- Ingunsurban

## **Case Study**

Transurban's Conspicuity Markings: Improving Vehicle Visibility for Safer Roads

### Transurban

Key Safety Focus: Conspicuity Markings

Transurban has a strong focus on providing a safe and healthy environment for its employees, contractors, customers, and the community. To support its focus on vehicle safety, Transurban revised its safe arrival model to a safe clearance model for incident response, including its fleet of tow trucks. During this revision an opportunity was identified to go above and beyond current vehicle marking standards to improve visibility of vehicles and in turn increase the safety of crews and road users.

This saw Transurban introduce conspicuity markings on its fleet of incident response vehicles. Conspicuity markings are retroreflective markers that highlight the contoured shape of a vehicle from various angles. They play an important role in increasing visibility to prevent crashes on the road, particularly during low-light conditions or when vehicles are pulled over to the side of the road.



By developing and implementing a standard that required conspicuity markings on all its vehicles, Transurban aimed to improve safety for its employees and contractors, as well as motorists. By allowing incident response vehicles to be highly visible as emergency response vehicles, they are able to get to incidents quickly and safely. It also makes it easier for other motorists to see Transurban vehicles during low-visibility conditions or when they are stationary at the roadside. Conspicuity markings help prevent collisions and keep both vehicle operators and the motoring public safe.

This case study briefly explores Transurban's use of conspicuity markings, how they were implemented, and their impact on employee and motorist safety.





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#### Implementation

With limited information on conspicuity markings available, Transurban's first step was consulting subject matter experts. A research report was commissioned from the Monash University Accident Research Centre (MUARC), which reviewed research on conspicuity markings and outlined key considerations such as regulations, colour, pattern, contour markings, and vehicle frontlines. The report also provided suggested guidelines and caveats for conspicuity markings on fleet vehicles. In addition, Transurban sought advice from 3M, a major supplier of reflective markings, on key specification details such as luminosity and positioning.

This consultation informed tailored guidelines Transurban developed for its vehicle conspicuity markings, including standard specifications for all vehicles (including third-party contractors, as specified in contract requirements).

To maximise visibility, these guidelines require vehicles to have a white base colour, and full contour markings to clearly outline the rear, sides, and front of the vehicle. To ensure the vehicle outline can be clearly distinguished, the markings are also applied around the wheel hub and truck toolboxes/cabinets. Transurban's conspicuity markings include wide strips of reflective, fluorescent yellow tape that provide vivid retroreflectivity at wide angles, almost 90 degrees from perpendicular, to help improve visibility.

Transurban incident response vehicles also feature a white and green (or blue and yellow in Queensland) Battenberg pattern (alternating rectangles of colours) between two strips of conspicuity tape to increase vehicle visibility, distinguishing Transurban vehicles from other incident response operators on the road.

Transurban initially implemented conspicuity markings in Victoria on new CityLink incident response vehicles. However, their success saw them quickly become a requirement on all Transurban vehicles across Queensland, Victoria, and New South Wales, including incident response vehicles, project site vehicles, sweepers, and tow trucks.

#### **Key challenges**

As well as informing their conspicuity marking guidelines, Transurban's extensive consultation process also played a significant role in ensuring smooth implementation.

However, several details still had to be considered when tailoring the guidelines for Transurban's operations, including local regulations. For example, although they intended to have a green and white Battenburg pattern in all markets, vehicles in Queensland needed to reflect the State Government's yellow and blue colour scheme.

#### **Achievements and Community Impacts**

As a Like any preventive measure, it is challenging to directly measure the impact of conspicuity markings. However, previous research3,4 suggests the markings will play an important role for Transurban in reducing collisions – and subsequent vehicle or property damage, injuries, and fatalities – due to improved visibility for drivers at night and when pulled over to the side of the road.

Feedback from Transurban's incident response crews has shown a significant positive impact, with drivers indicating that increased visibility provided by the markings has helped them feel safer on the road. They also report a noticeable difference in the behaviour of motorists, such as moving to the side to let them pass, allowing incident response vehicles to reach their destination as quickly and as safely as possible.

The distinctive yellow conspicuity tape and Battenberg pattern distinguish Transurban vehicles from other response teams or incident response vehicle operators, providing customers with the confidence that they are receiving the highest standard of service and safety when they see these vehicles. Customer feedback indicates they feel a sense of relief and safety when they see Transurban incident response teams arrive, and the increased visibility and recognisability of these vehicles from the conspicuity markings may play a role in this.

Transurban's successful implementation of conspicuity markings demonstrates the feasibility of implementing this important safety solution in other sectors, such as the construction industry, and raises expectations around maximising safety for vehicle operators.







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#### Summary

Transurban's implementation of conspicuity markings has helped increase visibility and recognisability of their vehicles, contributing to crash prevention, assisting incident response teams to reach their destination quickly and safely, and increasing feelings of safety for employees, contractors and road users.

The implementation process was carefully considered and included extensive consultation, resulting in tailored guidelines that highlighted key specification requirements for all Transurban vehicles operating across its network.

Conspicuity markings are an important part of a larger Transurban package of safety initiatives, including high visibility clothing and protective safety equipment such as eyewear and gloves. Together, these initiatives improve the visibility of response vehicles, and the safety of employees, contractors and motorists across Transurban's roads.







Improving Vehicle Visibility for Safer Roads

### References

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