

KNAPP at a Glance





Hart bei Graz Austria headquarters



locations worldwide



production locations

54 million€ invested in innovation



Employees

employees





We speak languages







Industry



Fashion



Healthcare



Retail



Food



Certifications



Quality Management ISO 9001

Occupational Health and Safety ISO 45001 2018

Environmental Management ISO 14001

Sustomer

1,250 employees worldwide in Customer Service



24/7 Service Desk support



100,600 customer inquiries a year to the Service Desk

Production



45 miles km of conveyors manufactured 0000000 at Hart bei Graz

~100,000 m^{2*} 1,076,390 ft² production and warehousing space worldwide



Challenges in the fashion sector

E-Commerce

Broad item range with flat ABC curve
PULL - Orders Variety of products Multichannel Fulfillment

Efficient returns handling Handling of various channels of distribution Shop-friendly-delivery Quality assurance & Quality check

Reduction of the work effort at the point of sale

Delicate materials Same-and-next-day-delivery

Collection change & high seasonal fluctuations
Short order lead time PUSH - Orders

Many Value Added Services such as price marking Different processes for hanging and flat-packed goods

Challenges in the fashion e-Commerce

Very high number of returns (approx.50%)

IT process map (real-time) Few order lines/order (< 3 lines)

PULL - Orders Variety of products Customer Service

Fewer items/order line(< 2 items) Changes in collection & extremely high seasonal peaks Shop-friendly-delivery Low Batch Factor

Variable and high number of customers per day

Volume and cost optimized dispatch in cartons or polybags

High number of SKUs & almost no ABC forecast Same-and-next-day-delivery PUSH - Orders

Many Value Added Services such as gift wrapping

Different processes for hanging and flat-packed goods

KNAPP & Dürkopp

- Complete supplier of turnkey systems for hanging and flat-packed goods
- Market leader in transport and sorting systems for hanging goods
- Market leader in shuttle systems
- Experience from many successfully realized projects
- 600 programmers and software developers for one unified software package

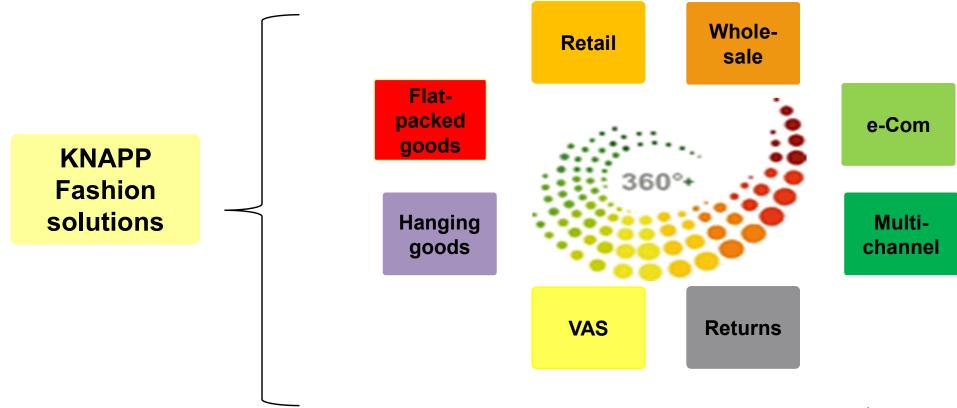






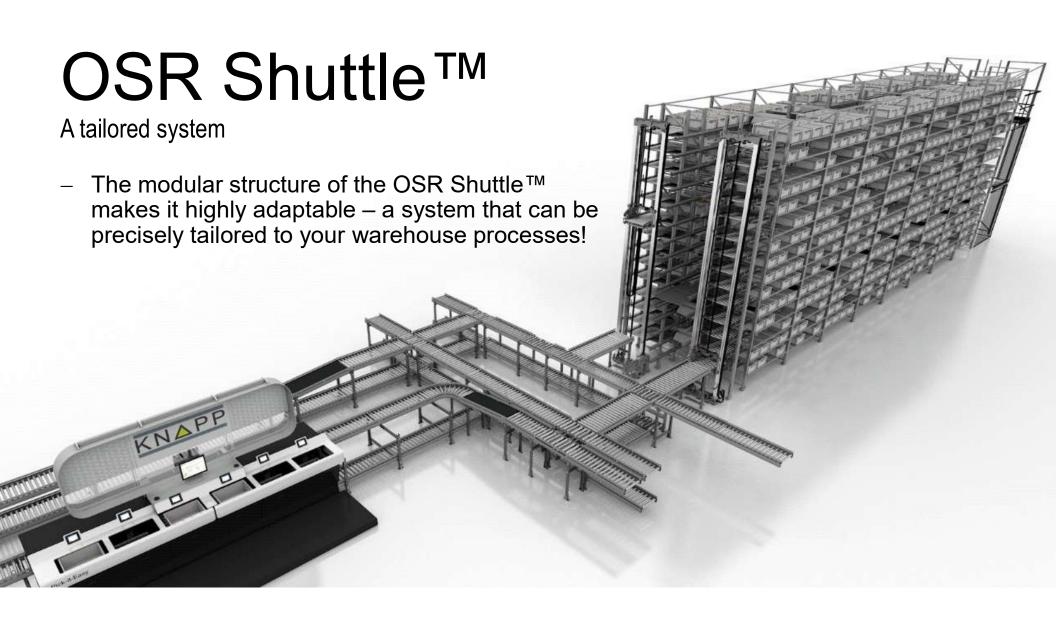
KNAPP Fashion solutions

The right solution for all your needs



knapp.com





OSR Shuttle™

Rack line system



- Storage depth
- Rack height
- Rack length

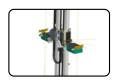
Lift system



Quad lift



Twin lift



Basic lift

Pre-zone



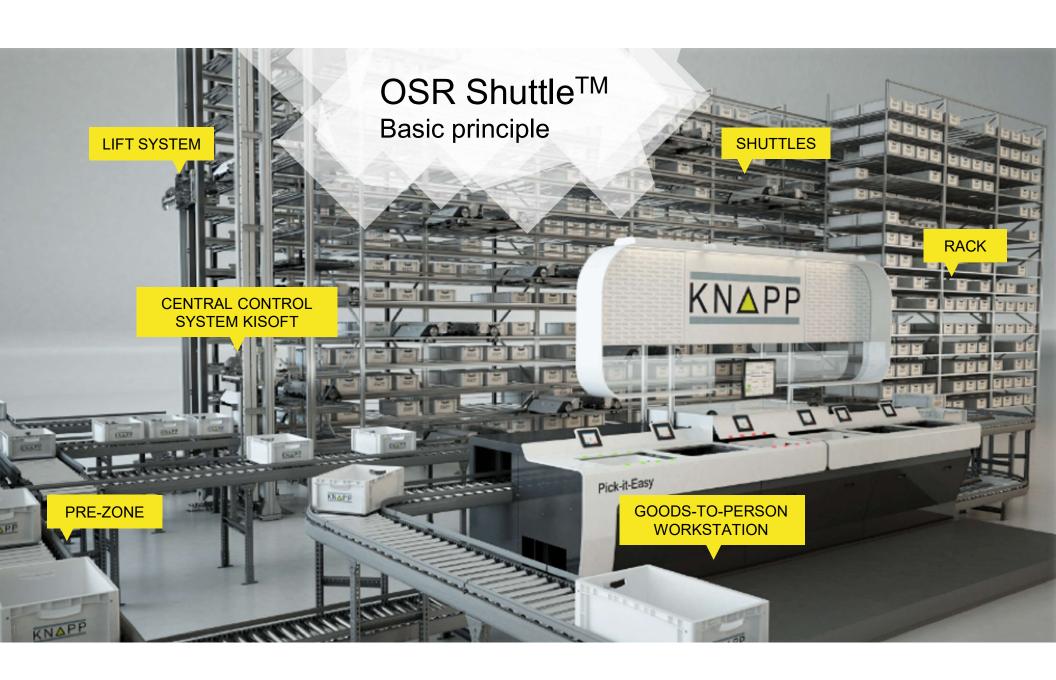
Sorter Loop



AAA Loop



Conveyor Loop



OSR Shuttle™

Advantages at a glance

Use of RFID technology

lowest energy consumption on the market CE confirmed

TÜV certified Modular design Flexible Design

Minimal energy consumption Manageable number of components requiring maintenance

Scalable investment – partial expansion of levels possible

Proven over 15,000 times Proven operation in earthquake zones Expansion by rack lines and levels Worldwide support

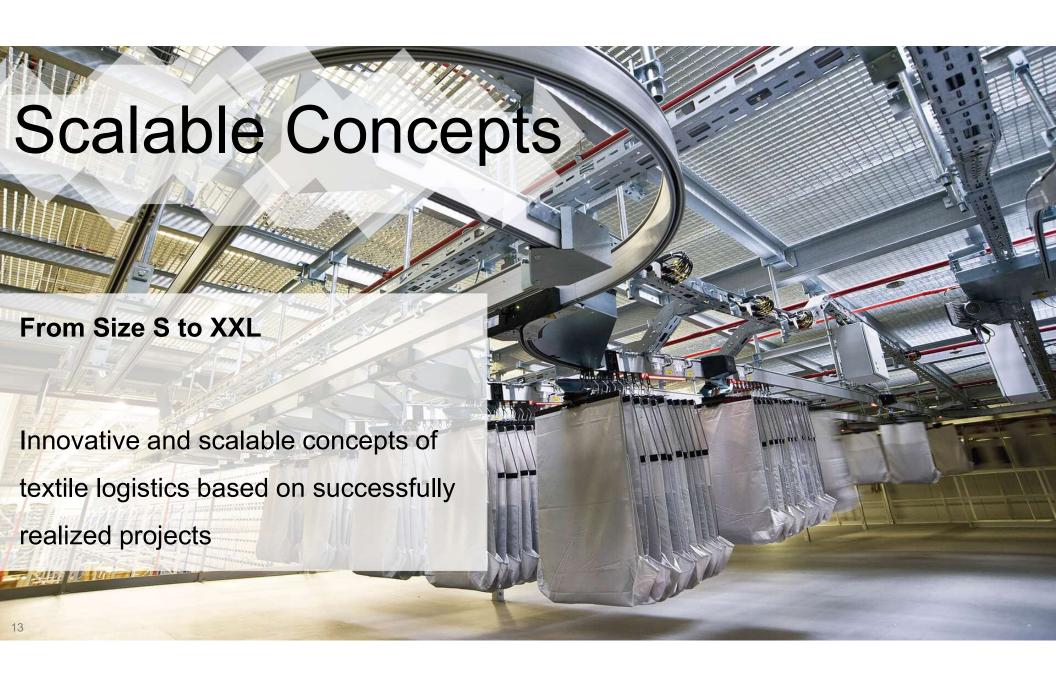
KiSoft SRC Parallel and independent operation on all rack levels

Important components such as shuttles are replaced within minutes

OSR Shuttle™









Shop delivery with flat-packed goods

The customer

Marks & Spencer

Location

London, UK

Sector

 Stylish & high-quality clothing & home articles at affordable prices as well as food of outstanding quality

Sales channels

Retail, returns management





Requirements and project design

Restructuring of the M&S distribution network

=> A proven solution

Growth-related requirements for retail expansion & e-commerce

=> Scalability / step-wise realization

No ABC prognosis and seasonal peaks

=> Flexibility – "what-if" scenarios (volume, order profile, stock units)

Quick order fulfilment

=> Minimization of risks, eventualities

Showcase project / limiting risks

=> Experienced team, professional realization





Core technologies

- OSR Shuttle[™] 35b system (double-deep)
- OSR Shuttle™ 32 system
- Trolley-less overhead conveyor
- Pallet conveyor system
- Sort & Pack work stations
- Crossbelt sorter
- KiSoft WMS, KiSoft WCS, KiSoft SRC
- Vertical lift conveyor
- Stacker/destacker
- Height and weight check

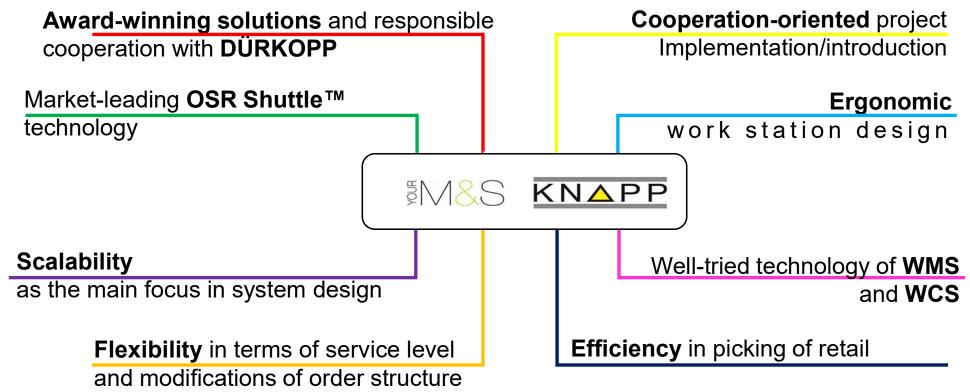




OSR Shuttle™



Highlights and benefits for the customer



knapp.com

MARKS& SPENCER





Grazie.

Thank you.

Merci beaucoup.

Muchas gracias.

Vielen Dank.



Dr. Tommaso Del VentoHead of Business Development

KNAPP Italia s.r.l.
Centro Direzionale Colleoni
Palazzo Taurus, 1
20864 Agrate Brianza (MB)

Mobile: +39 334 82 334 73 tommaso.delvento@knapp.com www.knapp.com