

## Ambition

Over the next three years, CARING NATURE will address the challenge of reducing the global carbon footprint in healthcare facilities which are major energy consumers and waste producers.

The **CARING NATURE** project aims to foster a cultural shift in the sector: achieving sustainable, eco-friendly healthcare systems which requires solutions that are effective, affordable, and acceptable to all stakeholders.

**CARING NATURE** aims to develop 10 innovative solutions, regarding building, waste, telemedicine, governance, and staff engagement to reduce the impact of the health and care sector on the environment, without interfering with the safety of patients and medical staff.

## Methodology

To reach its ambitious objectives towards decarbonising the healthcare sector, the project is built on a 3-phase methodology:

- 1 Gather prospective adopters' **needs** and **requirements**
- 2 **Develop** and **test** the solutions with one end user (health and care providers)
- 3 **Validate** the solutions with at least two other end-users (health and care providers)

The solutions are tested and validated in **33 use cases** in 5 European healthcare organisations located in Finland, Germany, Greece, Italy and Spain.



“The nature of the health and care workers should be **CARING** both for their patients and for **NATURE**”

The **CARING NATURE** Consortium



## ABOUT CARING NATURE

<b>Start Date</b>	1 January 2024
<b>Duration</b>	36 months
<b>Budget</b>	6M€
<b>Aim</b>	Develop 10 sustainable solutions to lower the carbon footprint of the health and care sector

### PROJECT COORDINATION



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore

**Prof. Daniele Gui**

Università Cattolica del Sacro Cuore,  
Rome, Italy  
daniele.gui@unicatt.it

## 19 PARTNERS from 11 european countries



### CONTACT US

- @CaringNature\_
- @CARING NATURE
- @CaringNature



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Health and Digital Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.



# CARING NATURE

Sustainable solutions for healthcare

Developing 10 innovative solutions to reduce the adverse impact of the **health and care** sector on the **environment**, without interfering with the safety of patients and medical staff





## CARING NATURE

Sustainable solutions for healthcare



### OBJECTIVE 1 Governance

Increase the **governance** capability of HCPs, policy makers and investors to implement the green transformation, while ensuring social and economic sustainability.



### OBJECTIVE 2 Buildings

Reduce the environmental impact of buildings' renovation and energy consumption.



### OBJECTIVE 3 Waste

Reduce and valorise the medical and food waste as well as the **wastewater**.



### OBJECTIVE 4 Patients travel

Reduce the environmental impact of **patient travel** through next generation telemedicine.



### OBJECTIVE 5 Staff engagement

Obtain **staff engagement** in the green transition of the healthcare providers



### Knowledge Sharing and Decision Support System

A software infrastructure empowering stakeholders through sharing sustainable knowledge, measuring environmental impacts, and guiding informed decisions for holistic healthcare sustainability.



### Green Building Compass 4 Care

An AI software-based toolkit for decision support regarding the development and management of green and resilient healthcare facilities.



### MED-WASTE PYROLISIS

An on-site prototype plant to produce sustainable alternative fuel from medical waste by pyrolysis and therefore, eliminate waste transportation and landfill or incineration.



### WASTE - OR

A set of guidelines to reduce and valorise waste produced in operating rooms, promoting the reuse of materials and the rethinking of strategies and regulations.



### TELE-ME NOW

A set of telemedicine solutions in an all-in-one suitcase for patients enabling remote consultation with the same quality of information as in-person visits (heart, lungs, ENT, ECG, skin, ...), protocols for delivering telemedicine, ...



### ENGAGE

A participatory staff engagement model fostering environmental sustainability awareness, innovative ideas, and adoption of solutions developed by CARING NATURE



### Green Lean Healthcare

An analytical method that identifies processes which reduces green house gaz emissions and removes non-value added activities for cost and time reduction.



### ENER

An AI-driven energy management software for healthcare buildings to monitor, predict, optimise, and assess processes towards low and zero impact sustainable energy structures.



### CleanFlow

Assesments of affordable and sustainable processes for hospital wastewater treatment to reduce water pollution, based on economic, environmental and chemical criteria.



### FoodToBiogas

A feasibility study of two on-site processes to produce biogas from food waste, allowing to reduce CO2 emissions through transport reduction, local production of energy and reduction of antimicrobial genes.

