

# Workshops of REHVA Supporters and Associate Organisation



Theme: Health & Comfort

7 Essentials of Healthy Indoor Air

Belimo has interviewed consulting engineers and experts in the ventilation sector around the world to identify the priorities when aspiring to create a healthy indoor air environment in a building. In the process, seven essential factors for ensuring healthy indoor air in non-residential buildings have emerged.

In this workshop, we would like to define the KPIs for each 7 essentials of healthy indoor air.



Theme: Health & Comfort  
Safety in Indoor Settings

With a focus on Safety in Indoor Settings during or after pandemics, the Halton Workshop introduces new research initiatives and solutions designed for improving occupants' Safety, Health and Comfort in hospitals, offices, and restaurants and for addressing the challenges with upgrading or designing safe HVAC systems.

Halton has invited Professor Piia Sormunen (University of Tampere, Finland), who oversees the E3 project (Excellence in Pandemic Response and Enterprise Solutions Co-Innovation), to share insights on methods of preventing viral infectious diseases indoors to maintain a viable society during pandemics.



Theme: Health & Comfort

Low relative humidity in indoor air  
- an important element of indoor  
air quality

This workshop wants to initiate debate on the importance of low RH and which levels should create actionable decisions. We need more scientific studies of negative impact of dry indoor air in wellbeing and health.

One other reason for this debate is that the modern humidity recovery equipment in ventilation systems, control strategies and many humidity sources (mechanical and natural), gives new opportunities to minimize the energy costs and avoiding risks to have too high humidity levels in the buildings. Humidity control and humidity optimization is not so expensive as assumed if it is done.



Theme: Energy  
Energy for Comfort

Comfort in concept solutions, circularity and energy efficiency.



G R O U P

Theme: Energy

Deep Renovation Concepts

In the energy-efficient renovation of buildings, the thermal insulation and the airtightness of the building envelope, including windows and exterior doors, are improved to almost meet the requirements of new construction. Building services systems, such as heating, water and ventilation systems, as well as electrical and telecommunications systems, will also be modernized to be more functionally efficient and energy efficient.

This workshop presents renovation concepts that can achieve the desired level of energy performance, which in many European countries is considered to have an EP value of less than 75 kWh / m<sup>2</sup> per year. The goal of deep renovation is to achieve at least 60% energy savings compared to the initial consumption.



Theme: Digitization

The future of HVAC as a  
service

This workshop will deep dive into the potential future of the HVAC industry when it comes to sustainable, shared and digitalized solutions and will allow participants to open our minds to what that future could look like through the unique, collected lens of experts from across the industry.

We will brainstorm, shake up the way we workshop and come together in a format where there is no wrong answer and all ideas are welcome to answer a few key questions: How can industry players collaborate to make HVAC a positive contributor to climate change while helping end-users enjoy more efficient spaces? How can HVAC technology be a key player in Europe's and the world's climate goals? What are our individual roles as industry players in shaping this change? How can governments go further in supporting the end-users adoption of sustainable HVAC technologies? etc.



For an intelligent use of energy

Theme: Digitization

Efficiency beyond the building: the  
leverage of advanced HVAC control  
systems in the management of Energy  
Communities

The workshop will introduce the principle of operation of Artificial Intelligence-based advanced BACS and focus on how these algorithms can be exploited to reach optimal performance of the HVAC systems with respect to different objective functions, ranging from occupants' comfort requests to community level energy self-sufficiency.

Specifically, the participants will exchange ideas on whether, how, and to which extent indoor environmental conditions and preferences - maintained through the remote management of the HVAC systems - can target flexible set-points, to be varied based on the energy use profiles and on the renewable energy production patterns both at the building level and at the community level as well as the needs of grid balancing. The discussion will thus explore the role of HVAC in Demand Side Management (DMS).