ViDESIGN CASE STUDY
ViBODY: BUS SEAT INSTALLATION

PROJECT: MANUAL HANDLING DURING INSTALLATION OF THE ISRI 6860 BUS SEAT

» Installation of a newly procured driver seat ISRI 6860 into new and refurbished buses.

» Installation requires two people to lift the bus seat onto brackets in the cab, which is a small confined area.

» Basic procedure that takes approximately 20 – 30mins:

1. Remove bus seat from box packaging
2. Lift the bus seat from pallet storage
3. Carry the bus seat to the bus cab
4. Install the bus seat and attach the seat base to brackets in the bus seat cab

CONTROL STRATEGIES:

» Assessments of ergonomic designs and risk factors were performed using skilled observations, interviews, recordings and measurements of forces.

» New work procedures were adopted for the seat installation process using a Lifting Aide (external lifting device). This device significantly reduced the need for lifting the seat and allowed the seat transfer into the cab at waist height using light push-pull manoeuvers.

COST-BENEFIT, PAYBACK, AND PROJECT TIMES

» Injury risk reduction for low back or shoulder sprain/strain

» The project was completed < 3 months

» Engaged workforce motivated by their participation in the project

HEALTH ISSUES AND INITIAL ASSESSMENT

» Employees reported aggravation of low back pain and taking time off work for up to 4 days, which was also costing the company lost time.

» The ergonomic risks associated with the manual handling tasks include:

- Lifting an awkward load
- Lifting in a confined space
- Handling a heavy load
- Physical exertion level "heavy"

ANALYSIS AFTER IMPLEMENTATION

» Reduced the need for one or two persons to lift and carry a 43+kg load.

» The innovation of the Lifting Aide and implementation of procedural changes reduced the physical exertion level from "heavy work" to "light work". Thus, the task is now manageable for persons able to engage in light-duty work.

» The tools, equipment and procedure illustrate an example of a safe work measure for manual handling a heavy load.