



VERTUOZ CONTROL

**Optimize HVAC systems efficiency
with IoT, cloud & AI
to reduce energy consumption and carbon footprint**

RESTRICTED

INTERNAL

CONFIDENTIAL



VERTUOZ

ENGie
Solutions

80
People



Energy + digital + O&M



Smart Building Solutions



Energy & operational efficiency



Private and public sector, industry

FACTS & FIGURES



200,000 connected objects
deployed

90,000 Buildings
monitored

30 million m²
analysed

250,000 ton CO₂ eq
Saved per year

CUSTOMERS ISSUES AND EXPECTATIONS



LEGAL

- Comply with regulatory obligations



DECARBONIZATION & ENERGY EFFICIENCY

- Réduire energy consumption, energy bill and carbon footprint



OPERATIONS

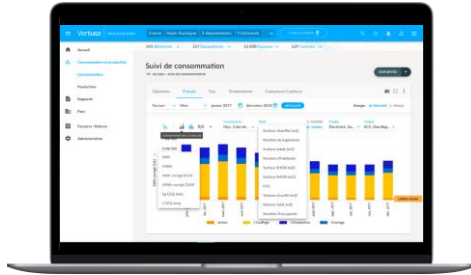
- Real time monitoring, 3D digital twins for operational efficiency



COMFORT & AIR QUALITY

- Improve comfort (temperature & air quality)

SMART BUILDING SOLUTIONS FOR EFFICIENCY



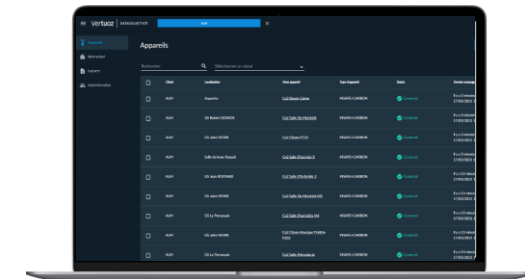
Energy data collect
& dashboarding



Hypervision
3D real time monitoring



HVAC optimization
With AI & IoT



Data & IoT
Platforms

The main challenges for smart buildings



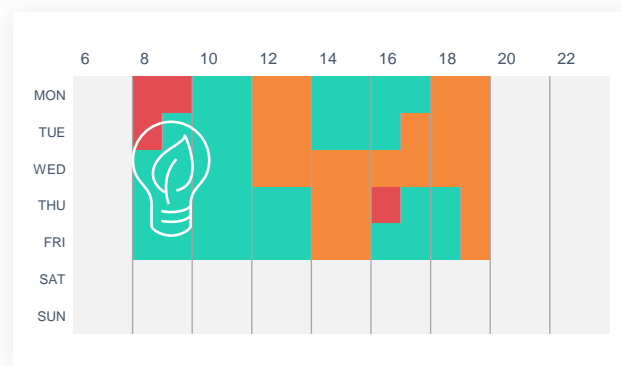
**Real conditions
of using buildings,
Changing**



Systems of automation
and control of Heating, Ventilation
and Air Conditioning (HVAC) existing
**not optimised
& difficult to solve.**



20%
of time
in uncomf



30%
energy for
unoccupied areas



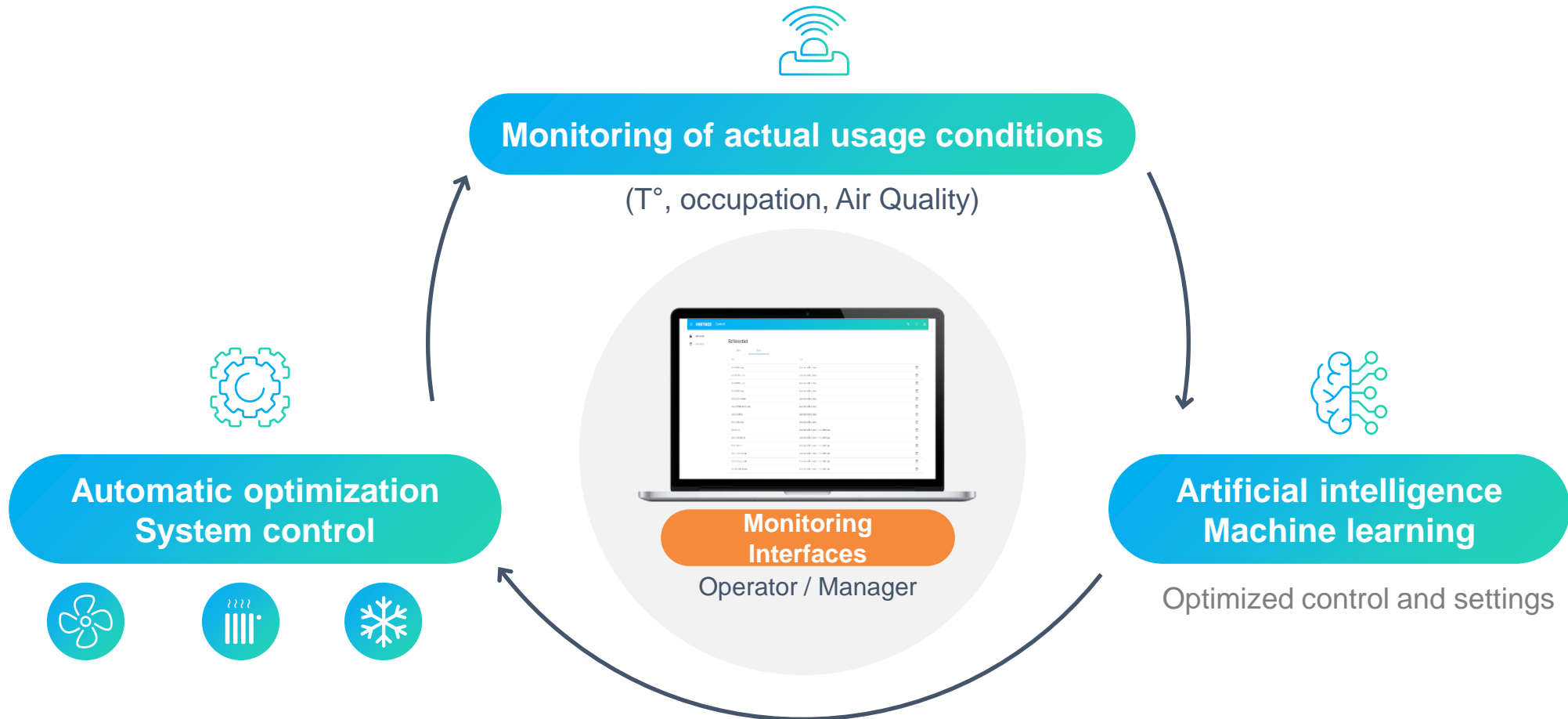
Problems
**Comfort and indoor
air quality**



Expenses
kWh and €

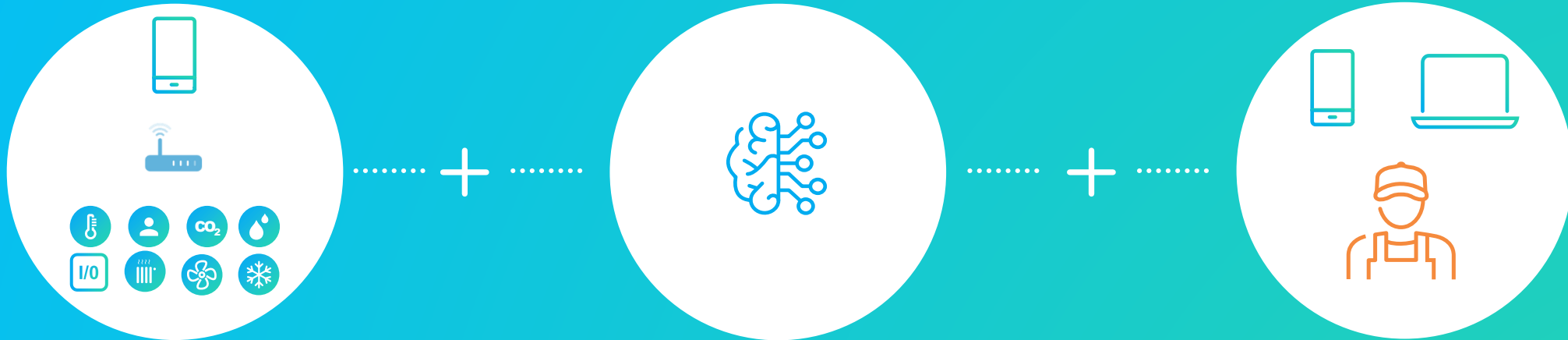
IoT + AI = energy savings for buildings

Optimizing HVAC systems efficiency according to the actual use of the building to reduce consumption & improve comfort



Vertuoz Control

A turnkey service to deliver high performance and operational efficiency



Initialization

Connected objects & infrastructure
(IoT, data collect infra...)

Optimization controls
Predictive system control

App, Operation & maintenance

VALUE PROPOSITION

-25%

Energy Savings &
CO₂ emissions

**Attractive
Financial
Model**

improved ROI

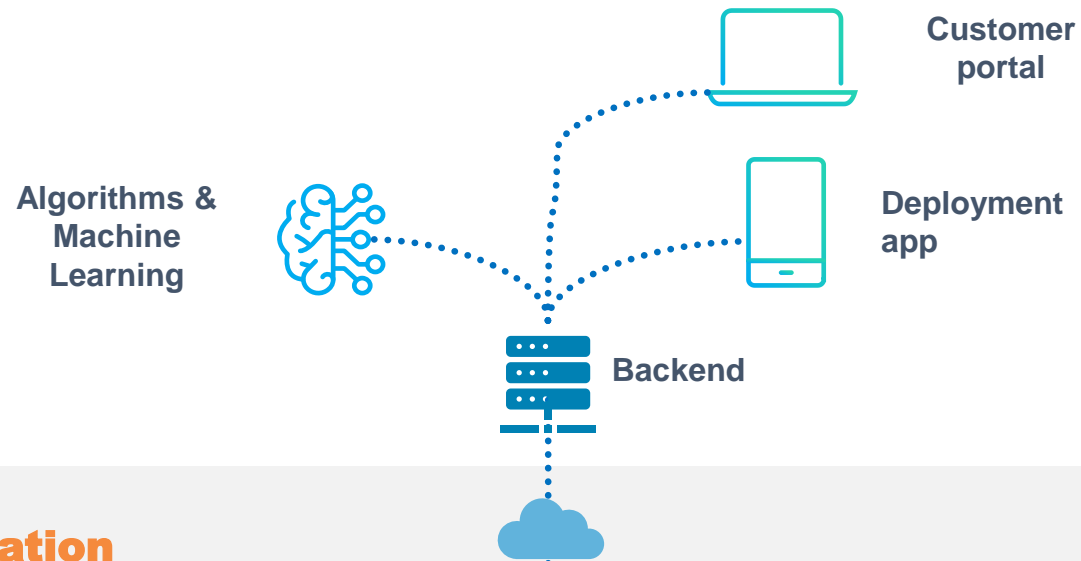
**Easy to
deploy and
operate**

France
& international

Reliability

300+ sites
optimized

INSTALLATION OVERVIEW



Temperature Régulation room by room



Optimizer for heating production

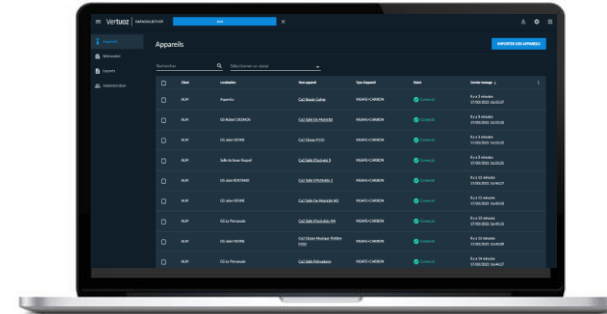


Operator supervision

Monitor objects, comfort and performance



Operator's summary



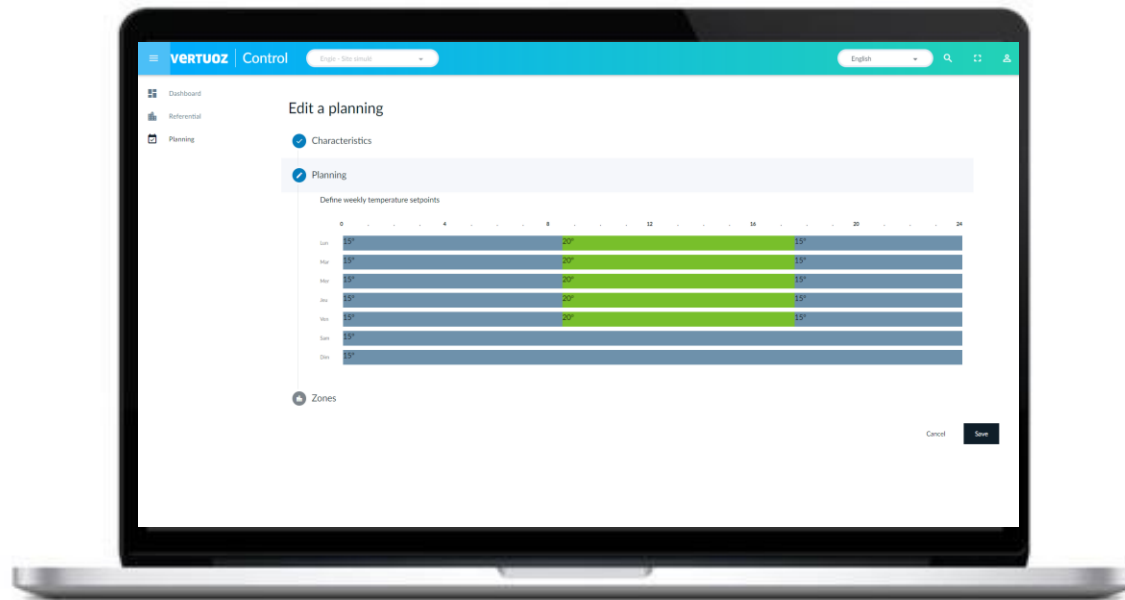
Devices monitoring



Custom reports

Final Customer - web application

Define preferences, monitor the operation and performance indicators



Secure web portal, accessible 24/7

- Simple monitoring of system's operation
- Set up the setpoint calendars
- Comfort Dashboard and site performance
- Set up occupancies and site preferences
- Consult the sites and zones repository

Final Customer - web 3D interface



Secured web portal, available 24/7

- Real time monitoring of building status
- Identify anomaly
- KPI

CERTIFIED “EFFICIENT SOLUTION”



Towards a portfolio of 1000 labelled solutions

Our Solar Impulse Label awards efficient, clean and profitable solutions with a positive impact on environment and quality of life.

Here are the Efficient Solutions which have been already selected and labelled to be included in our 1000 Solutions Portfolio. Let's explore the ingenuity and the creativity of our World Alliance Members.



[→ ABOUT THE LABEL](#)



VERTUOZ

.....

See you soon on

engie-vertuoz.fr



engie-solutions.com