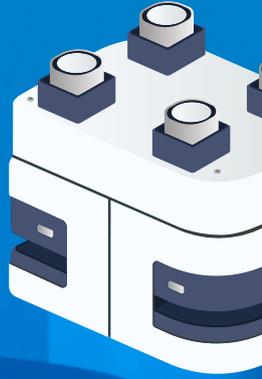
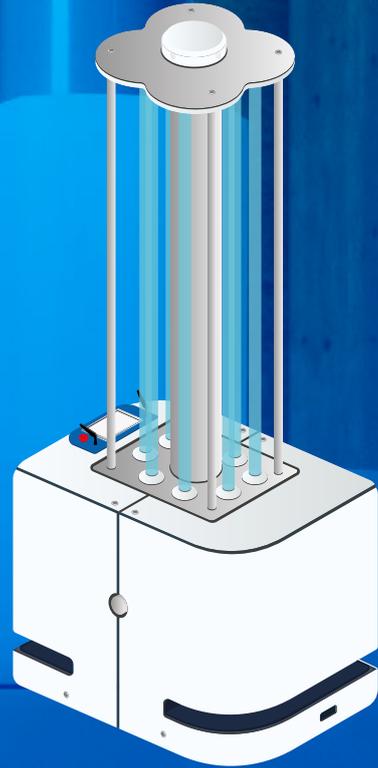
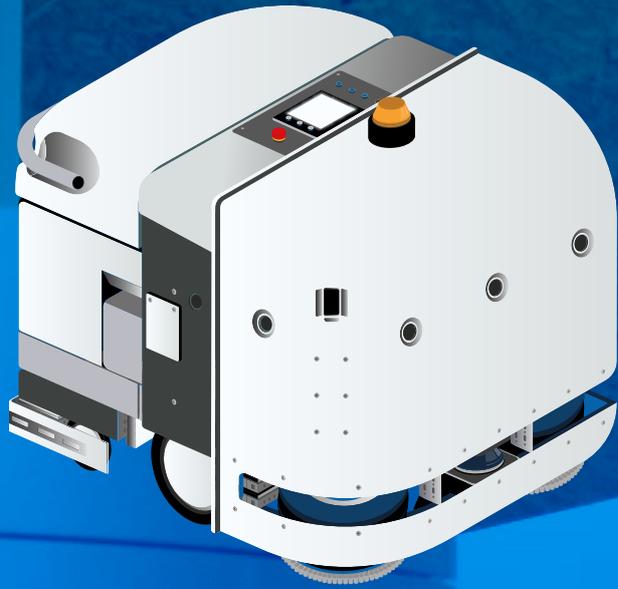


Engineering Services

| From idea to product

BLUEBOTICS

— Your Vehicle Navigation Partner

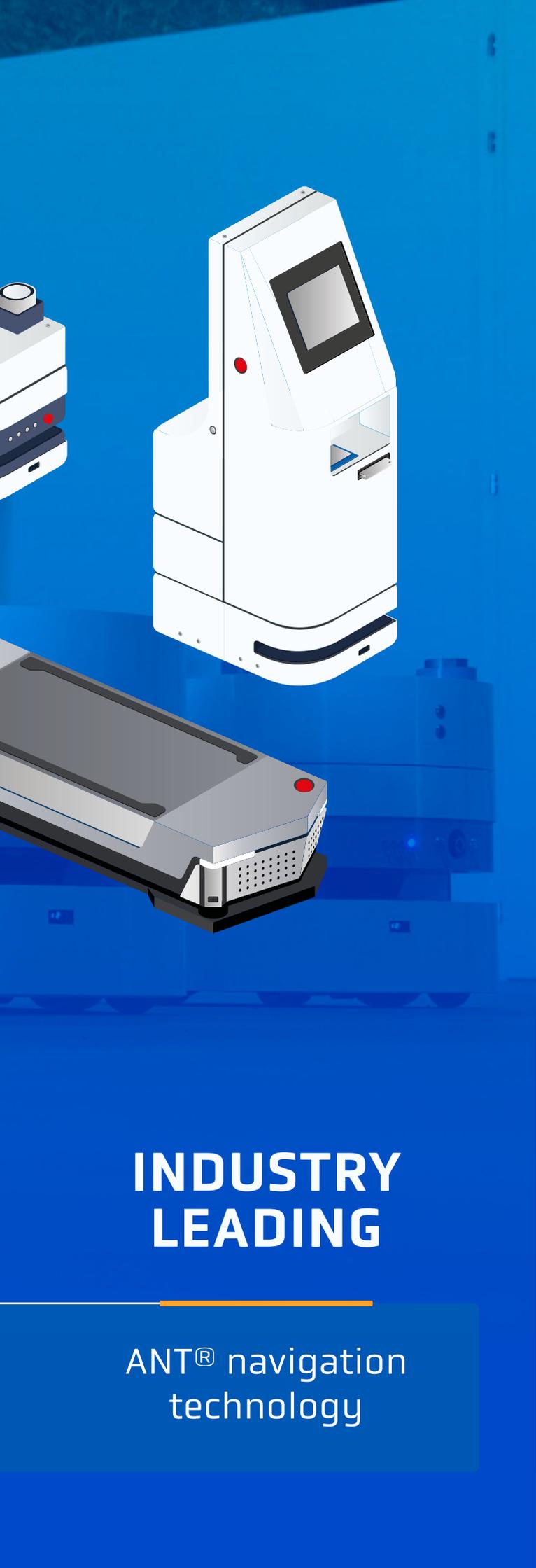


**EXPERT
TEAM**

**20
YEARS**

of
engineers

of development
experience



INDUSTRY LEADING

ANT[®] navigation technology

ENGINEERING SERVICES FOR YOUR AGV OR MOBILE ROBOT

Deciding to become one of your market's innovation leaders, or even disrupt a market, by creating an automated guided vehicle (AGV) or autonomous mobile robot (AMR) is one thing.

Developing that product is quite another. At BlueBotics, we've been helping companies to bring mobile robots and AGVs efficiently to market for over two decades.



Team up
with the right partner



Bring
your vehicle to life



Lead
your market

Inside:

Your path to success	4
ANT [®] navigation	5
Mobile robot platforms	6
Example projects	8
References	10



YOUR PATH TO SUCCESS

To create an AGV or mobile robot that is tailored to your customer's needs, we propose our proven three-phase development process.

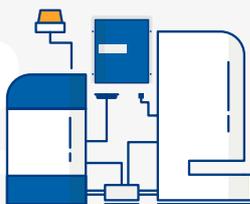
1



1. Feasibility

We discuss your product's use case to define its functional specification. This allows us to assess its technical feasibility and costs with you.

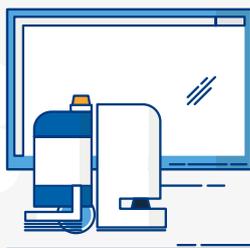
2



2. Prototyping

We define technical specifications and together develop a prototype - handling whatever you need, from design to production.

3



3. Launch

When you go to market, we work with you to ensure your launch is a success, including providing on-site support at your first customer installation.

BUILT ON AUTONOMOUS NAVIGATION TECHNOLOGY (ANT®)

All BlueBotics engineering services projects are built upon our ANT® navigation technology.

The result of over 20 years of industry experience, ANT® is a flexible, accurate and robust solution that ensures our partners' AGVs and mobile robots are both simple to use and cost-effective to install and modify.



Explore ANT® navigation

Find out how natural feature navigation works by visiting our in-depth webpage.

[> LEARN MORE](#)

NATURAL FEATURE NAVIGATION FOR YOUR AGV OR MOBILE ROBOT

- > Accurate to ± 1 cm / $\pm 1^\circ$
- > Minimal infrastructure changes (reflective stickers possible)
- > Vehicles commissioned in days, not weeks
- > Multi-vehicle fleet management



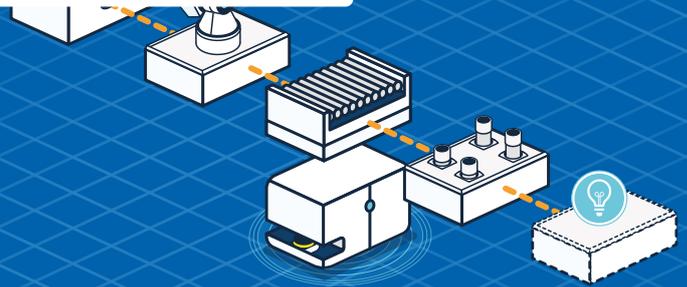
“The robot engineering services of BlueBotics, combined with the robustness of the ANT® product, opened the door for Cleanfix to commercialize an autonomous professional cleaning machine for new applications in hospitals, airports, and commercial centers.”

Felix Ruesch
CEO
Cleanfix

“

AUTONOMOUS MOBILE ROBOT PLATFORMS

These platforms are a proven base on which, together, we can develop a vehicle that meets your exact needs.



mini™ lite

THE MOBILE ROBOT PLATFORM FOR DIVERSE APPLICATIONS

The BlueBotics mini™ lite is a flexible, industry-proven autonomous mobile robot (AMR) platform. Driven by our ANT® navigation technology and therefore immediately fleet-ready, it is the perfect base on which to develop a vehicle that meets your organization's specific needs.

YOUR APPLICATION, OUR MOBILE ROBOT

Ideal for:

- > Light material handling (boxes/racks/trays)
- > Integration of small industrial robots/cobots
- > Custom applications

TECHNICAL SPECIFICATIONS	mini™ lite
Dimensions (WxHxL)	46 x 39 x 68 cm
Weight (platform)	100 kg
Weight (modules)	15 - 25 kg
Payload capacity	100 kg
Max. speed	1.5 m/s
Autonomy	>6 hours
Charging time	1.2 hours
Automatic recharging	Optional
Safety	270° laser scanner view (360° with optional 2nd laser scanner)

Includes:



ANT® navigation technology



Lift module option



Conveyor module option



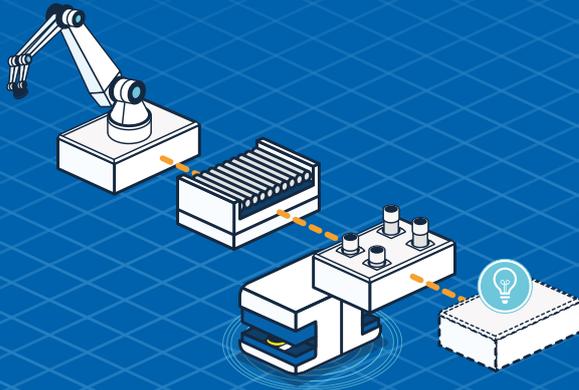
Custom module development



Obstacle avoidance option



Fleet management



mini™

THE MOBILE ROBOT PLATFORM FOR CLEANROOM APPLICATIONS

The BlueBotics mini™ is a compact, low particle emission autonomous mobile robot (AMR) platform. Driven by our ANT® navigation technology this fleet-ready performer is the perfect base on which to develop a vehicle that meets your cleanroom's specific needs.

mini™	TECHNICAL SPECIFICATIONS
40 x 30 x 59 cm	Dimensions (WxHxL)
70 kg	Weight (platform)
15 - 25 kg	Weight (modules)
150 kg	Payload capacity
1.5 m/s	Max. speed
>6 hours	Autonomy
1.2 hours	Charging time
Included	Automatic recharging
360° laser scanner view	Safety

YOUR APPLICATION, OUR MOBILE ROBOT

Ideal for:

- > Cleanrooms
- > Laboratories
- > Light material handling (boxes/racks/trays)
- > Custom applications
- > Integration of small industrial robots /cobots

Includes:

-  Low particle emission
-  Articulated chassis
-  Highly compact
-  ANT® navigation technology
-  Lift module option
-  Conveyor module option
-  Custom module development
-  Obstacle avoidance option
-  Fleet management

EXAMPLE PROJECTS

Our expert team has helped companies around the world to develop AGVs and mobile robots from the ground up. Here are a few key examples...

DEVELOPMENT OF A MOBILE ROBOT FOR CLEANROOM MANUFACTURING



Client: ABB Group

Application: Semiconductor manufacturing

Vehicle: BlueBotics mini™

The BlueBotics mini™ mobile robot base was developed to meet the exacting demands of ABB's 'Genesis' production automation project in Lenzburg, Switzerland.



DEVELOPMENT OF A ROBOTIC CLEANING MACHINE



Client: Cleanfix

Application: Professional cleaning

Vehicles: RA660 Navi, RA660 Navi XL

We collaborated with Swiss cleaning leader, Cleanfix, to help the company develop its first robotic floor scrubber. This was followed by the development of a larger XL model.



DEVELOPMENT OF AN AUTONOMOUS DISINFECTION ROBOT



mini™ UVC

Client: Engmotion

Application: Commercial disinfection

Vehicle: mini™ UVC



BlueBotics was approached by healthcare automation specialists Engmotion to develop a robust and fleet-ready autonomous disinfection robot.

DEVELOPMENT OF A MOBILE ROBOT FOR HEALTHCARE LOGISTICS



OPPENT
ADVANCED MOTION TECHNOLOGY

Client: Oppent

Application: Hospital logistics, manufacturing

Vehicle: EVOcar™



We helped the company to design a new hospital logistics robot from scratch. This included the development of a complete traffic management solution and working with a strategic partner for flow and infrastructure control.

DEVELOPMENT OF AN INTELLIGENT ROBOTIC KIOSK



SITA

Client: SITA

Application: Airport check-in

Vehicle: SITA Kate



We worked with SITA, provider of IT and telecommunication services to the air transport industry, to develop three prototypes of its SITA Kate check-in kiosk, moving from specification to delivery in under four months.



OUR STORY

Established in Switzerland in 2001, we have more than twenty years of AGV and mobile robot development experience. Here is a quick guide to some of our most interesting projects to date.

2001

BlueBotics is founded as a spin-off of EPFL.



2007

We design and manufacture a robotic mobile coffee machine for Nespresso.



2014

Cleanfix launches its RA660 Navi cleaning robot, following an engineering services collaboration with BlueBotics.

OPPENT launches its EVOcart™ AGV for hospital logistics, following another engineering services collaboration with BlueBotics.



2002

Our team installs 11 BlueBotics-developed 'RoboX' guide robots at the Swiss National Exhibition.



2013

Geneva Airport commissions Robbi, its new guide robot, following an engineering services collaboration with BlueBotics.



We launch ANT® lite, a simple and compact navigation solution for service robotics (today ANT® lite+).



3,000+

ANT® driven vehicles
in operation worldwide

1,000+

end-user vehicle
installations

10 MILLION KM

driven by ANT® (250 times the
circumference of the Earth)

PRESENT IN 25+

countries across
all 5 continents

45+

employees based
in Switzerland

BLUEBOTICS TODAY



2015

KLM commissions SPENCER, its BlueBotics-developed guide robot, at Schiphol Airport in Amsterdam.



2017

SITA continues its engineering partnership with BlueBotics by deploying its intelligent robotic kiosk, Kate, at Geneva Airport.



2019

ABB commissions a fleet of mini™ mobile robots at its semiconductor production plant in Lenzburg, Switzerland.



2021

We deliver our 3,000th ANT® system and ANT® driven vehicles are estimated to have travelled over 10 million kilometers.

2016

SITA deploys its Leo baggage robot at Geneva Airport, following an engineering services project with BlueBotics.



2018

Our team delivers the 1,000th ANT® system to our engineering services client Cleanfix.



2020

BlueBotics and Engmotion launch the mini™ UVC disinfection robot, also the result of an engineering services collaboration.



BLUEBOTICS

————— Your Vehicle Navigation Partner

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Switzerland

About us

At BlueBotics we help companies meet the challenge of vehicle automation. We provide the navigation technology and expert support they need to bring their AGV, automated forklift or mobile robot successfully to market.

