



# Data Analytics at Renson: From airflows to dataflows

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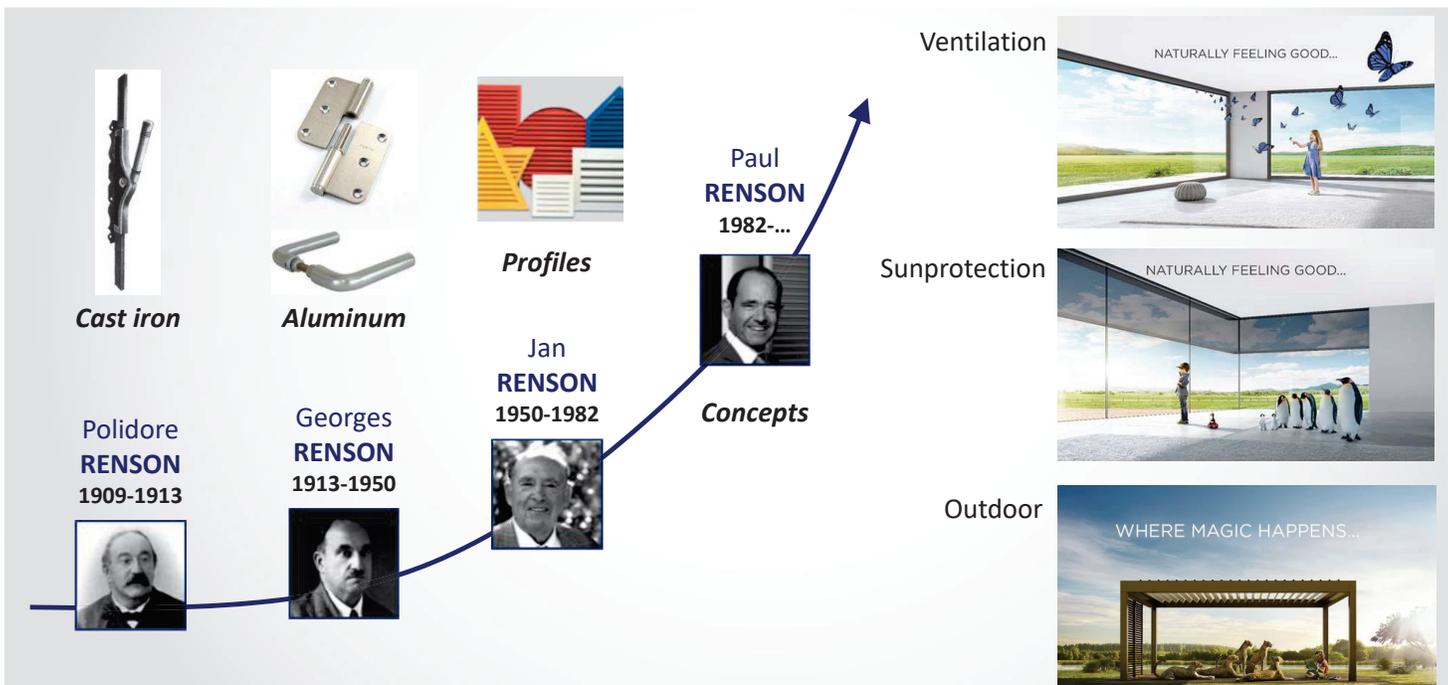
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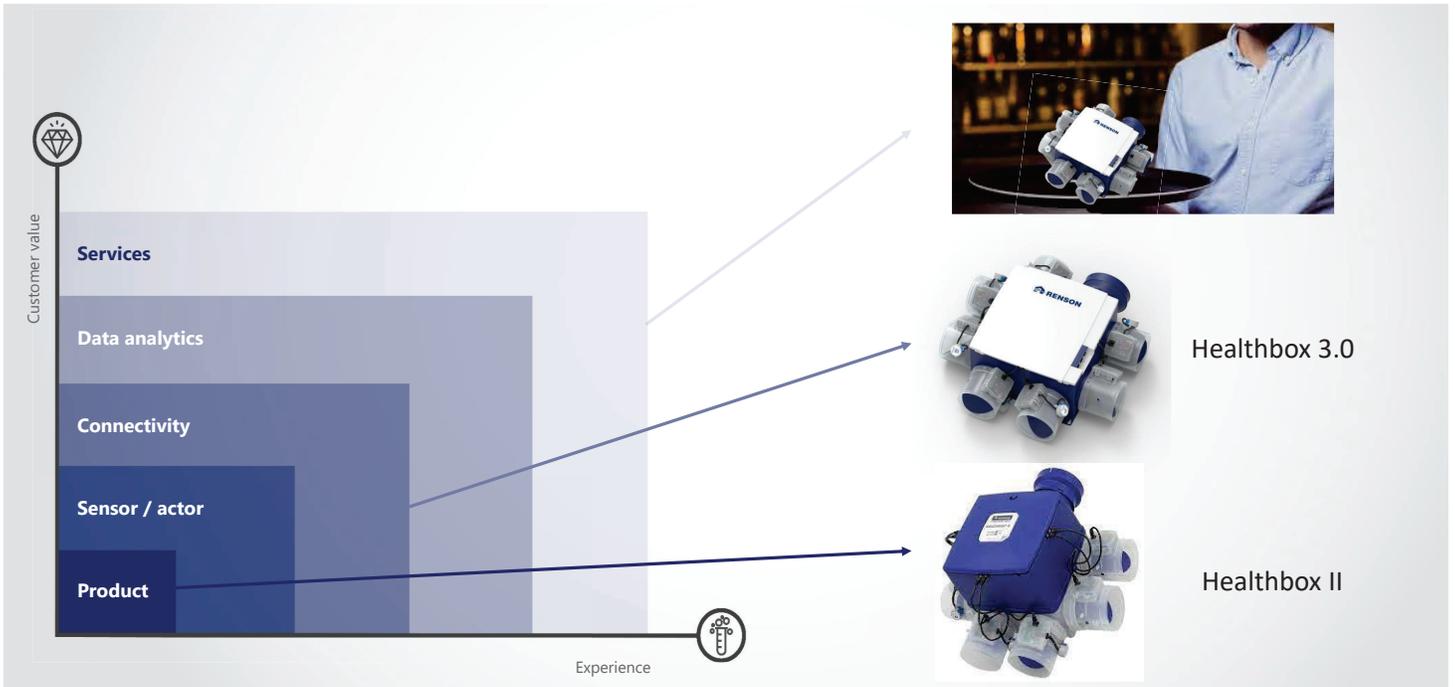
# Introduction

## Introduction RENSON THROUGH THE YEARS



# Introduction

## DIGITAL INNOVATION ROADMAP



# Introduction

## RENSON CONNECTED DEVICES

	Healthbox 3.0	Waves	Sense	Outdoor	Screens
	2018	2019	2020	2021	2022
	± 8500	± 700	± 2100		

# Data analytics at Renson

## Data analytics at Renson THE LOGICAL NEXT STEP

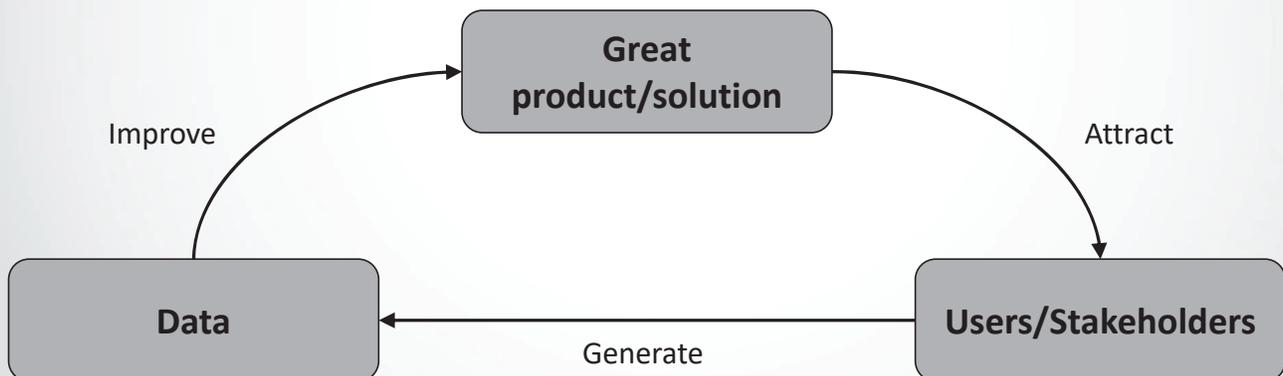
### Vision



Take the concept of 'Creating Healthy Spaces' to the next level using product data.

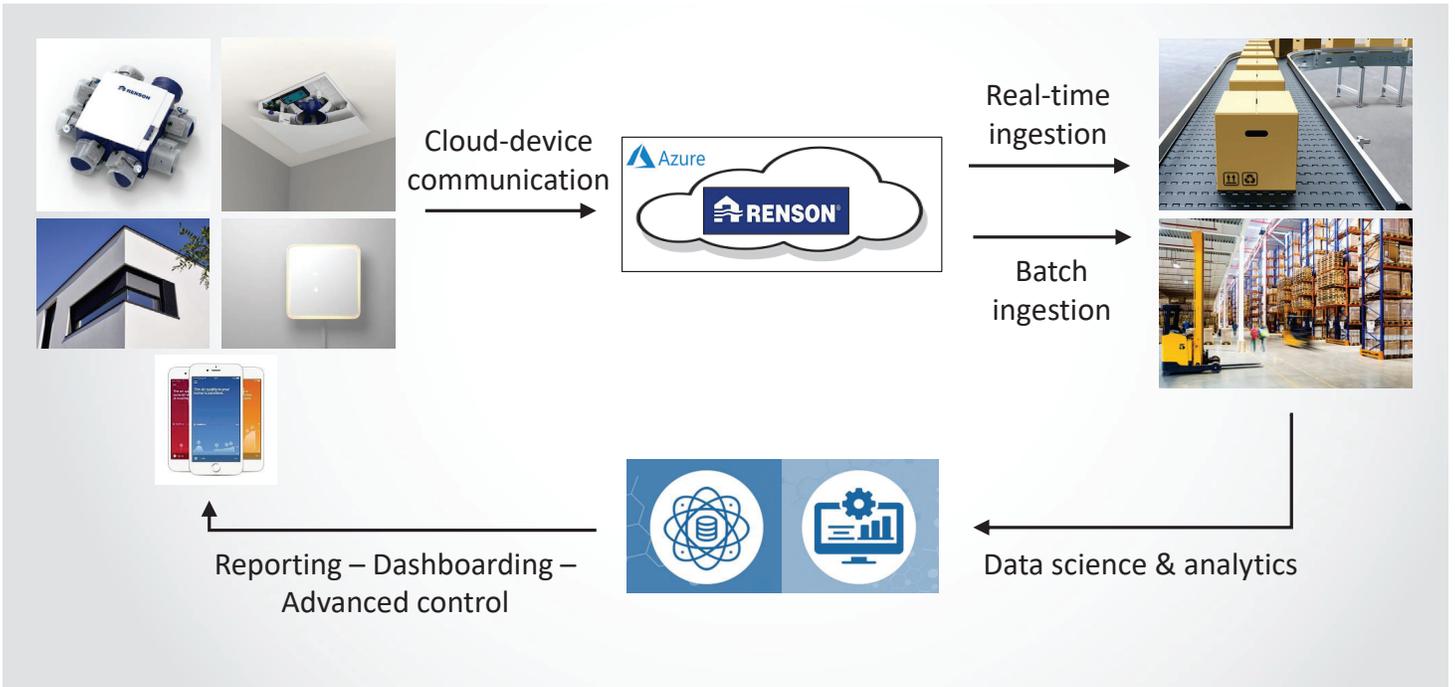
Develop data tools and methods to assist the company in creating innovative concepts and products for healthy and comfortable living.

### Mission



# Data analytics at Renson

## A MODERN DATA PLATFORM



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## SOME EXAMPLE DATA



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## SOME EXAMPLE DATA

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# Data analytics at Renson

## USE CASES

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**Research and  
decision-making**



**Improved  
customers  
engagement**



**Product  
improvement**



**Service  
development**

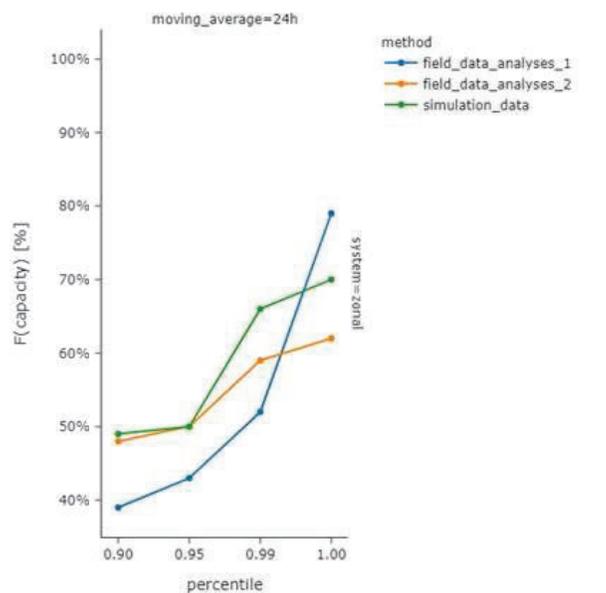
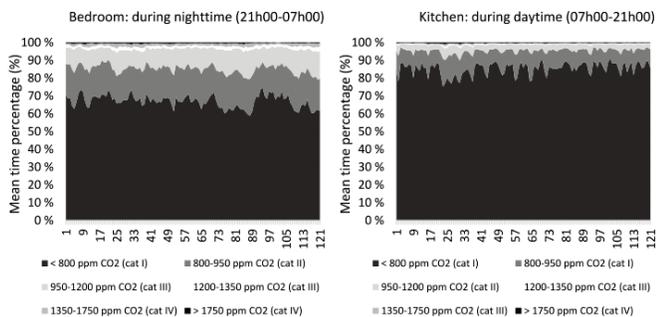
# Data analytics use cases

## Data analytics use cases RESEARCH AND DECISION-MAKING

**Articles**

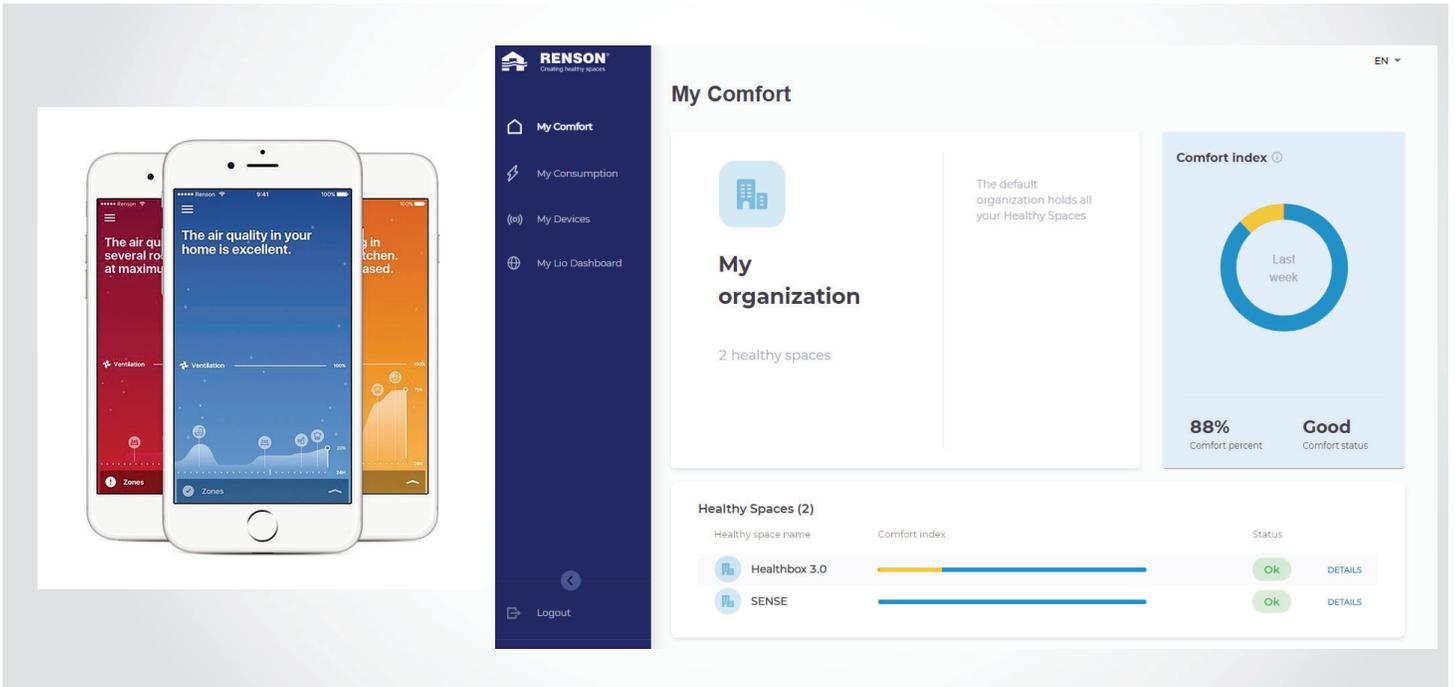
*This article is based on a paper presented at the 40th AIVC - 8th TightVent & 6th Venticool Conference "From energy crisis to sustainable indoor climate" 15-16 October 2019, Ghent, Belgium*

### Cloud based large-scale performance analysis of a smart residential MEV system



# Data analytics use cases

## IMPROVED CUSTOMER ENGAGEMENT



The image displays three smartphones on the left showing air quality data. The middle smartphone screen reads: "The air quality in your home is excellent." Below this, there are graphs for "Ventilation" and "Zones".

The right side shows a tablet interface titled "My Comfort". It features a sidebar menu with options: "My Comfort", "My Consumption", "My Devices", "My Lio Dashboard", and "Logout". The main content area includes:

- My organization:** A card showing "2 healthy spaces" and a note: "The default organization holds all your Healthy Spaces".
- Comfort index:** A donut chart labeled "Last week" showing an 88% comfort percent and a "Good" comfort status.
- Healthy Spaces (2):** A table listing two spaces:
 

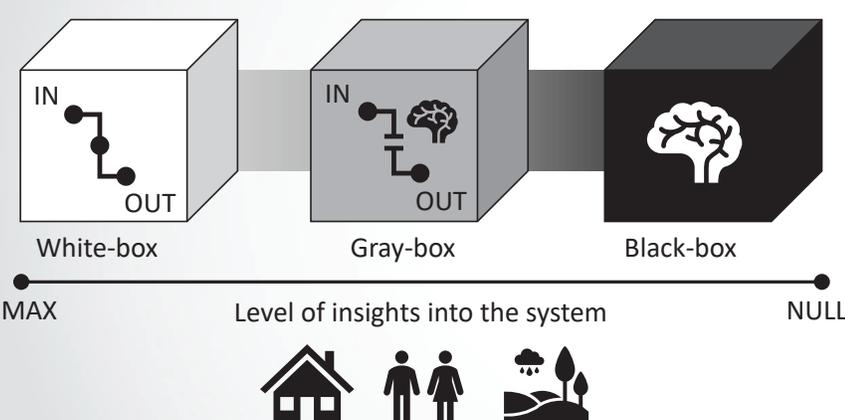
Healthy space name	Comfort index	Status
Healthbox 3.0		Ok <a href="#">DETAILS</a>
SENSE		Ok <a href="#">DETAILS</a>

# Data analytics use cases

## PRODUCT IMPROVEMENT - RENSON COMFORT CONTROLLER



### System identification



The diagram illustrates a progression of system identification from "White-box" (MAX) to "Black-box" (NULL). It consists of three boxes connected by a line:

- White-box:** A white box with "IN" and "OUT" labels and a simple circuit diagram.
- Gray-box:** A gray box with "IN" and "OUT" labels, a circuit diagram, and a brain icon.
- Black-box:** A black box with a brain icon.

Below the boxes is a horizontal axis labeled "Level of insights into the system" ranging from "MAX" on the left to "NULL" on the right. At the bottom are icons for a house, two people, and a plant.

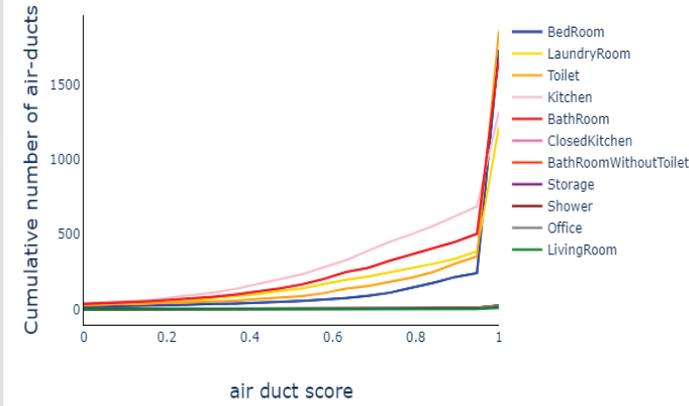
### Preference identification



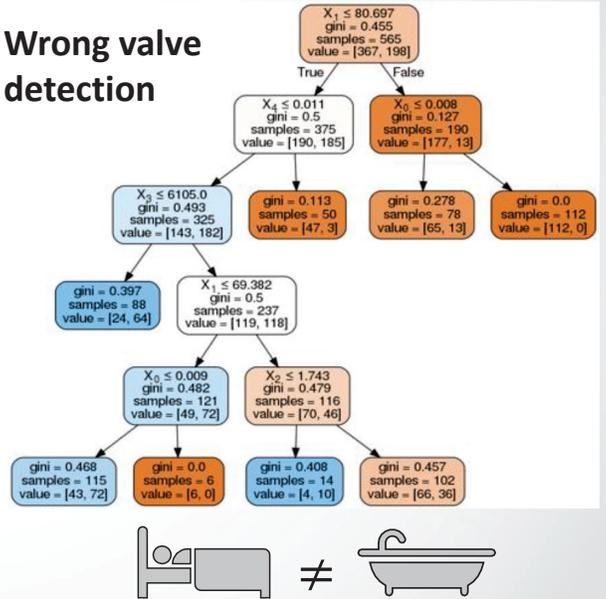
This section shows visual examples of preference identification, including a window view, a building facade, and a line-art icon of a house with an upward-trending arrow.

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### Installation score



### Wrong valve detection



# Key take aways

## Key take aways

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- Data analytics is on the rise for managing and maintaining healthy and comfortable indoor environments
- Data analytics can be used to create awareness
- Data analytics allows optimization of the performance of HVAC systems
- Data analytics is key to unlock various insights of your system (comfort, energy efficiency, maintenance, ...)
- ...

The sky is the limit



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Creating healthy spaces

VENTILATION | SUNPROTECTION | OUTDOOR