

**Complete
Entertainment
Services**

New Zealand



New Warehouse for Book Wholesaler

Customer Requirements

CES is a new company formed to specifically provide Vendor Managed Inventory (VMI) facilities to a range of New Zealand customers for books and other entertainment products starting with The Warehouse Ltd (TWL)

CES was a startup company, with no existing operation. This presented a significant challenge in designing a new warehouse. The business intent was to implement this design, stabilise and establish the business in a tenancy CES had obtained.

Darroch Consulting was engaged to perform the complete design of the warehouse and its operation and take it through to implementation.

Darroch Consulting was engaged to

- a) Design a suitable warehouse fitout capable of distributing 00 books on a daily basis with a peak of 20,000 to the 85 TWL stores.
- b) Develop the processes required to manage a complex warehouse with unique requirements covering the distribution of new titles, mixed title allocations for bargain bins as well as the daily replenishment of stores as stock is sold.
- c) Evaluate software systems for:
 - Warehouse management compatible with the recommended processes in (a) and (b) above.
 - Order entry, inventory and financial software.
 - Forecasting (to enable planned purchases of replenishment stock).
 - EDI (between CES and suppliers, CES and their customers).
- d) Project manage the software implementation.

The key outcome for CES was that the warehouse would be capable of low unit cost, high efficiency operation.



The Darroch Approach

ANALYSIS AND DESIGN DEVELOPMENT

Although there was no established operation from which to extract data, CES was able to obtain historic store demand data from their principal future customer.

Based on this data, an extensive modelling exercise was undertaken in order to map demand and ordering patterns. Order release in waves was modelled, and particular care was taken in identifying SKU commonality between stores.

Concepts and detailed designs were developed from the design level. An extensive series of workshops were held with CES staff to ensure the design integrated WMS and processes with fitout and ergonomics.

Following finalisation of design, DCL handled the tendering of all aspects of software and MHE fitout.



The Solution

The developed solution is a put-to-light operation.

Requirements for TWL are grouped into waves and picked from bulk pallet or shelving.

Bulk picks are fed to the pricing stations. Units are then priced and placed in totes destined for specific put-to-light stations. When a tote is full it is placed on a recirculation conveyor to be distributed to its put-to-light station.

Upon receiving a tote, put-to-light station operators scan a unit. Shippers requiring that SKU are indicated by a light display which displays the quantity required. Operators then put the units to those shippers and confirm by button press. This process is repeated for each SKU in the tote until the tote is empty.

New Title releases can be pre-priced and picked as whole cartons to store where possible.

Once complete, shippers are removed from the stations and conveyed to despatch, The WMS integrates with freight companies' systems, which allows automatic freight labelling and manifest generation.

INFORMATION TECHNOLOGY

Darroch Consulting initially produced a functional requirements specification for the design.

Darroch Consulting then evaluated a shortlist of suitable software suppliers for ERP, WMS and OFS systems. Based on this evaluation, DCL recommended an integrated package from a range of suppliers based upon the preferred WMS software.

Workshops involving the relevant department staff were held with each of the software suppliers to determine the GAP analysis and configuration options under the guidance of Darroch Consulting followed by a prototype presentation to key CES personnel.

Darroch Consulting undertook the project management of the software implementation.



The Benefits

Since inception, the put-to-light module has achieved high line per hour throughput rates.

The CES operation operates successfully with low cost per unit.

CES's success has a lead to being awarded the contract for TWL's online order fulfilment service for books, music, DVDs, gaming, and book supply into Warehouse Stationary.

CES is currently pursuing other opportunities where their low cost unit pick capability provides a customer solution.