The Omni-Channel evolution: How strategic investment in fulfilment automation ensures survival of the fittest

Presented by:

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In the mid 1800s
Fastest horses
Fashion/Apparel market
Speed to market & fashion cycle
How to deal with Omni-Channel?
Focus on the Last Mile
Turning stores into fulfilment centres
Click & Collect using store's inventory
Ship from store
Store purpose: sell in shop, not fulfil orders
From distribution centres to stores
Legacy solutions implication
Inventory excess and its consequences
Discount Culture
How should shops look?
Ecom? Ship to store
How to achieve this?
Effective Omni-channel is not just dealing with the last mile issue
Different Approach

LONG TERM →

← SHORT TERM
Don’t get stuck on Islands of Automation
Last mile deliveries
Smaller and more frequent deliveries
The store is evolving from being a distribution channel to becoming a media channel.
Less inventory in shops
Same or next day delivery
Latest Cut-off Times
In the new world, it is not the big fish which eats the small fish, it’s the fast fish which eats the slow fish.

Klaus Schwab
Founder and Executive Chairman
World Economic Forum
Even higher
3 ways to act “Omni-Channel”

- **Retail / Wholesale DC** (1 System for Retail / Wholesale only)
  - Direct DC (1 System for Direct only)
    - Shops (Retail / Wholesale)
    - End Customers (Home Deliveries)

- **Retail DC** (1 System for R / W)
  - Direct DC (1 System for Direct)
    - Shops (Retail / Wholesale)
    - End Customers (Home Deliveries)

- **Omni-Channel DC** (1 System for Retail / Wholesale and Direct)
  - Shops (Retail / Wholesale)
  - End Customers (Home Deliveries)
What order fulfilment solutions?
Large batch order processing
Discrete Picking: Individual orders with own priorities
Dynamic order fulfilment solutions

- Dynamic – high T’put & short order lead time
- Flexible – independent from order structure
- Scalable – easy to grow
- Modular – pre-engineered systems
- Ergonomic – sustainable high productivity
- Highly Automated – reduced labour
GTP Omni-Channel Distribution Centers
One touch receiving
Miniload System

- Automated Storage & Retrieval System
- Direct carton handling
- Multiple carton sizes
- Multiple deep storage
High throughput engine
Feeds the order fulfilment
Pick Station

Pocket Sorter
Up to 50% higher performance
Distribution centre concentration
We Are Hiring
Aging workforce
Solutions?
INDUSTRIAL Robotics
How about Automated Material Handling?
Full case palletizing / de-palletizing
Mixed case palletizing
Single item picking?
Fashion & Apparel

Grocery

General Merchandise

What’s the most difficult hurdle?
Robustness

- Adaptability in unpredictable situations.

- Ability of the Robot to move efficiently in an area with unpredictable events and react appropriately towards them.
COLLABORATIVE Robotics
High performance pick station
Sustainable rate up to 600 items/hour
Why trying to combine both?
What’s missing...

...to introduce robotics in

- stand-alone
- complex

picking operations?
Grippers?
Object identification?

performance
Fast is fine, but accuracy is everything.

(Wyatt Earp - Town marshal in Tombstone, Arizona)
Intelligent

- From the very first moment
- No initial teaching required
- React to unexpected events
- Self correction of potential errors
Learn from every picking scenario
- Record if successful or not
- Learn the handling-speed
- Weight & position of an item
- Determine how to do it next time.
Flexible

- Large variety of products and packaging
- Variable shapes and random scenarios
- Changing Portfolio.
Imagine

Intelligent

Self-Learning

Flexible
COGNITIVE

Intelligent

Self-Learning

Flexible
Robust

Intelligent

Self-Learning

Flexible
Intelligent

Self-Learning

Flexible

24/7
Intelligent
Self-Learning
Flexible

Fully Autonomous
Applications?
Robotic Pick Station
Robust rate up to 600 items/hour
How do they “collaborate”?
At system level
Seamless integration
Easy to upgrade
100% automated distribution centres?

No
Different job profiles?

Yes
From

- Low-skilled temporary personnel with high turnover
- High recruiting costs
Towardss

- Higher skilled permanent staff
- Reduced turnover
Total Cost of Ownership