

LOGISTICS SUMMIT

Kontraktlogistik im Wandel:

Was sind unsere technologischen Use-Cases?

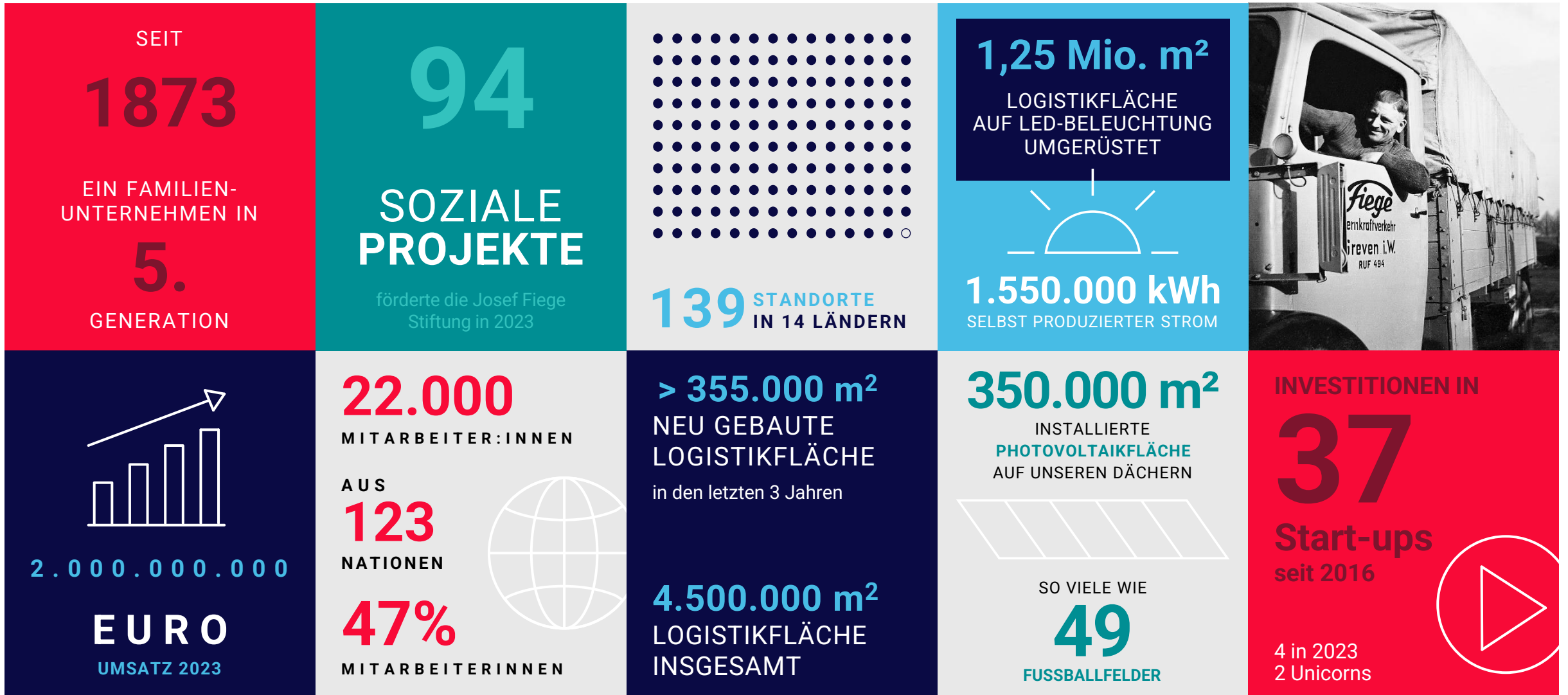
Welche Herausforderungen, Key Learnings & Erfolgsfaktoren resultieren aus der praktischen Erfahrung bei FIEGE?

Düsseldorf, 09.10.2024

Hendric Fiege & Jens Veltel

Wer oder was ist eigentlich FIEGE?

ZAHLEN UND FAKTEN



Fashion and Lifestyle



Consumer Products



Fast Moving Consumer Goods



Healthcare



Industry



Tires



Warum soll die Kontraktlogistik sich überhaupt wandeln?

Herausragende Zukunftsentwicklungen in relevanten Bereichen



Gesellschaft

Gesellschaftliche Trends, kulturelle Veränderungen und demografischer Wandel



Technologie

Technologische Fortschritte und Innovationen, wie Automatisierung, Robotik und KI



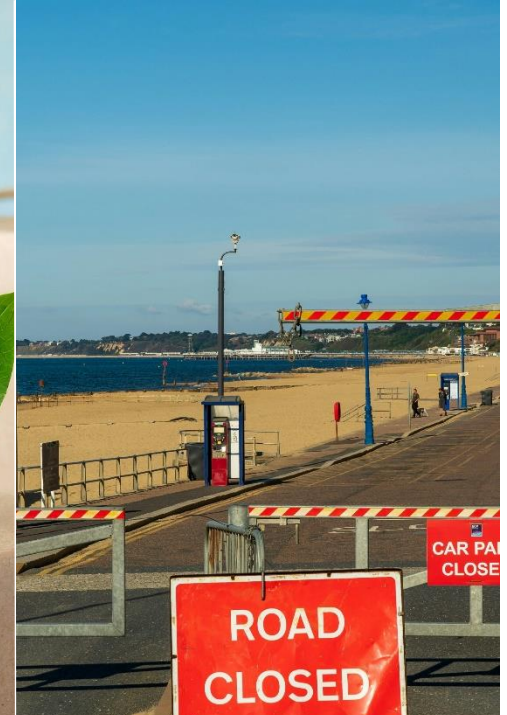
Wirtschaft

Marktbedingungen, neue Wettbewerber und sich entwickelnde Geschäftsmodelle



Umwelt

Umweltaspekte, Fragen der Nachhaltigkeit und ökologische Faktoren



Politik

Globale Märkte, Politik, Vorschriften und politische Stabilität

vorgestern

gestern

heute

morgen



Manuelle Betriebe

Manuelle Betriebe,
jedoch einzelne tailormade
Automatik-Leuchttürme

Hybride Konzepte mit
modularen Techniken

Humanide Roboter & KI
und was dann?

Warehouse Automation Market Map 2023 - 8th Edition

~700 Companies are shaping the future of automated warehouses opportunity worth \$41B by 2027

Warehouse Management System (50)

Warehouse Management System (50)

Companies: SAP, Manhattan, Oracle, Epicor, Tecsyst, ShipEdge, Fishbowl, Vinclulum, BLU JAY, SNAFFULFIL, REPLY, PTC, aplean, INCONSO, Corsair Logistics, wayzsim, Identra, DAVANTI, LogicGate, iptor, SAVANNA.NET, DEPOSCO, Softeon, HARDIS GROUP, generix, dsi, EPG, BOWE, made.net, SCHAFER, CognitOps, Enotek, swisslog, DEMATIC, afs, envista, SAVOYE, Bastian

Micro-Fulfillment (22)

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Companies: EXOTEC, KNAPP, AutoStore, swisslog, Fabric, Takeoff, ALERT INNOVATION, DEMATIC, Geek+, i-collector, EWEEMENTI, Honeywell, ocado, KPI, Bastian, Nano, AT

AGV/AMR (205)

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Companies: MIR, Wellwit, quicktron, Forward, HIKROBOT, SHERPA, COBALT, MEGVI, SEEGRID, HEASE, PAL, MYRMEX, BA, wayzsim, fetch, OMRON, Scallog, KIVA, savant, MILREM, WAYPOINT, MILVUS, NEXTSHIFT, GEBENZBACH, fellow, JBT, SNAPFULFIL, MAX/AGV, BALYO, bossanova, HNI ROBOTICS, OPPENT, Linde, MAGAZIN, AGVE, GUOZI, INTELLIGENT ROBOTS, GIDEON, KUKA, simbe, ek-robotics, TRANSBOTICS, GreyOrange, WEWO, BEARBOTICS, rexroth, BLOOM, EUROTEC, LODAMASTER, smp, Bionic HIVE, FLEXLOG, CREFORM, Photon, ALOG, arculus, AGV, activespace, DRJA, VEGA, NEOBOTIX, XMACHINES, UBILITY ROBOTICS, Robotnik, AMERDEN, IAMROBOTICS, GROUND, irob, VDL, AutoGuide, OCEANEERING, SKPI, ASTI, JATEN, CIMCORP, JENBUNJERD, AT, fives

Piece Picking Robots (26)

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Companies: KINDRED, MOTIVE, AWL, BEKESURE GREY, AWL, covariant, GreyOrange, FIZYR, DEXTERITY, PLUS ONE, Enotek, RIGHTHAND, KNAPP, nimble, UNIVERSAL ROBOTS, ambi, muLin, DEMATIC, LVRO, OSARO, Vicarious

Robotics Components (30)

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Companies: SIEMENS, ENERGIID, robot, ADVANCED, SOFT ROBOTICS, SICK, ROBOTIQ, rexroth, KINOVE, Nord Modules, DAMBACH, SCHUNK, KOLLMOGEN, Elmö, PARKER, PILZ, SEW, GUDEL, STX Motion, WACHENDORFF, BALLUFF, YUIN, ROBOT

Energy and Power Automation (8)

Energy and Power Automation (8)

Companies: Schneider Electric, General Electric, Siemens, ALSTOM, Festo, Eaton

Navigation & Robotics Software (36)

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Companies: brain, BLUEBOTICS, BALYO, KOLLMOGEN, ASI, MOVIA, MEVEL AI, HUMATICS, SEEDR, VEENA, ACCERION, Automi, AIMA, WIBOTIC, robominds, realtime, Enotek, SLAMTEC, Rapyta Robotics, PERCEPT, RoboCV, cogniteam, Photon, ELOKON, MEUVI, SOLOMON, CLEARPATH, covariant, STANLEY, YUIN, ROBOT

Material Handling Solution Providers (95)

Material Handling Solution Providers (95)

Companies: KION, VANDERLANDE, symbiotic, DEMATIC, DAIFUKU, BEUMER GROUP, MHS, Stocklin, DAWAY, Honeywell, SCHAFER, Bastian, LODAMASTER, BlueSword, TOYOTA, Interlake, SJSUN, JUNGHEINRICH, swisslog, fives, KNAPP, SKPI, CTW, Enotek, SEER, CONVEYCO, NORCAN, LODIGE, kardexgroup, KORBER, OPEX, OTHER, ROBO, GULICOM, KENGIC, ULMA, omh, CASI, ferag, COSTO, Hirata, viastore, VEGA, JR, JR AUTOMATION, sybersight, danon, SCOTT, ALSTEF, RAYMOND, MIRLE, CAPTRON, DALCA, JENBUNJERD, ARMSTRONG, SDI, AGITO, GUDEL, boag, CIMCORP, IHI, Liberty Reach, CIMCORP, invata, KONECRANES, Casstoll, ZION SOLUTIONS, EUROPORT, MIAS, SAVOYE, WACHENDORFF, bermak, GALAXIS, LG CNS, OPTIMARK, STU

Battery and Charging Infra (28)

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Companies: accutrenics, BAPLUS, Leclanché, Xnergy, EnerSys, murata, SBS, EASTPENN, WEWO, TOSHIBA, EXIDE, Fronius, LithiumWerks, Wiferion, SAMSUNG SDI, INVENTUS, VARTA, CONDUITIX, SCIB, BYD, LG Chem, CROWN, SHOWA DENKO, Panasonic, HELPPower

ASRS / Storage (82)

ASRS / Storage (82)

Companies: ROBO, WITRON, VANDERLANDE, DEMATIC, DAIFUKU, BEUMER GROUP, BlueSword, DAMBACH, Stocklin, Honeywell, swisslog, Bastian, SCHAFER, viastore, TOYOTA, Interlake, SJSUN, JUNGHEINRICH, REXFORT, fives, KNAPP, SKPI, IHI, CTW, AT, RAYMOND, OPEX, LODIGE, kardexgroup, CIMCORP, CONVEYCO, MEUVI, SencorpWhite, HANEL, Westfalia, DOOPER, AutoStore, JENBUNJERD, SCOTT, FRAZIER, EXOTEC, JENBUNJERD, wayzsim, KORBBER, JR AUTOMATION, FERRITO GROUP, ARMSTRONG, KUBO SYSTEM, ICA, G.J. EICOM, ALSTEF, BLUE ROBOT, MIAAS, SAVOYE, SDI, ULMA, ONO, ESSEGI, ROCKET SOLUTION, GALAXIS, YONGYI, ENFON, symbiotic

Energy and Power Automation (8)

Companies: sybersight, DAWAY, SDI, ARMSSTRONG, sybersight, IHI, iMech, KORBBER, SCOTT, cohesio group, PULSE, CONSOVEYO, Mad Automation, HYSTER-YALE, CLEVERON, robotec, Yandex, CORECON, OTTO, Logic Robotics, BLUEBOTICS, df, ECKHART, YUIN, ROBOT, SIERA.AI, DTA, SAFELOG, modaya, Barcodes, bama, ROEMOV, esatroll, Csjet, PROXAUT, AMS, Enotek, TRANSOLT, ROBOS, moveXX, MYZER, MLR, Lean - Tech, SOLVING, TURWEGGE, AXTER, MGS, INDEA, MOVIGO, MEIDEN, TECHNO FERRARI, KOLEB, CEIT, WNT, AICHIKAKI, aiut, NOVA-TECH, PINTO BRASIL, WIP, B.J. EICOM, NODE, PALOMAT, ULMA, YASKAWA, RB, STILL, VOLTAS, FENWICK, Bauli, AWL, inform, 井源机电, YOUBOT, A.I.C. Systems, CAI NIAO, MICOLOMAY, AICRobo, YONEYGY

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Last Mile Delivery (48)

Companies: Kionbot, AETHON, STARSHIP, robby, TeleRetail, Gatik, NURU, WORKHORSE, zipline, FLYTRENZ, dispatch, Postmates, Skycart, deliv, parcelpro, marble, 新石器, pick'ship, ELIPORT, JD, Routific, ROADIE, CAI NIAO, udelv, AMVBotics, Panasonic, BRING, boxbot, BYONE LOGISTIC, SCOUT, HelloWorld Robotics, UBILITY ROBOTICS, MATTERNET, HUGO, Yandex

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Warehouse Drones (12)

Companies: Aeriu, DRONE SCAN, delta, AIRMAP, flightbase, e3, doks, AIRIO, DRONE

Automatic Identification & Data Capture (28)

Companies: ZEBRA, SICK, TOSHIBA, Panasonic, CASIO, wayzsim, MOBILE, NCR, EPSON, BASLER, OMRON, VITRONIC, COB, Honeywell, wenglor, SABC, RF CONTROLS, scansource, Logistiq, NATA, TSC, QATALOGIC, DENSO, Cognex, COGNEX, Leuze, Newland America, unitech

Automatic Truck Loading System (8)

Companies: BEUMER GROUP, ACTIW, Bastian, ancro, Honeywell, jaloda, hydraroll, techn'ca, SIEMENS

3PL - 3rd Party Logistics (32)

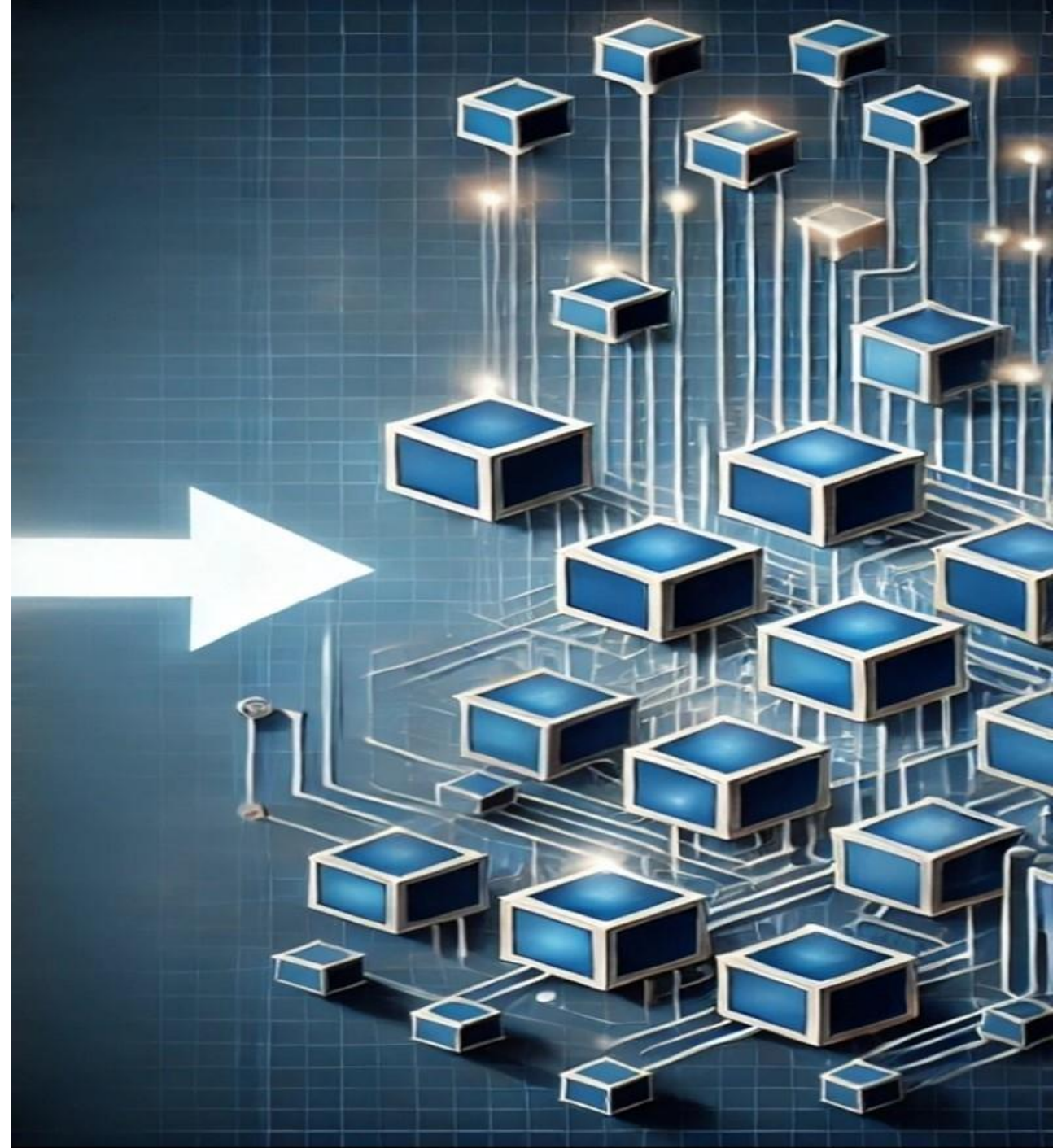
Companies: Agility, CEVA, 日立物流, KERRY, BOLLORE, LOGISTICS, GEODIS, KUERNER-NAGEL, CH. ROBINSON, DAMO, hellmann, 日本通運, COYOTE, DB SCHENKER, Imperial logistics, Yusen Logistics, DHL, Expeditors, IHI, Hub group, FedEx, GEFCO, J.B. HUNT, ILOGISTICS, Ryder, TOLL, XPOLogistics, TQL

Warehouse Real Estate (12)

Companies: Blackstone, CBRE, PROLOGIS, Colliers International, CUSHMAN & WAKEFIELD, PANATTONI, ESR, REALTERM, GLP, savills, JILL, SEGRO

For further queries please reach us at sales@thelogisticsiq.com

Was macht ein modernes Konzept aus?



Und was bedeutet das für die Praxis?



**AMR –
Paletten
Transport**

Autonome Stapler

Fördertechnik

TRANSPORT

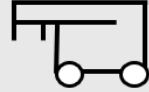
**Was machen wir, wenn uns
die Fachkräfte ausgehen?**

Key Learning

1. Labor \neq Echtumgebung.
2. Privat \neq Industrie.
3. WLAN \neq WLAN.

LAGERUNG

Wie kriegen wir
all unsere
Kunden unter
einen Hut?



Shuttle

Bin to Person

Pallet to Person

Shelf to Person

Key Learning

1. **Software macht den Unterschied.**
2. **Spitze ist nicht spitze.**
3. **Brandschutzindividualität.**

PICKING

**Kann ein Roboter
überhaupt die
menschliche
Fingerfertigkeit
ersetzen?**



Robot Arm

Zone Picking

AMR Picking

Key Learning

1. **Roboter alleine schaffen es nicht.**
2. **Vom Roboter zum Kollegen.**
3. **Der Mensch bleibt ungeschlagen.**



Fördertechnik

AMR

Taschensorter

Line-Sorter

SORTIERUNG

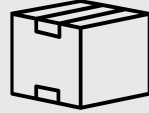
**Wollen wir wirklich
alles Automatisieren?**

Key Learning

1. **Use-Case first.**
2. **Hybrid geht auch.**
3. **Modular, Flexibel, Skalierbar.**

VERPACKUNG

Und was bringt
das der Umwelt?



Volumen-
reduzierer

Karton Aufsteller
& Verschießer

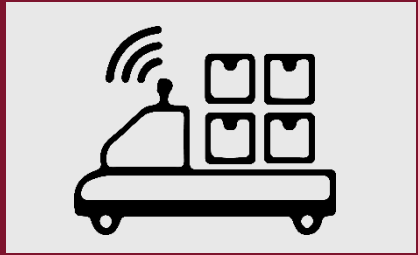
Packaging on
Demand - Carton

Packaging on
Demand - Bags

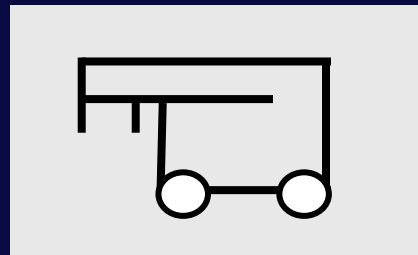
Key Learning

1. Von Logistik zur Produktion.
2. Ganzheitliche BC-Betrachtung.
3. Just do it.

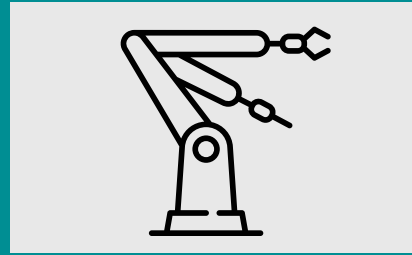
Automatisierung @ FIEGE



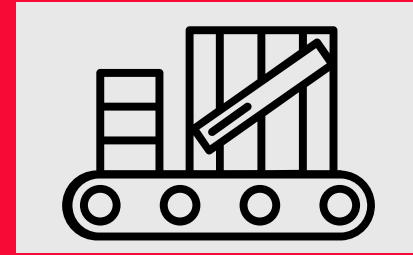
Transport



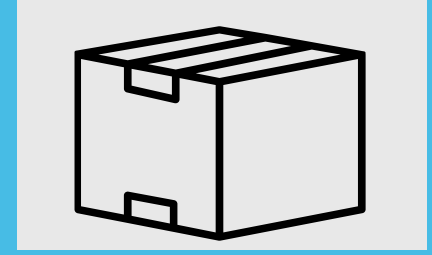
Lagerung



Picking



Sortierung



Verpackung





THANKS
for listening!

Hendric Fiege

Executive Director Engineering

Jens Veltel

Director Warehouse Automation

