



ek-robotics

INFINITE COLORS OF TRANSPORT





SMART MOVE: High lift trucks, Low lift trucks & Tow Tractors.

More than **25 years of experience** and **over 1.000 automated series production vehicles**. **ek robotics** equips vehicles of well-known manufacturers with navigation and control systems and adjusts the entire system to the customer's requirements in a holistic manner. Since these systems work with prefabricated modules, we offer a **cost-effective entry into the technology of automated guided vehicles (AGVs)** for many applications in different industries.

Short planning and commissioning times, fast deliveries and flexible customization options are further advantages that speak for the use of SMART MOVE vehicles. Our portfolio includes tow tractors, low-lift and high-lift vehicles.

SMART MOVE:

Series industrial trucks

as driverless transport systems.

High-quality manufacturing, sophisticated equipment and high price awareness do not necessarily have to be a contradiction. This is where the SMART MOVE product family comes in: series-production industrial trucks as driverless transport systems that offer cost-efficient transport solutions for all industries.



1 **OUR TOP SELLER: SMART MOVE L14 / L16**
 With the driverless transport vehicles SMART MOVE L14 and L16, you can be prepared for anything in the future. The automated high lift truck from **ek robotics** can store and retrieve goods up to a height of more than 4 metres in racks. Even the basic model offers features that include laser navigation, a LI-ION energy system and personal protection scanners in both directions of travel.

2 **COUNTERBALANCED TRUCK: SMART MOVE L06 - 16AC**
 With no less than four models of the SMART MOVE AC type, **ek robotics** offers a selection of transport robots that are perfectly designed for heavy transport tasks. With load capacities of 600 kg, 1.000 kg, 1.200 kg and 1.600 kg, the AGV vehicles transport a wide range of different loading devices. Laser navigation, LI-ION energy system as well as personal protection scanners in both directions of travel are included in the basic equipment.

3 **LOW-LIFT PALLET TRUCK: SMART MOVE T30**
 Loads of up to 3.000 kg can be transported with the fully automatic SMART MOVE T30. The low-lift truck can be equipped with forks up to 2.400 mm long for the transport of 2 pallets at the same time. The SMART MOVE T30 is featured with laser navigation, LI-ION energy system and personal protection scanners.

4 **DRIVERLESS TOW TRACTOR: SMART MOVE P40 C AND P60 C**
 Are you looking for a towing vehicle that impresses through pure transport performance? The SMART MOVE P40 C and P60 C meet this requirement without "ifs and buts". The SMART MOVE P40 C and P60 C transport robots automated by **ek robotics** carry trailer loads of up to 6.000 kg and offer high transport performance at low cost.

SMART MOVE: Fast deliveries and flexible customization options.

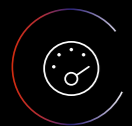
DRIVERLESS TRANSPORT ROBOTICS MADE TO MEASURE

With the SMART MOVE series, we offer you an entry-level solution for the automation of your intralogistics with AGVs. Transport tasks that you still perform manually today and with high personnel effort can be carried out very efficiently and cost-effectively with the SMART MOVE.



VARIABLE LOAD CYCLES

With the SMART MOVE L14-20 and AC, load cycles can be released up to a height of more than 4 meters.



DRIVING SPEED

Depending on the model, the SMART MOVE can reach a driving speed of up to 6 km/h.



LI-ION BATTERY SYSTEM

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



FAST AMORTIZATION

through low process costs and high savings right from the start.



HYBRID NAVIGATION

Our multi-sensor capable vehicle control system allows the combination of different navigation technologies. So, we can offer our customers the right solution.

HIGH LOAD

Depending on the vehicle model, payloads of 1.600 or 3.000 kg are possible.



LOW OPERATING COSTS

The use of standardized vehicles and components reduces operating costs.



SUSTAINABLE

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



HIGH FLEXIBILITY

through modular design adaptable to new requirements.



MAXIMUM AVAILABILITY

through uncompromising quality standards.



EK SERVICE: Competent, individual, safe and sustainable.

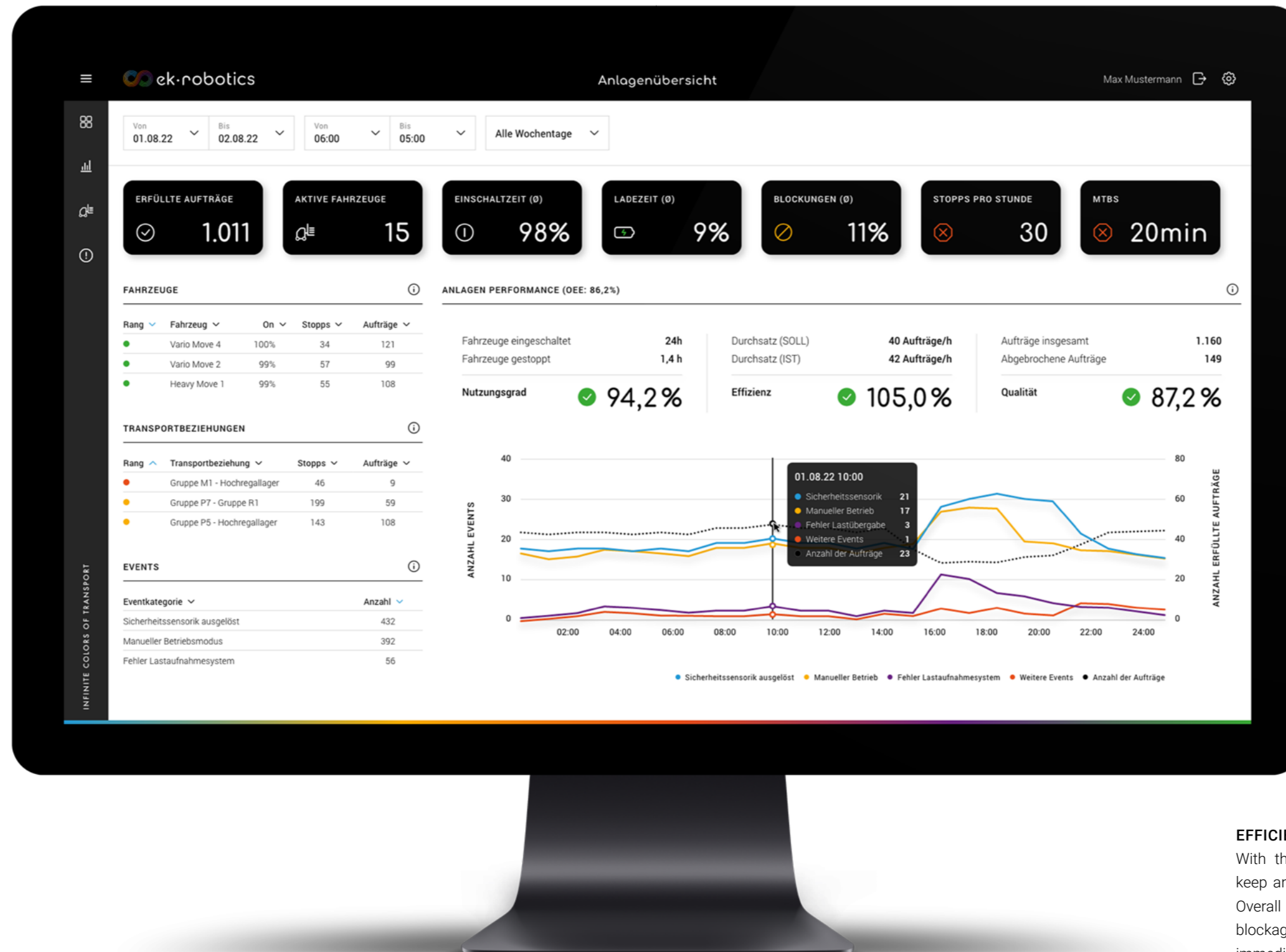


SERVICES WORLDWIDE

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.

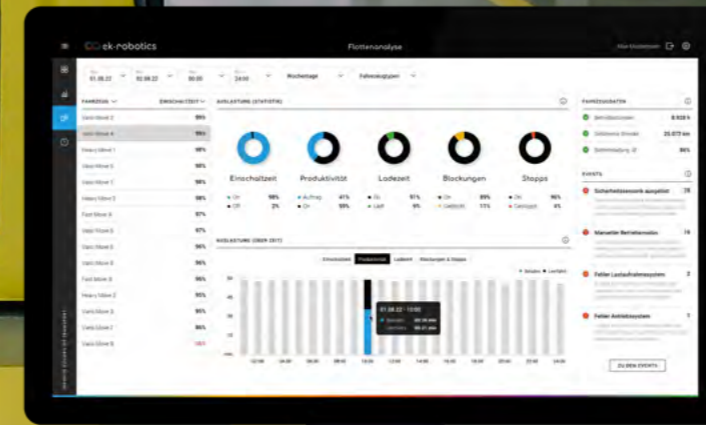
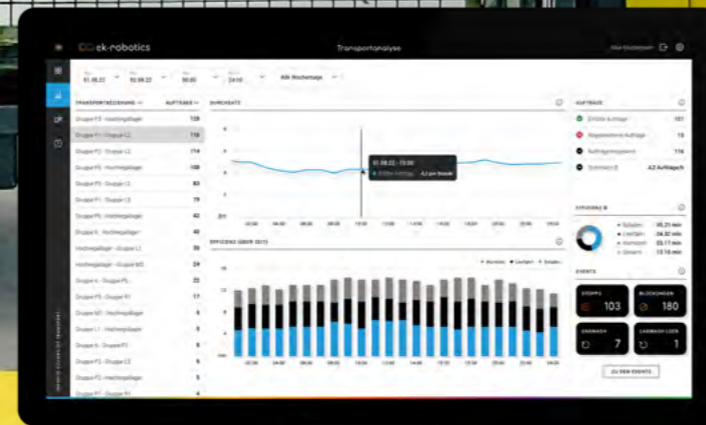
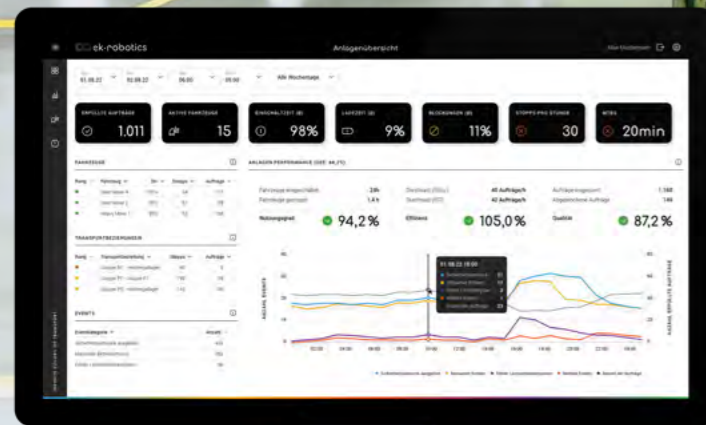
SARA collects all relevant data of your plant and vehicles, evaluates them in corresponding statistics and graphics in real time and provides a reliable overview of your system.



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

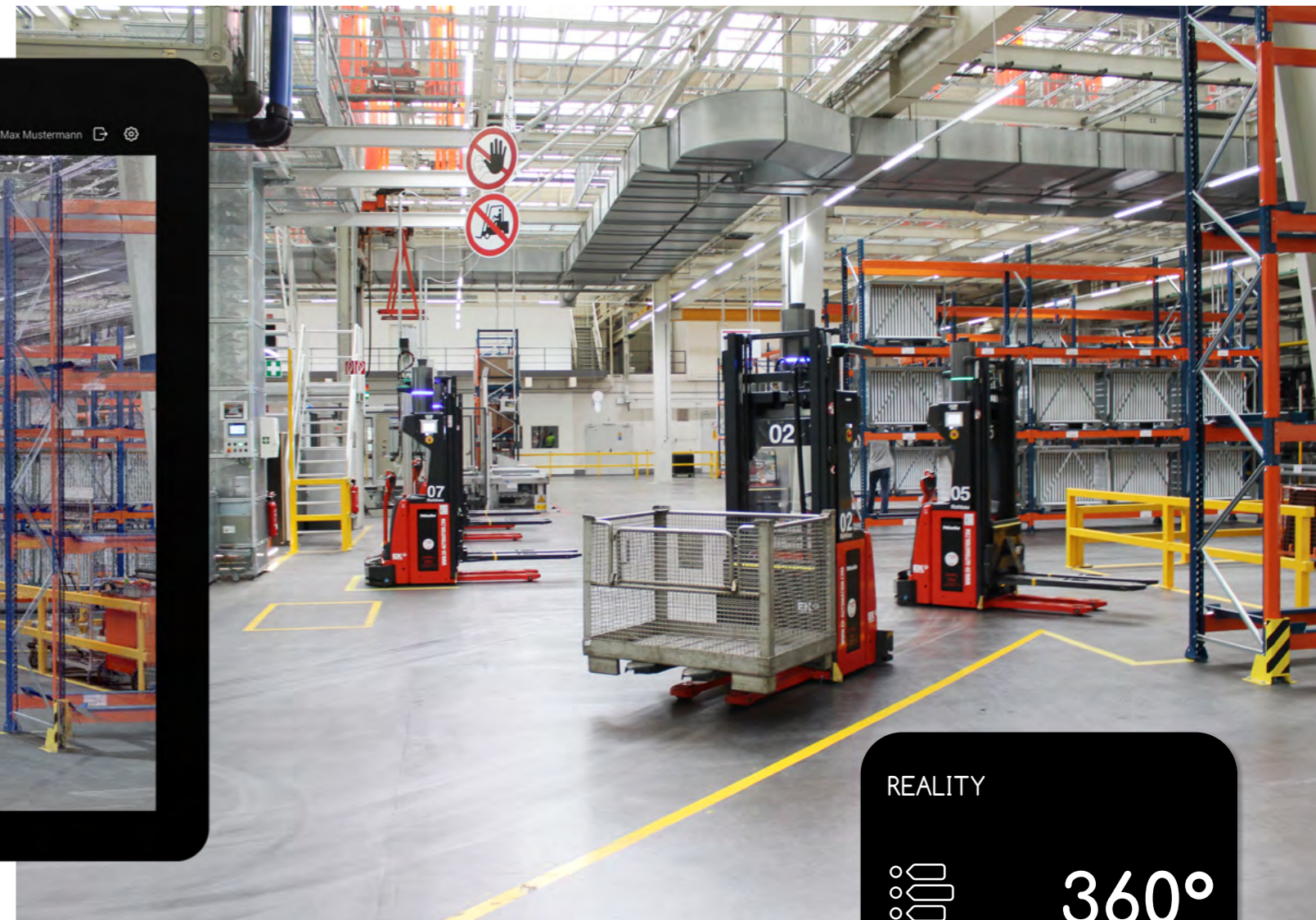
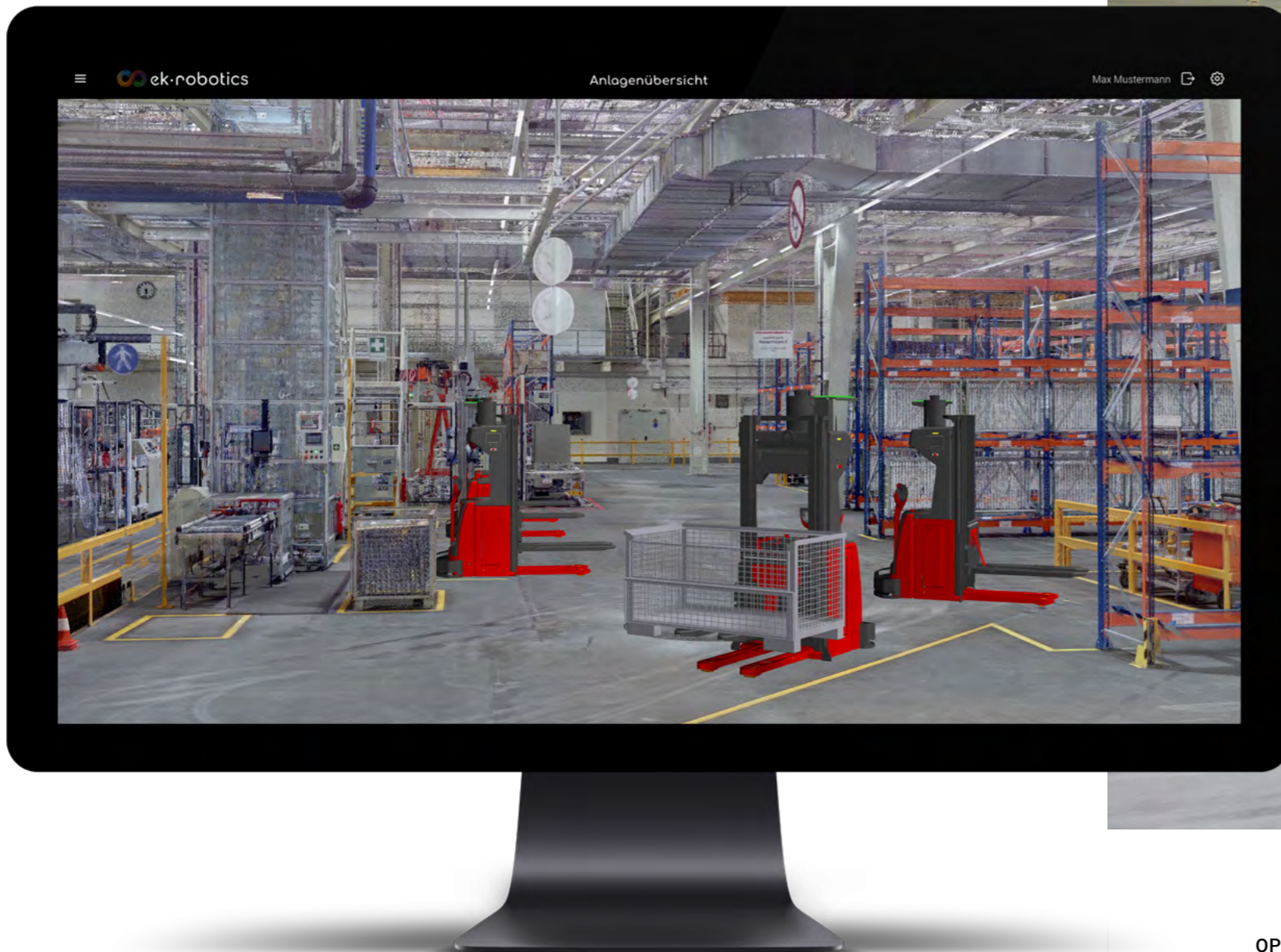
For maintenance and development/specialist departments of the plant and/or vehicles

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.

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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.

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