



## Metro Trains Melbourne and INVER Engineering

Performance through engagement

### The Challenge

Metro Trains Melbourne (MTM), operates a fleet of 72 Siemens trains, which have completed 1.2million km of service. In February 2014 the Bogie overhaul programme; one set (consisting of 6 bogies) to be replaced weekly for a period of 18 months, commenced.

Unipart Expert Practices were asked by MTM to support their preferred supplier INVER Engineering to establish an end-to-end process for this overhaul programme; the removal from vehicle at MTM, overhaul at INVER, return and refit to vehicle at MTM.

### The Solution

Unipart's standard approach was used to engage and develop teams in Lean tools and techniques. The timescales to establish the processes for the overhaul programme were tight, therefore the Expert Practitioners took on a practical role of leading and guiding the development of the processes, identifying issues and improvements that would ensure deadlines were met and performance was unhindered. Lean principles were built into the process from the start with tools implemented in the area to support the process; creating real examples from which to then develop the team's Lean knowledge. Many of the improvements included;

- Standardised process from which to identify and implement future improvements
- Identification of safety and quality risks within the processes. Identifying solutions to remove or mitigation actions.
- Implement visual management to monitor key performance measures; ensuring the team captured trends, identified issues and developed corrective actions
- Development of an internal Lean capability to support the project and continue after UEP had left



## The Result

Through hands on support, training and coaching the INVER team to achieve:

- The design and implementation of a standard process, based on Lean principles for the end to end bogie overhaul. The 'current best process' from which to further improve by the continuous removal of waste was established.
- A dedicated layout and process for the overhaul of traction motors to meet the build requirements for the bogie.
- The development and implementation of a Communication Cell to co-ordinate activity across the sub-assembly areas (traction motor, gearbox, wheel sets), highlight issues and ensure focus on meeting the delivery programme for the customer.

As a result of the programme INVER Engineering have produced excellent results to complete the bogie overhauls for the MTM Siemens train fleet:

- Safety - No lost time injuries
- Quality - Zero defects
- Delivery - 100% on time to customer since project start, achieving 1 train set/week.
- Cost - 38% Reduction in man hours (since 3rd Bogie set)

"Unipart came in and put some structure into our business to stop us running from bushfire to bushfire and we were able to build on this to put robust processes in place"

"My personal perception of Lean prior to my experience with Unipart was from Seminars that I have attended where people spoke about it being worth the pain and the effort. I don't think it's hard and the cost is minimal to the pay back."

**Graeme Smith**, *Managing Director / Owner,*  
*INVER Engineering*

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