ViDESIGN CASE STUDY

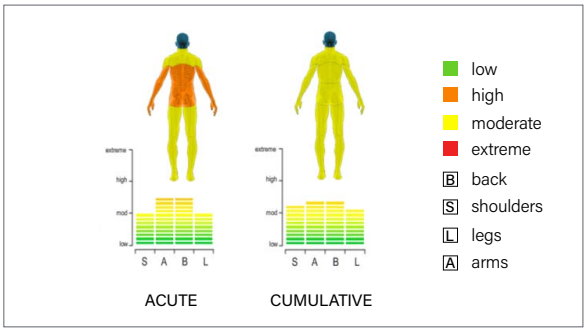
ViBODY: REMOVAL OF ASPHALT PAVER TYRE

BEFORE

- Removal of Asphalt Paver tyres are conducted up to 4 times per month, as per preventative maintenance schedules.
- Task requires two persons to manoeuver the tyre (approx. 200kg w/o water and 400kg w/ water) to allow the forklift to lift and transport the tyre.
- Removal: 45min to 60min per tyre.
- Working with restricted access within the wheel arch & access to the hub of the tyre.

HEALTH ISSUES AND INITIAL ASSESSMENT

- Awkward postures in the back, neck when kneeling.
- High force required when lifting/manoeuvring tyre and using hand tools.
- Repetitive use of hand tools while in sustained static postures.
- Exposure to low levels of hand-arm vibration with use of rattle gun.
- Risk of crushing injury and sudden forces from tyre imbalance during manoeuvres.
- High acute risk to the back, arms, and hands, and moderate risk of cumulative injury.



- Manual Task Risk Assessment per ErgoAnalyst www.ergoanalyst.com

AFTER

CONTROL STRATEGIES: ROLLRUNNER TROLLEY

- Implemented the use of a manual wheel remover: Levanta with clamp on top of tyre and narrow wheel base.
- Knee pads were also procured for use by workers on hard flooring.
- Training was provided for new work procedures and safe work methods with new equipment.

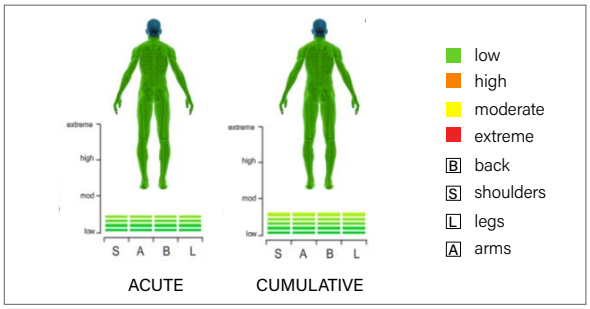
COST BENEFITS AND PROJECT TIMES

- Eliminated the need for forklift and operator.
- Eliminated the need to release the tyre from the paver to another work area.
- Reduced the labour required from 3 staff to 2; billable at $95/hr up to 4 times per month, approx. $380/mo.

ANALYSIS AFTER IMPLEMENTATION

- Removed the risk of imbalanced loads and reduced overall exposure to manual handling.
- Overall reduction resulted in low risk for both acute and cumulative risk.

Risk Reductions		
	Acute	Cumulative
Shoulders	50%	53%
Arms	50%	53%
Back	33%	50%
Legs	33%	50%



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✓ **WE ACHIEVED:** Risk reduction of Fatality, Severe Disability, Moderate Disability, Temporary Injury, Discomfort, and achieved Comfort/Efficiency, Conditioning, Social Connection, Profitability, Business Integration and Industry Liaison.