SCHÖNENBERGER…

Masterclass - Pouch sorter 2.0
Logistics summit 2022
05.10.2022
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Ideen, die bewegen…
…Think along new lines

ILS

Omniflo

EINLAGERUNG IN LAGERBLÖCKE

LEITSTAND
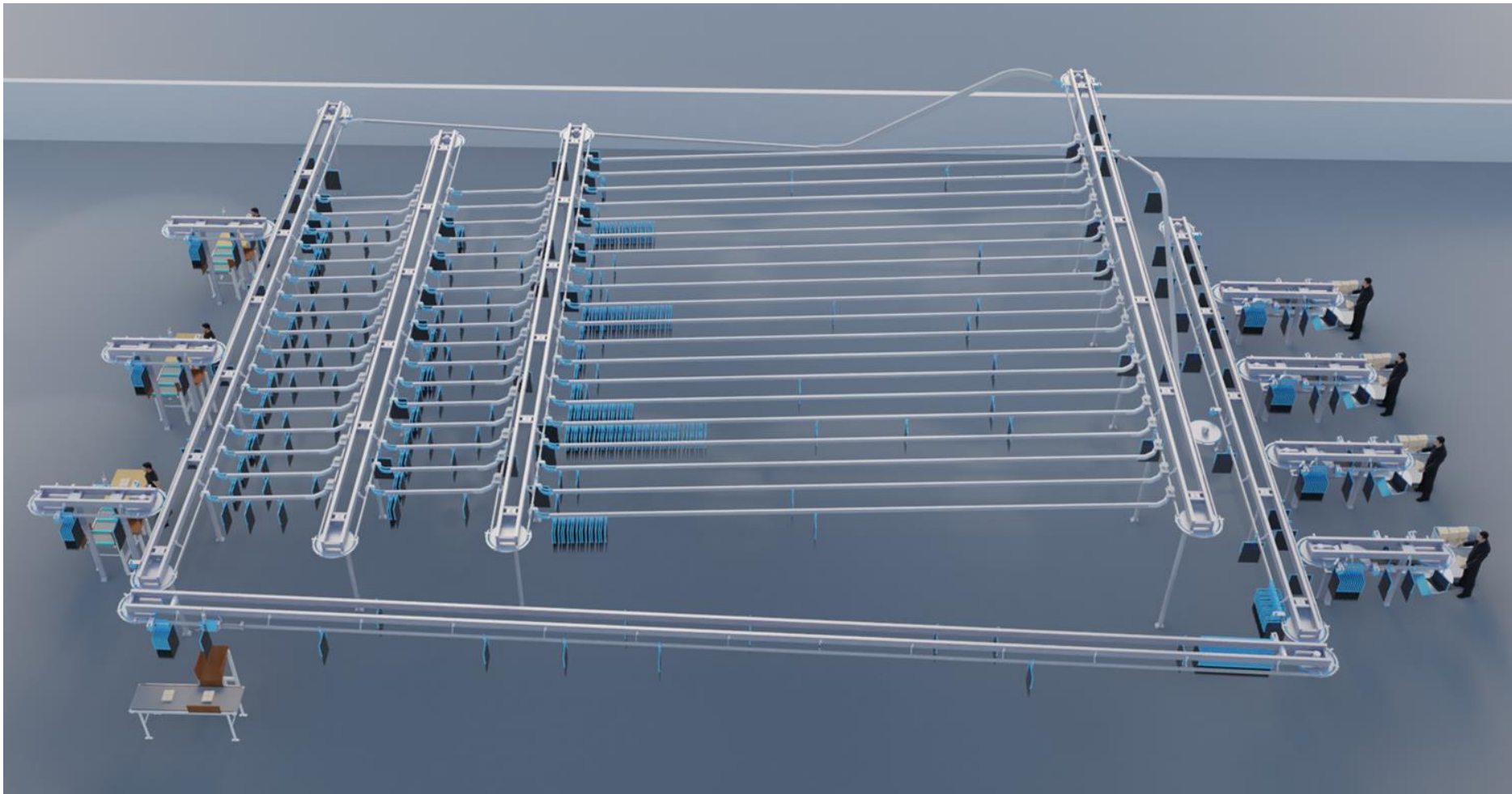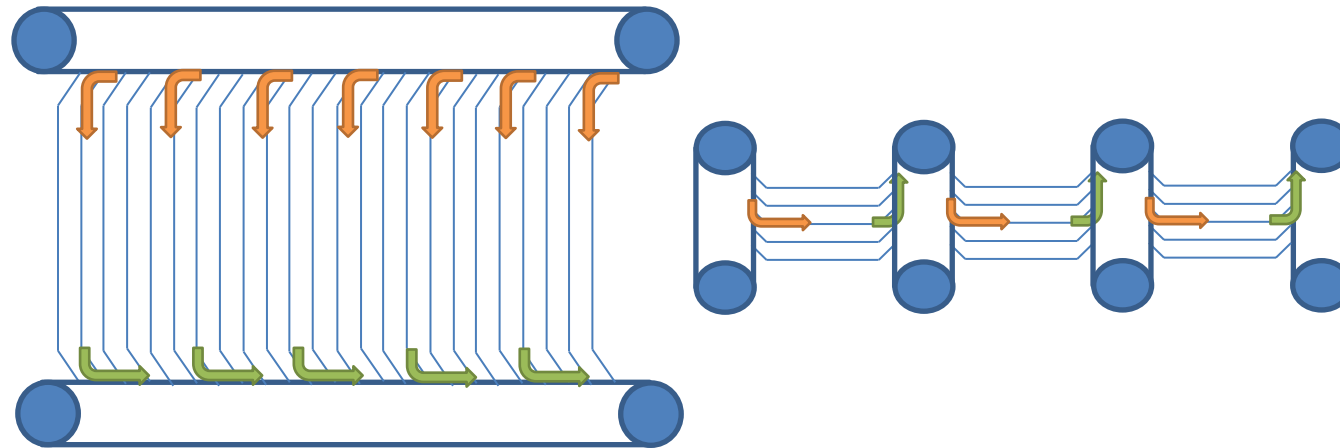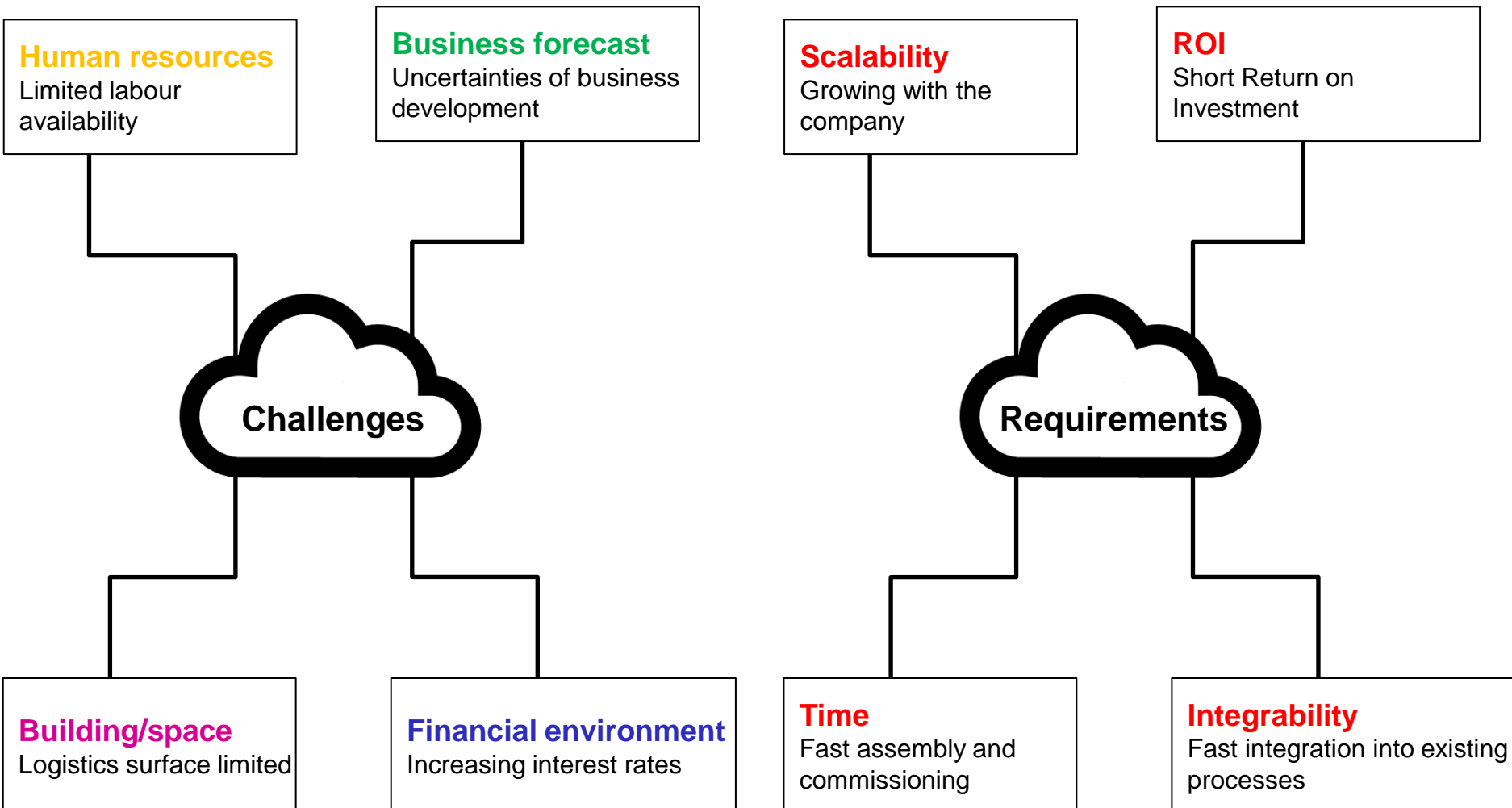
Industrial standard solution of a pouch sorter:

Matrix sorting principle

- **Fast sorting process** to put the parts in the right order, based on different criteria

- Sorting criteria can be unlimited

- High sorting performance (Up to 7.200 parts/h)

- **A big batch buffer is needed**, all parts have to be buffered until the entire batch is complete

- Significant surface is needed

- Available height for gravity lanes is needed

E-commerce and start-up environment

SCHÖNENBERGER

Human resources
Limited labour availability

Business forecast
Uncertainties of business development

Scalability
Growing with the company

ROI
Short Return on Investment

Challenges

Requirements

Building/space
Logistics surface limited

Financial environment
Increasing interest rates

Time
Fast assembly and commissioning

Integrability
Fast integration into existing processes

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Schönenberger sorting principles overview:

• Matrix sortation – Sorting levels according sorting steps
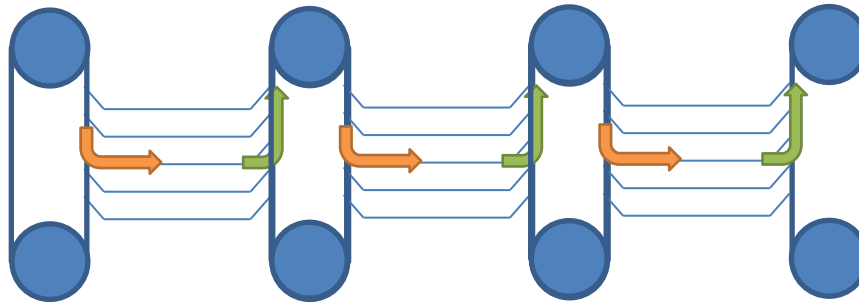
• Tuple loop sorting principle

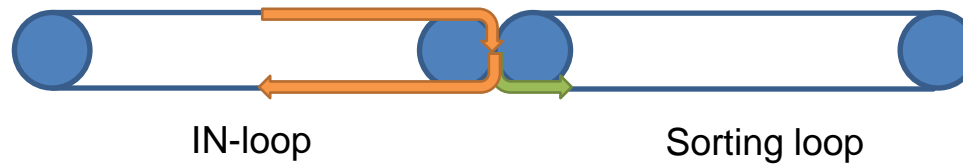
• Bubble sorting principle

• Double sorting principle based on bubble sort

Overview

Bubble sorting principle

IN-loop   Sorting loop

- All parts are in a IN-loop

- The IN-loop turns until the first part has been found → Part moves into the sorting loop

- Find next part …

- The process becomes slow as the number of parts increases

- **Parts do not have to be all available at the start, can be added continuously**

- There is not need for a clear sorting criterion, e.g. parts can be also sorted by order

Double sorting principle

ⓐ   ⓑ
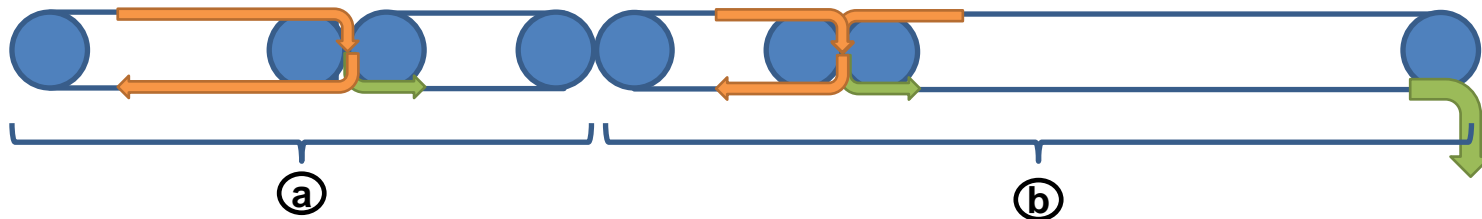
- **Advanced sorting principle**
  - In the first 2 loops, the parts are sorted ascending, batch wise (a)
  - In the second 2 loops, the parts are sorted into the stock, that has already been sorted (b)
- **The process is faster due to sorting of small quantities in the first loops and sorting into the stocking loop in the second loops**

- **Sorting & Stocking in one system**

- **Limited surface needed**

- Sorting criteria can be unlimited

- Parallelization of activities (Stocking and Sorting)

- Sorting speed is slower than the matrix sort

- Limited stocking capacity, if the orders are not getting complete, the buffer loop is getting overloaded

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Simulation & decision parameters

Sorting principle in motion:
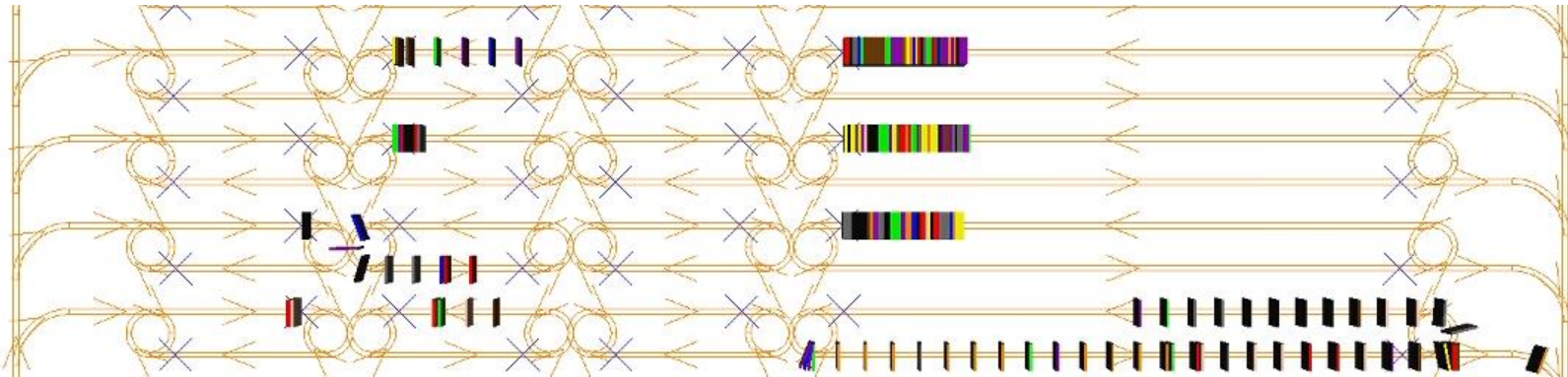
Decision parameters:

- **Available space**

- **Sorting performance**

- **Batch size**

- **Return of Investment requirements**

- **Average articles / order**

- **Time between picking and final sortation**

Thank you for your attention

- See you at booth K2 -