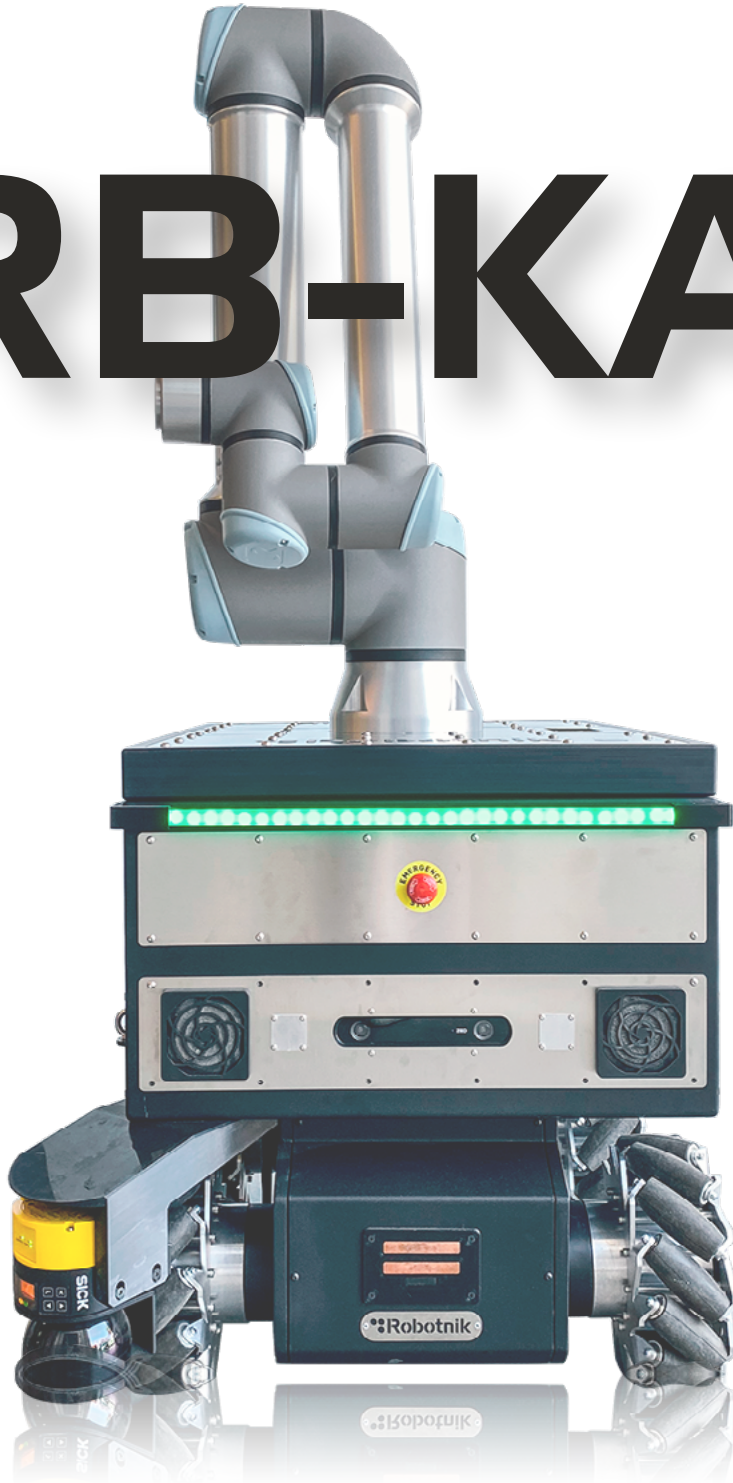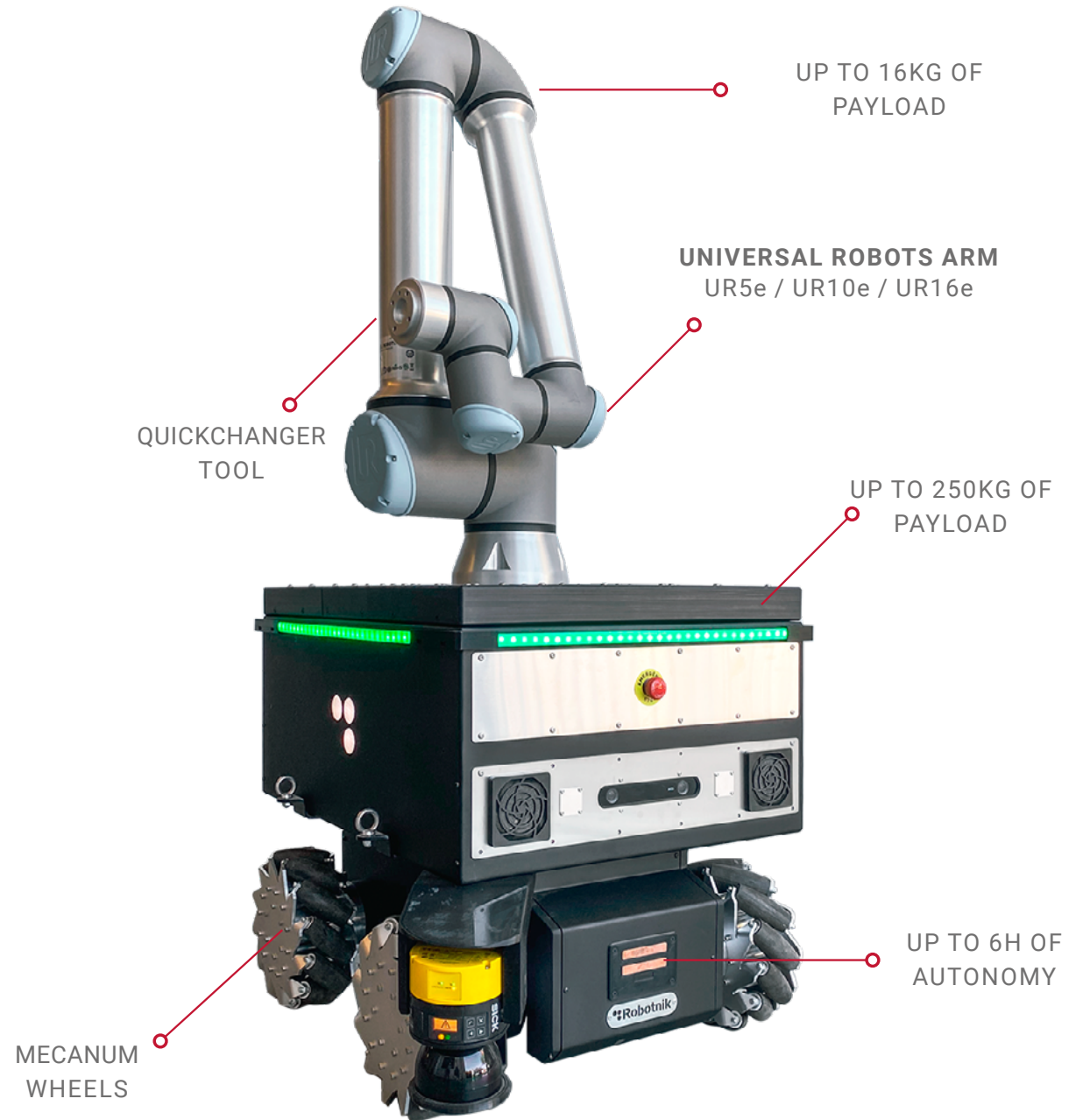# RB-KAIROS+

THE
AUTONOMOUS
MOBILE
MANIPULATOR
FOR LOGISTICS

ADVANCED AUTOMATION WITH THE RB-KAIROS+ MOBILE MANIPULATOR: IMPROVING THE EFFICIENCY OF LOGISTICS PROCESSES.

Robotnik

THE PRECISION, DEXTERITY AND FLEXIBILITY OF THE **MANIPULATOR ARM**

THE AUTONOMY AND MOBILITY OF THE **ROBOTIC PLATFORM**

UP TO 16KG OF PAYLOAD

UNIVERSAL ROBOTS ARM
UR5e / UR10e / UR16e

QUICKCHANGER TOOL

UP TO 250KG OF PAYLOAD

UP TO 6H OF AUTONOMY

MECANUM WHEELS

Robotnik answer the **4 questions** you ask us most frequently about Mobile Manipulation.

1. How will production costs improve by incorporating **RB-KAIROS+**?

2. Is it the right product for my application?

3. What tasks can **RB-KAIROS+** automate by itself?

4. How to get started.
   Let's talk numbers.

1.

HOW WILL PRODUCTION COSTS IMPROVE BY INCORPORATING **RB-KAIROS+**?

MINIMAL INITIAL INVESTMENT

RB-KAIROS+ is designed to operate in existing infrastructures with no need for costly redesigns or adaptations to the facilities where it will be deployed. As no layout modifications are required, the initial outlay is significantly reduced, making the investment affordable for companies of various sizes.

This also means greater scalability, i.e. expanding the number of mobile robots you deploy on your facility (especially for small projects that can be scaled up later), depending on demand, workflow or company growth.

OPTIMISATION OF RESOURCES

Automation through this autonomous mobile manipulator optimises the use of resources in the production line. By being able to work without breaks beyond the loading time, non-productive times are reduced. This enables a constant 24/7 workflow facilitated by the UR user interface, which allows intuitive control of the robot from various devices.

RB-KAIROS+ performs repetitive and dangerous tasks with high precision, allowing workers to focus on higher value operations. In addition, errors are avoided by mitigating human fatigue in highly repetitive tasks and the associated waste of materials due to faults, leading to lower operating costs.

FLEXIBILITY

RB-KAIROS+ adapts to different tasks within a logistics environment, eliminating the need for multiple specialised equipment for each function. In addition, a wide range of tools or end effectors compatible with this manipulator are available, depending on the task: grippers, vision cameras, suction cups or robotic hands, among others.

The fact that it is mobile and autonomous, rather than a fixed/static robotic arm, gives the robot greater utility by allowing it to be used in multiple locations according to the user's needs.
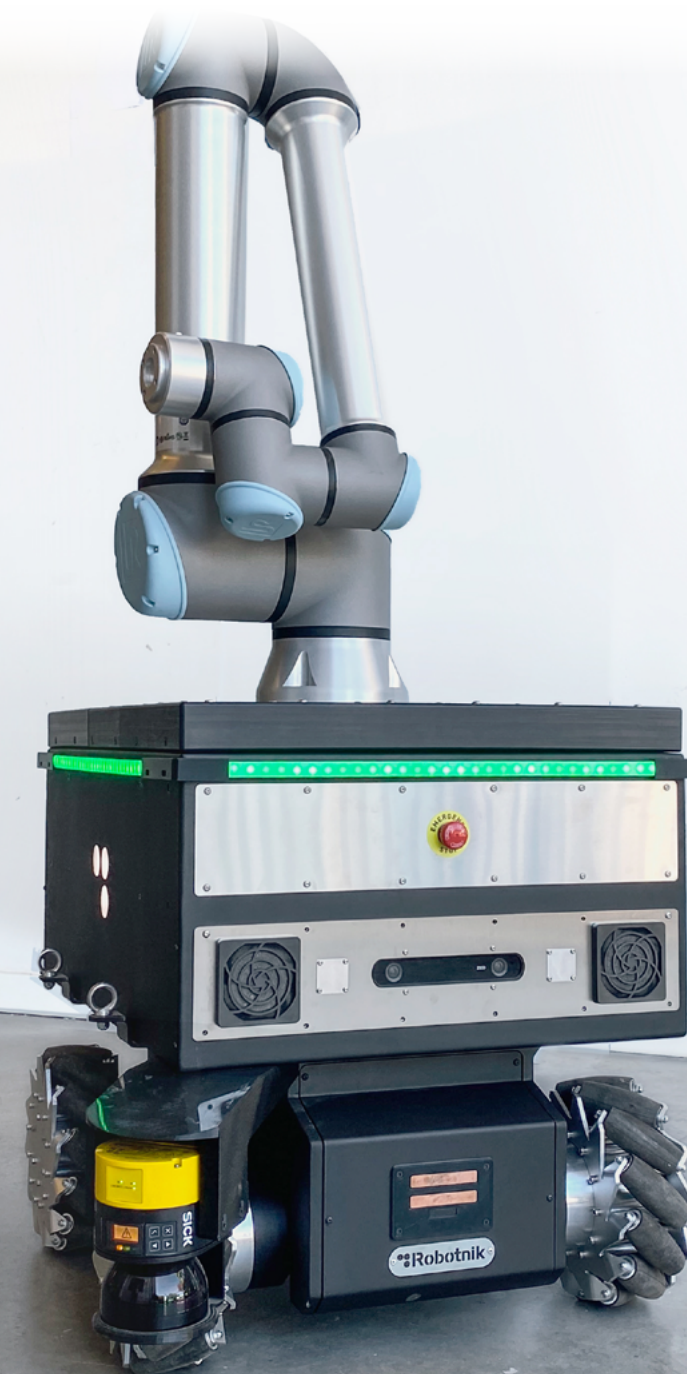
2. IS IT THE RIGHT MANIPULATOR ROBOT FOR MY SPECIFIC APPLICATION?

YES, IF:

- You are looking to automate material handling tasks such as Pick & Place, sorting, quality control, machine tending, parts manipulation…

- You need higher accuracy for quality control of parts. **RB-KAIROS+** with the UR10e arm can handle workpieces up to 12.5 kg and has a large reach of 1,300 mm.

- You need adaptability for your applications. **RB-KAIROS+** can be adapted to different applications depending on the material to be handled, weight, required reach or other particularities of the task thanks to the wide range of end effectors and tools compatible with the UR arm.

- You expect to improve production process times: **RB-KAIROS+** runs at a speed of 1.5 m/second, safely sharing the work space with operators. The arm has a repeatability of ± 0.05 mm, providing unprecedented consistency and accuracy.

- Your application is in an indoor environment: **RB-KAIROS+** is ideal for narrow spaces due to its omnidirectional movement.

- You have to run full shifts for handling operations: **RB-KAIROS+** has an autonomy of up to 6 hours, depending on the application.

3. WHAT TASKS CAN **RB-KAIROS+** AUTOMATE BY ITSELF?

Pick & Place
Identify and pick up objects of different sizes and shapes and place them between different workstations, warehouses and production areas.

Machine tending
Loading materials into production machines (such as presses or milling machines), monitoring the process and removing finished products, improving efficiency.

Screwing and Drilling
Place and fix parts and components into products with an automated robotic screwdriving or drilling tool.

Assembly
Assemble various parts and components to form complete products or sub-assemblies, working on automated assembly lines for tasks requiring repeatability.

Quality Control
Advanced components and sensors to inspect items for defects, measure dimensions and verify compliance with established quality standards.

Welding
Automated welding on metal parts, joining components with high precision, which is especially useful in industries such as automotive or machinery manufacturers.

Finishing Tasks
Perform polishing, sanding, deburring and cleaning of products to give them their final finish, improving the surface quality and aesthetics of the product.

Metrology
Using automated measuring tools, robots can inspect dimensions or geometries of parts and products, ensuring that technical manufacturing specs are met.

Packaging
Collect, organise and pack products into boxes or containers for subsequent shipping or storage, optimising the packaging process.

Parts Feeding
Load material into workstations or other machines, maintaining the correct production flow, ensuring that all stages have the necessary supply at every moment.

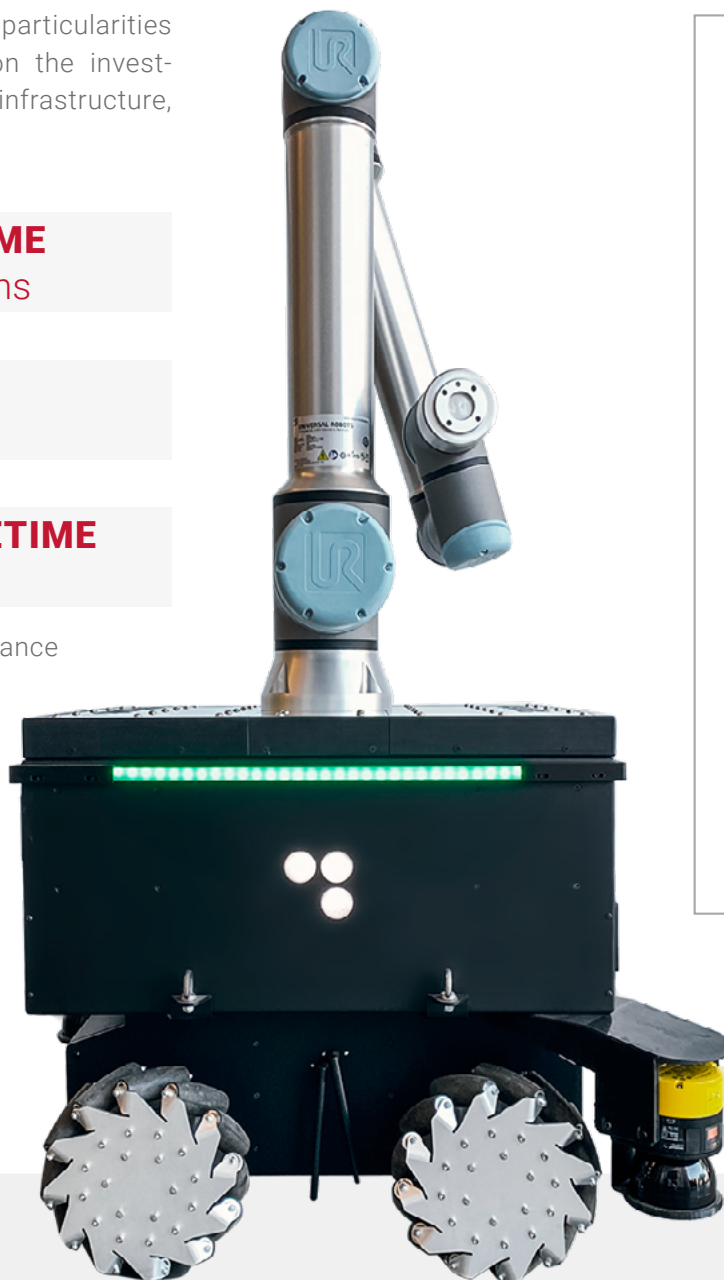# 4. HOW TO GET STARTED?
LET'S TALK NUMBERS

Each implementation has particularities that may vary depending on the investment, the application, the infrastructure, the shifts, etc.

PAYBACK TIME
12 - 15 months

LIFETIME
10 years

ROI AFTER LIFETIME
>300 %

* Inluding support & maintenance

FOR 1 OR 2 UNITS
30K - 100K €

START-UP: 3K - 15K €
*Depending on customization and complexity of the environment

- More than 2 shifts per day of continuous operation
- Reduction of unrewarding tasks
- Increase productivity with existing staff
- Decrease in the need for additional personnel
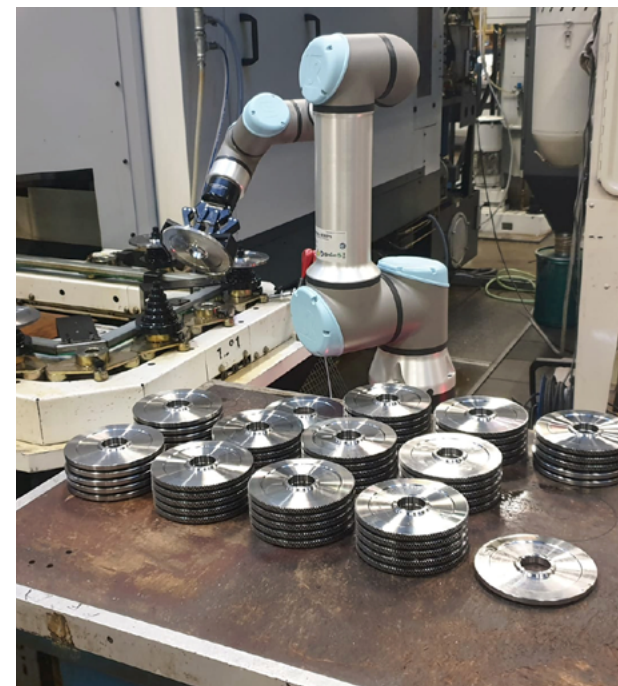- Objective quantification of results

USE CASES

CHECK SOME USE CASES OF **RB-KAIROS+** PERFORMING DIFFERENT TASKS

Use of robotics in a lighting factory
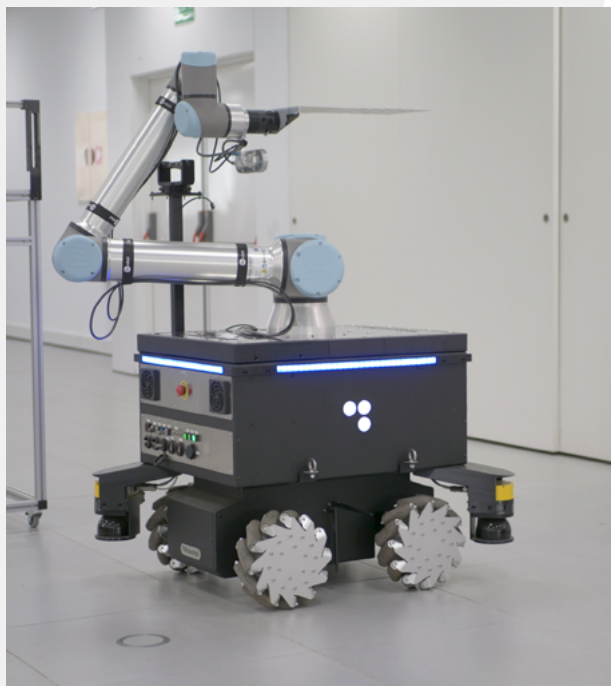
Use of robotics in the sleep industry

Use of robotics in a gears factory

Watch the
RB-KAIROS+
explanation
video ▶

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RB-KAIROS+

MORE THAN 20 YEARS
LEADING MOBILE ROBOTICS

Do you have a project in mind?

CONTACT ONE
OF OUR EXPERTS

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