

Healthy Workplaces Good Practice Awards 2020-2022

CASE STUDY



Wearable exoskeletons to better manage manual handling at airports



ORGANISATION/COMPANY
Swissport Cyprus Ltd

COUNTRY
Cyprus

SECTOR
Service activities
incidental to air
transportation

TASKS
Loading and unloading
luggage



Source: SWISSPORT CYPRUS LTD

Background

Swissport Cyprus Ltd operates out of Larnaca and Paphos International Airports. It provides ground handling services to several airlines, including the operations

control and coordination centre, customer service, aircraft loading/unloading and cleaning.

The Ramp Handling Department is responsible for manual loading/unloading of luggage, cargo and mail on

aircraft. This involves frequent and repetitive lifting. Over time, this leads to back disorders.

Despite repeated training, dissemination of information and the supervision of manual handling, the company recognised that employees in the Ramp Handling Department continued to be at risk from musculoskeletal strain. This could lead to increased absenteeism and decreased productivity.

Aims

Introduce the LiftSuit exoskeleton to improve employees' quality of life professionally and personally by reducing the pressure that may be placed on the musculoskeletal system during manual handling.

What was done and how?

- Through the company's wellbeing initiative to promote a healthier lifestyle, the campaign 'Work-Ergonomics-Health' was launched.
- The campaign's main initiative was the testing of the LiftSuit, a wearable exoskeleton designed by the company Auxivo in collaboration with Swissport International. The exoskeleton supports lifting movements during luggage handling to reduce workload, exhaustion and fatigue, ultimately ensuring employees' long-term wellbeing.
- Volunteers from the Ramp Handling Department took part in short-term tests of the LiftSuit. They recorded their observations and continuously consulted with the Health and Safety Manager as well as the Company Occupational Physician.
- Feedback and suggestions from the employees involved in LiftSuit testing led to the creation of a more advanced version that was also tested and then certified. As a result, six LiftSuits were purchased for the long-term testing.
- After the final testing and employee feedback, the company will evaluate the results to proceed with the purchase of this innovative product on a larger scale to achieve a healthier and safer working environment for all employees.

What was achieved?



Source: SWISSPORT CYPRUS LTD

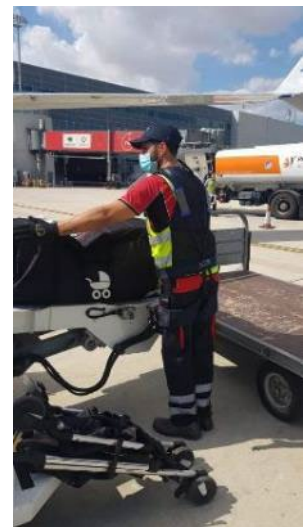
- Employees experienced reduced strain on the musculoskeletal system during manual handling,

with better support while standing and/or in a crouching position.

- There was improved staff perception on health at work.
- Employees' satisfaction with management increased due to their active role and involvement in testing and decision-making.
- Laboratory results indicated that the intensity of muscular activities for an employee are reduced by up to 30% when wearing the LiftSuit.
- The exoskeletons eased the physical strain when loading/unloading luggage onto the aircraft, providing better support while standing and/or in a crouching position.
- In the long run, the results of this intervention could lead to lower rates of absenteeism due to musculoskeletal disorders (MSDs).

Success factors

- The company's focus on maintaining a healthy and safe work environment and its recognition of the need to reduce the risk of musculoskeletal strain during manual handling activities.
- The company's ability to evolve and invest in innovations, giving it a competitive advantage.
- Management's vision to develop a project based on the company's values (people, professionalism and partnership) that respect employees and their safety and health.
- The company's pioneering spirit to explore innovative options and improved solutions that achieve sustainable results with respect to efficiency, profitability and employee needs.



Source: SWISSPORT CYPRUS LTD

Transferability

This intervention could easily be adopted by other companies in air transportation services, as well as companies where manual handling is required.

Costs and benefits

Costs:

- Testing and on-site training of the LiftSuit exoskeleton
- Price for six LiftSuits

- Promotional material, such as posters and brochures, designed as part of the staff information campaign
- Working hours of the team leading the campaign

Benefits:

- Reduction in potential strain on the musculoskeletal system of workers performing manual handling activities
- Reduction in absenteeism related to musculoskeletal strain
- Increase in staff satisfaction
- Improved efficiency and productivity of employees
- Positive contribution to employees' wellbeing outside work
- General benefit to society through promoting and informing on innovative ideas (for example, other companies facing similar risks at work could exemplify and follow this good practice)

Key features of good practice example

- The introduction of the exoskeleton built on previous measures to reduce MSDs, as it was found that more needed to be done.
- The exoskeletons were introduced in a planned way, with full testing beforehand.
- Employee involvement was important, participating in testing and evaluating the exoskeleton.
- The company is committed to investing in new technologies and products that ultimately lead to a positive impact on the wellbeing of its employees.

Further information

Further information can be found at

<https://www.swissport.com/en/network/europe/cyprus/lca>

<https://www.swissport.com/en/network/europe/cyprus/pfo>

References and resources

<https://www.auxivo.com/liftsuit>

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