

SPECTRUM OF SERVICES
C-PARTS MANAGEMENT

ENGEL

CONNECTS

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C-PARTS MANAGEMENT MADE TO MEASURE

ENGEL offers you the support of a strong, experienced C-Parts supplier whose range of services far exceeds that of a traditional customer/supplier relationship. Our principles include treating customers as partners, providing professional support and pursuing a future-oriented approach.

Whether the job calls for the classic multi-bin KANBAN system, scanner solutions, innovative RFID solutions or complex IT connections, we master the ABC logistics and offer customised solutions for C-Parts management.

80%

Management, ordering,
storage, monitoring, etc.

**C-PARTS: SMALL BUT COSTLY!
REDUCE YOUR EFFECTIVE COSTS FOR
PROCUREMENT, PLANNING AND LOGISTICS!**

20%

Value of the goods

The procurement effort for C-Parts is disproportionately high compared to the value of the goods. Demand assessment, ordering, storage, management, monitoring and internal goods movements often account for 80% of the costs, while the material value only accounts for 20%.

**GAIN RESOURCES
FOR YOUR CORE COMPETENCIES!**

KANBAN EXPERIENCE **FOR MORE THAN**

25 YEARS

**ELECTRONIC
KANBAN SYSTEMS
SINCE 2015**

The term KANBAN derives from the Japanese and means 'card' or 'sign'.

In 1947, Toyota developed the KANBAN system as a method for organising just-in-time production. The procedure is guided solely by the actual consumption of materials at the place of provision or consumption.

The reason why it was necessary to make changes to the production process is that productivity was relatively low compared to American competition at the time and inventories were costly to maintain.

KANBAN can be easily understood based on the example of the 'milk run' or the 'milkman principle', which guided the work of English milkmen even before the system was applied to industrial production. Empty milk bottles at the front door are replaced

**KANBAN: HISTORY AND
PRINCIPLE**

**>70,000
KANBAN BINS
IN CIRCULATION**

by an equal number of full bottles in an established delivery rhythm.

**PUNCTUAL, DEMAND-BASED,
COST-EFFICIENT!**

Since these early days, the method has undergone constant improvement. 'Pull' principles emerged with future-oriented overall concepts for logistics. For 25 years, ENGEL has offered KANBAN systems as your C-Parts partner, and now more than ever they are tailored to your individual requirements!

**MANY SATISFIED, LONG-TERM
KANBAN CUSTOMERS KNOW:
ENGEL KNOWS KANBAN!**



ENGEL SYSTEMS
AT A GLANCE



E-CLASSIC

E-LINK (RFID)

E-MAT (RFID)

E-BOX (RFID)

E-MOBILE (SCAN)

E-SCAN

PROVEN | COST-EFFECTIVE

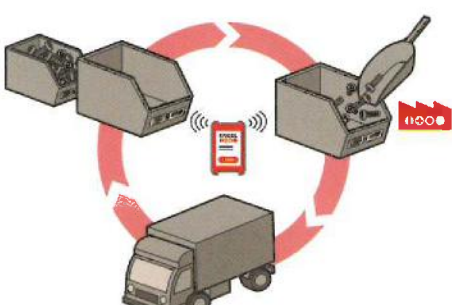
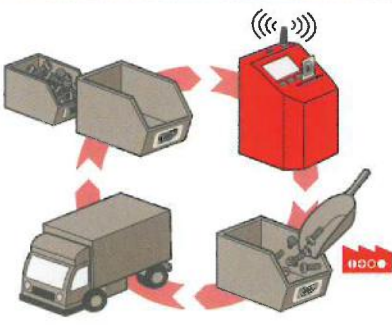
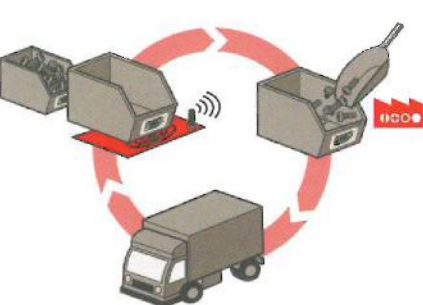
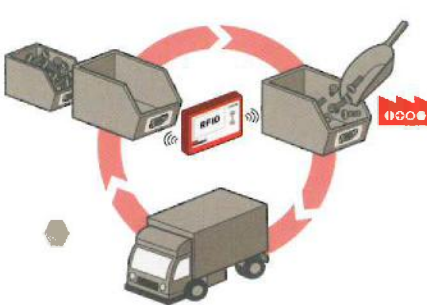
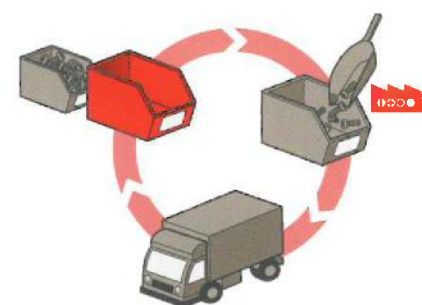
EFFECTIVE | SPACE-SAVING

CONVENIENT | FAST

CENTRAL | INTEGRABLE

AUTONOMOUS | FLEXIBLE

TIDY | WEB-BASED



OUR CLASSIC
TWO-/MULTI-BIN
KANBAN SYSTEM

- You make the empty bins available for collection
- The order is initiated by the cyclical collection of empty bins by ENGEL
- ENGEL delivers the refilled bins directly to your shelf or to another location

TWO-/MULTI-BIN
KANBAN SYSTEM WITH
E-LINK/RFID SUPPORT

- The order is sent to Engel by holding the inserted bin label in front of the transmission unit
- ENGEL fills the new bins with goods and affixes new labels to them
- ENGEL delivers them to the shelf or to another location

TWO-/MULTI-BIN
KANBAN SYSTEM WITH
E-LINK/RFID SUPPORT

- The order process ends with the placement of the empty bins on the E-Mat
- The data read from the RFID label on the bin is automatically transferred to ENGEL
- ENGEL delivers new bins with goods and a label to the shelf or to another location

TWO-/MULTI-BIN
KANBAN SYSTEM WITH
E-BOX/RFID SUPPORT

- The record is transmitted to ENGEL by inserting the label in the E-Box
- The transmitted record triggers the filling of new bins at ENGEL
- ENGEL delivers them to the shelf or to another location

THE FLEXIBLE AND MOBILE
TWO-/MULTI-BIN
KANBAN SYSTEM

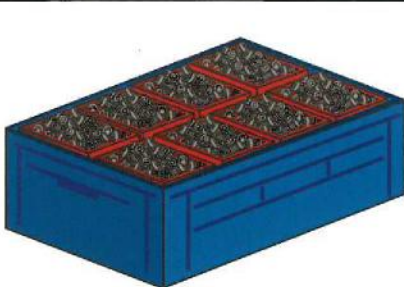
- The barcodes on the empty bins are read using the hand scanner
- The data is transmitted to ENGEL immediately
- ENGEL delivers new bins with goods to the shelf or to another location

OUR
ONE-BIN SYSTEM

- Bins with two compartments stay with you permanently
- If the front compartment is empty, the goods can be shifted forward by removing the partition
- When the barcode on the box is scanned, the data is transmitted via the web portal
- ENGEL sends the goods to you, and you place them in the bins yourself

SPECIAL SOLUTIONS

INDIVIDUAL | INNOVATIVE



CUSTOMISED
SPECIAL SOLUTIONS

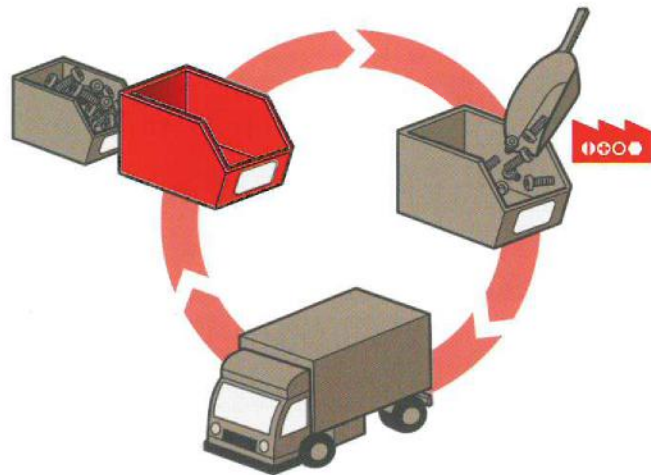
- All systems are flexible and can be dynamically expanded at any time.
- We work to find solutions to create an ideal system for your C-Parts management

E-CLASSIC

PROVEN | COST-EFFECTIVE

The two-/multi-bin KANBAN system from ENGEL is our classic!

This simple, affordable, classic KANBAN system has been successful for more than 25 years. With our E-Classic KANBAN system you can realise the basic principles of lean management.



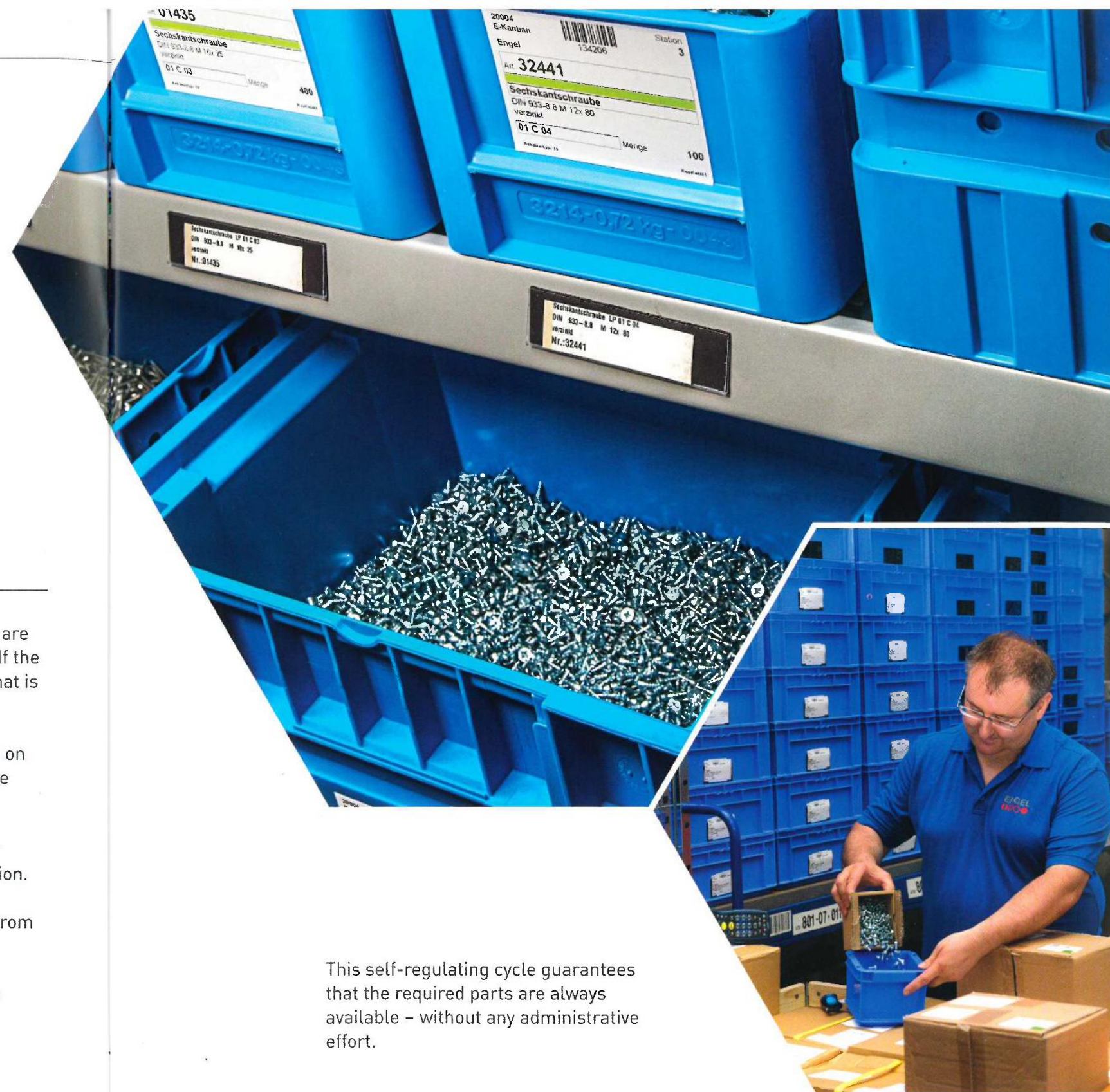
In E-Classic KANBAN shelves, at least two bins are positioned one behind the other for every item. If the front bin is empty, your employee places it in what is termed the 'station' for pick-up.

The second bin, which is still full, shifts forward on the shelf and ensures that the required parts are supplied.

The empty containers that have been placed for collection are picked up by ENGEL in a set rotation.

At the same time, ENGEL delivers refilled bins from the last pick-up.

Our full-service solution includes delivering the goods directly to your shelves.



This self-regulating cycle guarantees that the required parts are always available – without any administrative effort.

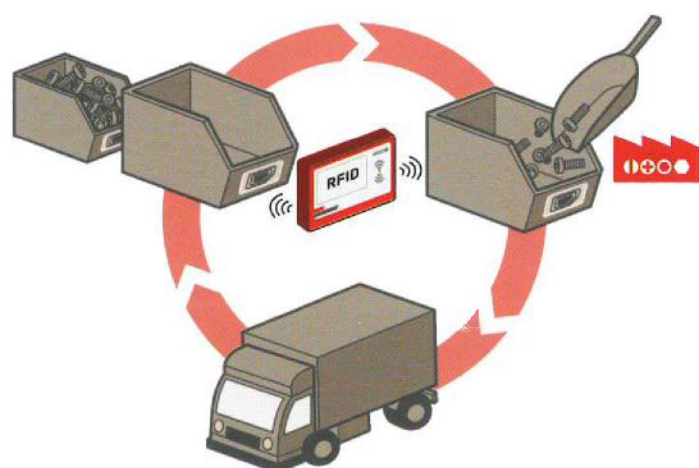
ADVANTAGES

- Exceptional security of supply
- No processes done by the customer – full-service
- Independent of technology

More advantages on page 26/27

E-LINK (RFID) EFFECTIVE | SPACE-SAVING

Modern technology without the need for more space!



The E-Link transmission unit is attached directly to the shelf to save space. When the RFID label in the empty bin is held in front of the transmission unit, the record is read and transmitted to ENGEL and an order to fill a new bin is initiated at ENGEL. It is delivered with a new RFID label before the empty box is picked up at the customer's premises.

The data is transmitted autonomously via the mobile phone network (GSM) or optionally via WLAN.

RFID (RADIO FREQUENCY IDENTIFICATION)

- RFID tag [chip] integrated in bin label
- Transmission of order via GSM or WLAN
- Non-contact, direct, digital transfer of data



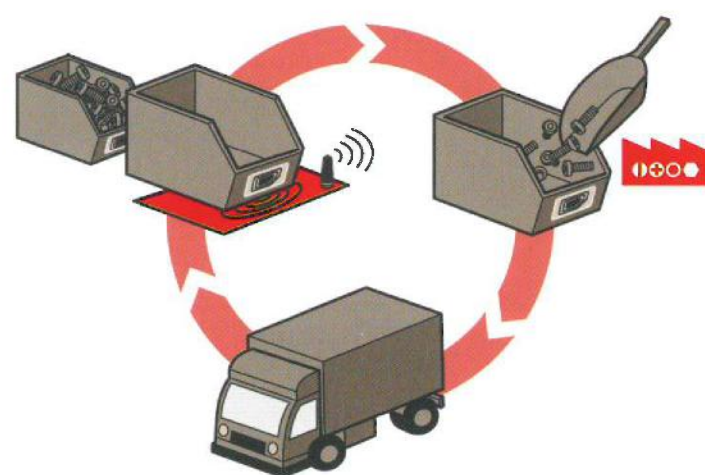
ADVANTAGES

- Flexible delivery intervals thanks to prompt placement of orders
- No additional space required
- Maximum optimisation of stocks and space utilisation

More advantages on page 26/27

E-MAT (RFID) CONVENIENT | FAST

E-Mat makes it easy to get faster
and more efficient!



In the E-Mat system, the empty bins are placed on the E-Mat. The RFID labels on the bins are immediately read by the electronic mat and sent to the transmission unit, which transmits your order directly to the ENGEL ERP system.

ENGEL delivers the ordered goods in new boxes with new RFID labels.

As in our E-Link system, the data is transferred autonomously and securely via the cellular phone network (GSM) or WLAN.



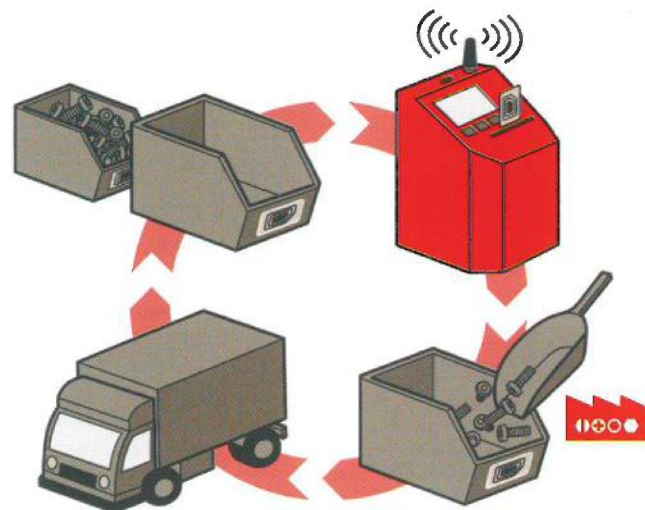
ADVANTAGES

- The fastest and easiest ordering solution
- Empty bins are integrated into the shelves
- The technology cannot be manipulated

More advantages on page 26/27

E-BOX (RFID) CENTRAL | INTEGRABLE

E-BOX –
flexible positioning, integration in the system!



The E-Box from ENGEL works like a mailbox. You remove the RFID label from the front of the empty bin and insert it into the E-Box. A card slot with a stop function ensures that the data is read correctly.

The order is initiated automatically and instantly. We deliver a new, full bin equipped with a new RFID tag. Thanks to flexible positioning, the ENGEL KANBAN system can be integrated into existing production control systems. The data is transmitted autonomously via the mobile phone network (GSM) or WLAN.



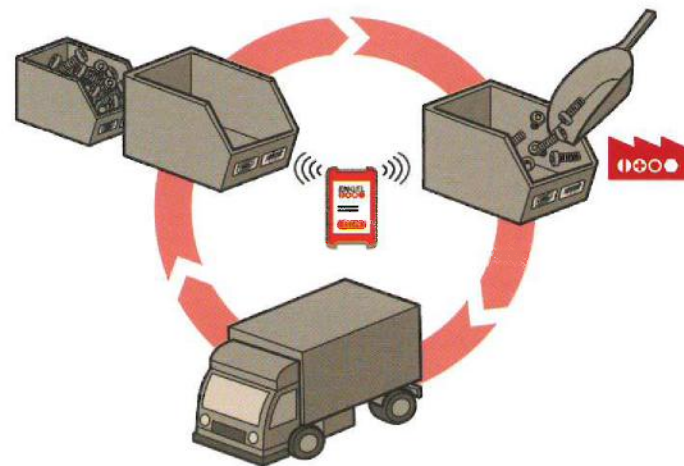
ADVANTAGES

- One transmission unit
- Can be integrated into the production control system
- Cost-effective RFID system

More advantages on page 26/27

E-MOBILE (SCAN) AUTONOMOUS | FLEXIBLE

Mobile and flexible throughout
the company with E-Mobile!



With E-Mobile, you can scan empty bins no matter where or when with the hand scanner. This gives you unlimited mobility in your company.

Orders are initiated under controlled circumstances by your authorised personnel.

The data is transmitted autonomously via GSM (mobile phone network) or WLAN. Your system does not require any further modifications.



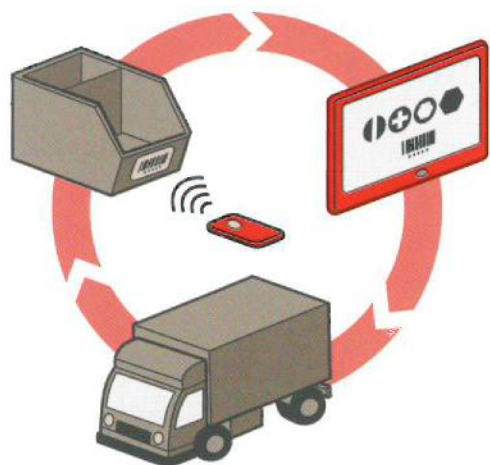
ADVANTAGES

- Defined responsibility for orders
- Visualisation of ordering process
- Works without RFID technology

More advantages on page 26/27

E-SCAN TIDY | WEB-BASED

E-Scan ensures that your shelves are restocked quickly!



E-Scan is a streamlined process for reducing your costs and making work easier for your employees. The ENGEL scanner system enables you to send us orders easily and directly.

You scan the required items in your warehouse using barcode labels and send your order via our web shop and we deliver the goods you requested.

The storage area is tidy with up to 60 items per shelf, it looks clean and manageable.

PROCESS:

- We receive a list of items from you with data on quantity and usage
- ENGEL delivers the complete E-Scan system, including shelves, bins, barcode labels, scanner and software
- After installing the software, you can scan the desired items immediately
- You open the order in the ENGEL web portal, where you can make changes and order additional goods.
- Your order is sent directly to us when you press the 'order' button
- The order confirmation is sent to you via email.
- The goods are delivered immediately or in a previously defined rotation

ADVANTAGES

- Fast and precise placement of orders
- Clean and manageable storage in high-quality bins
- Scanning and electronic data transfer makes work easier for your employees

More advantages on page 26/27



SPECIAL SOLUTIONS INDIVIDUAL | INNOVATIVE

Our strengths:
We work with you to implement customised logistics solutions!

- Management of items that supplement our classic product portfolio
- Management of special and custom-made parts
- Cooperation with external service providers
- Electronic connection to your ERP system (EDI solutions)
- Simplification of goods receipt thanks to barcodes on the delivery documents
- 'Bin-within-a-bin' systems
- Ready-to-use assembly bags in bins
- Electronic payment processing
- Analysis of your logistics in the C-Parts area
- Engineering, standardisation and item optimisation thanks to our qualified employees, sales engineers and technicians
- KLT containers and KLT cards
- Containers come in various colours
- Management of other C-Parts outside the connecting elements



KANBAN WEB PORTAL

TRANSPARENT | COLLABORATIVE

Stay on top of
things with ENGEL!

STAY ON TOP OF THINGS WITH ENGEL ABOUT YOUR KANBAN ITEMS

Do you want to know ...

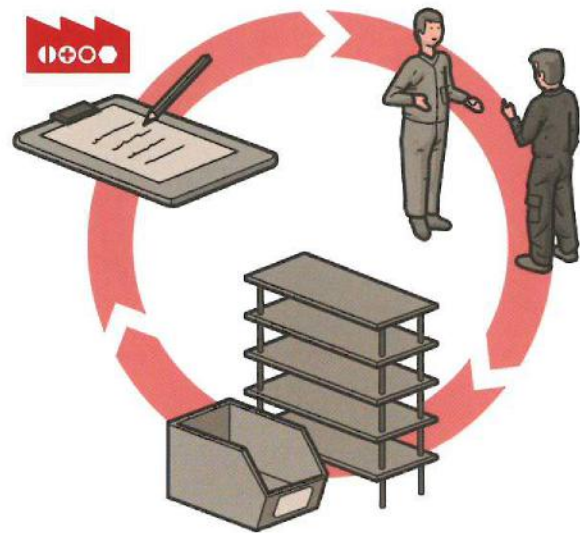
- ... how many parts are used in the KANBAN?
- ... where a required item can be found?
- ... which station and storage space contains a specific bin?
- ... what target figure ENGEL has on file for your item?
- ... which bins are on order at ENGEL?
- ... what price an item is delivered at?
- ... what quantities the bins are filled with?



Not only does our online portal provide information, but it can also be actively integrated into your management system. For example, supplementary orders due to consumption peaks can be placed at any time via the portal.

HOW TO BECOME A KANBANER

We support you throughout the entire project, including a smooth start and beyond. In next to no time, you can take advantage of all the benefits of C-Parts management by ENGEL.



1. SURVEY OF THE ACTUAL SITUATION

→ ENGEL surveys your conditions on site, for example, existing logistics and your specific guidelines.

2. CONSULTING AND DEVELOPMENT

→ ENGEL employees develop ideas and suggestions for your ideal system. You can rely on the experience we've gathered in over 25 years of working with KANBAN in various companies and industries.

3. TRANSLATION INTO PRACTICE

→ A customised concept has been developed and the range of items to be managed has been determined. Shelves are put in place and the filled bins are delivered by ENGEL.



AS YOUR C-PARTS PARTNER, ENGEL ACCOMPANIES YOU ON THE ROAD TO BECOMING A SUCCESSFUL AND PRODUCTIVE KANBANER!



The KANBAN approach means creating value without wastage. It has become a recipe for success in many companies today.

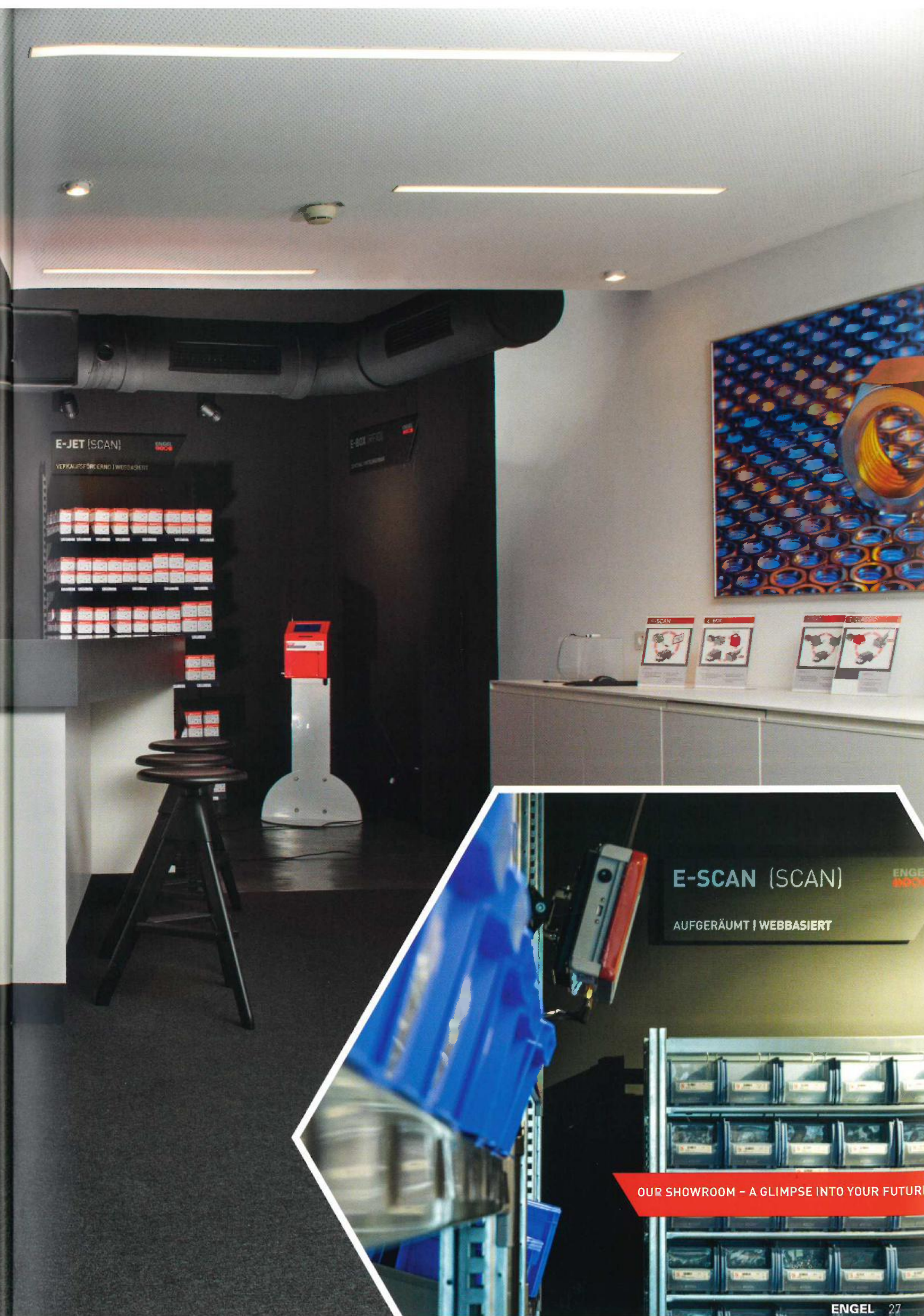
SHOWROOM

REPRESENTATIVE | AUTHENTIC

Experience all the systems
in a single room!

In our redesigned showroom, you can gain first-hand knowledge of the capabilities of all our systems and experience them actively yourself. Our team would be happy to welcome you and help you choose the ideal system for you.

WE WELCOME YOUR VISIT



E-SCAN (SCAN)

AUFGERÄUMT | WEBBASIERT

OUR SHOWROOM - A GLIMPSE INTO YOUR FUTURE

OVERVIEW OF SERVICES ADVANTAGES | COMPARISON

- Advantages over conventional procurement
- Comparison of systems

Improvement ●
Major advantage ●●
Optimal condition ●●●



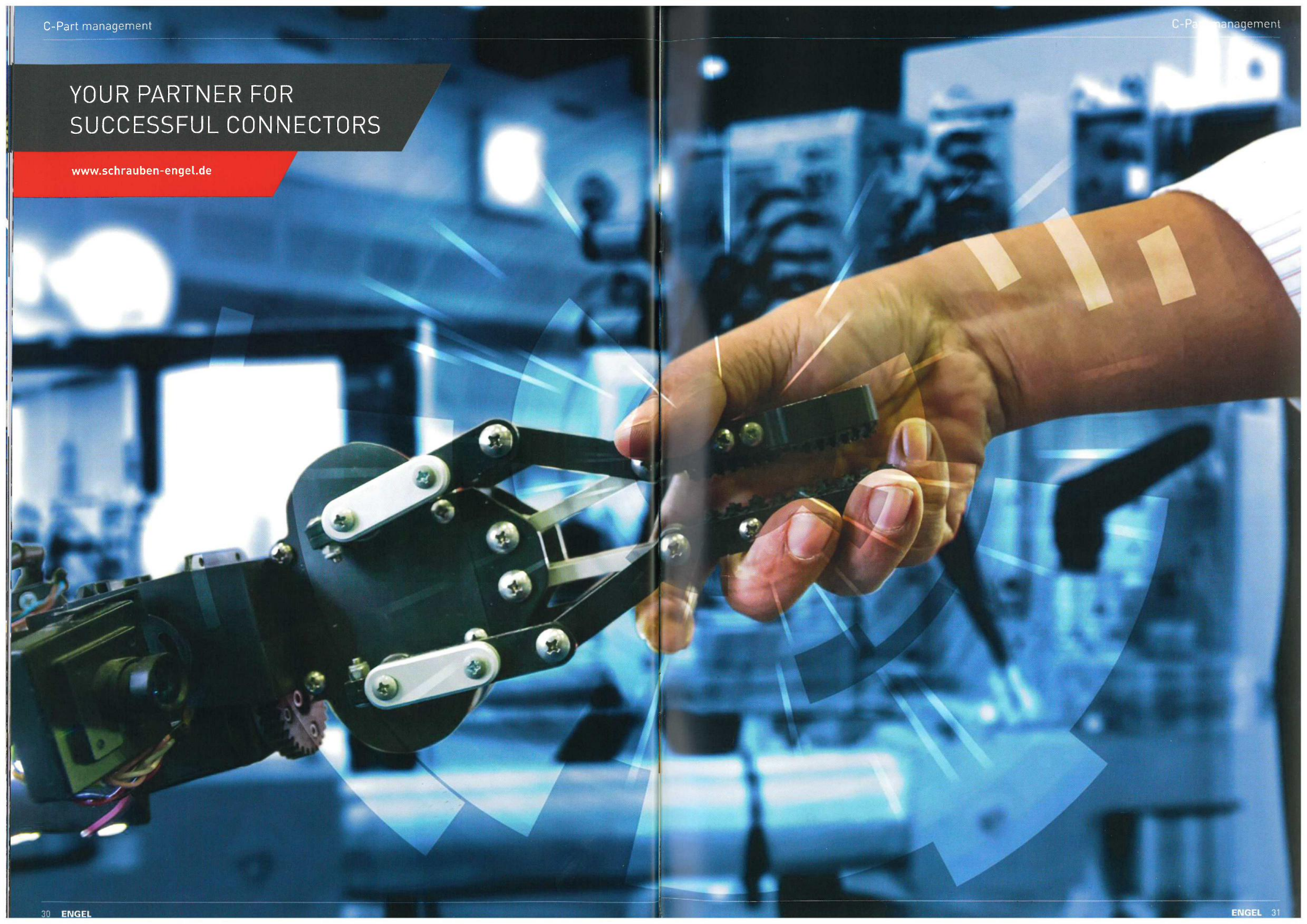
ADVANTAGES SYSTEM	E-CLASSIC	E-LINK (RFID)	E-MAT (RFID)	E-BOX (RFID)	E-MOBILE (SCAN)	E-SCAN
	Two-/multi-bin Kanban	Two-/multi-bin Kanban	Two-/multi-bin Kanban	Two-/multi-bin Kanban	Two-/multi-bin Kanban	One-bin Kanban
Security of supply	●●●	●●●	●●●	●●●	●●●	●●
Process reliability	●●●	●●●	●●●	●●	●●	●
Capital commitment / space requirement	●●	●●●	●●●	●●●	●●●	●●
No need to assess demand	●●●	●●●	●●●	●●●	●●●	●●
Elimination of manual processes	●●●	●●●	●●●	●●	●●	●
Order initiation	●●●	●●●	●●●	●●	●●	●
Personnel costs	●●●	●●	●●	●●	●	●
Reduction of error sources	●●●	●●	●●	●	●	●
Flexible delivery intervals	●●	●●●	●●●	●●●	●●●	●●●
New bins - new labels		●●●	●●●	●●●	●●●	
Order initiation at the place of consumption		●●●	●●●	●●	●●●	●●
Simplified goods receipt	●●●	●●	●●	●●	●●	
Batch traceability	●●	●●●	●●●	●●●	●●●	
Innovative technology		●●●	●●●	●●●	●	●

OTHER ADVANTAGES OF ALL SYSTEMS

- Optimised supply chain
- Fewer suppliers
- No manual data entry
- Simplified inventory
- Transparency thanks to KANBAN web portal
- Avoidance of small warehouses
- Neatness and manageability

YOUR PARTNER FOR SUCCESSFUL CONNECTORS

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