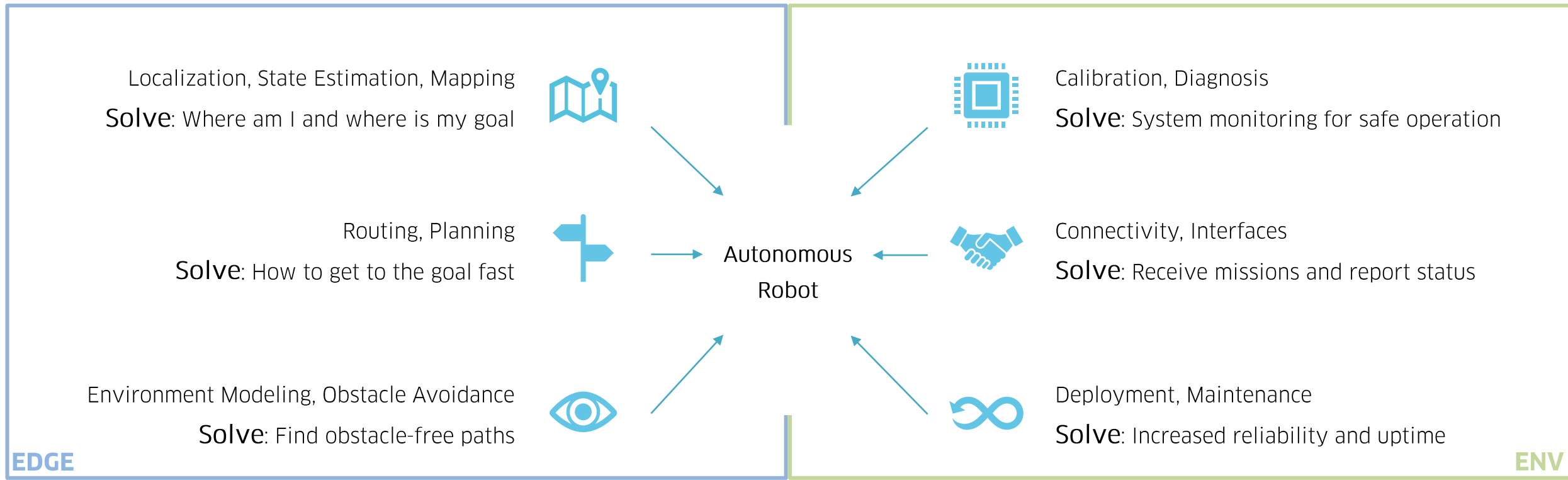# ARTI

AUTONOMY FOR ROBOTS

AI Kits

Problem: Automation vs Adaption

Even though different robots require similar parts, **complexity is increasing**

We distinguish between applications **directly on the robot** (Edge) and the **ecosystem** (Env) in which they operate

Localization, State Estimation, Mapping
Solve: Where am I and where is my goal

Routing, Planning
Solve: How to get to the goal fast

Environment Modeling, Obstacle Avoidance
Solve: Find obstacle-free paths

Autonomous Robot

Calibration, Diagnosis
Solve: System monitoring for safe operation

Connectivity, Interfaces
Solve: Receive missions and report status

Deployment, Maintenance
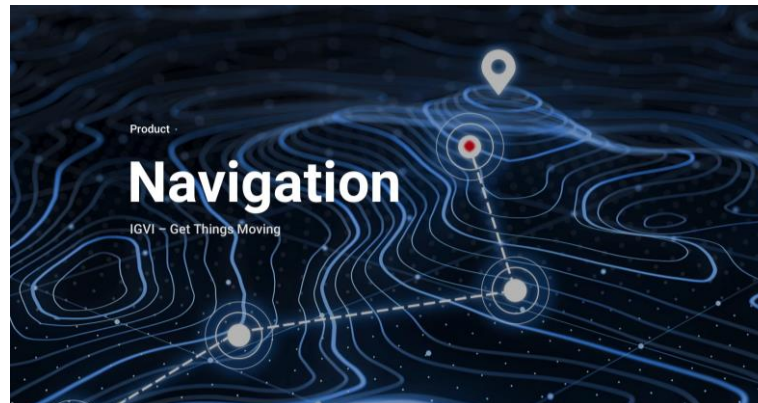**Solve**: Increased reliability and uptime

EDGE

ENV

ARTI

AI Kits

Modular software design allows customer assembly and wide configuration space.

Providing ready to use software components designed for fast integration but easy long-term maintenance.

Product

Localization
WAI and JMI – Pinpoint Precision

Product

Navigation
IGVI – Get Things Moving

Product

Fleet Management
FLI – Oversee and Take Control

- Mapping (JMI)
- Localization (WAI)

- Indoor Navigation (IGVI)
- Outdoor Navigation (LF, AVI)

- Outdoor Management (FLI)

Licensing Models

You have the choice between single system licenses for smaller volumes up to product line licenses for full comfort.
Scale your product seamlessly, add enhancements and enter the market faster than ever before!

Model	Integration and Configuration	Number of Systems	Updates and Feature Support	Time-of-use period	Source
Single System License	Performance-based	1	Performance-based	Lifetime	-
Product Line License Pure *	Included	Unlimited for product line	6 Months	Lifetime	-
Product Line License Plus *	Included	Unlimited for product line	6 Months	Lifetime	Included

* Trial period possible (3 Months); Easy-Stay-In extension of Updates and Feature Support possible (1/3rd of initial licensing costs)

For more information and detailed descriptions please contact our purchasing department.
If you are interested, we will be delighted to prepare an offer for you and advise you along the way.

ARTI

Product ·

Localization

WAI and JMI – Pinpoint Precision

Mapping / Localization / SLAM

Map your operating environment in 2D or 3D.

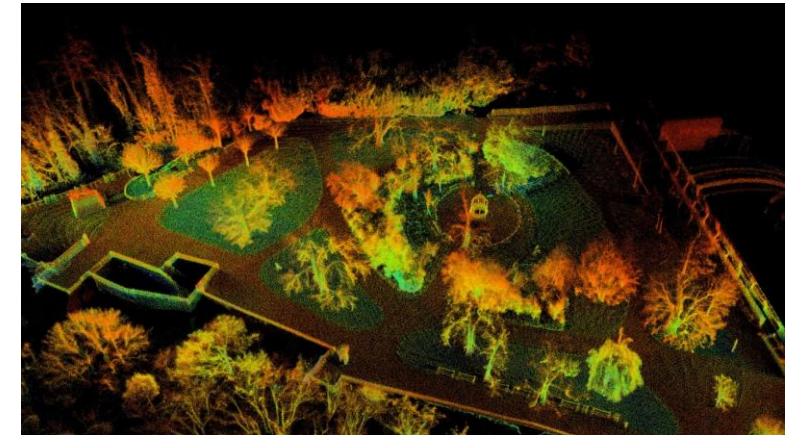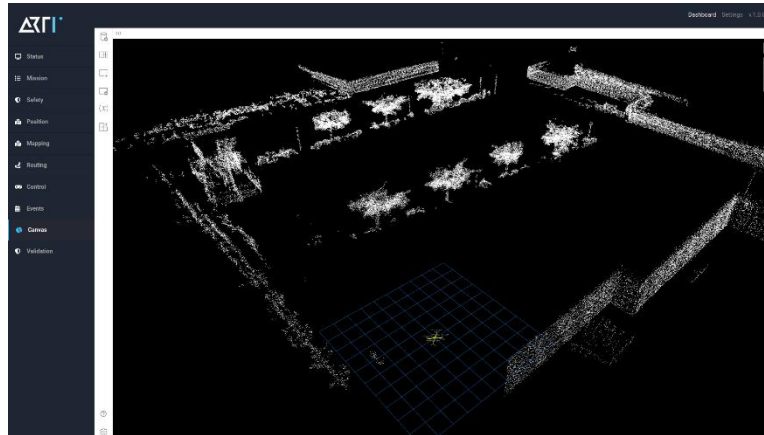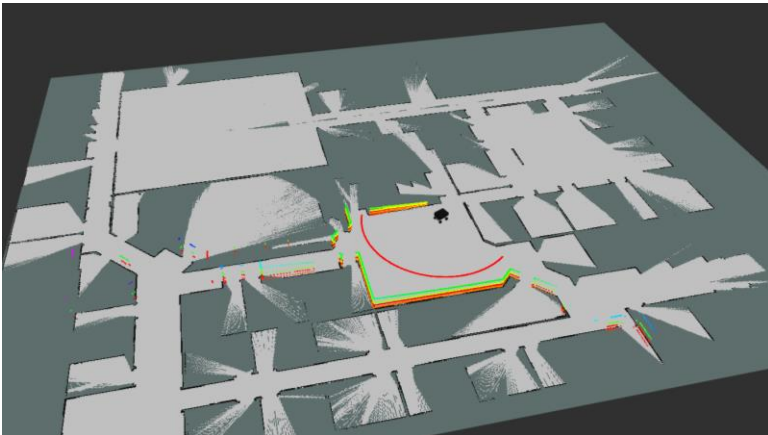We offer high-quality maps for localization and planning.

- High fidelity and high precision

- High position accuracy

- Realtime results (10 Hz up to 50 Hz)

- Processing of large areas

- Easy usage

- Usage of multiple sensors

- Position accuracy

  Expected: xyz < 20 mm / rpy < 1.0 degree

  Optimized: xyz < 2 mm / rpy < 0.5 degree

Product ·

Navigation

IGVI – Get Things Moving

Navigation

Navigation, in the meaning of driving autonomously from a starting position to the target point.

We offer complete navigation suite for indoor and outdoor robots.

- Complete navigation suite for mobile robots

- Suitable for large operating areas

- Supports different drive mechanics

- Fleet management via VDA5050

- Expandability of sensors

- This package includes WAI
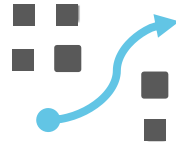

HUBTEX.

GER4TECH

serva «««
transport systems

ARTI

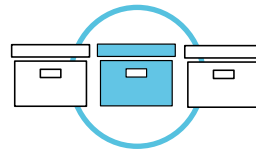# IGVI Navigation Kit – Modules
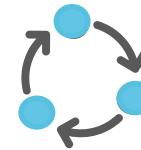
Dynamic Mapping

Obstacle Avoidance

VDA 5050

Dynamic Path Planning
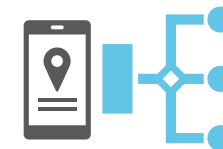
Object Detection

Action Pipeline

Fine Positioning

System Diagnose

Web Application

IGVI Navigation Kit – Modules

Dynamic Mapping

Precise positioning without the need to model the environment. Both fixed components and changeable elements are considered to ensure highly precise positioning, even in complex scenarios.

Obstacle Avoidance

Enabling the vehicle to detect obstacles and avoid them along the way by adjusting speed and movement accordingly. Fully compatible with common industry safety systems.

Dynamic Path Planning

Through dynamic path generation and modification of driving routes, objects in the changing environment are detected and bypassed. Both dynamic routes and fixed paths are possible, even in combination.

Fine Positioning

By precisely detecting the target object, a very accurate alignment is made possible. If necessary, further realignment enables and ensure a reliable and highly accurate interaction.

Object Detection

Exact recognition and identification of predefined objects. Allows targeted actions such as fine positioning to be executed and enables exact knowledge of the environment.

ARTI

IGVI Navigation Kit – Modules

VDA 5050

Standardized interface allowing communication between compliant driverless transport systems and the AGV fleet control software, regardless of the manufacturer.

Action Pipeline

Possibility of continuous and funneled workflow. Allows adding, scheduling and prioritizing the tasks which are to be fulfilled. Custom changes are supported.

Web Application

Interface designed for control and execution of base and advanced functions such as change of configuration, commissioning, diagnostics, control panel, behavior customization and more.

System Diagnose

Performing pre-launch checks, problem detection and diagnosis, enabling faster and more efficient troubleshooting.

Missing Feature?

In addition to constantly working on new features, fixes and incorporating innovative capabilities, we also take in account your specific needs to deliver optimal performance.
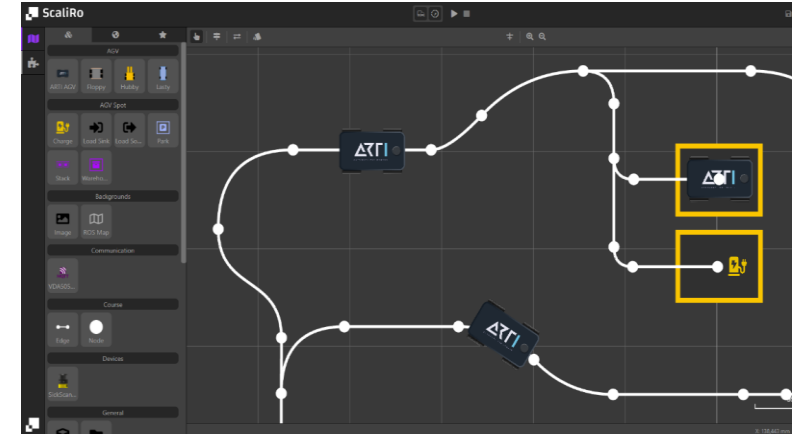
ARTI

Product ·

Fleet Management

FLI – Oversee and Take Control

Fleet Management / Cargo Routing

Ready to use VDA 5050 interface for cargo routing and fleet management
Scale up to high numbers with our partner ScaliRo GmbH.

- Designing routes

- Coordinate actions

- Managing multiple robots

- Processing of large areas

- Easy usage

- Connecting with warehouse
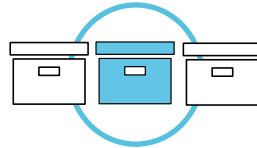
FLI Fleet Management – Modules

Job Prioritizing

Order Management

VDA 5050

Dynamic Routing

Cargo Information

Vehicle Maintenance

On-Premise Operation

Rapid Setup

Web Application

ARTI

Market Thoughts

Software sells Hardware

Most customers want an all-in-one proven solution, rather than developing their own or buying from multiple vendors. Perfectly tailored software by configuration to complement hardware vastly expands the spectrum of potential customers.

Hardware Longevity

Longer hardware lifespan is a competitive advantage on the market and should not be limited by software.
When paired with the right software, the use-cycle of hardware can be vastly extended.

Freedom of Choice

Providing the end customer with the choice to pick a software vendor is mandatory to secure a larger market share. Different factors such as resource limitations of the vendor, level of technical innovation etc., influence the choice.

Leading-Edge Technology

Offering state-of-the-art software and algorithms are necessary to achieve market advantage. Incorporating upcoming interfaces, improving precision and reliability through quicker responsiveness and rapid development

Locality to Global Expansion

Having a partner in central Europe offers key advantages, including increased market knowledge, client trust, customer proximity, and smooth communication. Local support translates to more new and satisfied customers.

Get in Touch

A simple conversation can answer a lot of questions.

So don't hesitate to get in touch!

Konstantin Mautner-Lassnig, CEO
Email: k.ml@arti-robots.com
Phone: +43 664 5831500

Alexander Buchegger, COO
Email: a.buchegger@arti-robots.com
Phone: +43 676 3997001

← Alumni

Partners

ARTI is an Alumnus of ESA Business Incubation Centre Austria 2023