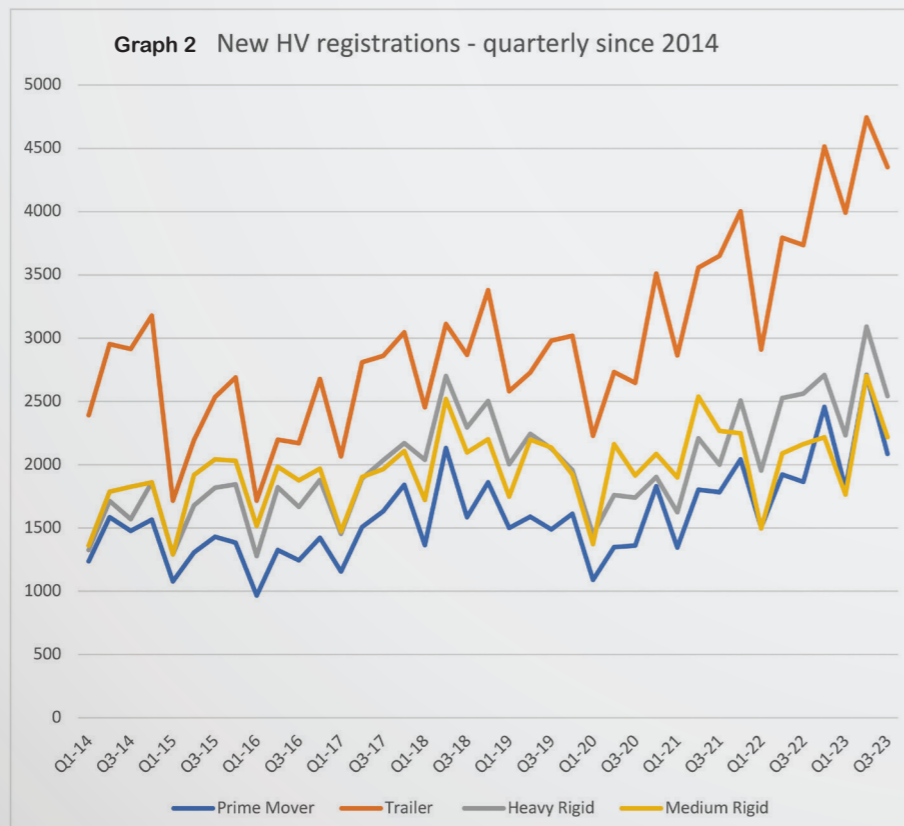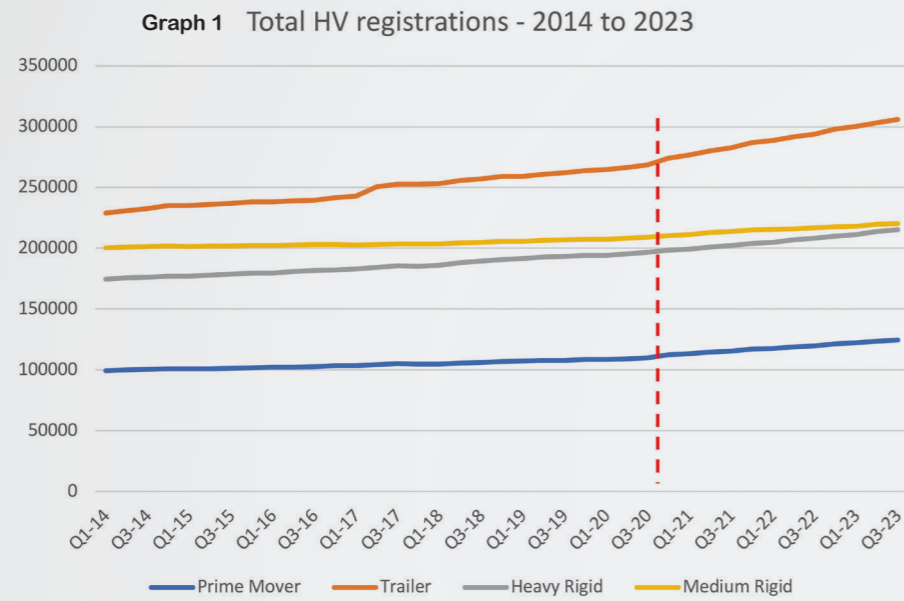**ROB PERKINS**

ARTSA-i data analysis of the NEVDIS heavy vehicle registration database

A RTSA-institute has been analysing the Australian heavy vehicle registration database for the past ten years. Every quarter ARTSA-i obtains an extract of the Australian vehicle registration base called NEVDIS that is maintained by AustRoads. ARTSA-i then refines the data so it can be presented with consistent makes, models and types. ARTSA-i produces reports that are tailored to the interests of the equipment suppliers that participate in this project and to agencies and other interest groups. Over recent years ARTSA-i has developed the advanced analytics using the Tableau analysis software to present the refined data in a real-time graphical format. So, ARTSA-i can now cut and dice the data according to geographical region, registration code, vehicle age, body type and many more indicators. ARTSA-i also makes a quarterly report about market trends, which can be downloaded from the ARTSA-i website: http://www.artsa.com.au/data/index.html There are many insights that have come from this project. This article will illustrate some of them in graphical format.

Total registrations of heavy vehicles
The total registration numbers are shown in Graph 1 for each of the four main registration types: prime movers, trailers and both heavy and medium duty rigids. Note the market uptake for prime movers, trailers and heavy rigid trucks started in late 2020.

Graph 1   Total HV registrations - 2014 to 2023

Graph 2   New HV registrations - quarterly since 2014

Growth in the last ten years has seen total registrations increase by:

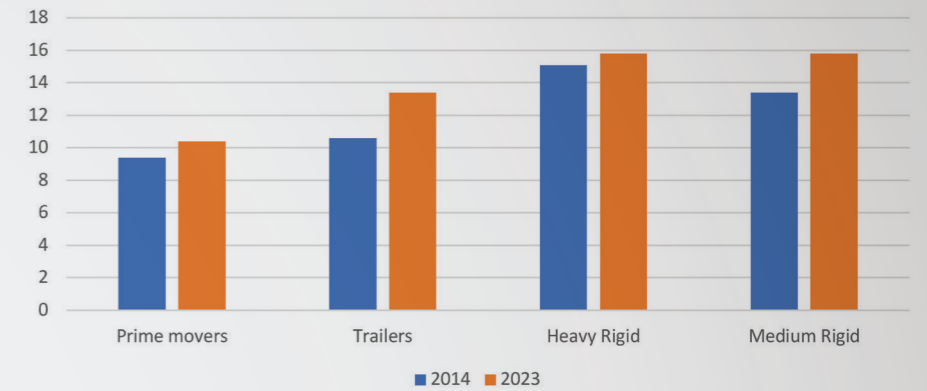|	
Prime movers	25.5%
Trailers	33.6%
Heavy Rigids	23.3%
Medium Rigids	9.9%

New registrations of heavy vehicles
Graph 2 shows the quarterly growth in new registrations over the last ten years. A marked increase in registrations can be seen from around Q3 2020 and continues to break records for new registrations almost every quarter. Trailer growth is particularly evident. Quarter 1 registrations tend to be low, as expected, due to the holiday slowdown. Q4 registrations peak.

Over the past two years the new prime mover market grew by about 19 per cent per annum. For heavy trailers the new market grew by about 14 per cent per annum. For heavy rigid trucks the new market grew by about 15 per cent per annum. For medium rigid trucks the new market grew by about 2 per cent per annum.

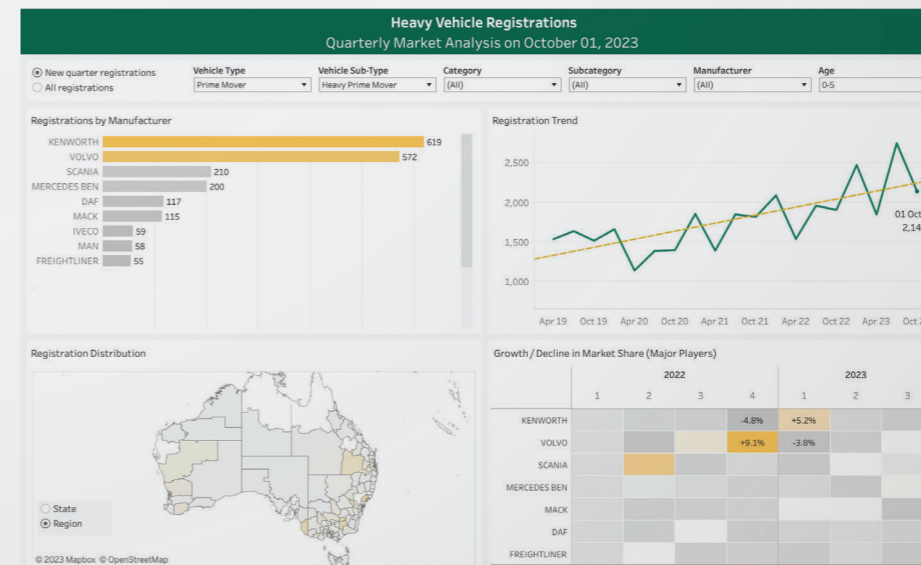**Median age**
Despite the remarkable growth trajectory

for trailers, prime movers and heavy rigids, particularly in recent years, the median age of the fleet continues to increase over that period. This is illustrated in Graph 3. Median age is the age where there are equal numbers of younger and older vehicles. The prime mover category can be further split into single-trailer haulers and multicombination prime movers. The single combination prime movers have a median age well over 12 years. Demand for road transport is growing at such a pace that older vehicles still move a lot of freight.

Detailed analytics using Tableau
ARTSA-i data analytics uses Tableau

Graph 3   Median age - heavy vehicle fleet, 2014 and 2023

data analytics to provide an interactive database that allows the user to interrogate the registration data to reveal insights that flat spreadsheets cannot provide. An example applicable to prime movers is shown in Graph 4 below. Tableau delivers the ability to investigate regions as well as providing a national picture. This includes new as well as total registrations and the many sub-categories across prime movers, trailers, buses and rigid vehicles. It is a very powerful analytics tool and one that ARTSA-i Data and its subscribers can use around the clock given it is an online service. Data is updated quarterly but the history of data and the ability to download data of interest is a considerable plus for this tool.

The future for ARTSA-i Data
ARTSA-i Data is continuing to develop new features and tools as well as new sources of data to further enhance the already powerful collection. We want to expand our reach and usefulness with suppliers, operator associations and regulators. The ARTSA-i database is now a national industry asset. It's been a rewarding ten years and the work has only just begun. For more information, visit http://www.artsa.com.au/data/index.html or email rob@artsa.com.au

Rob Perkins
ARTSA-I Data Executive Director

Graph 4 Interactive data analysis using Tableau.