





#CES2021 #OccitanieCES2021 #FrenchTech



# **ReCOVery Robot**

The CleanTech Booster presents the air and surface disinfection robot developed by four companies Fadilec, Innowtech, Sirea and Sterixene: ReCOVery.

Medical and professional environment: the technical teams have tested ReCOVery.

Discover this innovative solution to fight viruses includingCOVID-19, bacteria, moulds.





# A collective dynamic

Under the dynamic of the CleanTech Booster dynamic, these four companies, helped by the CleanTech Booster have decided to pool their technologies and expertises to create a decontamination solution for the COVID-19 pandemic.

Fadilec, Innowtech and Sirea have joined forces with Sterixene, a french specialist in the elimination of germs, bacteria and viruses, to develop ReCOVery, the air and surface disinfection robot designed to meet the aseptic needs of premises used for medical, professional or public purposes.

The partners Fadilec, Sirea, Innowtech and Sterixene are established companies.

Their main field are data, deeptech and robotics, applied to the industrial sector. The technological building blocks of this robot have been developed, tested and validated. They have already been put into service on other devices on the market:

• robotic made by Innowtech

ZFadilec INOWTECH

- assembly by Fadilec
- disinfection by ultraviolet light conducted by Sterixene
- disinfectant spraying and an energy supply provided by Sirea.

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sirea



STERIXENE



# **ReCOVery robot**

This decontamination robot has been tested successfully:

- In a medical environment at the Bagnols-sur-Cèze Hospital Center.
- In a professional context at the new business incubator in the Gard Rhodanien area.
- In EDF's industrial premises in Tricastin (nuclear power plant)
- In a food-processing environment.

In a furnished or an empty room, the robot is autonomous and moves without any operator next to it to ensure the safety of those involved. It is able to enter the premises through staff access doors, to overcome or avoid various obstacles and to operate with low luminosity is reduced. Its dual disinfection process includes a spray of very fine droplets as well as decontamination by ultraviolet light. The spraying of the sanitizing solution does not increase the ambient humidity level. It is designed to disinfect premises of 30m<sup>2</sup> minimum, at a temperature between 0 and 50° and including equipment.

This first prototype of ReCOVery has already been tested in the laboratory.



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# **Strenghts**

- A quick solution: about 30 minutes for a 30m<sup>2</sup> room
- An optimal, unique and ecological disinfection with two coupled
- Mercury-free processes to destroy all traces of viruses, bacteria and moulds
- A total autonomy without pilot and on battery
- An economical technology: half the cost of the robots currently on the market
- A compact and light solution: about 50 kg
- A scalable project: a data management module and a pulsed UV technology already programmed
- An efficiency proven and quantified by laboratory tests..

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STERIXENE



## Innowtech

The idea of Innowtech is to develop technological solutions, sensor robots, to collect data in sensitive, dangerous, hostile or inaccessible environments.

# **INOW**TECH

The target is a use in the heart of the industry with a declination for professionals and craftsmen.

The keywords: agility, multidisciplinarity, innovation, collaboration. Innowtech develops innovative solutions for industrial measurement and associated equipment: sensors, acquisition and processing electronics, software and databases.

The company from the French Occitanie region imagines a modular tool concept to meet specific needs in sensitive environments:

measurement systems, robot sensors, communication systems, piloting and control interface and measurement data management.

Innowtech follows an approach that enables it to globalize the definition, development, prototyping and testing of innovative technological measurement solutions. By integrating the ReCOVery project, Innowtech offers its expertise in measurement and robotics.

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# **Sterixene**

The start-up Sterixene develops an ecological, economical and efficient technology based on UV light provided by a set of LEDs or pulsed light to decontaminate surfaces, powders and liquids. Janyce Franc and Christophe Puisnel, the company's founders and optics specialists, have designed these new solutions.

Based in the French Occitanie region, Sterixene has a laboratory allowing it to test its disinfection process using ecologic UV light. This technology is a monowavelength light (275 nm), ultrapowerful, chemicalfree, mercuryfree, and with no risk of quartz breakage. It is a fast process and leaves no residue.

The advantage of IPL disinfection lies in being compact and flexible. The LED can be adapted to the application offering easy integration possibilities.

It is a method that does not use mercury gas. The solution is simple, cost-effective, compact, efficient and environmentally friendly.

Associated with the second disinfection brick proposed by Sirea, the decontamination by UV light provided by a set of LEDs allows to disinfect air and surfaces.

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# 🚽 Fadilec

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# Fadilec

The Fadilec group, it's 25 years of expertise in France and abroad, in engineering, robotics, automation, computing and measurement.

Within the ReCOVery project, FADILEC is in charge of the integration of the different sub-systems and the assembly of the robot.

Manufacturer and integrator of robotic solutions, automatisms or data processing, Fadilec offers global solutions for all projects. Fadilec is regularly involved in the nuclear, food, pharmaceutical, chemical, automotive, aeronautics and oil & gas industries.

Its various fields of expertise in automation, IT, measurement, electricity, mechanics, robotics and vision are complementary and allow it, as an integrator, to offer global solutions in France and abroad.

Fadilec designs and implements complex automated systems.

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## Sirea

It is designed to guarantee a minimum concentration of a universal antiseptic (5 g/L).

Independent of external supply, compact and lightweight, waste-reducing and easy to use, AURA solution is a real alternative for disinfecting surfaces or washing hands by diluting it with water.

Created by the Sirea, a company from French Occitanie region, AURA is an innovative system for the production of disinfectant based on salt, water and... sunlight.

AURA is integrated into the decontamination robot imagined collectively but it can also be used alone.

AURA provides hospitals, health centers, companies, in urban or rural areas, to produce their own disinfectant solution. It is delivered turnkey.

Solea (the Sirea subsidiary that develops AURA) offers dedicated solutions in the fields of health, energy and water, designed to be implemented everywhere and for everyone.

The SIREA group has been involved since 1994 in the search for innovative technical solutions to meet the problems of energy management, energy efficiency, optimization of the use of renewable energies, for residential, community and industrial installations.

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