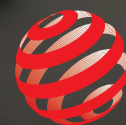




ek·robotics

INFINITE COLORS OF TRANSPORT



red dot winner 2022



# VARIO MOVE: New standards in transport robotics.

## SAFE, EFFICIENT AND POWERFUL.

Powerful and efficient. Safe and precise. Sustainable and economical. The **VARIO MOVE** is characterized by decades of experience, uncompromising quality standards, the will to break new ground and the latest technology. Designed for the sustainable optimization of your transport and material flows, the fully automatic transport robot meets a wide range of transport requirements. The modular concept, maximum availability, maintenance-friendly design and an exceptionally long-life cycle ensure sustainable cost and competitive advantages.

# VARIO MOVE: Individually configurable for effective optimization of your transport and material flows.



- A DRIVE UNIT**  
The VARIO MOVE drive unit with module interface to the various trolleys.
- B CHASSIS**  
The matching chassis for the VARIO MOVE transport robot equipped with lift mast and forks.
- C LIFT MAST**  
An optimized selection of lifting masts is available.
- D LOAD HANDLING DEVICE**  
Different forks and active conveyors offer a wide range of applications for the VARIO MOVE.

## FLEXIBILITY IS HIS STRENGTH

The VARIO MOVE represents the next evolutionary stage of transport robots. Flexibly configurable industrial trucks consisting of a drive unit with a module interface can be equipped with various trolleys and different load handling devices.

Designed for the sustainable optimization of transport and material flows, the fully automated VARIO MOVE transport robot meets a wide range of individual transport requirements.

# VARIO MOVE: Maximum availability and versatile in use.



1

## VARIO MOVE AS

### HIGH-LIFT TRANSPORT ROBOT WITH TROLLEY CHASSIS AND HIGH MANEUVERABILITY

Inspired expertise: With its externally mounted wheel arms, the VARIO MOVE AS transports special load carriers and closed pallets. The short wheelbase enables the AGV to perform fully automated transports with a **small turning circle** – even in narrow production areas and racking systems. With the standardised portfolio of lift masts, the VARIO MOVE AS can handle load cycles at heights of up to 5 meters and **transport a load capacity of up to 1.600 kg**.

2

## VARIO MOVE CB

### VERY COMPACT AND POWERFUL COUNTERBALANCE TRANSPORT ROBOT

Function in perfection: the VARIO MOVE CB automatic counterweight transport robot combines the universal drive unit with stepped load modules. With self-supporting forks and a high **payload of up to 1.600 kg** depending on the load module, it is a compact, powerful, and reliable transport robot.

3

## VARIO MOVE L

### HIGH-LIFT TRANSPORT ROBOT WITH OPTIMIZED CHASSIS FOR HIGH LOAD CYCLES

The fully automatic high-lift transport robot VARIO MOVE L impresses with its sophisticated, modular, maintenance-friendly design as well as the optimized chassis for **safe load cycles at heights of up to 5 meters**. At the same time, it has a **high load capacity of up to 1.600 kg**.

4

## VARIO MOVE CTO

### AREA-MOVING TRANSPORT ROBOT WITH CONVEYORS

Smart technology that moves: Specially designed for **high-performance plants**, the VARIO MOVE CTO has 1 to x conveyors paired with an omnidirectional chassis. Thanks to its high maneuverability, the transport robot can be used efficiently even in tight production areas. A wide range of additional safety and equipment options make the VARIO MOVE CTO **an indispensable AGV partner** in day-to-day business, when it comes to optimally implementing tasks and meeting requirements.

5

## VARIO MOVE CT

### HIGH PERFORMANCE TRANSPORT ROBOT WITH AUTOMATIC CONVEYORS.

Efficient design as it should be: Connected to the drive module via a universal interface, the VARIO MOVE CT can be adapted to almost any individual and special tasks. In the process the drive module can be combined **with one or more roller or chain conveyors** and, if desired, with additional features, such as a load hold-down device. Particularly powerful **transport robot with possible travel speeds of up to 2m/s**.

# VARIO MOVE: Safe, precise and economically sensible.

## INNOVATIVE TECHNOLOGY, MAXIMUM QUALITY

The VARIO MOVE is characterized by innovative technology down to the last detail and an uncompromising commitment to quality. Thanks to its modular concept, maximum availability, maintenance-friendly design and an exceptionally long-life cycle, it ensures sustainable and competitive advantages.



### SAFE LOAD TRANSFER AT HEIGHTS OF UP TO 5 M

Thanks to its smart, modular design and optimized undercarriage, load transfers at high heights are safe.



### TRAVEL SPEED

The drive units allow speeds of up to 2 m/s.



### LI-ION BATTERY SYSTEM

Innovative, maintenance-free energy system with fully automatic charging. Designed for 24-hour use, 365 days a year, it guarantees many years of availability for your transport system.



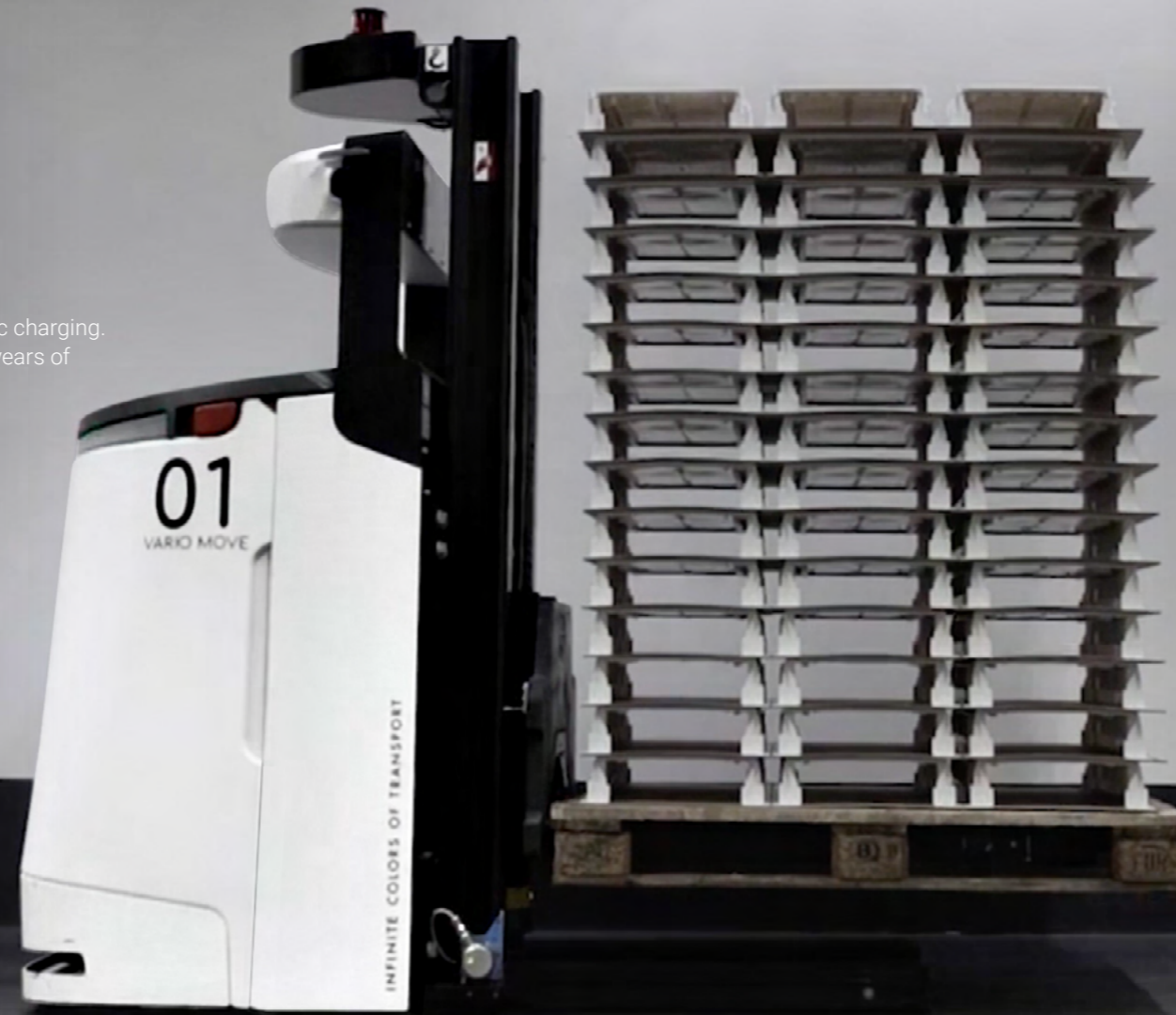
### FAST AMORTIZATION

Low process costs and high savings from the beginning, ensure a small ROI (Return on Invest).



### HYBRID NAVIGATION

Our multi-sensor capable vehicle control system allows the combination of different navigation technologies. We find the right solution for every task.



### HIGH LOAD CAPACITY

Thanks to its optimized drive units, it has a high load capacity of up to 1.600 kg.



### LOW OPERATING COSTS

Due to extended service intervals and reduced service times, the operating costs are significantly lower than with automated series industrial trucks.



### SUSTAINABILITY

More sustainable compared to other series industrial trucks due to a significantly longer life cycle.



### HIGH FLEXIBILITY

The modular design is versatile in use and can be adapted to new requirements.



### MAXIMUM AVAILABILITY

Uncompromising quality standards enable maximum availability.



# EK SERVICE: Competent, individual, safe and sustainable.

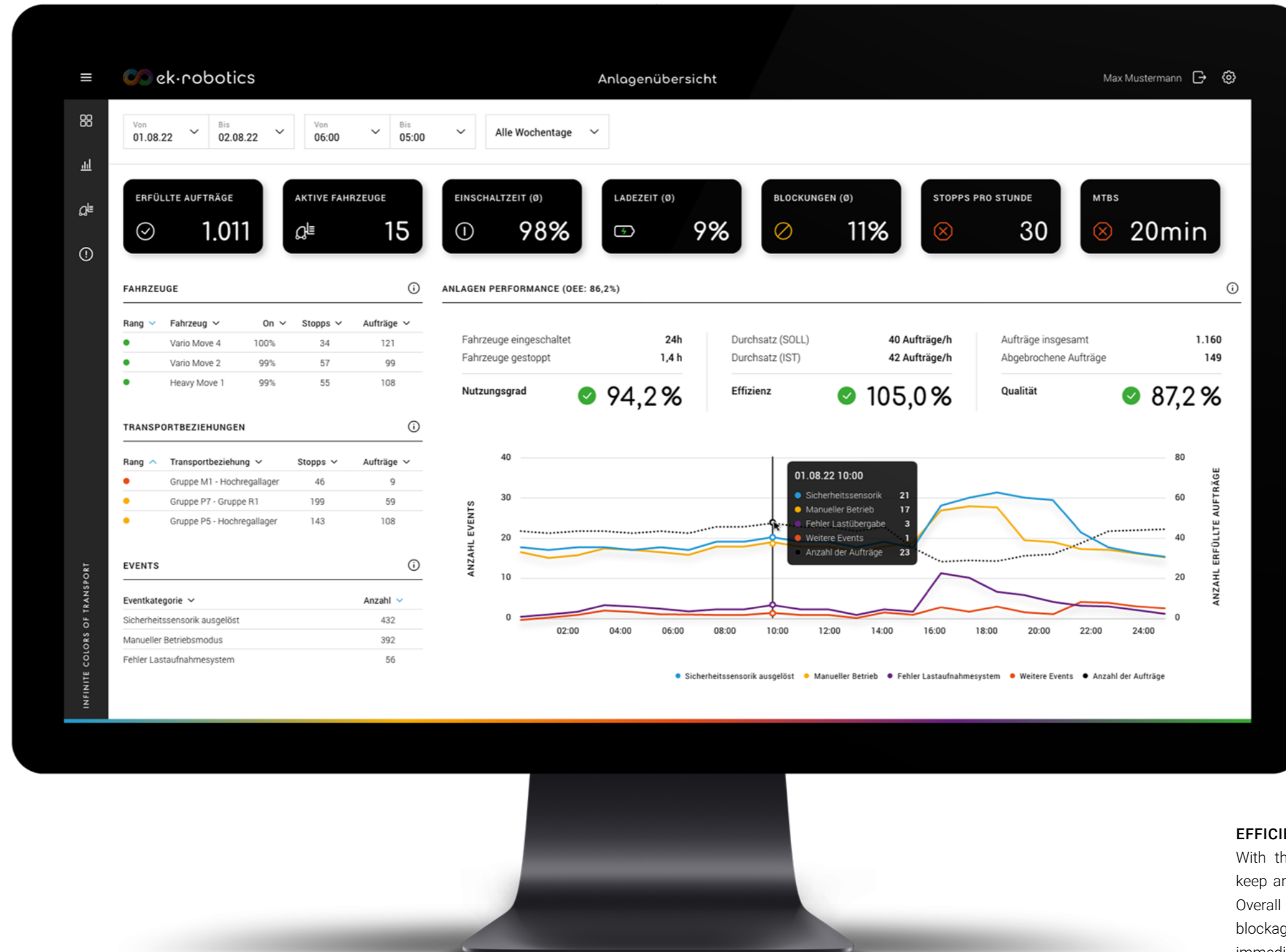


## SERVICES WORLDWIDE

With our service solutions, we offer maximum plant availability and investment security. We accompany. We support you throughout **the entire life cycle of your plant**: from commissioning and maintenance to retrofit. Even in 10, 20, 30 years – and beyond. **Your individual needs are always our top priority.**

# SARA: Smart Analytics Reporting App.

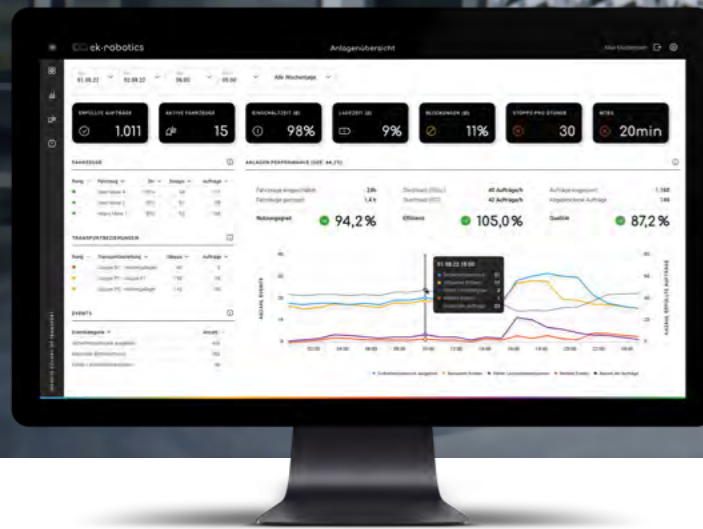
SARA collects all relevant data of your plant and vehicles, evaluates them in corresponding statistics and graphics in real time and provides a reliable overview of your system.



## EFFICIENT CONTROL AND MONITORING

With the Smart Analytics Reporting App SARA, you keep an optimal overview of all processes in practice. Overall performance, availabilities, transports, stops or blockages, fleet and vehicle loadings – everything is immediately transparent for you.

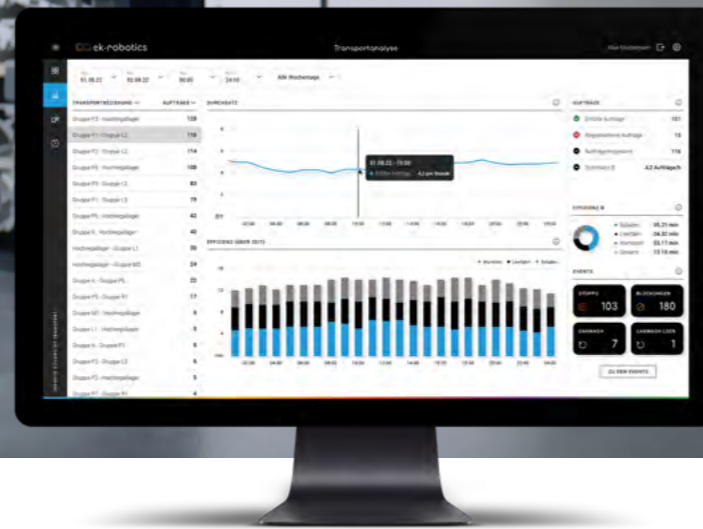
# SARA: The smart check-up for your AGV.



## DASHBOARD

The dashboard provides you with a comprehensive **overview of the overall performance** of your plant.

Performance KPIs, quality of transports as well as the availability of the system and the AGV fleet – the representation over time provides an accurate overview of the performance of your plant.

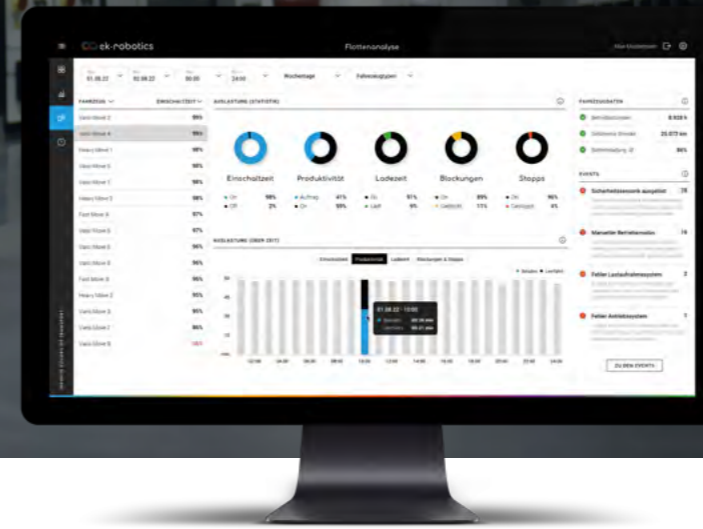


## TRANSPORTS

The transports overview lists the current analysis of the plant's performance.

- Number of transports performed each hour
- Distances from source to sink
- Frequency of transport times?
- Throughput?
- Interruptions

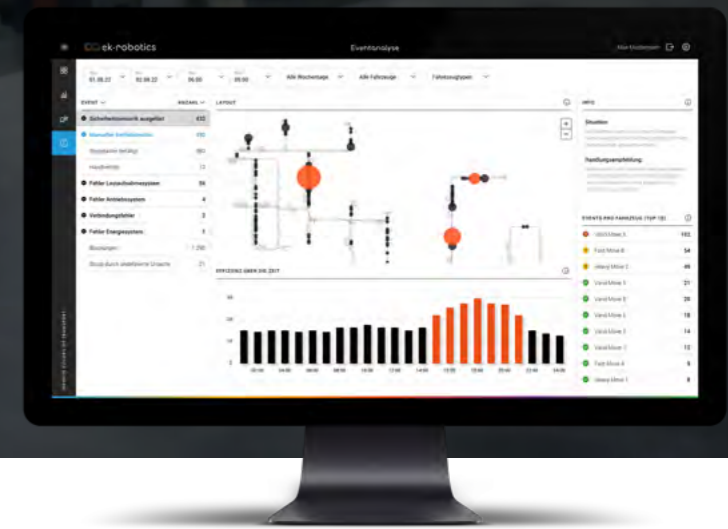
All information clearly presented and retrievable.



## VEHICLE FLEET

The fleet overview **analyzes the AGVs and their individual performance**. Get a quick overview of the distribution of the operating states of the fleet (and/or also individual transport vehicles) in relation to the switch-on time.

Get a reliable **assessment of the productivity**, loading times as well as the times for stops and blockades. Use the analysis data to identify possible causes for the results of the evaluations directly.



## STOPS, BLOCKS, EVENTS

Determine **the number and content of events in the layout**. Use detailed analyses of stops and blockings.

Evaluate **location and time for individual AGV in detail**: The analysis shows the event-related main points in the layout, depending on location, time and transport robot. Zoom in or pan the layout to see more details.





# ACADEMY: Develop your team!

## MORE KNOW-HOW THROUGH INDIVIDUAL TRAINING

Our training offer ranges from basic tutorials to training courses that enable you to modify and expand your AGV system. We get you fit in the optimal design of your plant and support you as a strong partner throughout the entire life cycle of your AGV system.

ca. 30-60 min.

### Level 1: Basics

For operators and maintenance personnel of plant and/or vehicles

Basic knowledge about your plant and vehicles, to be able to handle the AGV in its basic functions.

Trainer qualification: Commissioning or service technician

1-4 h

### Level 2: In-depth & Diagnosis

For operators and maintenance of the plant and/or vehicles

Instruction in the interaction of the plant components as well as in-depth training in the operation of the AGV (system and vehicles).

Trainer qualification: Commissioning or service technician

### System Design Training

1-4 h

### Level 3: Modify

For maintenance and development/specialist departments of the plant and/or vehicles

Legal relevance of the modifications.  
Knowledge transfer of the plant structure (layout, vehicle and control system) as well as training for independent adaptation of existing layout areas.

Trainer qualification: Layout specialist

ca. 10 d

### Level 3: Expert

For maintenance and development/specialist departments of the plant and/or vehicles

Contents of the training Modify plus extension of the layout by further stations and functions of the plant.

Trainer qualification: Expert Layout, Guidance system & AGV

ca. 1,5 d

### Level 3: SIM

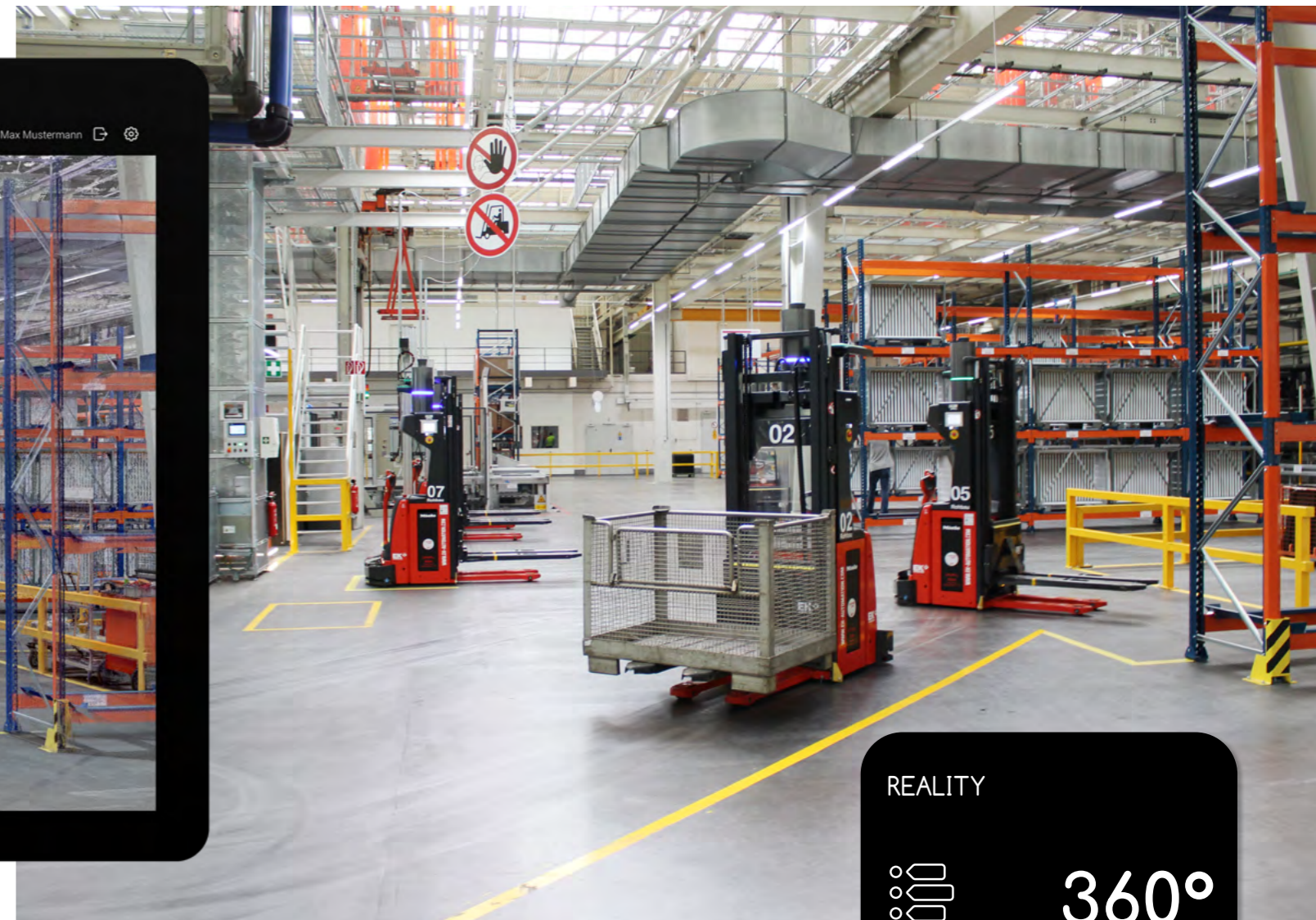
For maintenance and development/specialist departments of the plant and/or vehicles

Presentation of the analysis and simulation programs, versioning, System Manager operation, operation and setup of CWay for simulation, set up and start simulation, simulation statistics, error handling, ek order generator.


Trainer qualification: Specialist Layout



# SIMULATION: Optimal planning & dimensioning of complex intralogistics systems.



REALITY



**360°**  
PERFORMANCE CHECK

### OPTIMIZE PROCESSES

With our material flow simulation, we make the potentials for process optimization at the customer's site, find customized solutions and implement them.

# SIMULATION:

## For practical solutions made to measure.

### INTRALOGISTICS CONSULTING FOR OPTIMIZED PROCESSES

It is crucial for your company to optimally plan and to add dimension to complex intralogistics systems and upstream and downstream processes right from the start.

Simulation offers the best possible conditions:

Interrelationships, system limits, bottlenecks, plant modifications and alternative solutions that can be mapped exactly according to your requirements. We provide you with simulation-supported advice not only for the use of automated guided vehicles (AGVs), but also for completely AGV-independent systems and material flows.

**OPTIMAL DIMENSIONING**  
of buffers and resources.

**TIME-LAPSE FUNCTION**  
to illustrate long-term effects.

**CLEAR HOLISTIC VIEW**  
of the entire process instead  
of just a few sub-processes.



**PRESENTATION OF ALTERNATIVES**  
and selection of the best solution in the shortest  
possible time to reduce planning time and costs.

**BOTTLENECK  
ANALYSIS**  
of all your  
processes.

**DYNAMIC CONSIDERATION**  
of all simulation solutions with  
the help of free viewer files. Static  
videos with snapshots are no  
longer necessary.

**REUSABILITY**  
of created simulation  
models for later  
questions.

**PLANT CHANGES**  
especially in short time  
windows can be optimally  
planned and prepared in  
advance.

**FAST MODEL  
CREATION**  
through standardized  
AGV construction kit.

**REPRESENTATION OF  
DYNAMIC PROCESSES**  
also regarding  
fluctuations in  
production.

**PLANT SIMULATION**  
is a proven tool e.g.  
in the automotive  
industry, and can also  
be used without additional effort.



**SIMULATION MADE  
TO MEASURE**  
is always 100 %  
customized to your  
requirements.

**IDENTIFICATION OF  
SYSTEM LIMITS**  
to assess the limit  
performance.

**VISUAL  
REPRESENTATION**  
from a bird's eye  
view conveys even  
complex processes  
in a simple and  
understandable way.

**HIGHER ACCURACY AND  
QUALITY OF RESULTS**  
compared to conventional  
analyses for complex  
systems.



# EK ROBOTICS: Welcome to the High-tech Company for transport robotics.

We are the **leading manufacturer and system integrator of innovative high-performance transport robotics** for production and warehouse logistics around the world. We create intelligent, networked, and **flexible transport solutions** for the fully automatic, in-house material flow of our worldwide customers.

42  
VARIO MOVE



With more than **50 years of experience** in design, development, manufacturing, integration, **turnkey delivery** and support across the entire life cycle of Automated Guided Vehicles (AGVs), we are the **technical elite** in the very fast-growing transport robotics industry.



# Customised transport robotics solutions for every company.

The innovative **high-performance transport robots from ek robotics** solve internal inefficiencies in production and warehouse logistics. With highest reliability we optimize intralogistics processes and make them more flexible, fail-safe and efficient.

**Trust, safety and quality - our core values today and in the future.**

# INFINITE COLORS OF TRANSPORT

**ek robotics GmbH**  
Ohepark 2  
21244 Rosengarten · Germany  
[ek-robotics.com](http://ek-robotics.com)