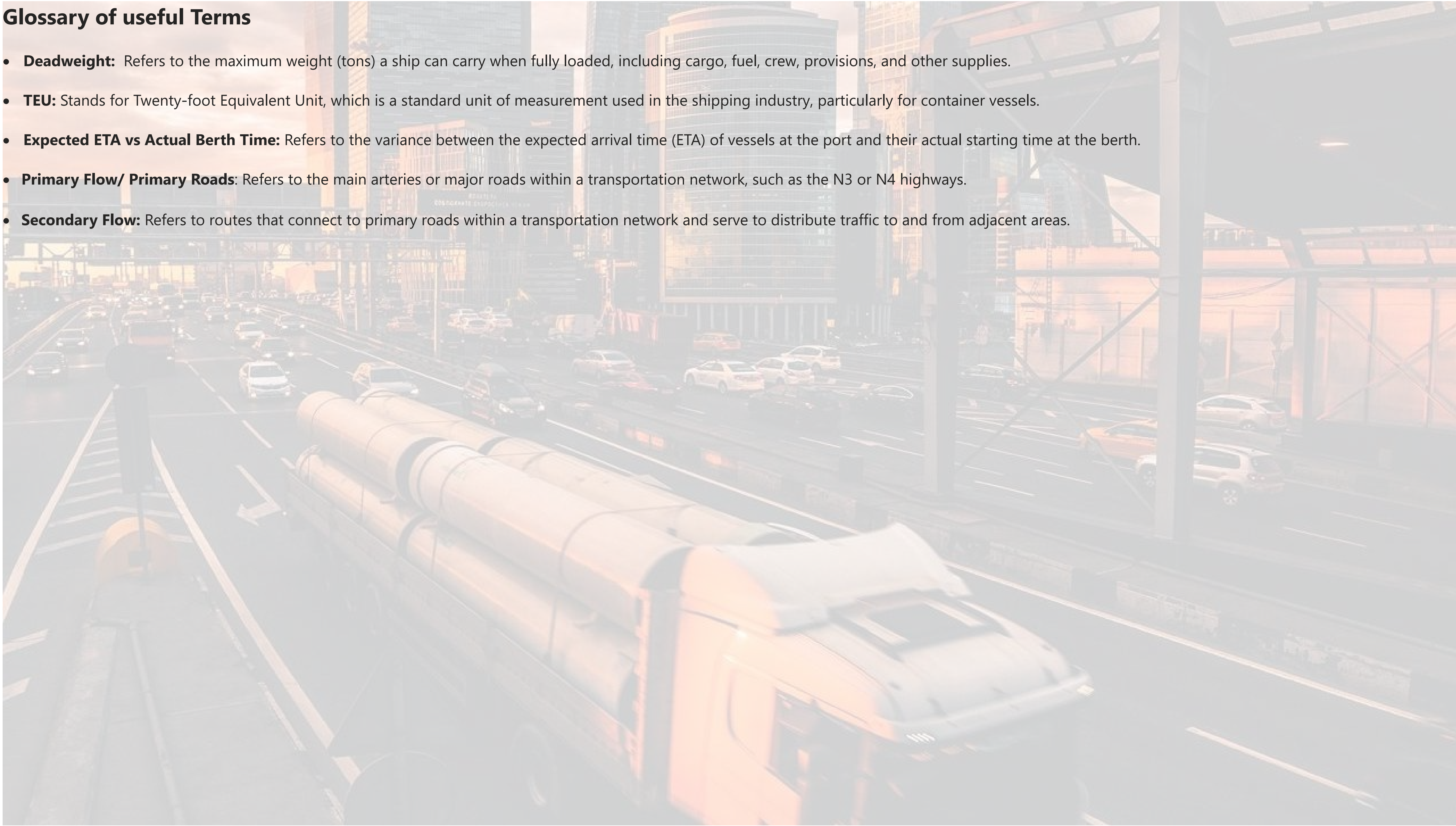
| Date      | HMV Round Trip Penalty Cost |
|-----------|-----------------------------|
| Jan, 2025 | R8,947.44                   |
| Dec, 2024 | R9,194.32                   |
| Nov, 2024 | R9,623.71                   |

| Date      | HMV Port Penalty Cost |
|-----------|-----------------------|
| Jan, 2025 | R1,167.98             |
| Dec, 2024 | R1,203.77             |
| Nov, 2024 | R1,063.57             |



# Glossary of useful Terms

- **Deadweight:** Refers to the maximum weight (tons) a ship can carry when fully loaded, including cargo, fuel, crew, provisions, and other supplies.
- **TEU:** Stands for Twenty-foot Equivalent Unit, which is a standard unit of measurement used in the shipping industry, particularly for container vessels.
- **Expected ETA vs Actual Berth Time:** Refers to the variance between the expected arrival time (ETA) of vessels at the port and their actual starting time at the berth.
- **Primary Flow/ Primary Roads:** Refers to the main arteries or major roads within a transportation network, such as the N3 or N4 highways.
- **Secondary Flow:** Refers to routes that connect to primary roads within a transportation network and serve to distribute traffic to and from adjacent areas.



# How can you participate?

Workstream 2 invites you to collaborate with us in unlocking the potential of our logistics network. To facilitate this we encourage you to make use of the Logistics Monitoring System (LMS) reporting mobile application and WhatsApp channel.

The purpose of these instruments is for users to record incidents that occur on our logistics network, so that we can achieve the following:

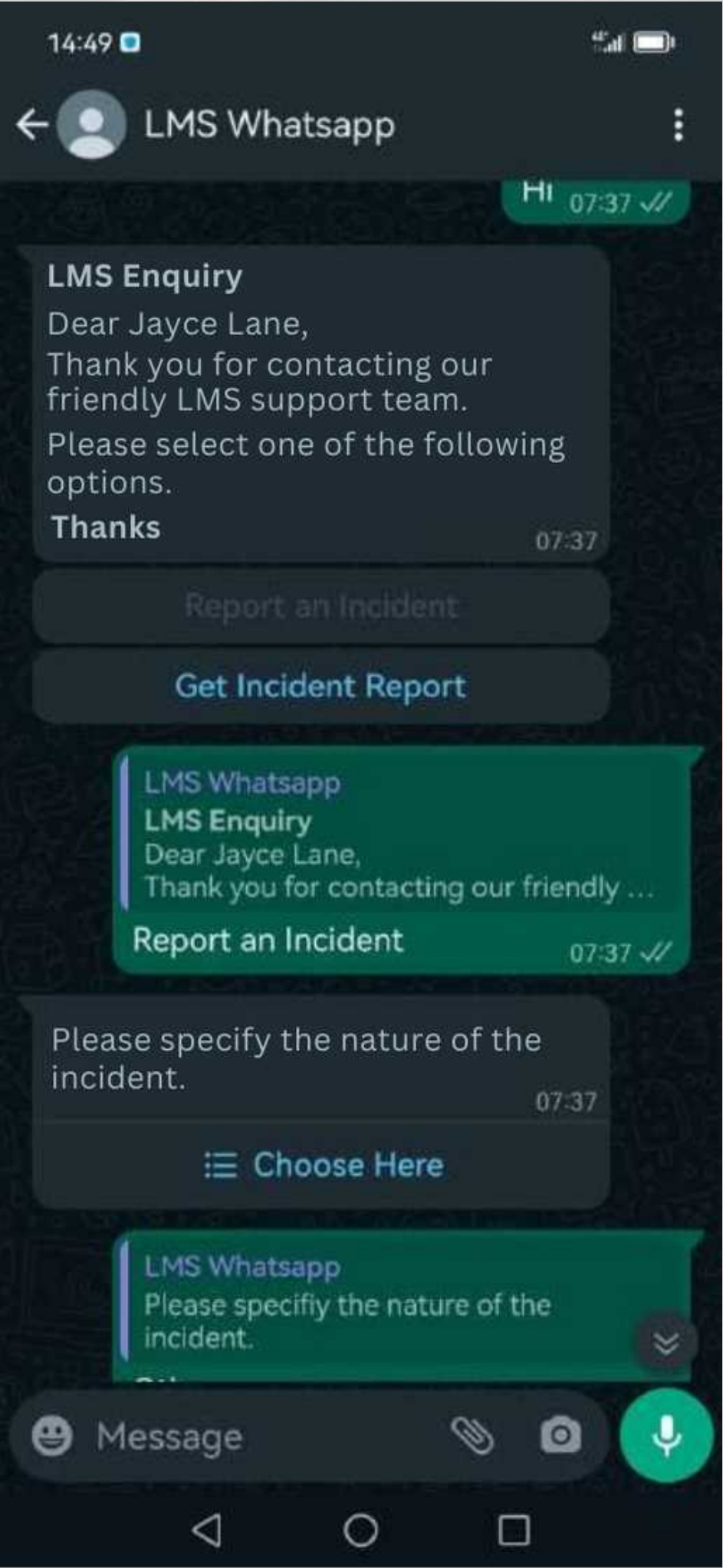
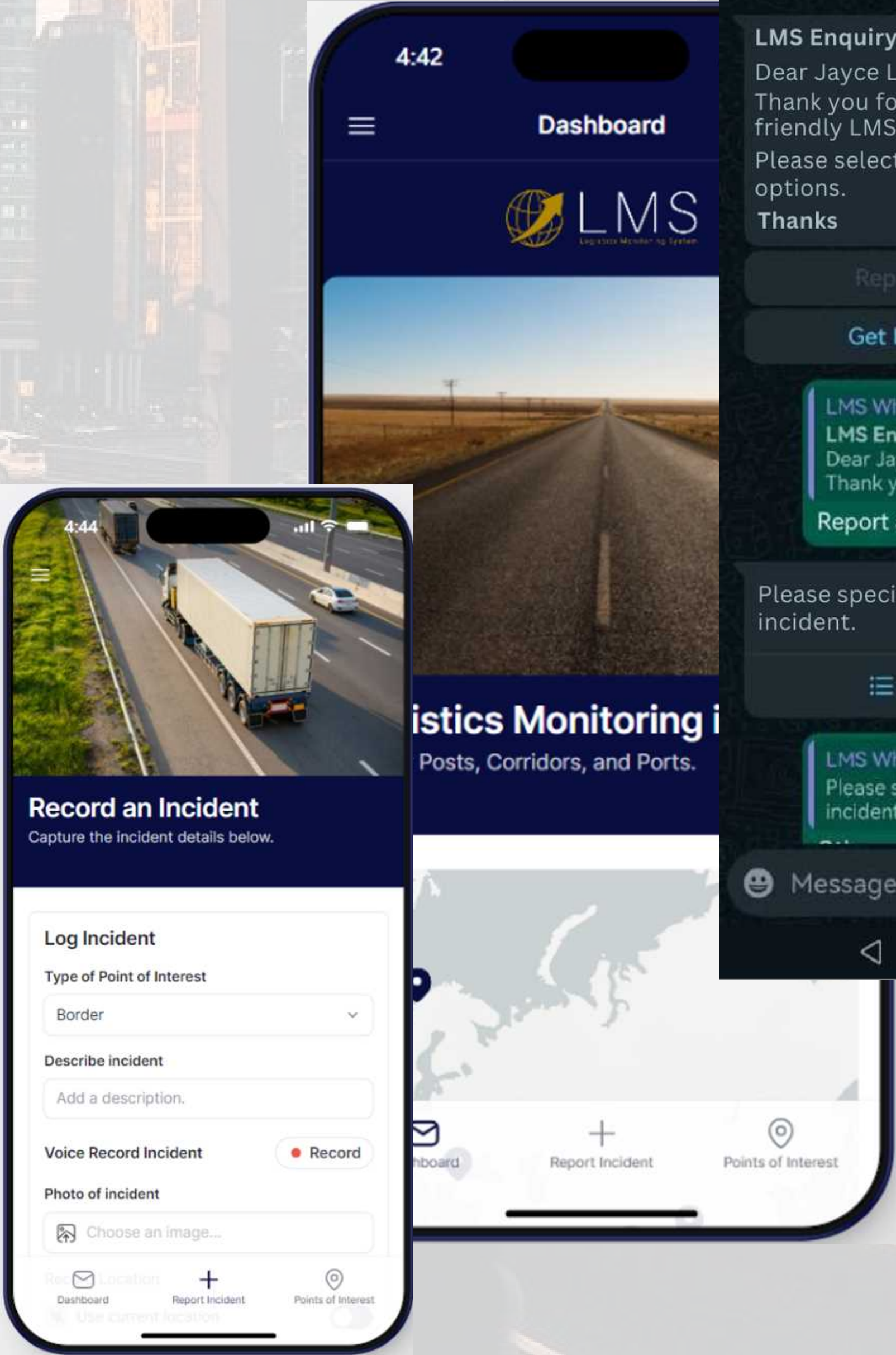
- Create a better understanding of how users of the logistics network are effected
- Communicate to users, issues that may effect them currently or within the next 24 hours
- Enable users to make more informed decisions
- Foster a sense of collaboration as we work towards a brighter future for South Africa

To access the LMS mobile application please register on your device by going to <https://app.logistics-monitoring.com> or scan the below QR code.

If your preferred method is WhatsApp you are welcome to engage with the LMS WhatsApp channel at 0721950714.

Further technical queries can be directed to [enquiries@crickmay.co.za](mailto:enquiries@crickmay.co.za) or 033 343 1007.

Lastly, we encourage you to provide feedback and we look forward to working with you.



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**Bryte Insurance Company** is the premier, proactive insurance risk specialist. Applying our unparalleled sector insights, proven expertise and foresight, we have partnered with clients and brokers since 1849 to protect their businesses, ensure livelihoods and improve their risk profiles.

**Bryte Specialist Motor** provides specialised motor insurance solutions for the transport, passenger transport, motorcycle, and classic and collectible car industries. Our expertise enables us to work with customers to understand their business and design an insurance solution that best suits their needs. With a range of products designed with this sector in mind, Bryte has a product that will keep customers on the road.