



NODE

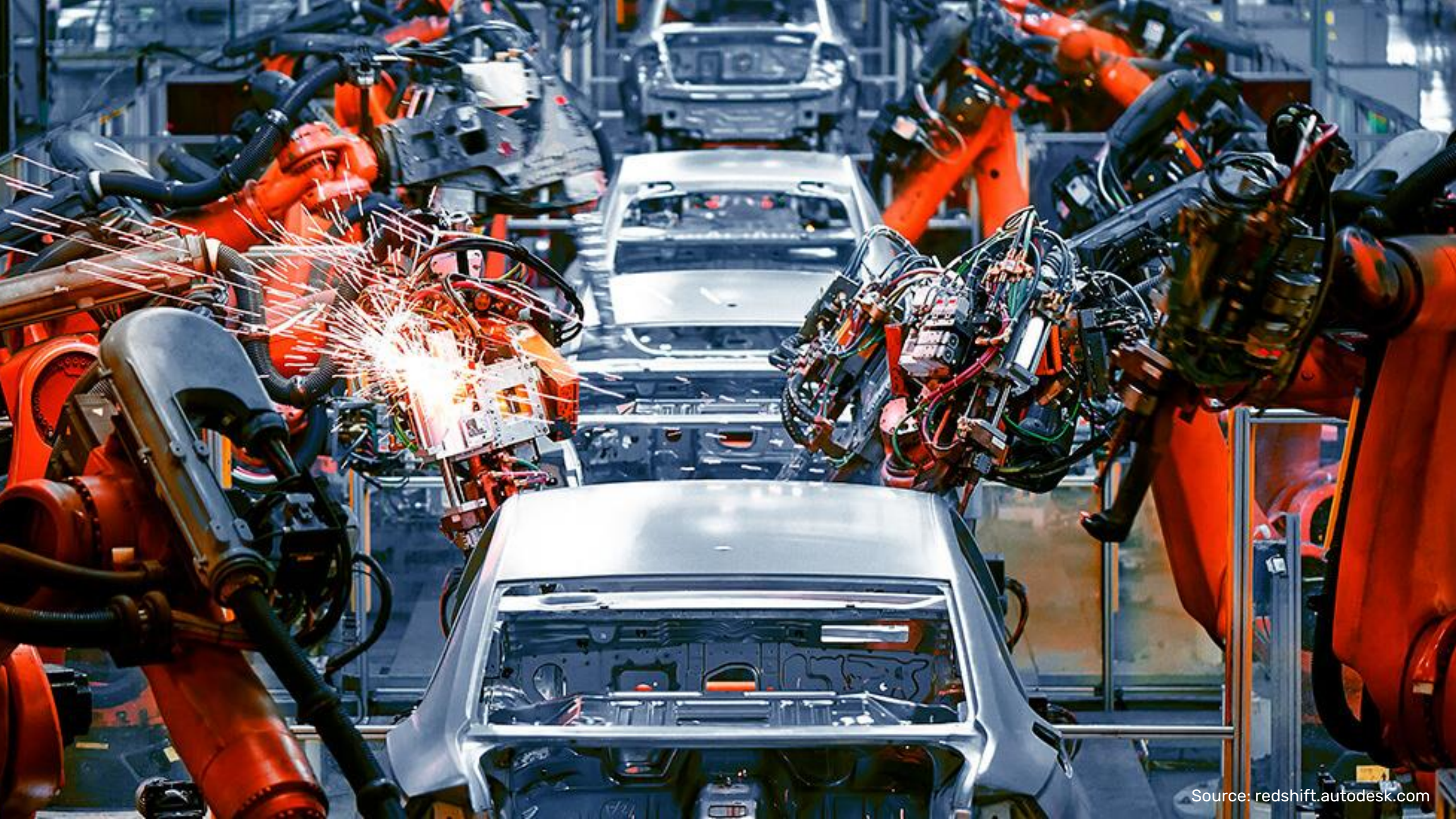
Enabling Autonomous Intralogistics.



[Contact](#)

Logistics Summit 2022

NODE Robotics GmbH
Hamburg, 2022

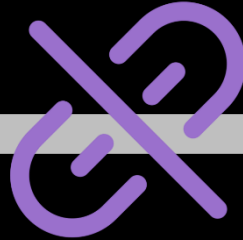




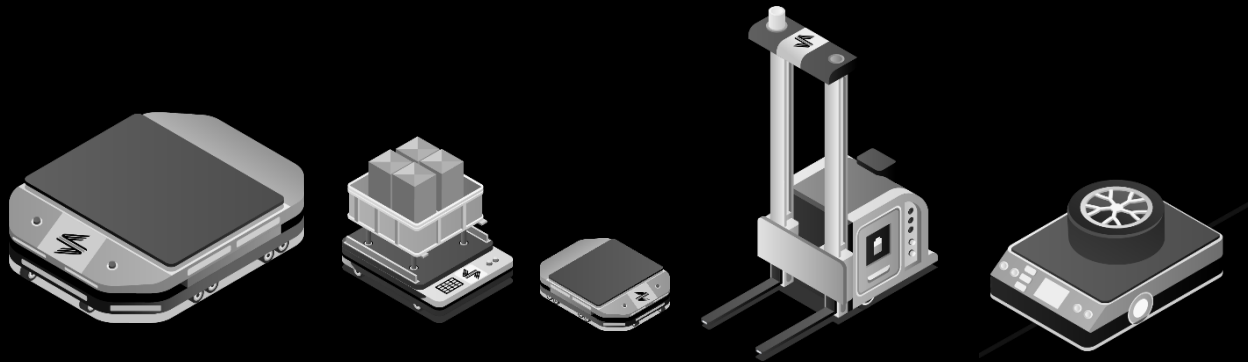
Status Quo in Flexible Intralogistics



Fleet Operators



Multi-vendor & Heterogeneous Fleet



Major reasons preventing further spread of AGVs/AMRs:

- Patchwork of incompatible solutions on the market
- No multi-vendor operation possible
- High integration & commissioning efforts

Need for vendor-agnostic & 'Plug & Play' software solutions!

NODE.OS – The Autonomous Intralogistics OS

NODE.EDGE Module 1

Robot-level advanced autonomous navigation

NODE.SRVS Module 3

Cloud-level services for fleet management & coordination

NODE.MESH Module 2

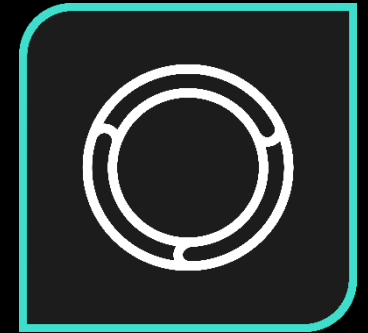
Decentralized data sharing and collaboration

- ✓ Any robot type
- ✓ “Plug & Play” commissioning
- ✓ Industrial proven

Powered by:

- ✓ Cloud robotics, machine learning & autonomous driving
- ✓ Community-driven Open Source middleware & interfaces
- ✓ >50 person years of R&D at Fraunhofer

NODE.OS – The Autonomous Intralogistics OS



NODE.OS

A plug & play
intralogistics operating
system for any kind of
mobile robot

Lighthouse Projects

AMRs with NODE.EDGE
in productive use

>500

Kilometers driven with
NODE.EDGE software

>250.000

Types of NODE.EDGE
enabled AMRs

>30



NODE @Audi:

- ✓ R8 assembly line replaced by 18 NODE-enabled AMRs
- ✓ In use since 2015 with system availability > 99,5%
- ✓ High positioning precision (sub-cm)



NODE @BMW:

- ✓ > 300 NODE-enabled AMRs in 7 production plants
- ✓ Interaction with forklifts, tigger trains & persons
- ✓ Diverse, large & highly dynamic environments (> 500,000 m²)

Our Team



NODE Robotics

Enabling Autonomous
Intralogistics

- ✓ Fraunhofer IPA startup
- ✓ Founded 2020
- ✓ Based in Stuttgart
- ✓ 25 employees





Getting started!

Mobile robot manufacturers/system integrators:
Commissioning in a day on your robot.

End users:
Potential assessment analysis for your factory/warehouse.

Investors:
Please reach out to get in touch.

Get in touch!



Dr.-Ing. Stefan Dörr
CEO & Co-Founder

Mail: stefan.doerr@node-robotics.com
Phone: +49 151 10320336



www.node-robotics.com

NODE.SRVS - Interface Options

 NODE.OS

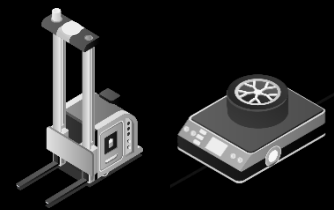
 NODE.SRVS



VDA5050 & OPEN API

VDA5050

Custom Adapter



 NODE.EDGE enabled AMRs

AGVs with VDA5050 interface

AGVs/AMRs w custom interface