Unleash your brownfield automation potential
Market survey 2024

Miebach

Agenda

Brownfield automation

- **an alternative to new greenfield buildings**

- **leveraging further cost potential in difficult economic times**

Your experience is in demand:

- Where is the greatest need?

- Automation potential?

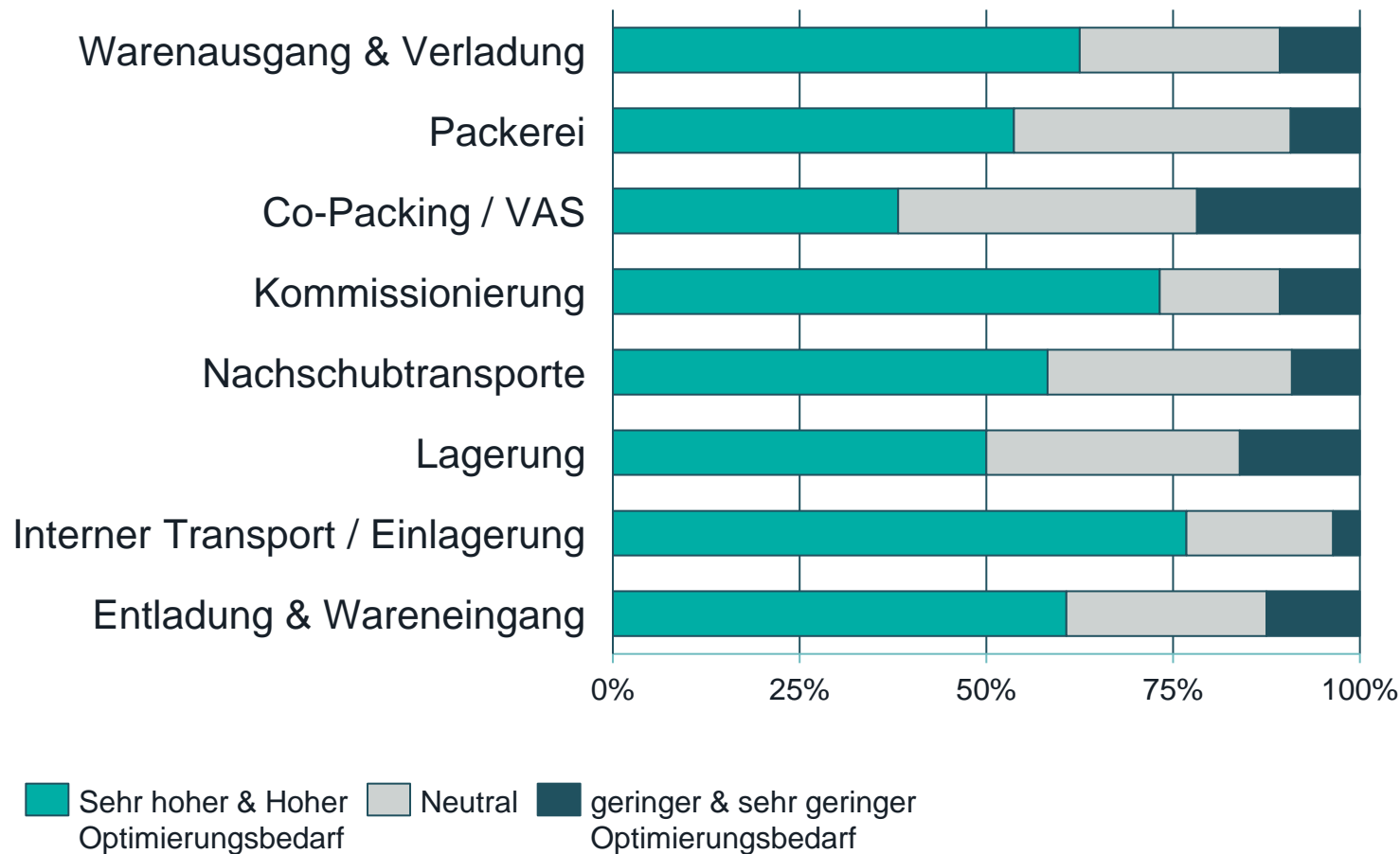- Technology familiarity?

- Obstacles & alternatives

Agenda

Greatest need for optimization identified in order picking and internal transport, lowest need in VAS

Need for optimization per process

Process	
Warenausgang & Verladung	
Packerei	
Co-Packing / VAS	
Kommissionierung	
Nachschubtransporte	
Lagerung	
Interner Transport / Einlagerung	
Entladung & Wareneingang	

Legend:
- ■ Sehr hoher & Hoher Optimierungsbedarf
- ■ Neutral
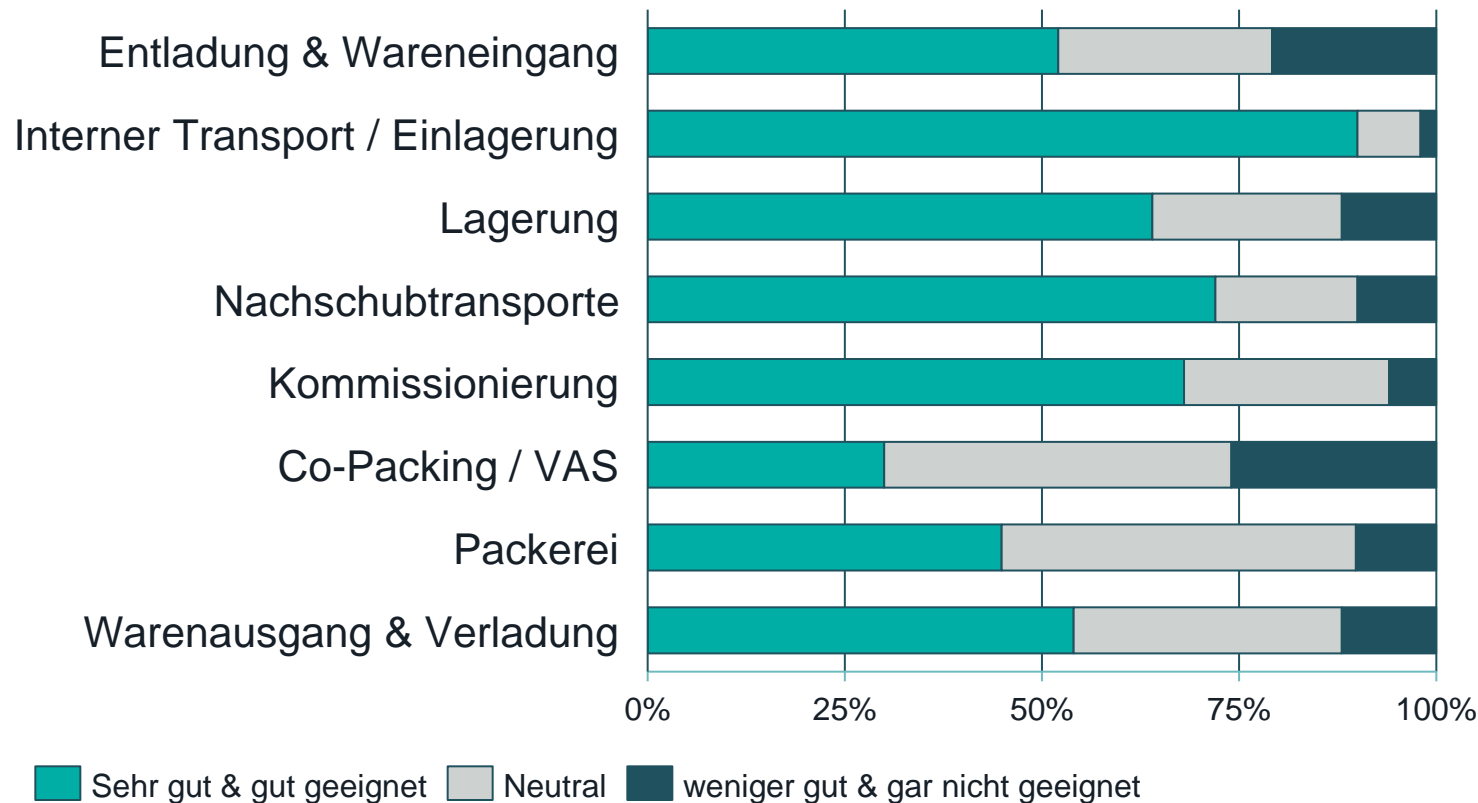- ■ geringer & sehr geringer Optimierungsbedarf

Explanation:

- Around 36% consider the need for optimization in order picking to be very high and a further 38% consider it to be high.

- Around 25% consider the need for optimization for internal transport / storage to be very high and a further approx. 52% consider it to be high.

- A very high or high need for optimization is also identified for unloading (11% and 50%) and loading (11% and 52%).

internal transport rated most suitable for automation, but also high values for order picking and storage

Suitability of different processes for brownfield automation

Entladung & Wareneingang
Interner Transport / Einlagerung
Lagerung
Nachschubtransporte
Kommissionierung
Co-Packing / VAS
Packerei
Warenausgang & Verladung

0%   25%   50%   75%   100%

■ Sehr gut & gut geeignet   ■ Neutral   ■ weniger gut & gar nicht geeignet

Explanation:

- Around 30% consider internal transport / storage to be very suitable and a further 60% consider it to be well suited.

- Around 18% consider order picking to be very good and a further 50% consider it to be good.

- For unloading and loading, the need for optimization is rated higher than the suitability for automation, while for all other processes the need for optimization and suitability for automation are in step.
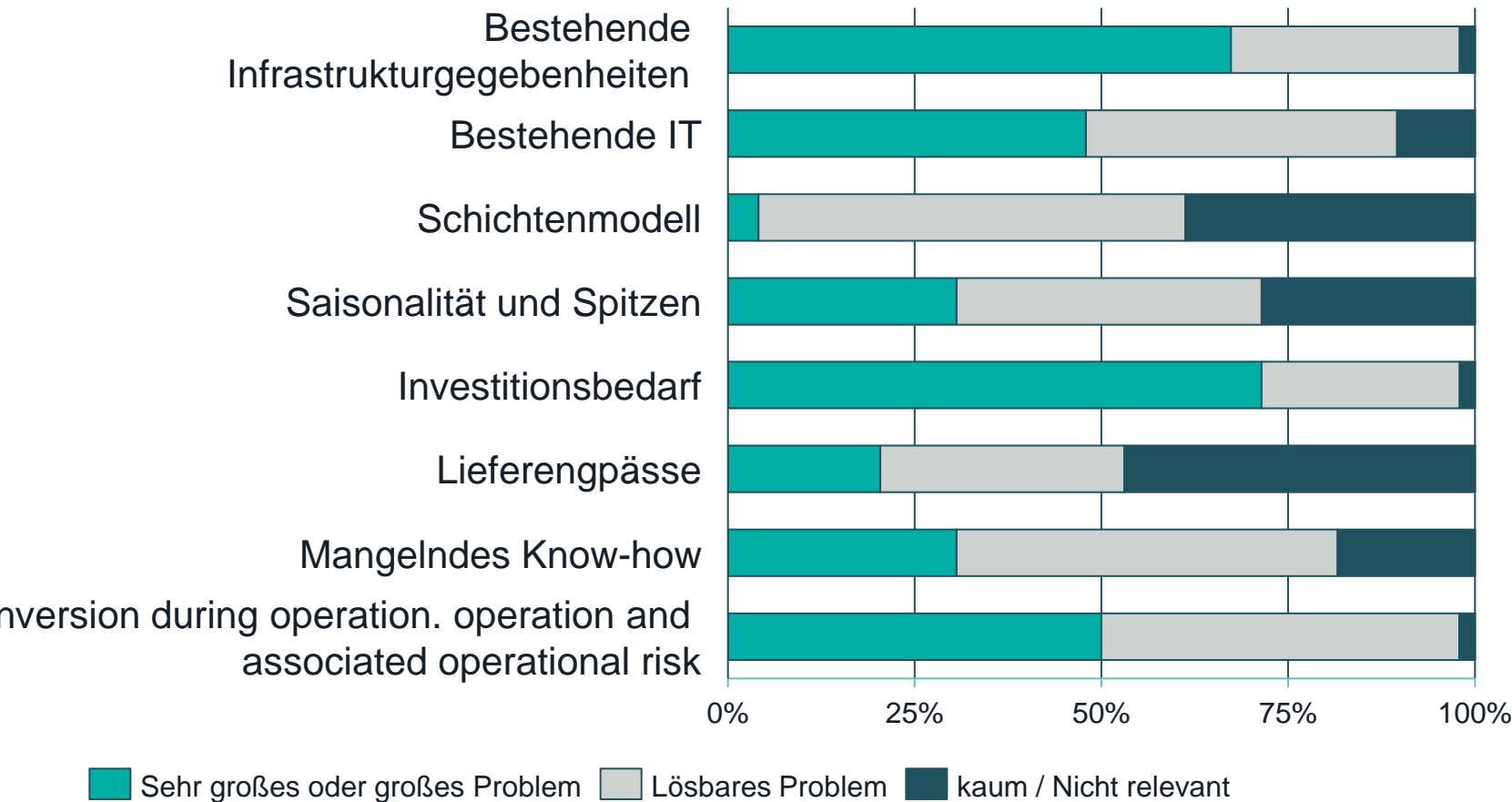
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The participants rate the need for investment and the current structural infrastructure as the biggest obstacles to automation

Obstacles to automation

Legend:
- Sehr großes oder großes Problem
- Lösbares Problem
- kaum / Nicht relevant

Categories (top to bottom):
- Bestehende Infrastrukturgegebenheiten
- Bestehende IT
- Schichtenmodell
- Saisonalität und Spitzen
- Investitionsbedarf
- Lieferengpässe
- Mangelndes Know-how
- ...nversion during operation. operation and associated operational risk

X-axis: 0%, 25%, 50%, 75%, 100%

Further obstacles:

- Lack of automation offerings, e.g: Container unloading, picking robots, self-propelled FFZs

- High price for insufficient performance

- Lack of skilled workers - development and / or acquisition of sufficient skilled personnel

- Added value requires end-to-end consideration of all relevant processes, but often only 'pieces of the puzzle' are changed in the brownfield and not the overall picture

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Automatic warehouses and AGVs most widespread, AGVs / automated forklifts and loading/unloading technologies currently in focus

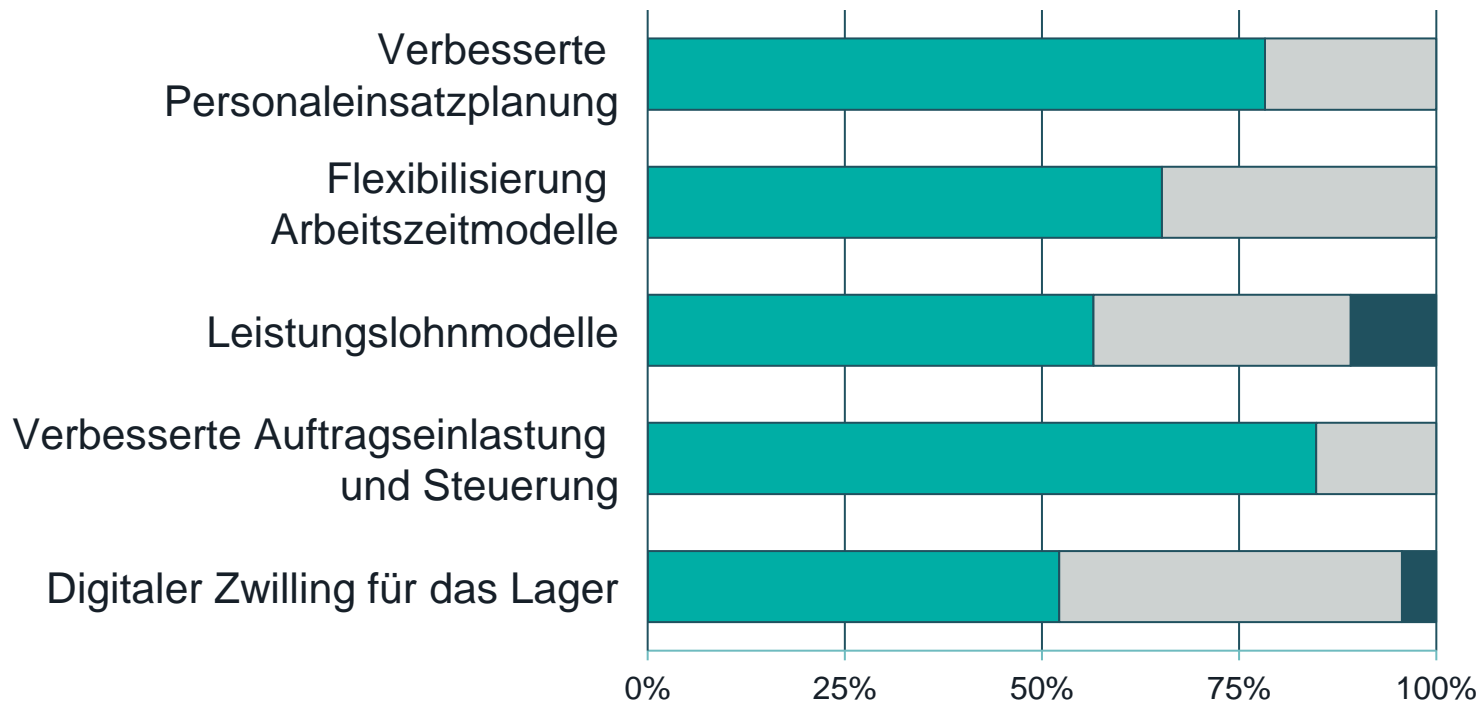|	In use	Under review / interest	Known	Already heard of	Unknown
Automatic loading / unloading technologies	9%	36%	42%	13%	0%
AGVs / AMRs for pallet transportation	35%	37%	22%	4%	2%
Automated forklifts	20%	37%	30%	9%	4%
Automatic container transport (e.g. Locus, Carry Pick, etc.)	24%	22%	35%	15%	4%
Cobots (e.g. 6River)	2%	17%	48%	20%	13%
Automatic picking (e.g. magazino)	7%	30%	41%	23%	0%
Warehouse technologies (Skypot, Autostore, Shuttle / AKLs, etc.)	52%	28%	17%	2%	0%
Automatic packing lines, box-on-demand, sealers, etc.	26%	20%	37%	15%	2%

Explanation:

- Automated warehouse technologies are by far the most widespread, cobots, automated pickers and loading/unloading technologies the least.

- Cobots are also currently only a minor focus of interest for potential users, perhaps also due to their low level of awareness.

- AGVs / AMRs for pallet transportation, automated forklifts and loading/unloading technologies are currently the main focus of users.

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Improved order utilization and control as well as personnel resource planning are real alternatives to automation

Alternatives to automation

Chart categories:
- Verbesserte Personaleinsatzplanung
- Flexibilisierung Arbeitszeitmodelle
- Leistungslohnmodelle
- Verbesserte Auftragseinlastung und Steuerung
- Digitaler Zwilling für das Lager

Legend:
- (sehr) relevant
- neutral
- weniger/nicht hilfreich

Explanation:

- Improved order utilization and control is considered very relevant by 37% and relevant by a further 48%.

- Improved workforce scheduling is considered very relevant by 33% and relevant by a further 46%.

- In contrast, the digital twin plays a subordinate role, although it is a very powerful tool for improving order utilization and control as well as workforce scheduling!

Agenda

Study design

Participants

- 66 participants

- CW 9/10 - 2024

- A wide variety of sectors such as automotive, chemicals, industrial, retail and logistics service providers

Survey format

- Online questionnaire with predominantly closed questions

- Potential participants contacted by email

Results of the survey

- Presentation of the results in the course of a talk at LOGIMAT

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