

# From concept to reality: development and implementation of the adaptive solar façade

CIBSE IBG: Intelligent Building Façades

15 March 2023

# Who are we?



**Dr Esther Borkowski**  
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Architecture and Building Systems  
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**Dr Bratislav Svetozarevic**  
CEO  
Zurich Soft Robotics

# Outline

1. Overview of HiLo demonstrator
2. Performance of adaptive solar façade (ASF) in HiLo
3. History of ASF
4. Development of ASF into market-ready product Solskin

# HiLo research unit: integrating energy systems with lightweight design

## Architecture and Building Systems

Prof Dr Arno Schlueter

Dr Gearoid Lydon

## Block Research Group

Prof Dr Philippe Block

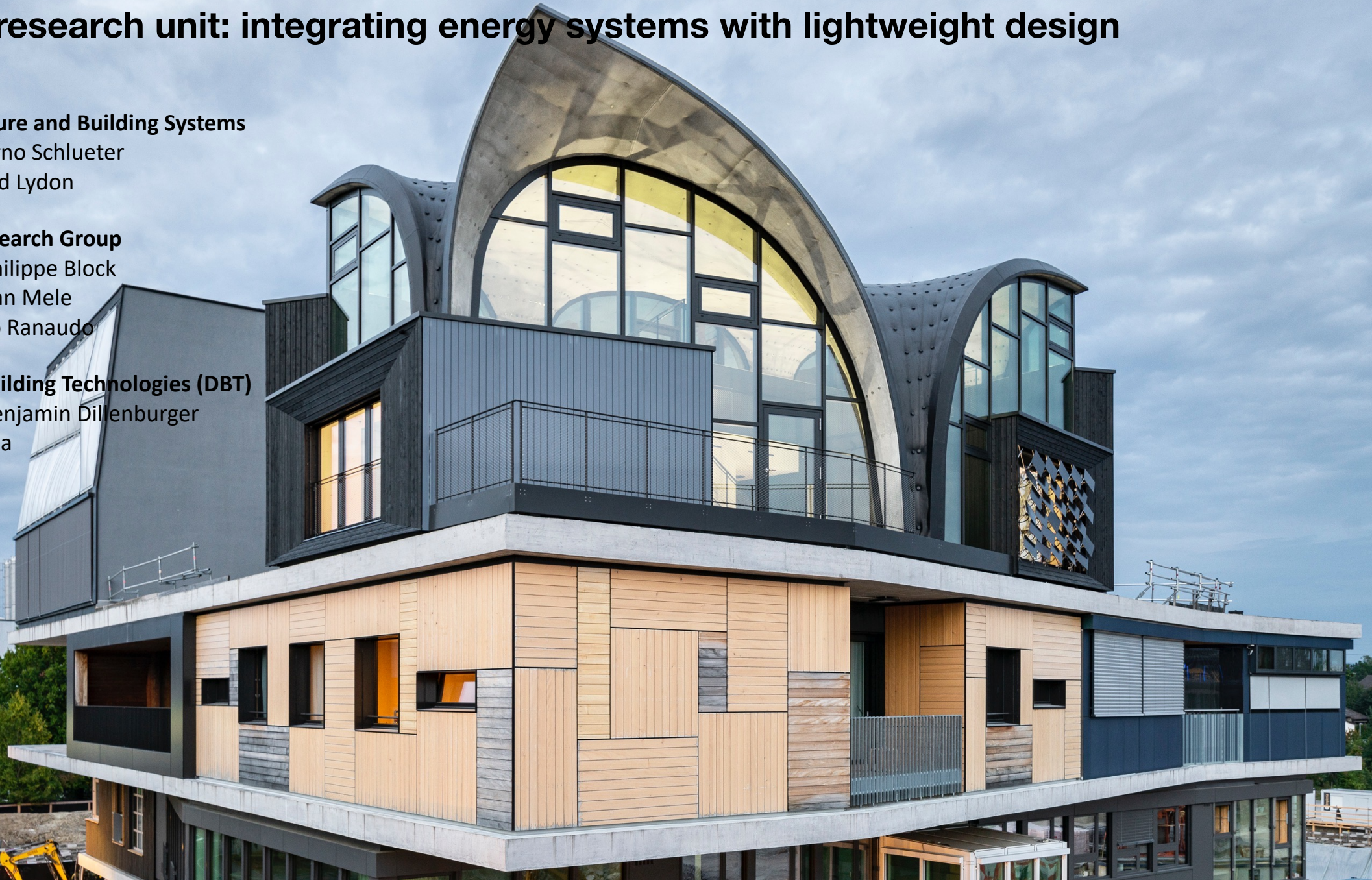
Dr Tom Van Mele

Francesco Ranaudo

## Digital Building Technologies (DBT)

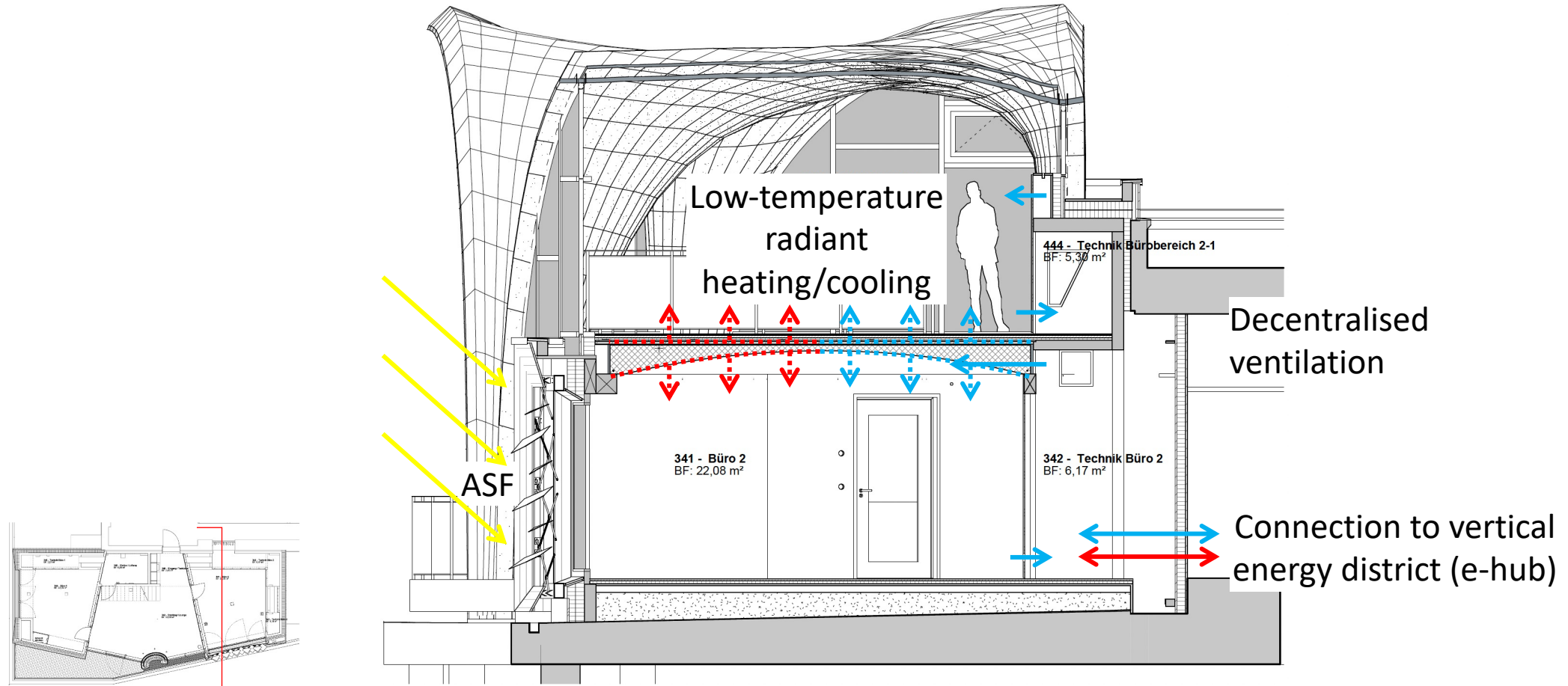
Prof Dr Benjamin Dillenburger

Andrej Jipa

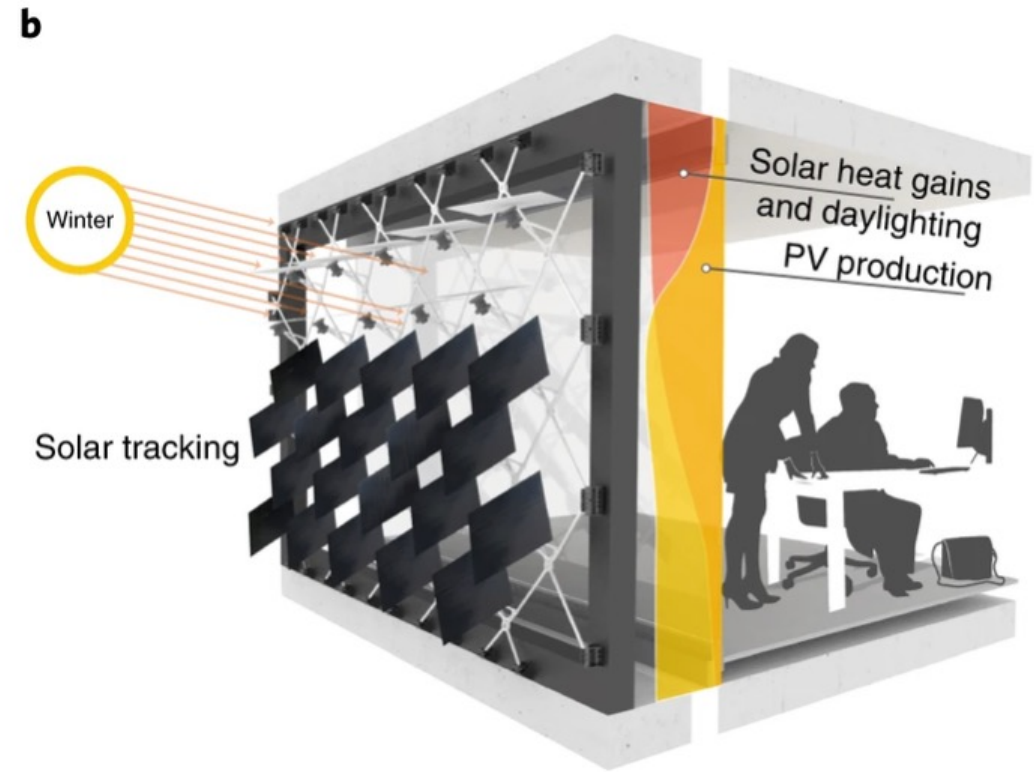
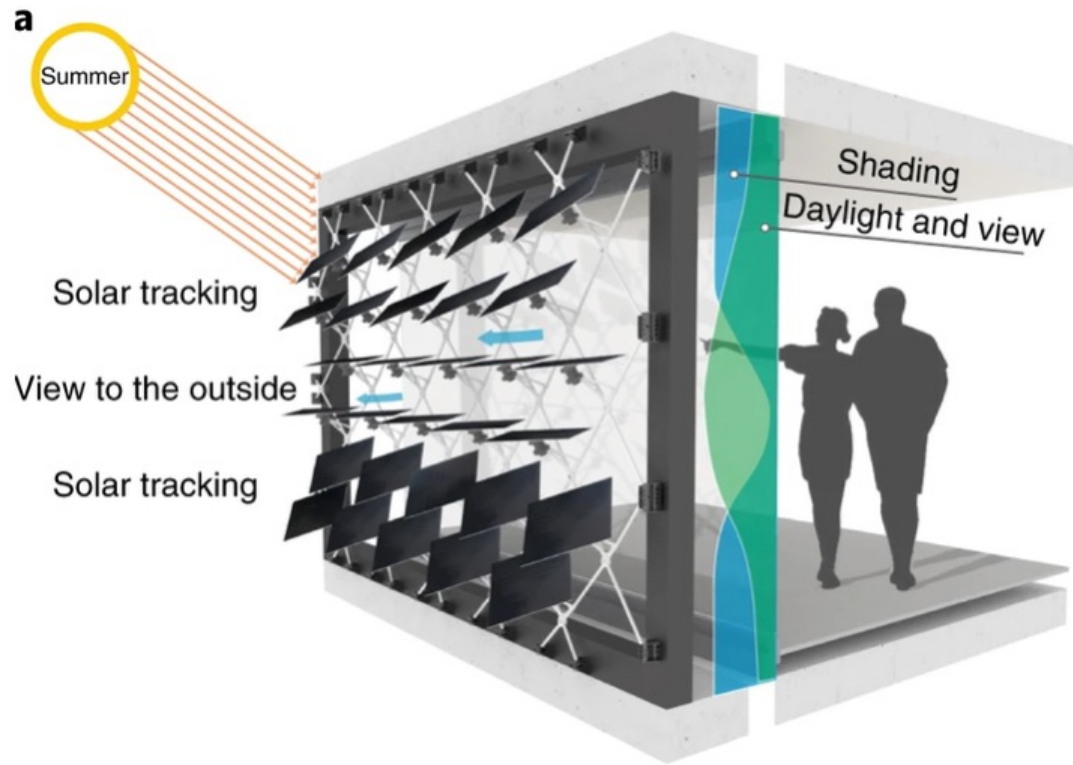




# Energy systems in HiLo



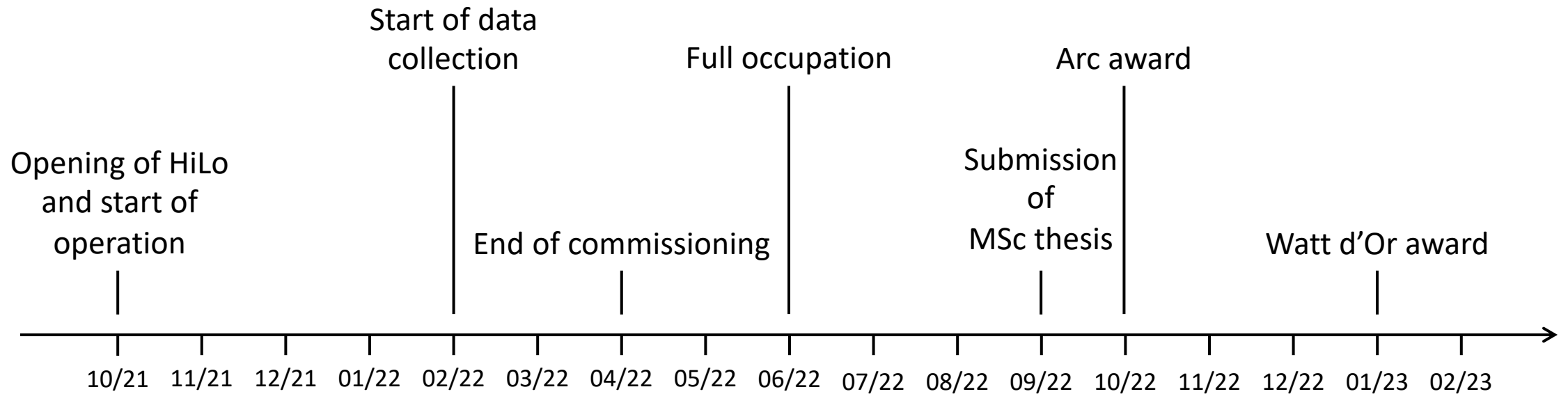
# ASF concept



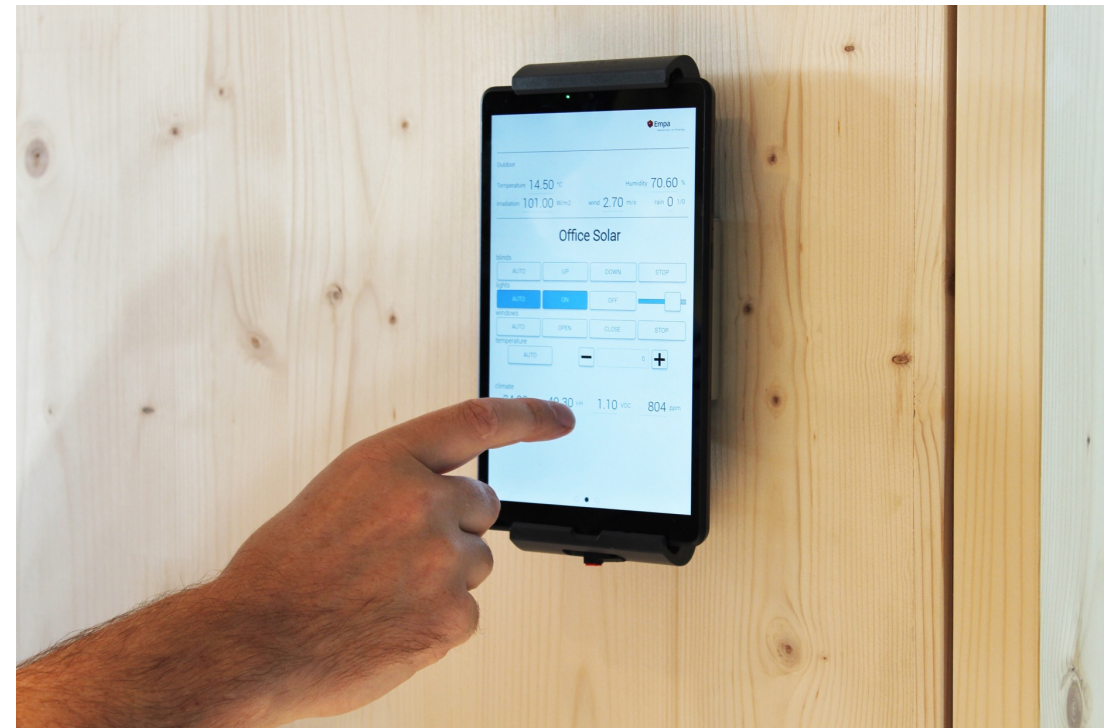
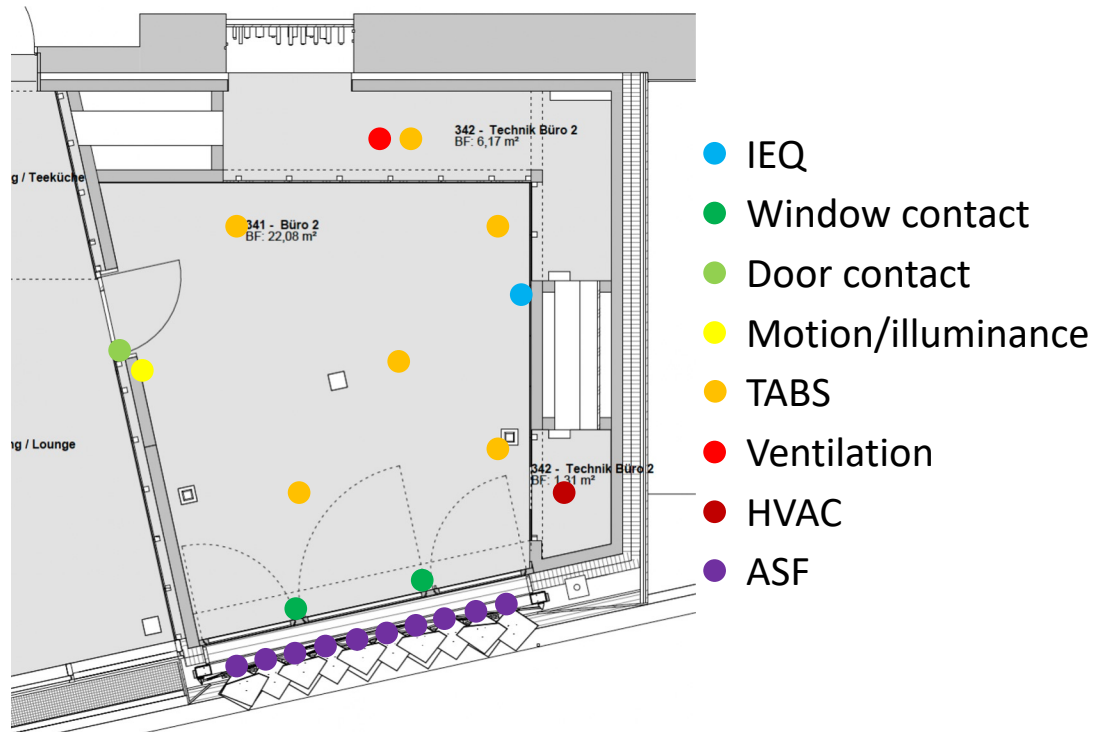




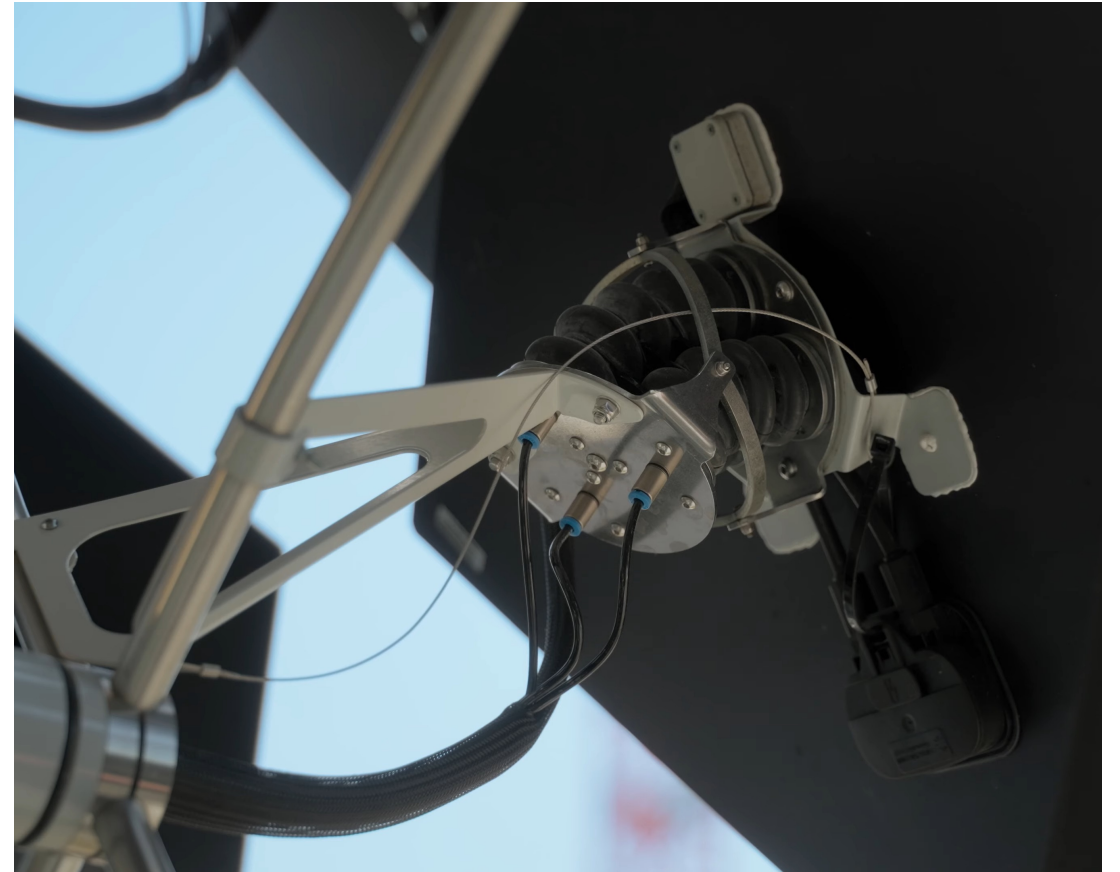
# Timeline



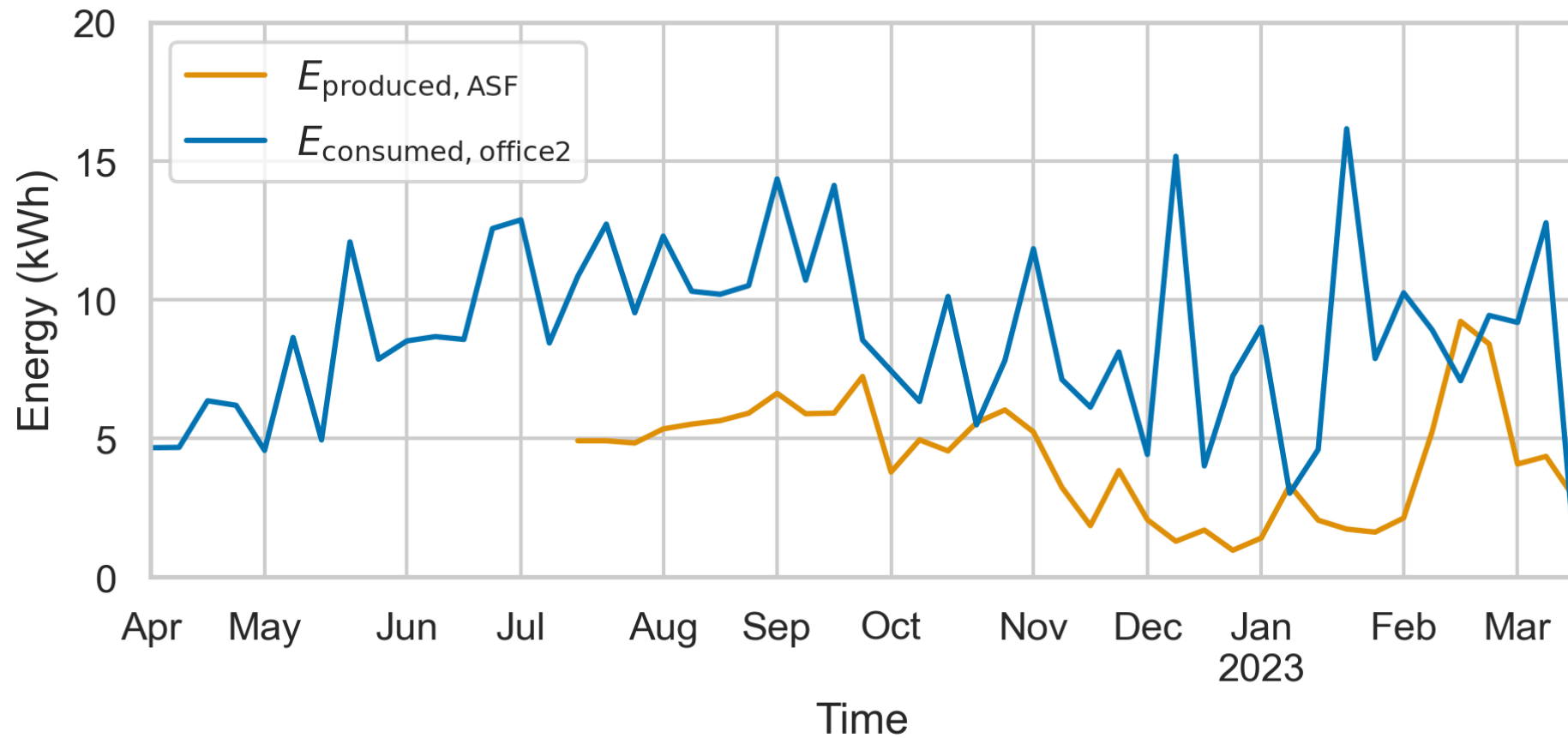
# Sensors in office 2



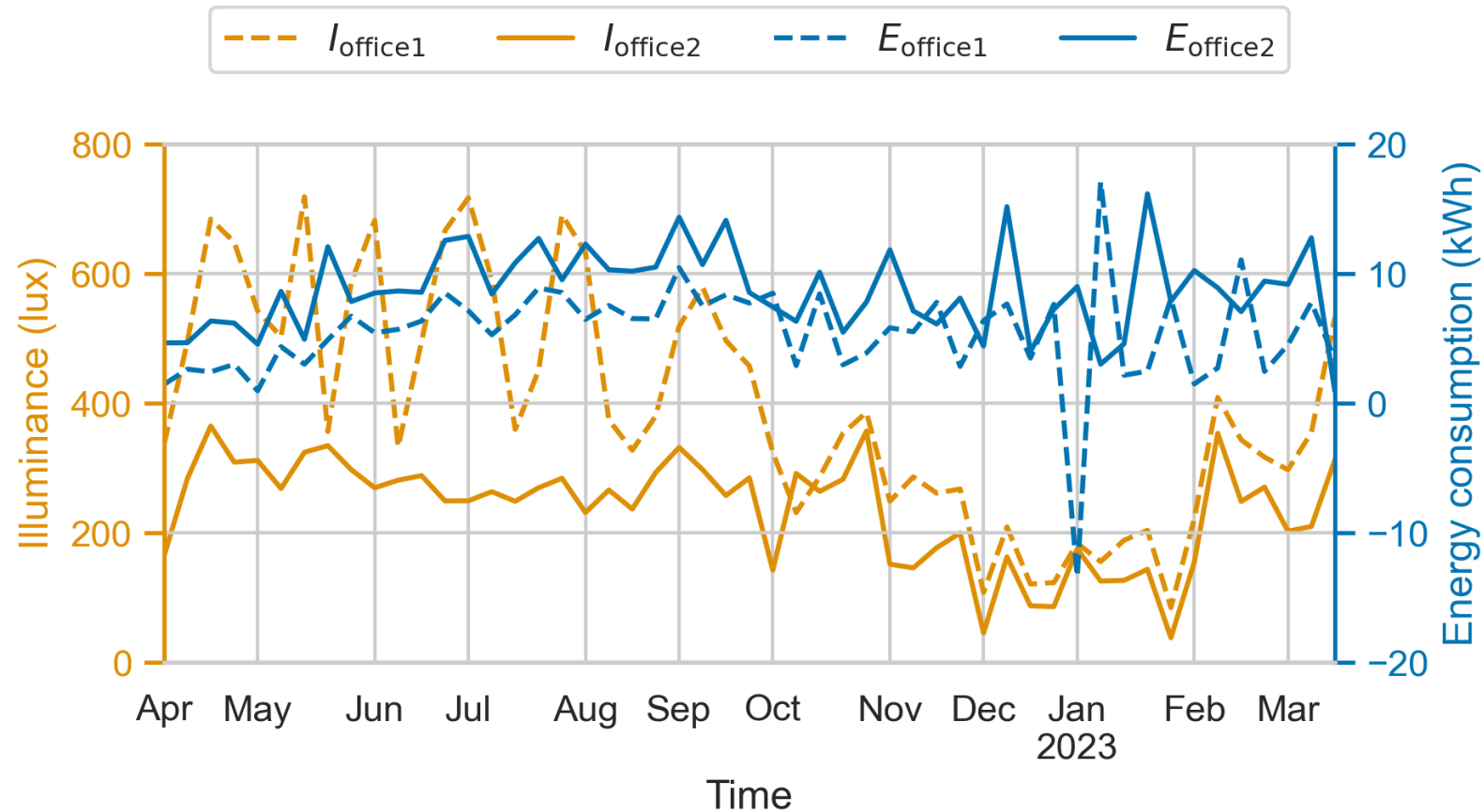
# Control algorithm of ASF



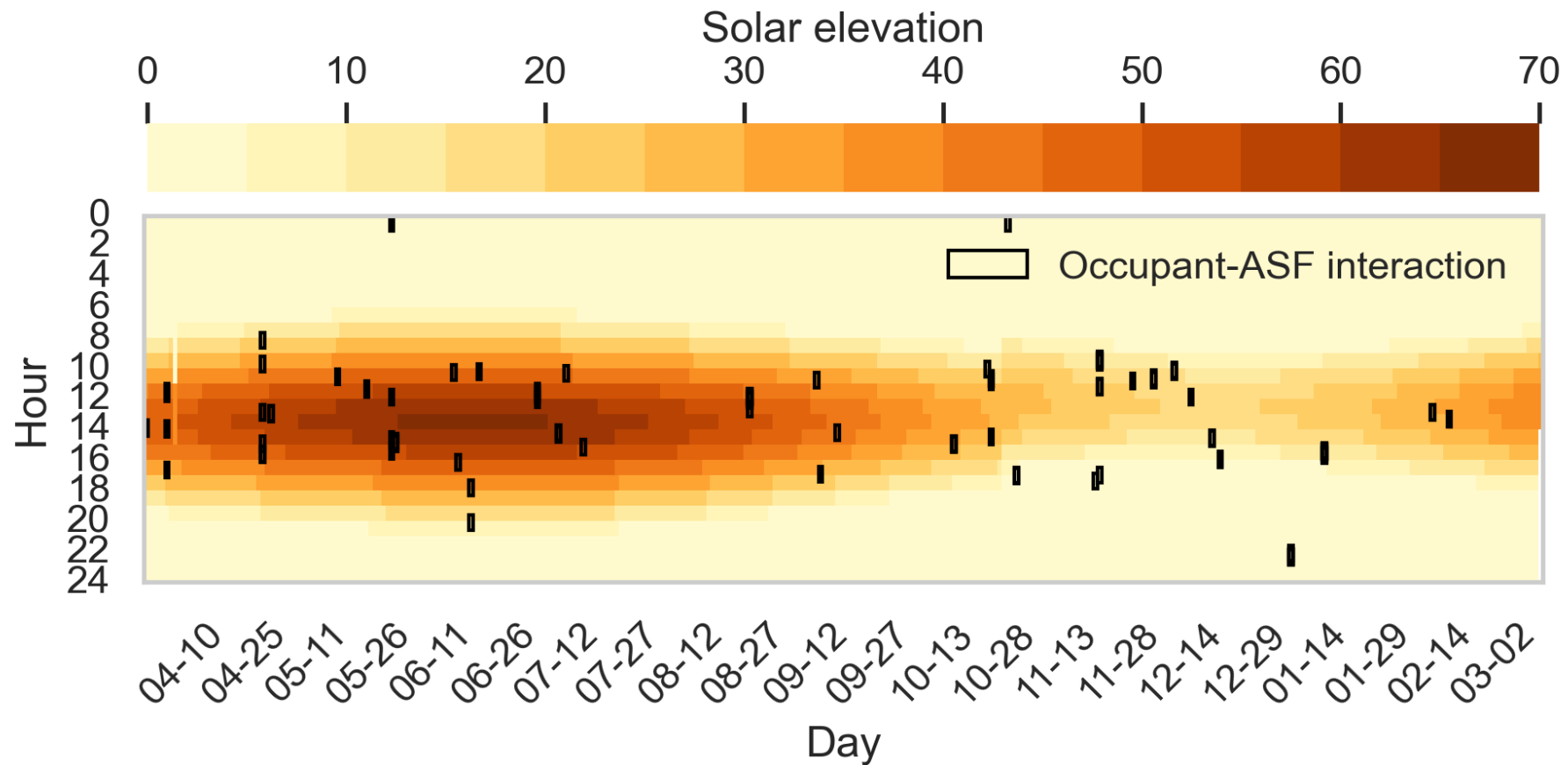
# Produced energy vs consumed energy



# Impact of ASF on illuminance and energy consumption



# Occupant interactions with ASF



# Thank you!

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