



INTRALOGISTICS

TRANSPARENT.
FLEXIBLE.
SIMPLE.



BEST IN INTRALOGISTICS

NAISE
NAISE TRAFFIC

CERTIFIED INNOVATION AUDIT | INNOVATION CHECK | TEST

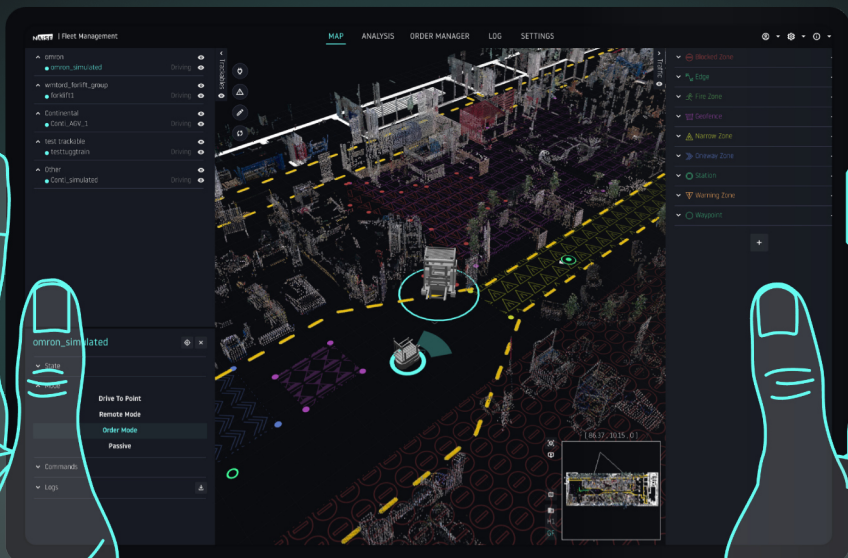
www.ifoyn.org

NAiSE

NAiSE

TRANSPARENT. FLEXIBLE. SIMPLE.

[nais]



AUTOMATED INTRALOGISTICS MADE EASY FOR EVERYONE !

NAiSE INTRALOGISTICS PLATFORM - ONE SOLUTION FOR ALL YOUR NEEDS

The NAiSE Intralogistics Platform is a manufacturer-independent solution designed to streamline material flow and automation in your facility. With its standard-agnostic approach, it seamlessly integrates diverse technologies and participants into a unified intralogistics ecosystem.

Through an intuitive, AI-supported interface and a gamified design, the platform simplifies complex processes, making them more accessible and engaging. By bringing together mobile robots, forklifts, tugger trains, and people, it ensures holistic coordination across all operations.

From fleet and traffic management to order processing and warehouse optimization, NAiSE provides one solution for everything. At its core, the platform consists of four key modules: Fleet Manager, Traffic Manager, Order Manager, and Warehouse Manager. Together, they enable a smarter, more efficient approach to intralogistics.

“We provide smart coordination, efficient intralogistics processes, and optimal decision-making.”

Kai Przybysz-Herz | CEO | NAiSE GmbH



BENEFITS THAT CREATE LASTING EFFECTS !

ABSOLUTE TRANSPARENCY

Gain complete visibility into your intralogistics processes. Real-time data and seamless communication between all participants ensure better planning, faster decision-making, and optimized workflows.

MAXIMUM FLEXIBILITY

Adapt quickly to changing demands with dynamic material flow planning. Whether scaling operations or integrating new technologies, flexibility ensures seamless transitions and efficient resource utilization.

PLAYFUL SIMPLICITY

Managing intralogistics complexity has never been easier. Our intuitive tools turn intricate workflows into a streamlined experience, allowing you to optimize operations effortlessly.



YOU CAN PROFIT FROM OUR SOLUTION, JUST LIKE OUR HAPPY CUSTOMERS !



We are happy to work together
with such a dynamic company !

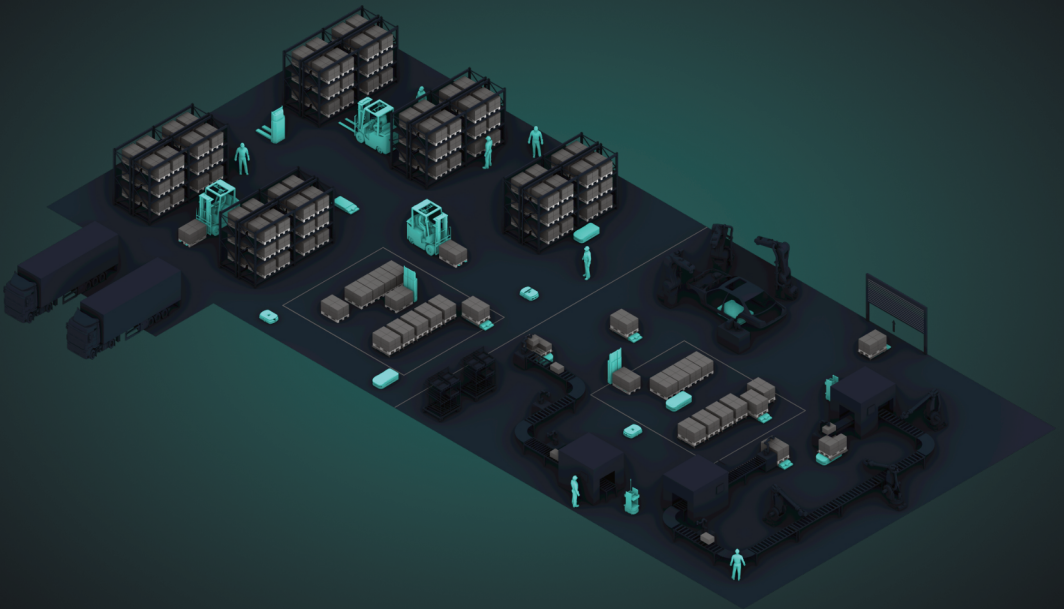
Marc Heubeck | SCM Strategy & Innovation | Continental AG



MANUFACTURER INDEPENDENT SOLUTION FOR ALL PARTICIPANTS !

FLEET MANAGER

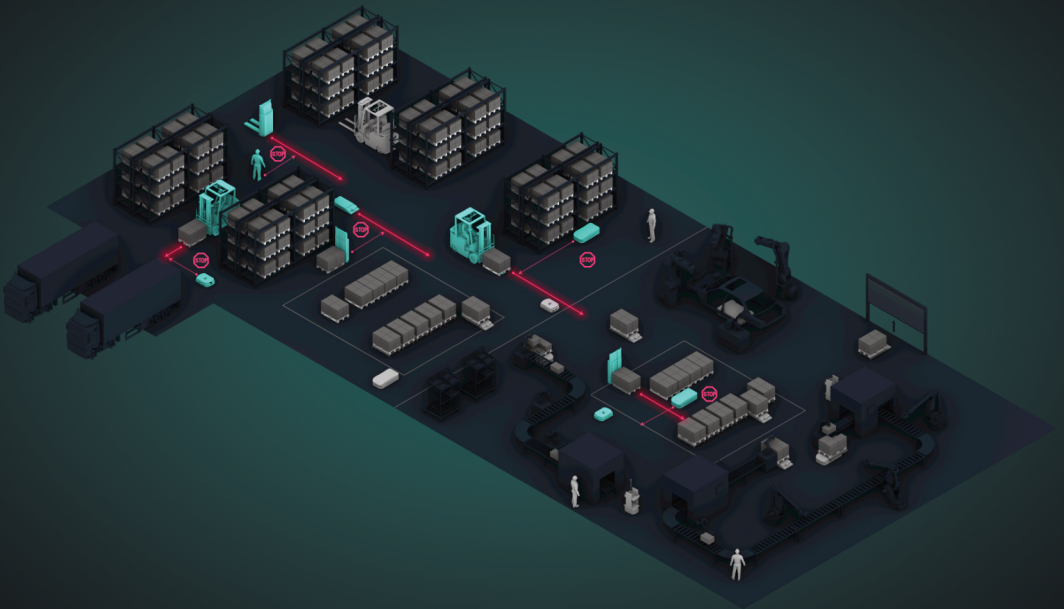
Experience maximum flexibility in your choice and control of the mixed fleet. Our manufacturer-independent solution allows you to integrate any robot, whether via VDA 5050 or native interfaces, and any manually driven vehicle. With our intuitive interface, you can monitor the status of your mixed fleet at a glance. Keep track of all vehicles in real-time and make informed decisions based on precise data. Thanks to our intelligent energy management, your fleet is always ready when you need it.



STREAMLINE MATERIAL FLOW IN MIXED OPERATIONS !

TRAFFIC MANAGER

Ensure smooth coordination of diverse fleets within your intralogistics environment, reducing collisions and enhancing communication between all traffic participants. It features advanced traffic rules management, hybrid traffic simulation, and detailed traffic analysis for optimal efficiency. Connect and automates industrial components such as gates, lights, and elevators. Our comprehensive solution provides actionable insights to improve decision-making and adapt to future scenarios.



INTELLIGENT DISTRIBUTION OF MATERIAL FLOW !

ORDER MANAGER

From receiving orders via third-party ERP/WMS integrations to initiating processes through our intuitive Operator Order Dashboard, we ensure a fully connected workflow. Our holistic approach enables cost-efficient, multi-stage transportation processes, dynamically assigning tasks to robots, forklifts, or conveyors. Track, analyze, and visualize performance data in real-time while benefiting from intelligent anomaly detection and warnings. With one solution, integrate existing technologies and meet automation requirements effortlessly.



REAL-TIME TRANSPARENCY FOR YOUR INVENTORY !

WAREHOUSE MANAGER

Seamlessly coordinate handling units with real-time visibility into inventory and smart station capacity utilization, ensuring an optimized and uninterrupted material flow with smooth warehouse-production integration. With real-time inventory tracking, you always have up-to-date insights into stock levels and material flow. Automate waste management and reduce inefficiencies by assigning transport dynamically. Our intuitive interface gives you complete visibility and control over warehouse operations, helping you make data-driven decisions that optimize space, time, and costs.



OPTIMIZATION IS A CONTINUOUS PROCESS !



COLLECT THE DATA

You will have access to real-time information about traffic, the sequence of actions, movement, and potential hazards within your facility.



ANALYZE THE TRAFFIC

This will enable you to understand the causes of conflicts and inefficient paths, discover useful information, and make data-driven decisions.

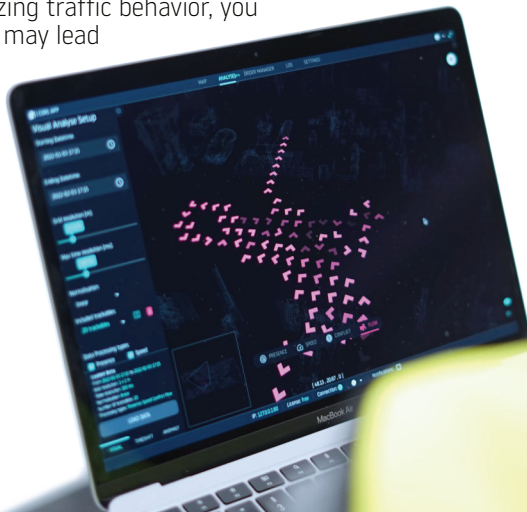


OPTIMIZE THE PROCESS

With this expertise, you can efficiently organize intralogistics processes while maintaining the highest standards of quality and reliability, minimizing risks and preventing accidents.

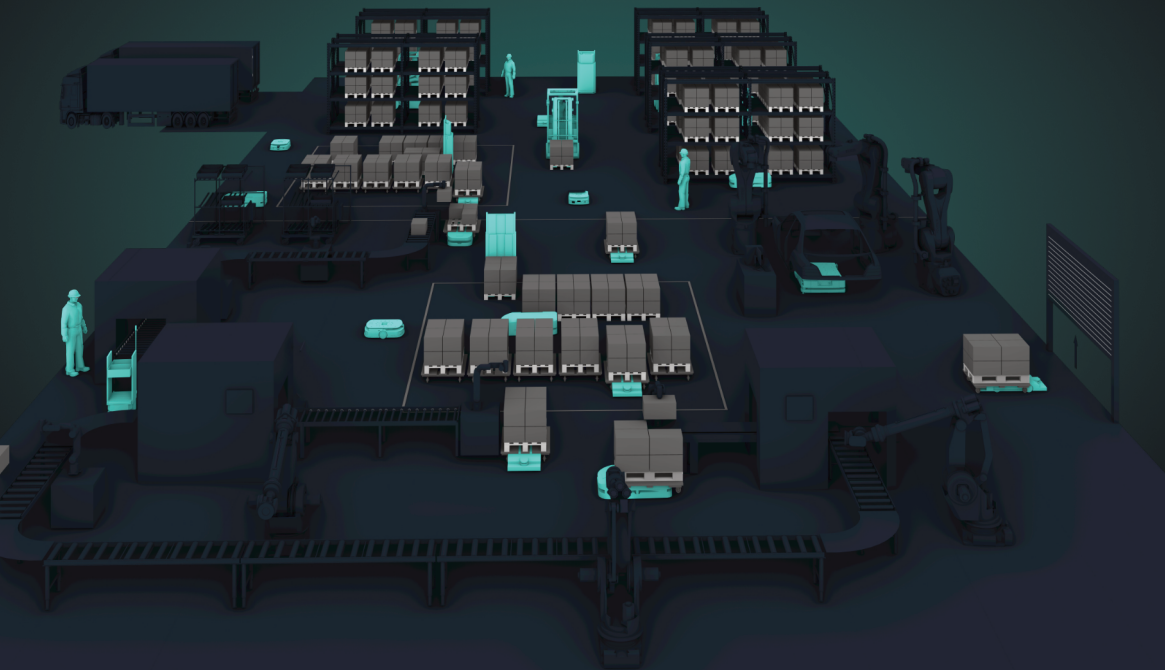
THE FACTORY OF THE FUTURE IS CONSTANTLY CHANGING WITH NAÏSE SOFTWARE YOU ARE EQUIPPED FOR IT!

For a factory to be flexible, it needs a flexible material flow. Our software enables you to adapt to the constant changes in the industry. With the three-dimensional map, you can remotely observe and gain insights into your operating environment in real-time. By analyzing traffic behavior, you can identify patterns early on that may lead to traffic conflicts and bottlenecks in the flow of goods. Using the Traffic-zone Editor, you can change and adjust traffic rules at any time to respond to conflicts detected early on and prevent them from occurring. This helps you maintain a smooth and efficient flow of goods throughout your facility.



ALL-IN-ONE SOLUTION FOR CONNECTED PARTICIPANTS !

The evolution of material handling in factories, from manual labor to advanced robotics, marks a significant milestone in industrial development. AGVs and AMRs are not just improving efficiency; they are reshaping the way factories operate, creating a future where humans, forklifts and robots work side by side in harmony. One of the standout characteristics of NAISE is its ability to seamlessly connect with any existing mobile robot, regardless of the manufacturer. This seamless connection extends beyond mobile robots to include traditional forklifts, enabling full synchronization between all moving elements in the factory. By leveraging advanced localization technology and an intuitive forklift GUI, even conventional forklifts can be integrated into automated workflows. Through real-time, transparent communication within the software, every participant—whether an AGV, AMR, or manually operated forklift—becomes part of a unified system.



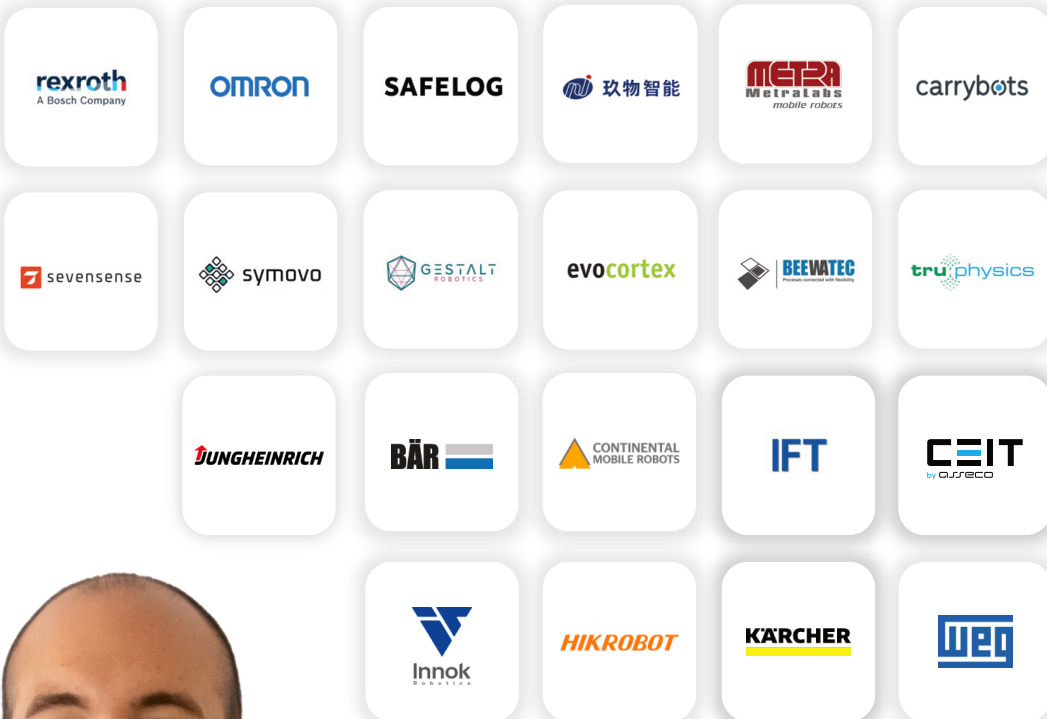
NO LIMITATION - PICK THE ROBOT FOR YOUR NEEDS !





COMPATIBILITY IS THE KEY TO SUCCESS !

INTEGRATION-READY AGV & MANUFACTURERS:

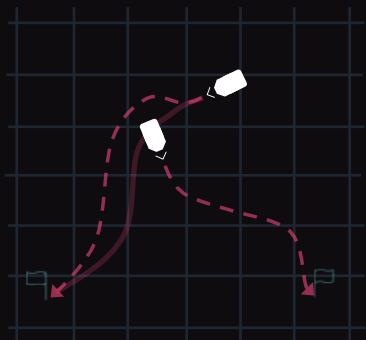


AS A TRULY FLEET MANAGEMENT-AGNOSTIC COMPANY, THE STRONG PARTNERSHIP WITH NAISE ALLOWS US TO TEST AND DEVELOP OUR AMR SOLUTIONS RAPIDLY AND RELIABLY. THIS GOES BEYOND VDA 5050 AND ENSURES FAST INTEGRATION AND SMOOTH OPERATIONS FOR OUR CUSTOMERS.

Dr. Alessandro Castagnotto
Head of Product Line Intralogistics
Continental Mobile Robots

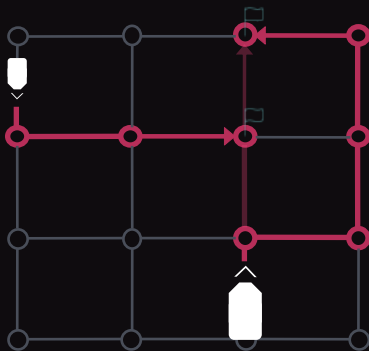
THE REAL MANUFACTURER-INDEPENDENT FLEET MANAGER !

SOLUTIONS ON THE MARKET:



FLEET MANAGER COORDINATES AMRS WITH THE SAME NAVIGATION COMPONENT

Coordination of a fleet with a high degree of autonomy across manufacturers can be achieved by integrating each manufacturer's Autonomous Mobile Robots (AMRs) with their own special navigation components. However, integrating a new component into an industrial robot platform is a complex and time-consuming process that involves strict requirements, leading to a limited selection of compatible robots.



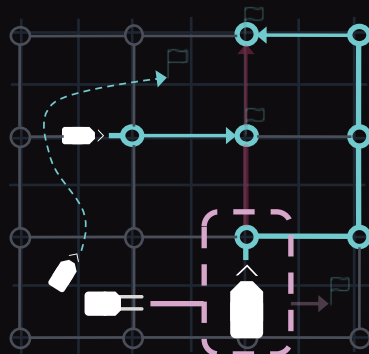
FLEET MANAGER COORDINATES VDA5050 COMPATIBLE AGVS

The VDA/VDMA standardized communication protocol for AGVs/AMRs was developed to enable the control of a fleet of AGVs/AMRs from different manufacturers using a single master controller. However, the robots in the VDA 5050 world can only navigate on nodes and edges with a limited degree of autonomy. Therefore, free-navigating robots, in particular, either do not support this standard or only partially support it.

THE NAISE SOLUTION:

NAISE COORDINATES ALL PARTICIPANTS

NAISE, with its patented real-time localization system, can integrate any Automated Guided Vehicle (AGV) or Autonomous Mobile Robot (AMR) with or without a VDA 5050 interface. In addition, it can also integrate manually driven vehicles such as forklifts, tugging trains, and various types of pallet trucks.





INTEGRATING AGV AND AMR SOLUTIONS SEAMLESSLY !



INTEGRATION LEVEL 1

The first level of integration involves talking to a technical expert from the robot manufacturer and gaining the necessary insights of the robot's interfaces.



INTEGRATION LEVEL 2

The second level of integration involves initial software integration, setup of the testing environment of the software in the cloud or as a docker image, and the validation of the checklist from the robot manufacturer.



INTEGRATION LEVEL 3

The third level of integration involves the final testing routine i.e. after successful software integration, a testing routine is performed that can be carried out in our testing center (ARENA2036, Stuttgart) or directly in the final application area of the robot.



Being compatible with NAISE helps our end customers to find the most efficient solution among different AGVs and AMRs.

Raphael Kusumoto | CTO | NAISE GmbH



INNOVATIVE WORK ENVIRONMENT !

ARENA2036

We are currently located at ARENA2036 in Stuttgart, where we have the opportunity to work with companies that are also located there on a daily basis. The atmosphere motivates us to create cutting-edge innovations and solutions for the needs of the industry. This space allows us to test and demonstrate the effectiveness of the solution.



INTEGRATED INDUSTRIAL SOLUTIONS FOR TOTAL COMPLIANCE

ADAPTABLE TO ANY ENVIRONMENT:

PILZ
THE SPIRIT OF SAFETY

W&T
www.WoT.de

FLEXLOG

Quuppa

Node-RED

waltkusengineering

ARDUINO

IVISO

O₂ Business
can do

IDEC

RGo
Robotics

waveye

BUILD UP WITH STANDARDS:

VDA5050

mbs
robotics

In NAISE, we have a partner to increase efficiency within the intralogistics that perfectly supplements our solutions for safe automation of AGVs.

Bernd Müller | Head of Market Development | Pilz GmbH



MAXIMUM TRANSPARENCY WITH PRECISE LOCALIZATION !

While the mobile transport robots share their coordinates through their software interface, they lack any information about the manually guided industrial trucks, such as forklifts or route trains. With NAISE Tracking, they get the maximum transparency of their intralogistics, because it reliably and precisely locates any non-digital industrial trucks. NAISE's patented process also enables cost-effective installation and use of the ultra-wideband-based localization system.

WE DIGITIZE YOUR INTRALOGISTICS IN 3 STEPS:

STEP 1:

Send us a scaled map of your warehouse or production environment and mark the relevant area in it. Based on the plan, we can provide a first reliable estimate of the infrastructure costs.

STEP 2:

We will send you our reference sensors (anchor) including mounting plan. The installation is very simple and can be done by any electrical service team.

STEP 3:

Once the reference sensors are mounted, NAISE's installation team will measure, calibrate and configure the sensors on your warehouse and production environment.



FULLY DIGITIZED TRAFFIC- & MATERIAL FLOW WITH **NAiSE TRACKING** !

UWB BASED TECHNOLOGY:

Precise radio localization technology (10 - 30cm accuracy) that enables robust localization even in industrial environments with machines and industrial trucks.

LOW INFRASTRUCTURE COST:

The localization system was developed specifically effective and cost-efficient for the application.

PATENTED MESH COMMUNICATION:

Tags determine their position independently and share it with each other within the same network. Thus, everyone knows its position and that of all other participants.

EASY INSTALLATION:

The reference sensors (anchor) only require a power supply. Complex and costly laying of network cables is not necessary.



FORKLIFTS PLAY AN IMPORTANT ROLE – HAND IN HAND WITH MOBILE TRANSPORT ROBOTS !



USE YOUR STOCK, JUST BETTER !

Your forklifts are not only connected to each other but also to all traffic participants. The communication between the forklift and the software is two-way. The software recognizes the real-time position of each forklift, useful for analysis and communication with other participants, and at the same time, the software is adapted to the forklift terminal and communication with the driver.

NAISE FORKLIFT CONTROL:

NAISE Forklift Control is an innovative solution for intralogistics that enables efficient and precise task assignment for forklift operators. The system utilizes a localization-based approach to assign tasks to forklift operators, ensuring that they are always in the right place at the right time. The system includes an intuitive interface for forklift terminals, which makes it easy for operators to receive and complete tasks quickly and efficiently. Additionally, the system can be used with a simple scanner-only operation, eliminating the need for complex hardware or software. With NAISE Forklift Control, companies can optimize their intralogistics operations, improving efficiency, reducing downtime, and increasing overall productivity.



„NAiSE GIVES A NEW **PERSPECTIVE TO** AUTONOMOUS INTRALOGISTICS !“

Shubham Gupta

Software Developer | NAiSE GmbH



THE WHOLE SUPPLY CHAIN IN ONE VIEW !

NAiSE optimizes intralogistics operations by providing real-time traffic flow insights using AGVs and AMRs, 2D or 3D map visualization of the shop floor, and control over battery, traffic, and status. The software also enables operators to simulate changes before implementation, reducing the risk of disruptions.

NAiSE MAP:

The NAiSE MAP is a comprehensive software component that provides a real-time view of the facility's traffic flow. It leverages sensor data from the AGVs and AMRs to create a visual representation of the facility's operations. It is a hybrid simulation system that combines digital twin technology with real-time data. This means that operators can simulate changes to the facility's layout or traffic flow before implementing them.

NAiSE AGV/AMR CONTROL:

NAiSE software also provides control over the AGVs and AMRs themselves. Operators can monitor the status of individual vehicles and adjust their routes or speeds as needed. They can also use the platform to manage the vehicles' battery levels, ensuring that they are always charged and ready for use. The NAiSE software also includes traffic control features that allow operators to manage intersections and prevent collisions between vehicles.



„SAFETY FIRST ! CONFLICT-FREE TRAFFIC REGULATION FOR AGV, AMR & MANUALLY OPERATED INDUSTRIAL TRUCKS !“

Silas Geiger

Data Engineer | NAiSE GmbH



TRAFFIC RULES FOR YOUR INTRALOGISTICS !

NAiSE software helps businesses optimize their intralogistics operations by creating custom zones and adapting rules for each area. The software includes a traffic management solution that allows monitoring and control of vehicles, paths, routes, exits, and entrances, along with fire alarm control and geofence automation capabilities. By standardizing communication and automating tasks based on location, NAiSE helps businesses increase efficiency while minimizing risks.

NAiSE TRAFFIC MANAGEMENT:

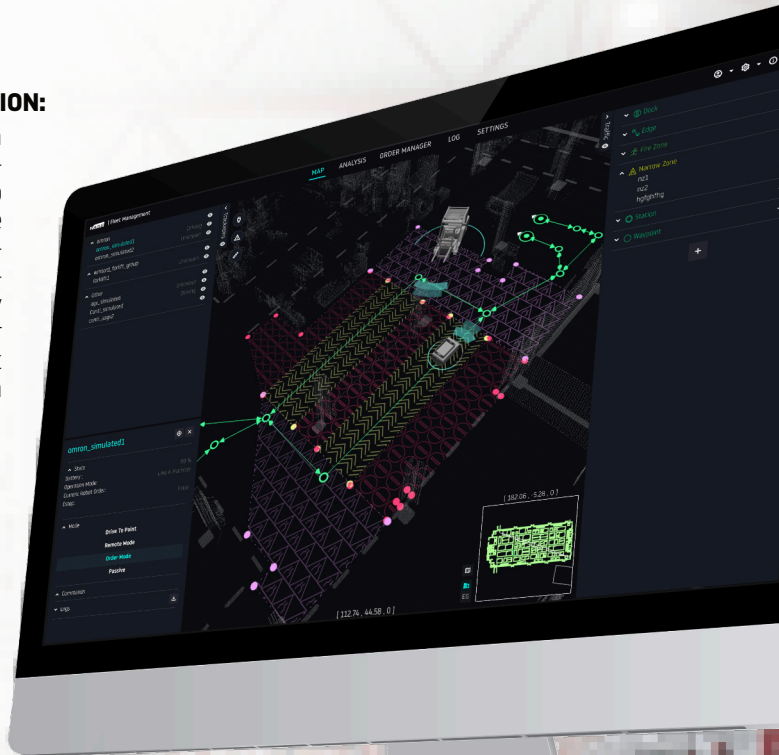
NAiSE includes traffic control features that allow operators to manage intersections and prevent collisions between vehicles, reducing the risk of accidents.

The traffic zone editor is a powerful tool that enables operators to define specific zones within the facility and set rules for vehicle movement. For example, they can create a designated loading zone and restrict access to non-authorized vehicles, ensuring that only authorized personnel are handling the materials.

The VDA 5050 map editor is a specialized tool that allows businesses to create and edit digital maps of their facilities. With the VDA 5050 map editor, operators can easily create detailed maps and configure the traffic management system to optimize vehicle movement and minimize congestion. NAiSE also includes fire alarm control features that allow businesses to integrate their fire alarm systems with the traffic management system, ensuring that vehicles and people can evacuate safely in the event of a fire.

NAiSE INDUSTRIAL AUTOMATION:

NAiSE industrial automation solution includes geofence automation features. It helps to automate tasks based on the location of vehicles or personnel within the facility. For example, they can automatically open loading docks or trigger material handling equipment when an AGV or AMR enters a designated zone.



**„A FACTORY IS
DYNAMIC. CHANGES
MUST BE RECOGNIZED
EARLY IN ORDER TO BE
ABLE TO REACT IN
TIME !“**

Aleksandar Jurić

Project Manager | NAISE GmbH



FIND BOTTLENECKS BEFORE THEY HAPPEN !

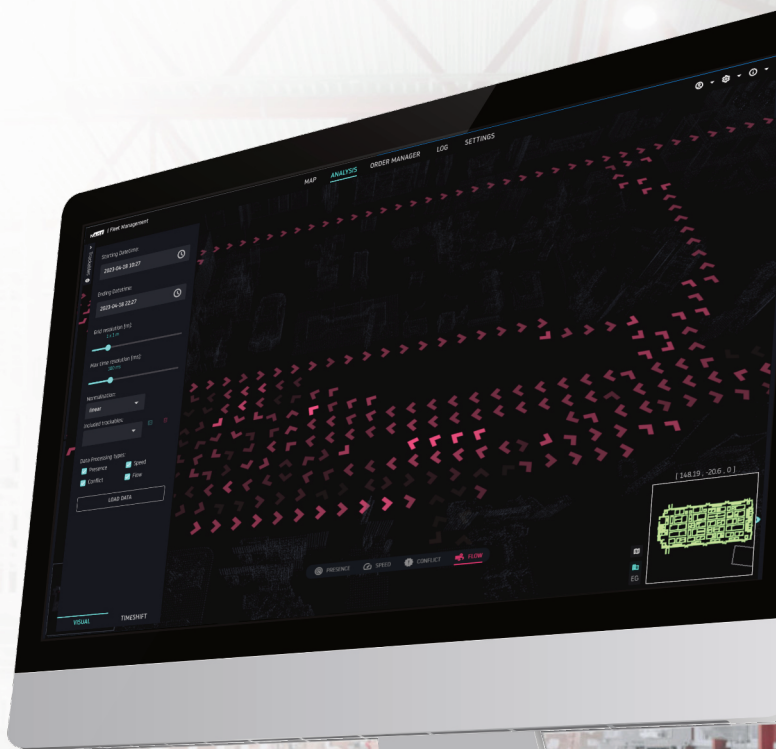
NAISE provides a traffic analysis solution to optimize intralogistics operations, which includes traffic heat maps, flow maps, timeshift functions, and anomaly detection to visualize traffic patterns and congestion levels. The solution helps prevent accidents, identify bottlenecks, and understand KPIs to set higher goals. Businesses can access four different views of data and become owners of all statistical data to improve efficiency and reduce delays.

NAISE TRAFFIC ANALYSIS:

The traffic flow map provides a visual representation of traffic flow within a facility. It displays the movement of vehicles, allowing operators to identify potential chokepoints or bottlenecks. The flow map can be customized to display different timeframes and traffic zones, providing operators with detailed insights into traffic patterns within specific areas of the facility.

The timeshift function is a unique feature that allows operators to analyze traffic flow over different periods. With this function, operators can compare traffic patterns from different times, allowing them to identify trends and anomalies.

The anomaly detector is a powerful tool that automatically detects and alerts operators to unusual traffic patterns. By analyzing real-time data, the anomaly detector can identify sudden changes in traffic flow, indicating potential issues or equipment malfunctions.



„THE FOUNDATION OF EFFECTIVE TRAFFIC MANAGEMENT IS INTELLIGENT ORDER MANAGEMENT !“

Robert Libert

COO | NAISE GmbH

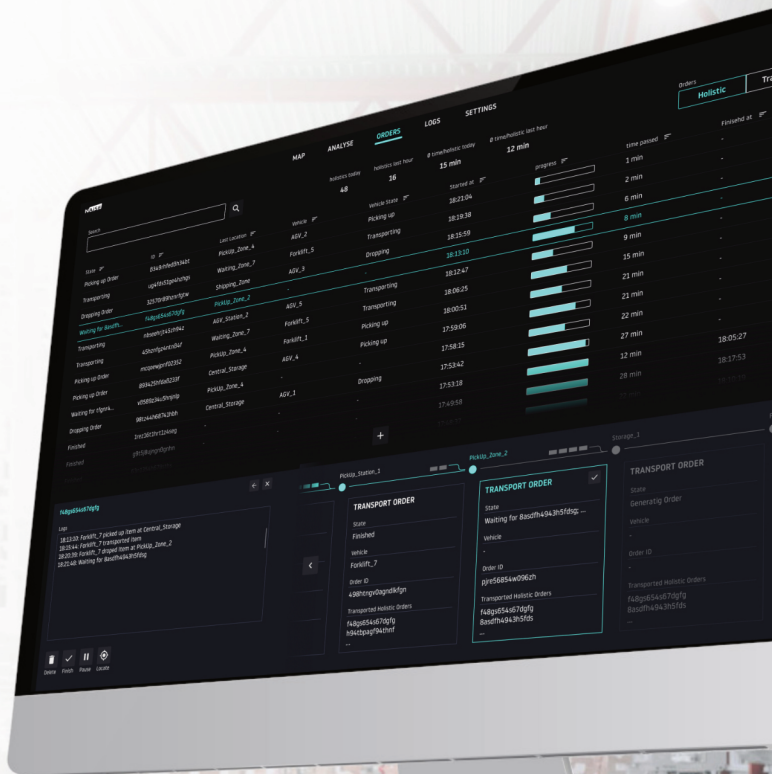


THE MATERIAL FLOW UNDER CONTROL !

NAISE offers an advanced solution by integrating automation into material flow management. Our platform provides flexibility in managing complex environments, defining the most efficient routes and tasks for all participants—whether a transport mobile robot, forklift, or human operator.

NAİSE ORDER MANAGER

NAiSE's holistic material flow management optimizes task execution by dynamically allocating the most capable and resource-efficient participant at any given time. Using smart algorithms and real-time data, our platform analyzes vehicle and worker availability to ensure optimal performance. Route planning is streamlined, and all transport orders within warehouses and production areas are visually represented, providing full order management visibility. Our solution integrates seamlessly with ERP and WMS, ensuring accurate material availability and location data. The NAiSE No-Code Editor simplifies order creation, allowing users to manually manage tasks via the intuitive Order Dashboard. Additionally, KPIs track task efficiency, while alerts for anomalies ensure proactive issue resolution.



**„AN INNOVATIVE
SOLUTION **FOR** THE USER -
CREATED JOINTLY **WITH**
THE USER !“**

Jazib Ali

Software Developer | NAiSE GmbH



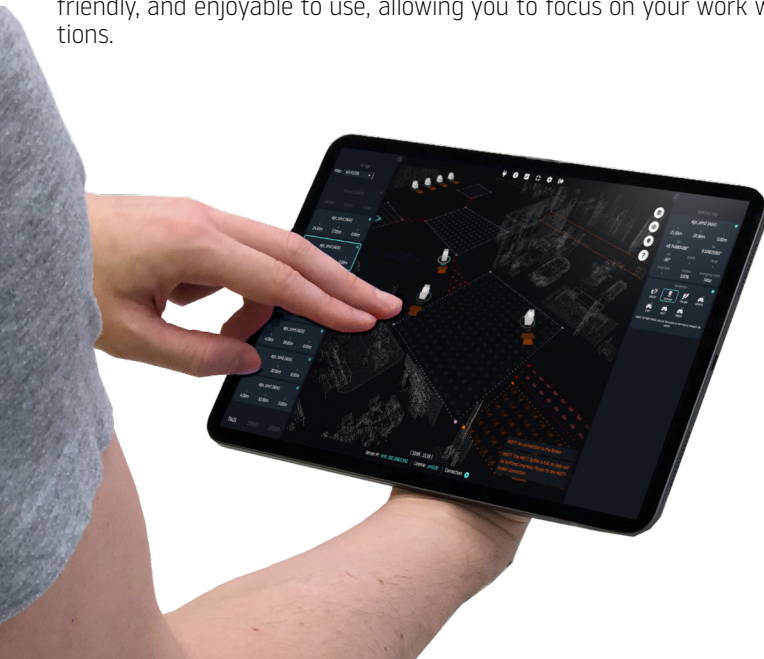
WHOEVER YOU ARE, WHEREVER YOU ARE !

MULTIPLE DEVICES: Our application is designed to offer maximum flexibility and convenience to our users. It can be accessed and used on a wide range of electronic devices, including desktop computers, laptops, tablets, and smartphones. As long as your device has a current version of a web browser, such as Google Chrome, Mozilla Firefox, Microsoft Edge or Safari, you can easily access and use our application. This compatibility ensures that you can access your data and complete your tasks from any device, at any time.

OS INDEPENDENT: Our software is designed to be operating system independent. This means that it can be used on a range of common operating systems, including Windows, Mac OS, Linux, and Android. This compatibility ensures that users can use our software on their preferred operating system without any issues or limitations. Whether you are using a desktop computer, laptop, or mobile device, our software is fully functional on all platforms, providing you with a seamless and efficient user experience.

FLEXIBLE USER MANAGEMENT: Our software offers a highly flexible user management system, providing you with full control over your users' access and permissions. With our software, you can easily define different user roles, each with corresponding user rights and access levels. For example, you can define roles such as "manager", "editor", or "viewer", and assign specific access levels and permissions to each role. This ensures that your users can only access the features and data that are relevant to their role, providing a more secure and efficient user experience.

USER-CENTRIC DESIGN: At our company, we prioritize the needs and preferences of our users, and our software reflects this philosophy through its user-centric design. We have developed a modern web application with an intuitive gaming character that has been shaped by constant feedback from our customers. Our user-centric design approach makes our software easy to navigate, user-friendly, and enjoyable to use, allowing you to focus on your work without any unnecessary distractions.



SEE NAISE IN ACTION IN OUR SHOWROOM ARENA2036 !

ARENA2036 | PFAFFENWALDRING 19 | 70569 STUTTGART

BY PLANE

From Stuttgart airport take the S-Bahn lines:

- **S2 Direction Schorndorf or**
- **S3 Direction Backnang**

Get off at the stop "Universität" and take the exit "Universitätszentrum". Go straight ahead and follow the signs to MPA (Otto Graf Institut). Departures are approximately every 15 minutes, the journey time is about 16 minutes.

BY TRAIN

Take the S-Bahn from lower level main station:

- **S1 Direction Herrenberg**
- **S2 Direction Vaihingen/ Filderstadt or**
- **S3 Direction Vaihingen/ Flughafen**

Get off at "Universität" and take the exit "Universitätszentrum". Go straight ahead and follow the signs to MPA (Otto Graf Institut). Departure is approximately every 10 minutes, the journey takes about 10 minutes.

BY CAR

From Munich or Karlsruhe via the A8 or from Singen or Heilbronn via the A81

Leave the motorway at the Stuttgart motorway junction in the direction of "Stuttgart (Zentrum)/Vaihingen". Leave the motorway at the exit "Universität". Turn left at the traffic lights into "Universitätsstraße". At the next possibility turn right into "Pfaffenwaldring" and then into the second street on the left. ARENA2036 is located on the right hand side.

Parking facilities

Parking spaces are located along Pfaffenwaldring, behind the ARENA2036 building and in the car park on the oppo-



STAY UP TO DATE & FOLLOW US ON SOCIAL MEDIA !



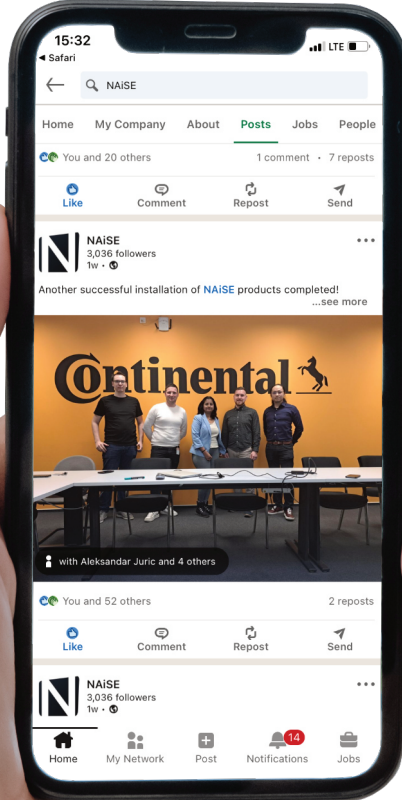
 naise.eu



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