



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

Material Handling Forum 2012

- Magazijnautomatisering voor e-fulfilment:
- Ervaringen bij internationale e-tailers





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE


FOOTWEAR

APPAREL

Material Handling Forum 2012

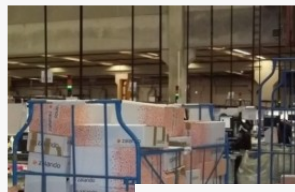
Magazijnautomatisering voor e-fulfilment: Ervaringen bij internationale e-tailers”

Barre arbeidsomstandigheden in magazijn Zalando

 CARRIÈRE & MENSEN LOGISTIEKE DIENSTVERLENERS

1757 x 1

Online modewinkel Zalando krijgt op dit moment een storm van kritiek vanwege de slechte arbeidsomstandigheden van het personeel magazijn in het oosten van Duitsland. Een reportage afgelopen week zender ZDF, waarbij gebruik werd gemaakt van een verborgen camera een groot aantal wantoestanden aan het licht.



Een medewerkster zegt in de reportage over de arbeidsomstandigheden: "Zit ik stiekem als niemand het ziet krijgt het magazijnpersoneel van Zalando een uursalaris van amper zeven euro, mogen ze niet zitten, doet een keet dienst als toilet en heerst er een aloeheel gevoel

Protest op Facebook-fanpagina

Eerder deze maand werd bekend, dat de omzet van de modewinkel in 2011 verdrievoudigde tot 510 miljoen euro. De reportage heeft er inmiddels toe geleid, zo melden Duitse media, dat uit protest de bezoekers van de Facebook-fanpagina van Zalando oproepen tot een boycot, van de ook in Nederland populaire, online modewinkel.

Amazon betaalt slecht

Een professor arbeidsrecht die tijdens de ZDF-reportage reageerde, zegt dat ook Amazon, met zeven logistieke centra actief in Duitsland, net als Zalando onder het marktgemiddelde uurloon uitbetaalt die gelden voor de logistieke sector. "Het valt niet te ontkennen dat er een ander Duitsland bestaat dat we niet kennen. Daar wordt slecht tot miserabel betaald."



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

Material Handling Forum 2012

Magazijnautomatisering voor e-fulfilment: Ervaringen bij internationale e-tailers”

› home › warehousing › magazijninrichting › vanderlande sleept twee grote orders in de wacht

Nieuws

13 jan 2012

Vanderlande sleept twee grote orders in de wacht

WAREHOUSING MAGAZIJNINRICHTING LUCHTHAVENS VANDERLANDE

23 x 0

Het Veghelse bedrijf Vanderlande Industries heeft deze week twee grote orders in de wacht gesleept. Voor webwinkelgigant Zalando wordt het nieuwe distributiecentrum in Erfurt ingericht en in Oman gaat Vanderlande bagagesystemen leveren aan twee luchthavens.

home / nieuws & pers / e-Commerce van A-Z: Zalando kiest ook voor Vanderlande Industries

E-COMMERCE VAN A-Z: ZALANDO KIEST OOK VOOR VANDERLANDE INDUSTRIES

De online kleding- en schoenenretailer Zalando bouwt een nieuw distributiecentrum in het Duitse Erfurt en heeft Vanderlande Industries gekozen als leverancier voor de automatisering van het distributiecentrum.

De "grootste garderobe" van Duitsland heeft een oppervlakte van 78,000 vierkante meter en zal in het voorjaar van 2013 in gebruik genomen worden. Het is één van de grootste investeringen voor Zalando om een succesvolle lange termijn ontwikkeling te bereiken. Het nieuwe distributiecentrum vormt een optimale basis om de snelle groei te continueren en geleidelijk uit te breiden.





Logistic demands

- E-commerce is growing 9% / year
- Customer demands
 - Deliver in the evening
 - Fast
 - Choice of delivery moment and location
 - Preferably at home or supermarket
 - Reliability on delivery time
- Delivery cost are the biggest irritation
- Logistic cost are 10% of the turnover of Amazon
- Conclusion flawless logistics are key!

FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

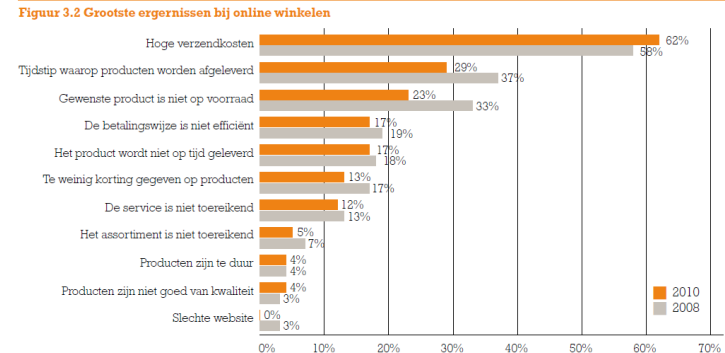
PARTS & COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL



Bron: ICT barometer (Ernst & Young)





Ecommerce: Food Retail compared to Retail

- FOOD
- CARE/PHARMA
- NON FOOD
- MEDIA/GAMES
- B2C
- PARTS & COMPONENTS
- 3PL
- AUTOMOTIVE
- FOOTWEAR
- APPAREL

Food / Retail Ecommerce, differences (in general)

	Retail .COM	Food Retail .COM
• No. of items/order	1 to 5	75
• No. of lines/order	1 to 2	50
• Order value	small	EUR 25 to 150.-
• Lead time	<6 hours (best)	up to 24h
• Returns	up to 40%	<<<
• Temperature requirements	no	-27 +2 + 12 and +20degr
• HACCP requirements	no	Yes
• Last mile	key	even more critical consumer presence required, smaller time window preferred
• No of SKU's	up to 1 mio	5.000 to 30.000
• Delivery accuracy	High	very high

Differences are so big that Food Retail.Com cannot be compared with other Retail.Com



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

Potential solutions, Batch pick

- ▶ Combining product demand for multiple orders into one pick instruction
- ▶ Picked products are sorted in second step
 - ▶ Manually by operators
 - ▶ Automatically by mechanised sortation
- ▶ Suitable for very large range of SKUs and a high throughput volume
- ▶ Relative low investment
- ▶ High operator performance
 - ▶ Reduction of walking distance up to 90%
 - ▶ Minimise # pick walks
 - ▶ Avoid congestion
- ▶ High capacity
- ▶ Organized process
- ▶ High accuracy
- ▶ Specially for single line/singe item orders
- ▶ Traceability





Potential solutions, Minibatch

FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

- ▶ Multiple storage locations per SKU, distribute among zones for quick replenishment and smart batching
- ▶ Generate mini-batches (with multiple-line orders) from a minimum number of zones
- ▶ Manual sort of mini-batches to packstations at re-bin (pigeon hole) station
- ▶ Suitable for very large assortments and high throughput volumes
- ▶ Strong in handling fluctuating volumes
 - ▶ Consistent high productivity
 - ▶ Minimal staff in off-peak periods
- ▶ Scalable and flexible
- ▶ Handle high number of single line orders





Potential solutions

- Sort while pick with consolidation buffer
- Typically food retail
- Manual picking with 6-20 customers
- Optimal zoning based on ABC
- Consolidation of customer orders



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL



Potential solutions Goods-to-Man

- High operator performance
- Space efficient
- Very flexible towards SKU growth
- Ideal in combination with returns
- With sequencer very flexible to order pattern
- Max. peak capacity
- Relative high investment

FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

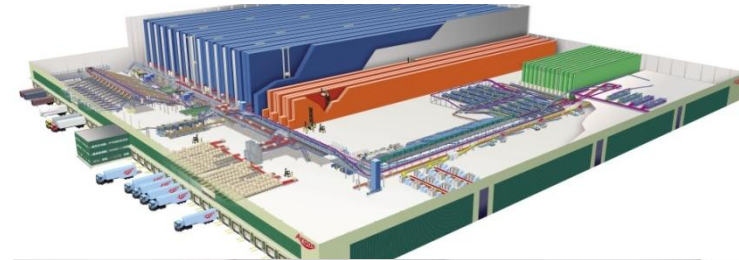
PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL





- FOOD
- CARE/PHARMA
- NON FOOD
- MEDIA/GAMES
- B2C
- PARTS & COMPONENTS
- 3PL
- AUTOMOTIVE
- FOOTWEAR
- APPAREL

Vanderlande References Ecommerce

URBAN OUTFITTERS

London
Rushden
Fashion

Bakker

Lisse
Flowers

Wehkamp

Dedemsvaart
Retail

otto group

Hamburg
Fashion

Littlewoods

Shaw
Fashion

ASDA

Enfield
Food Retail

TESCO

Aylesford
Greenford
Food retail

BCA

Swindon
Books

LA REDOUTE

Roubaix
Fashion

mac

Massy

Hermes

Nuneaton
Hamburg
Fashion

3S

Hern (Lille) France
Fashion

zooplus

Eisenach DE
Tilburg NL
Pet retail

H&M

Poznan, PL
Boras SE
Fashion

zalando

Erfurt, DE
Fashion

amazon.com

Bad Hersfeld, DE
Leipzig, DE
Ridgmont UK
Swansea UK
Milton Keynes UK
Marston Gate UK
Brussels, BE (DHL)

BAUR

Burgkunstadt DE.



Frankfurt DE.
Großzöberitz, DE
St. Jansteen NL

Witt-Gruppe

A member of the otto group

Weiden
Fashion

KLINGEL

Offenbach
Pforzheim
Fashion



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

AMAZON – COMPANY

- Leading online retailer
- Net sales 2011 \$48 billion (\$60 billion in 2012)
- Wide and ever increasing product range
- Exact delivery schedules
- 70 fulfilment centers world wide
- Logistic Centre in Bad Hersfeld (DE)





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

AMAZON – CHALLENGES

- Assortment of 250,000 SKUs
- 100,000 – 300,000 orders on a daily basis
- Include new products easily
- Handle fluctuating volumes
 - Consistent high productivity
 - Minimal staff in off-peak periods
 - Limited investment in technology
- Handle high number of single line orders
- Center of 42,500 m²





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

AMAZON – SOLUTION

- Goods receiving / repacking in totes
- Totes are stored in shelving area
- Batch picking in totes
 - Multi line orders
 - Single line orders
- Consolidation buffer
- Order consolidation stations (multi line orders)
- Packing stations (multi line orders)
- Packing station (single line orders)
- Labelling
- Sorting
- Shipping





AMAZON – RESULTS

FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

- Highly flexible: responsive to initially high growth rates (20-30%)
- Significant increase in capacity
- Considerable improvement in process management and supervision as a result of visualisation of proceedings and static organisation of process data
- Resulting standard jobs with predefined job content facilitate human resource management
- Reduction of time spent by staff moving around
- New products (CD and MP3 players, digital cameras, etc.) can be easily incorporated into the process
- System was successfully expanded multiple times
- Besides Germany, Vanderlande Industries also automated sites of Amazon in France, UK and Ireland



CLICK ON VIDEO TO START



FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS & COMPONENTS

3PL

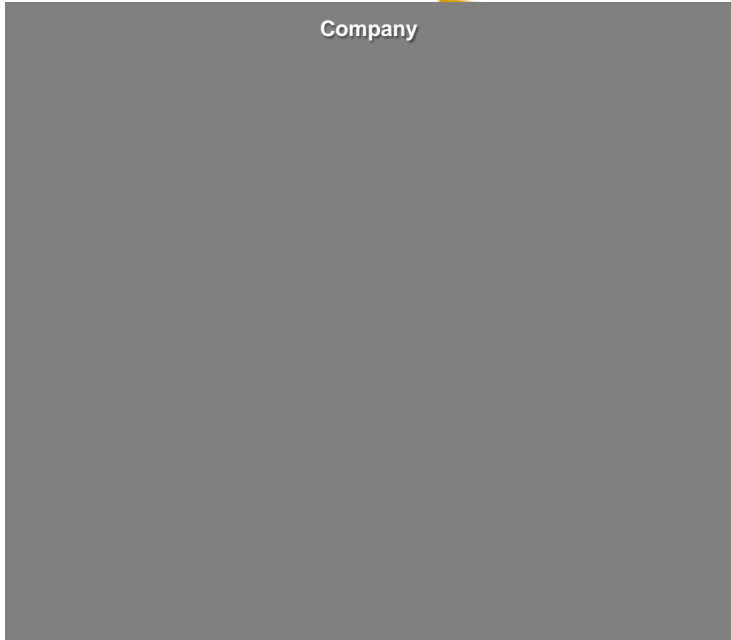
AUTOMOTIVE

FOOTWEAR

APPAREL

The company Company

- company the French mail-order operation of company
- company
 - is a leading seller of books and music videos, and other electronic media
 - with about 145 stores (some 80 in France) in half a dozen European countries and Brazil.





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS & COMPONENTS

3PL

AUTOMOTIVE

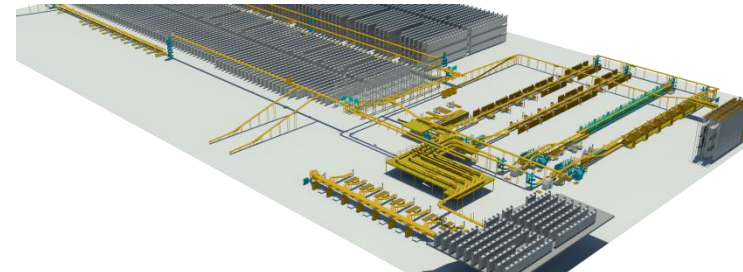
FOOTWEAR

APPAREL

The company Challenges

- Store deliveries were effected by .COM deliveries. (all in one process)
- DC was to small to handle the growth
- Total cost for ecom deliveries were to high
- Turn .COM into a profitable business.

- Products
 - Books, CDs, DVDs
 - Small electronics
- Volume





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

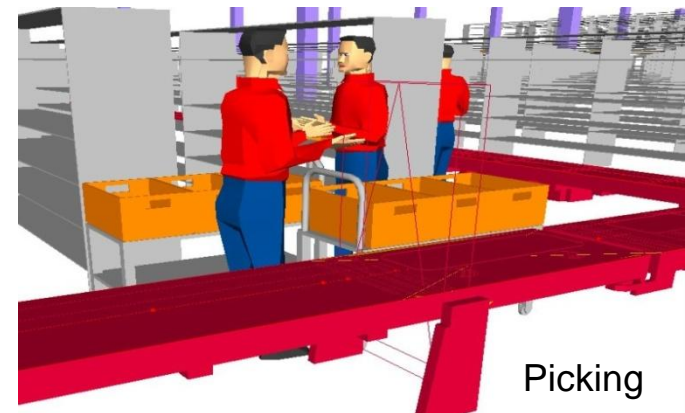
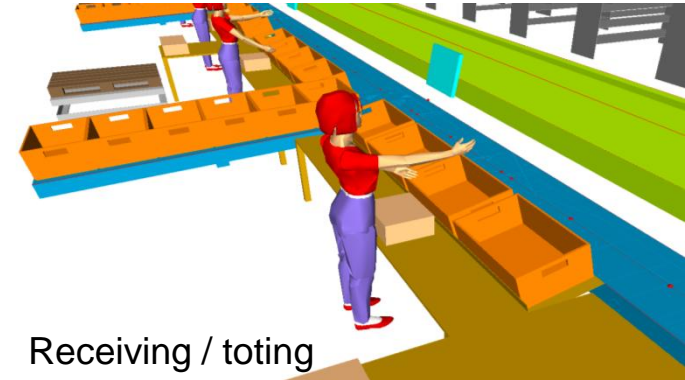
AUTOMOTIVE

FOOTWEAR

APPAREL

The company Solution

- New green field .COM store under vision.WMS
- Goods receiving in central de-canting area with automated transport to picking zones
- Picking from chaotic storage location for optimal reduction of walking distances
- Picking is split into “single line/single item” and “Multi line” orders
- HDS buffer for consolidation of picked order lines from different zones
- 3 different packing lines supply by HDS buffer small/ medium and any carton size
- Automatic carton erection and closing with height reduction. And label application
- Sortation to specific routs
- Fully automated truck loading for loose lored shipments





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS & COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

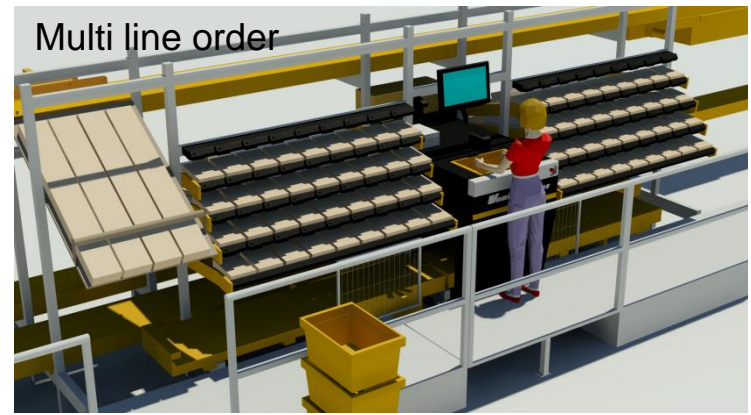
APPAREL

The company Results

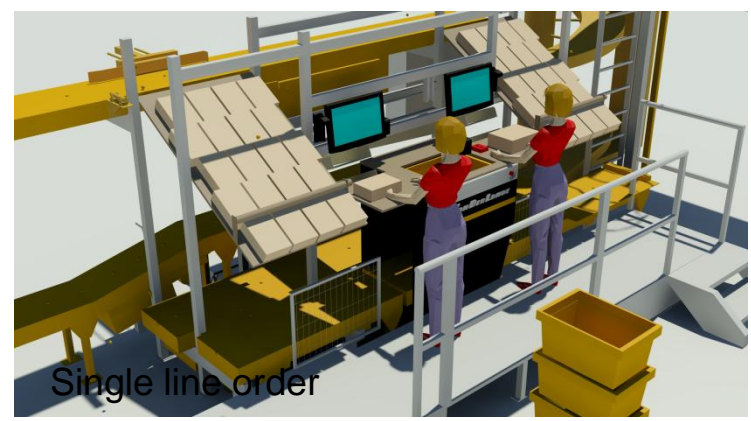
- Very flexible solution
- Salable because of mini batch principle
- Productivity remains the same with SKU growth
- Very flexible capacity (Christmas peak)
- Substantial reduction of logistic cost

“ Vanderlande designed a solution with relative low investment but with maximum productivity increase.”

Multi line order



Single line order





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

TESCO

- Tesco PLC is a top international retailer
- Active in the UK, the Republic of Ireland, Hungary, Poland, the Czech Republic, Slovakia, Turkey, Thailand, South Korea, Malaysia, Japan, China and the US.
- Also provides retail banking and insurance service.
- Sales channels include traditional stores, as well as home shopping via Tesco.com and Tesco Direct
- 1st DC Aylesford
- 2nd DC Greenford





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

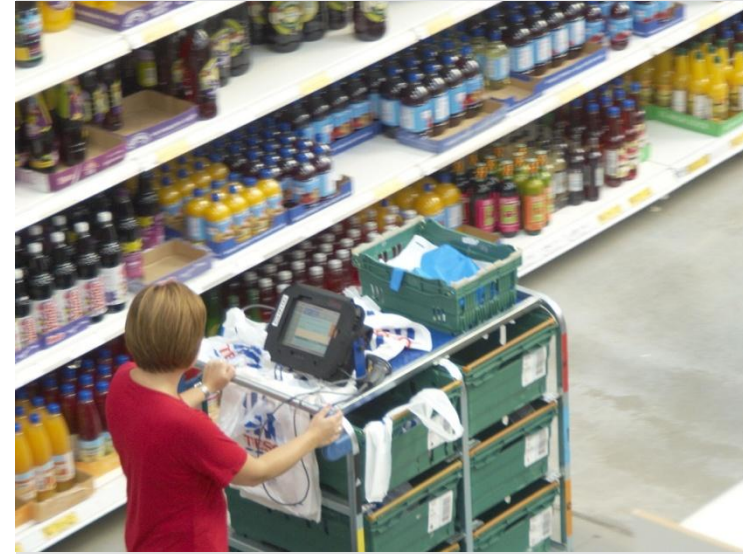
AUTOMOTIVE

FOOTWEAR

APPAREL

TESCO

- **Challenges:**
- Ensure customer service is improved
- Drive sufficient efficiencies into the operation
- How to handle strong growth in internet sales
- Reduce the impact of the DotCom operation in existing stores
- Space constraints for the vans in particular geographic areas
- Cost/time reduction in order consolidation





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

TESCO

- **Solution:**
- Automated order consolidation and shipping system. Main elements:
- Manual mini batch picking (6 customer orders per trolley) from conventional shelving
- Automated order consolidation in a 3-aisle QUICKSTORE HDS shuttle system: Orders are stored in buffer and retrieved at exactly the right time and in exactly the right sequence
- Automated sorting to van loading docks
- VISION WCS: Controls storage and release of customer orders; vehicle dispatch management process
- Conveyor system off the floor, so maximum amount of floor space is available for order picking





FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

AUTOMOTIVE

FOOTWEAR

APPAREL

TESCO

- **Customer benefits:**
- Increased capacity to fulfil online demand with improved service levels
- Removing some operational pressure from the surrounding Tesco stores
- This has helped these stores to grow their Like-for-Like sales
- Proving to have a quick payback time
- Freeing up expensive retail sales space in existing superstores
- Better operation in superstores thanks to less aisle congestion and wider product range
- Enabling faster growth of DotCom sales
- Highly efficient use of floor space
- Improved accuracy and traceability
- Reduction in product damage





Conclusion: Think big: Start small: Grow fast!

FOOD

CARE/PHARMA

NON FOOD

MEDIA/GAMES

B2C

PARTS &
COMPONENTS

3PL

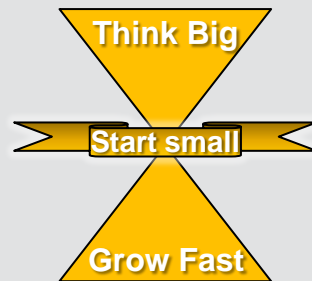
AUTOMOTIVE

FOOTWEAR

APPAREL

Anticipate on the growth

1. start in the stores,
2. move to dedicated .COM stores
3. open additional .COM stores or central .COM DC



High level picking strategy when growing fast:

1. Start small, manual picking in the stores
2. Manual picking in .COM stores
3. Automate consolidation and sortation of order totes
4. Improve picking performance with zone picking (MtG)
5. Think big: Improve total performance with GtM picking.