# respira

## now  breathe

**RESPIRA®** is artificial intelligence that enables efficient control of the ventilation system for improved comfort, quality of air and energy efficiency in underground transport networks and large scale infrastructures.

Based on dynamic algorithms, **RESPIRA®** finds equilibrium by employing complex variables like the temperature, humidity and quality of air in order to predict the environmental conditions and offer more comfort to the users.

## Artificial intelligence to control and improve ventilation systems

respira **=** × ( **+** **+** )

| ARTIFICIAL INTELLIGENCE | THERMAL COMFORT | AIR QUALITY | ENERGY EFFICIENCY |

## The advantages

**Efficient energy consumption management** and improved environmental condition thanks to automatic ventilation control.

**Efficient investment management** thanks to detection of hot spots and/or problems within the facility.

**Real time queries on the environmental conditions** (temperature, humidity and air quality) and the predictions for the next 72 hours.

**Real time queries on the comfort index,** thermal sensation and air quality.

**Real time queries on equipment operation,** fast tracking maintenance works.

**Different control modes.** Efficient, comfort and saving modes.

**Automatic Retraining.**

**Flexible, scalable** and fast deployment system.

SENER

# Product 4.0
Intelligent ventilation that constantly learns and adapts:

**INTERNET OF THINGS**
DATA SENSORING
AND GATHERING

**ETL PROCESSES**
STORAGE
AND PROCESSING

**DATA & ANALYTICS**
DESCRIPTIVE ANALYTICS
AND REPORTING

**ARTIFICIAL INTELLIGENCE**
PREDICTIVE ANALYTICS
MACHINE LEARNING

**INTELLIGENT PRODUCT**
SYSTEMS
INTEGRATION

# Deployments
RESPIRA® offers the best performance in large scale infrastructures
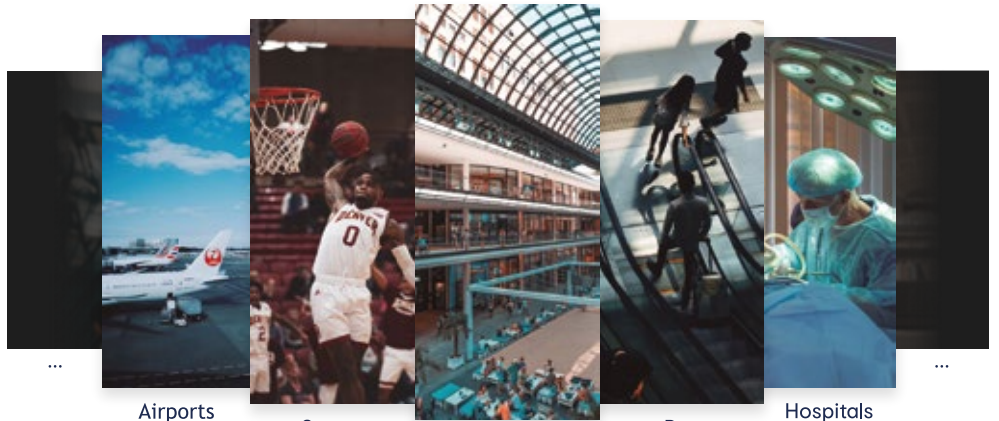and connected spaces in order to continue enjoying our cities.

**SUBURBAN TRANSPORT**

Ventilation system

Subway transport network

**LARGE – SCALE INFRASTRUCTURES AND CONNECTED SPACES**

HVAC

... Airports

Sports
complexes

Shopping
malls

Bus
stations

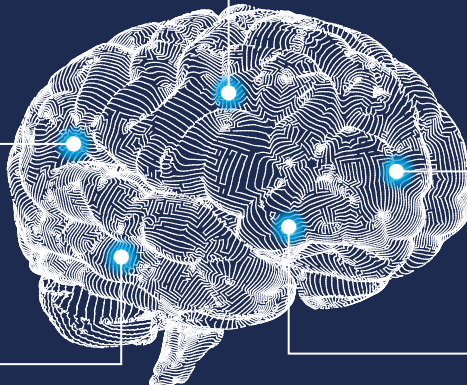Hospitals ...

# The capabilities of respira
**Intelligent and advanced technology** with positive
impact in our health and quality of life.

**AIR QUALITY**
Establish minimum levels
of air quality

**PATHOGENIC
MICROORGANISMS**
Detect the presence of
bioaerosols in the atmosphere

**ENVIRONMENTAL CONDITIONS**
Determine the degree of comfort
of users inside the facilities

**OPERATING PARAMETERS**
Link the facility's operating variables

**MECHANICAL PARAMETERS**
Enable predictive maintenance
of the facility's assets

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