# Chapter 2: Role of Warehouse Managers

**6 basic tenets:**

accuracy;

cost control;

cleanliness;

efficiency;

safety;

security.

Warehouse managers are expected to recognize and balance other trade-offs as follows:

- increased throughput vs. reduction in labour costs;
- storage density vs. quicker pallet extraction;
- manual vs. automated processes;
- increased pick rates vs. accuracy;
- inventory holding costs vs. cost of stock outs;
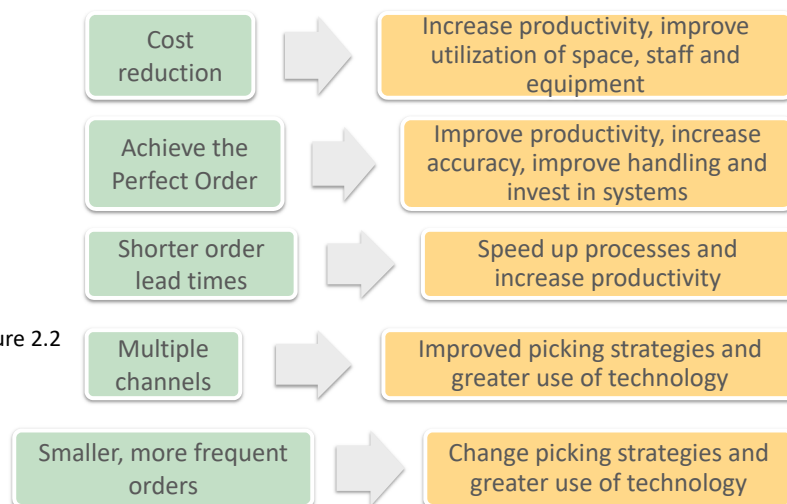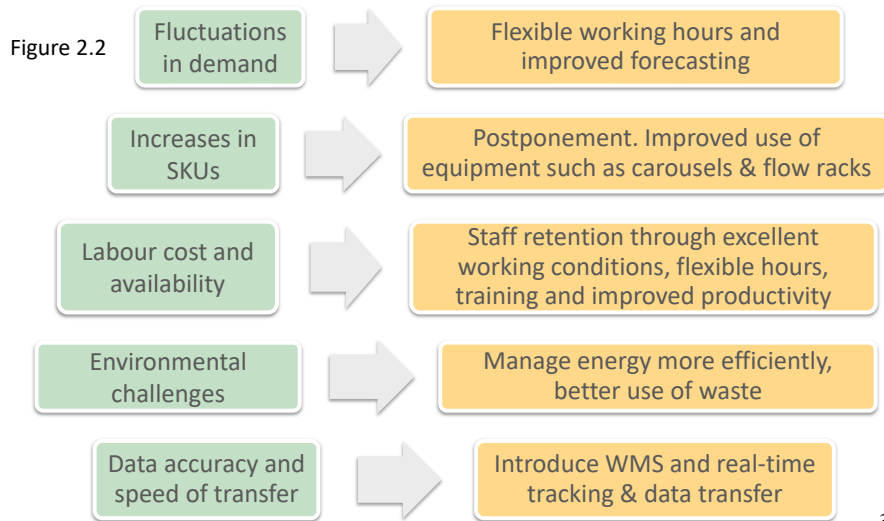- speed vs. safety.

# Warehouse Challenges

| Cost reduction | → | Increase productivity, improve utilization of space, staff and equipment |
| Achieve the Perfect Order | → | Improve productivity, increase accuracy, improve handling and invest in systems |
| Shorter order lead times | → | Speed up processes and increase productivity |
| Multiple channels | → | Improved picking strategies and greater use of technology |
| Smaller, more frequent orders | → | Change picking strategies and greater use of technology |

Figure 2.2

## Warehouse Challenges

Figure 2.2

| | |
|---|---|
| Fluctuations in demand | Flexible working hours and improved forecasting |
| Increases in SKUs | Postponement. Improved use of equipment such as carousels & flow racks |
| Labour cost and availability | Staff retention through excellent working conditions, flexible hours, training and improved productivity |
| Environmental challenges | Manage energy more efficiently, better use of waste |
| Data accuracy and speed of transfer | Introduce WMS and real-time tracking & data transfer |

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## Lean Warehousing

- The concept of 'lean' comes from the manufacturing sector, more specifically the automotive industry, and is very much associated with Toyota.

- 'Lean' is now being applied not only in manufacturing but also within the public sector and the supply chain.

- The idea behind lean is to remove any activity that uses resources but doesn't create any additional value.

LEAN THINKING

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## Examples

- half-height and quarter-height pallets taking up space in two-metre-high locations; 零板佔用儲位
    - Solution: moving smaller pallets to other locations, reducing beam heights or adjustable heights
- part pallets of the same product spread over a number of different locations; 品項儲存於不同儲位
    - Solution: Consolidate the pallets. Tradeoff between labour cost and storage space. 多儲位的優點
- over 10 per cent of the stock was obsolete. 呆料庫存
    - Solution: Decisions have to be made in conjunction with the finance department to dispose of obsolete product

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## Seven Wastes or Muda

- transportation (driving an empty forklift) 空車行駛
- defects (time spent correcting errors such as misspicks) 揀錯
- inventories (congestion at the inbound and outbound areas) 進出貨區域擁擠
- motion (interrupting movement such as staging product before put-away) 入庫作業中斷
- waiting time (bottlenecks at pick locations) 等候揀貨
- overproduction (holding too much inventory) 庫存過多
- overprocessing (performing unnecessary steps such as labelling and checking) 非必要的檢查

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## 5S + Safety



Sort or Seiri or Clear out

Straighten or Seiton or Configure

Shine or Seiso or Clean

Standardize or Seiketsu or Conform

Sustain or Shitsuke or Custom

Safety

## 5S Tool

| 5S | Actions | Responsibility | Measurement |
|---|---|---|---|
| Sort | Identify obsolete stock and dispose of it | Inventory manager | Increased available storage locations |
| Straighten | ABC analysis Locations are clearly defined and labelled | Warehouse manger | Increased picking productivity |
| Shine | Work areas are clean and damage free | Housekeeping | Visual |
| Standardize | Standard procedures and records for each operation | Team leaders | Accuracy, Quality |
| Sustain | Regular review meetings and recognitions | Warehouse manager/Team leaders | Suggestions made. Improvements introduced. |

## Workforce Management

- identifying, attracting and retaining good supervisors, first line managers and team leaders; 基層幹部

- retaining and attracting new employees; 員工素質

- an ageing and constantly changing workforce, including the introduction of foreign staff; 外勞

- identifying training needs;

- the need to provide safe, comfortable working conditions; 安全

- employment contract negotiations; 勞動合約

- compliance with employment and health and safety legislation 勞基法

- staff discipline. 紀律

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## Effective Supervisors and Managers

- Communication skills

- Ability to <u>delegate</u> effectively 用人

- Motivation skills

- Problem-solving skills

- Flexibility (react quickly and handle stress)

- Comprehensive knowledge

- Ability to train others

- Be customer oriented

- Teamwork skills 領導

- ability to work in a group;
- ability to build relationships;
- ability to cope under pressure;
- negotiating skills;
- ability to cooperate;
- coordination and allocation of tasks;
- influencing skills;
- ability to compromise where necessary;
- ability to make decisions.

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## Training

- ensure that all staff receive an induction: showing the end-to-end supply chain and how each step impacts the final customer

- undertake a training needs analysis to identify which staff require specific types of training. There are always areas in which staff need to be trained – the trick is in identifying them.

- all staff operating mechanical handling equipment must be trained on each individual piece of equipment and obtain a licence from the authorities

- 教導並要求遵照工作安全規範

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## Attracting and Retaining Employees

- Many firms see monetary incentives as being key to staff recruitment and retention.

- Surveys suggests otherwise with active employee involvement in productivity improvement, … being seen as high on the list. (52)

- Flexible hours, recognition of a job well done, clean and safe working conditions, … crucial to attracting and retaining staff. (52)

- As warehouses become more technically advanced this will also attract a new breed of warehouse employee – those with an interest in technology and automation. 物流共和國

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## Warehouse Audit

ISO 9001 – a standard of requirements against which your Quality Management System can be evaluated; 產品或作業的品質管理

ISO 14001 – a standard of requirements that defines and establishes controls to reduce your company's impact on the environment; 環保

ISO 50001 – a standard of requirements that deals with the energy impact of your warehouse operation; 節能

HACCP (ISO 22000) – 食品安全問題的管理系統

OHSAS 18001 (ISO 45001) – a standard of requirements against which your Health and Safety Management System can be evaluated; 職業健康安全

EICC (BRA) – Electronic Industry Code of Conduct 電子產業行為準則

ISO 27001 – a standard of requirements which deals with all aspects of information security (outsourced warehousing). 資訊安全

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## ISO 14001

- ISO 14001是一種標準，用於確定從原材料到客戶的過程中的環境因素，並通過必要的預防措施控制這些因素，並最大限度地減少對環境的危害。 ISO 14001是一種管理系統，旨在系統地減少並在可能的情況下消除企業可能對環境造成的損害。

- 優化資源配置、綠色運輸、綠色倉儲、綠色包裝、逆物流

    momo致力於發展綠色物流、友善包裝，2020年綠色物流與低碳運輸每月合計減少21.28公噸碳排放。在實踐綠色物流的道路上，momo從倉儲建置、運輸的布局皆將環境永續的理念涵蓋其中，如北區物流中心太陽能發電設置，持續打造綠色自有車隊，引進符合能源效率運輸車輛。

    momo不僅建立環境管理系統及運作機制，同時透過教育訓練提升公司內部環境永續意識，如針對同仁積極推動無紙化措施、廢棄物管理及各式節能宣導等。在momo的努力下，2020年雙雙通過ISO 14064-1溫室氣體盤查查證、ISO 14001環境管理系統驗證，實踐建立永續營運綠生活承諾。

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## HACCP (ISO 22000)

- HACCP制度為世界各國在食品管理政策之共同基準，強調源頭管理模式，從原料處理到產品製造、銷售等完整製程中，評估潛在的危害因素，並加以有效監測以確保食品安全的管理制度。實施HACCP制度的工廠，必須具備對其加工程序中可能發生之生物性、化學性或物理性危害，進行詳實之評估分析並研訂對策，確保產品安全品質。

- 包含從食物源頭開始的農場主，到食品與飼料生產、加工、製造的廠商、批發商和零售商，同時也適用於與食品有關的物流運輸、倉儲配送、包裝材料供應廠商、農業化學品和食品添加劑供應廠商，甚至涉及食品的服務供應商、餐廳、設備、清潔員也都算在內。

全台物流於2010年領先同業取得食品安全管理系統雙認證，確保從全台物流從食品服務、加工、運輸、儲存、零售和包裝等作業流程中，皆符合食品安全管理體系要求，提供客戶新鮮、安全與衛生商品的良好作業品質。

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## ISO 45001 (OHSAS 18001)

- ISO 45001是職業安全健康管理體系的ISO標準之一，基於國際勞工組織OHSAS 18001的公約、準則以及國家標準。ISO 45001的目標是為員工提供安全的作業場所，進行危害鑑別、風險評估，並確定必要的控制措施，提升人員的職業衛生安全意識和能力，以減少職業傷害和疾病，包括促進和保護身心健康。
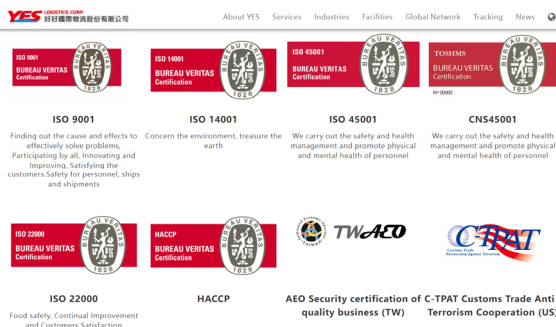
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## Electronic Industry Code of Conduct

- 惠普、戴爾和IBM等共同發表電子產業行為準則(EICC)，旨在電子行業的全球供應鏈中，建立標準化的社會責任感行為規範。該準則由一系列的基本規範組成，涉及勞工和招聘、健康安全、環境責任、管理系統和道德規範等。
- 2017年10月EICC 宣布組織改造同時亦改名為責任商業聯盟 (Responsible Business Alliance, RBA)

日月光加入EICC後將與供應商共同遵守EICC行為準則，並推動供應管理「SMILE供應鏈到ART供應網路」行動計畫，表達共創綠色永續供應鏈的決心。日月光表示，未來將關注供應鏈的綠色管理包括：一、原物料的綠色尋源與採購。二、資本設備與耗材的綠色支出。三、運輸與倉儲的綠色物流服務，引領供應商共同承擔環境、員工等社會責任。從商業道德、安全衛生、環境保護、管理系統等方面帶動整體供應鏈的綠化升級與永續經營目標。

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## ISO 27001

有關資訊安全管理系統架構、實施、維護以及持續改善上的要求，目的是幫助組織可以使其保管的資訊資產更加安全。ISO/IEC 27001包括的不只是IT部門而已，ISO/IEC 27001會要求進行以下的管理：

- 系統性地檢驗組織的資訊安全風險，考慮其威脅、弱點以及影響。
- 包含客戶隱私，企業機密以及資訊科技層面，更包含法律，人員管理，物資管理等諸多方面，每個與資訊相關的組織都應該進行相關的資訊安全風險評估，藉由相關的指導和建議實施適當的資訊安全管控。

新竹物流為落實客戶資料保護，於 99 年即成立個資保護執行委員會，於 99 年通過 ISO27001，今年再次通過 ISO27001 與 BS10012 兩國際驗證標準。成為台灣第一家同時通過 ISO27001 與 BS10012 認證之物流商；代表新竹物流對個資的管理與資訊安全是為企業首要議題，肯定其對客戶資料的重視與善盡保護責任的努力。

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## Summary

- Reducing cost and inventory whilst increasing customer service.

- Reducing waste

- An ageing population and difficulty in attracting new staff pose more challenges for today's manager, together with increased environmental pressures.

- Quality of service is what sets companies apart.

- Warehouse audit checklists (p.387)

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