**Project 2: Motor Vehicle Theft**

*Programming Language (PL): MySQL | Data Visualization: Tableau*

This project focuses on analyzing the *impact of motor vehicle theft* in *New Zealand* using MySQL for data analysis and Tableau for visualization. The dataset, sourced from [Maven Analytics](https://mavenanalytics.io/data-playground?order=date_added%2Cdesc&page=6), includes a *primary* table—*stolen vehicles*—and two *supporting* tables—*make details* and *locations*. It contains information such as *vehicle type, make, date stolen, region, population, and more*. Initially, the dataset had *4,553* records, with *44* missing values, which were removed during data cleaning. The final cleaned dataset consists of *4,509* records of stolen vehicles.

The datasets cover vehicle theft incidents that occurred between *October 7, 2021*, and *April 4, 2022*, revealing an *upward trend* in thefts over time. While the data for April 2022 is limited to just four days—restricting deeper insights for that month—*2022* still saw the highest number of thefts, with *2,860 incidents*, accounting for *63%* of the total cases. Notably, *March 2022* recorded the peak in monthly thefts at *1,046 incidents*, representing *36.57%* of the year’s total. The highest single-day count was recorded on *April 4, 2022*, with *81* thefts. Moreover, the analysis reveals that *74%* of thefts took place on *weekdays*, indicating a higher frequency compared to *weekends*.

During this six-month period, a total of *25* different vehicle types were reported stolen in New Zealand. Among them, ‘*Stationwagon*’ and ‘*Saloon*’ were the most frequently targeted, with *944* and *850* thefts, respectively. The data includes *135 vehicle brands*, classified into *Standard* and *Luxury* categories, with *96%* of thefts involving vehicles from the *Standard* category—indicating a much higher risk for this group. Within the *120* Standard-category brands, *Toyota* stands out as the most frequently stolen, with *716* reported incidents. Notably, *Stationwagons, Hatchbacks, and Saloons* from *Toyota* were particularly at risk.

Interestingly, *silver-colored* vehicles are at a notably higher risk of being stolen. Among the *13 regions*, *Auckland* reported the highest number of thefts, with *1,620* incidents, *68%* of which took place in *2022*. The most stolen vehicle types across these regions were *Stationwagon* and *Saloon*. Notably, *Toyota* was the brand most often associated with thefts, with the highest numbers reported in *Auckland, Canterbury, Bay of Plenty, Northland,* and *Otago*.

To reduce vehicle thefts, *law enforcement* should focus on high-risk regions with *increased weekday patrols*, *invest in surveillance* and *license plate recognition technologies*, and engage communities through *awareness campaigns*. Meanwhile, *vehicle manufacturers* must enhance built-in security features—especially in standard models—by including *immobilizers*, *GPS tracking*, and *keyless entry protection*, while also educating owners and collaborating with insurers to promote theft prevention measures.