

**synavision Pitch Deck**

# **Certified Digital Quality Management for Smart Buildings**

**It is only smart and sustainable - if it really works!**

Introducing  synavision





# Our Track Record



**500**  
Smarter  
Buildings

**450.000t**  
CO2-savings

**€135m**  
Opex-savings

**120,000**  
monitoring  
points

**<1 year**  
average  
ROI

# Vision & Mission



By ensuring that building technology works as designed from day 1, we reduce OPEX and CO2-emissions of buildings, improve indoor comfort for users and increase real estate value. This helps investors, building owners, operators and ultimately all as we are fighting the effects of climate change.

With our digital services and software for Quality Management of Building Technology we create digital twins of building automations' functions to automatically identify and remedy technical defects of Smart Buildings – fast, easy and with payback times < 1 year.

**Making smart buildings work.  
This is what drives us.**

*“All buildings that have been built in the last 10-15 years do not work.”*

Jochem Gombert, Deutsche Bundesbank,  
Head of Construction Management

*“Building Automation 4.0 is digitalization and quality”*

Prof. Dr.-Ing. Martin Höttecke,  
University of Applied Sciences Münster

# Our digital solutions on one platform



Fire Safety  
Testing



IoT-Sensor  
Integration



ISO 50001 certified  
Energy Management



Performance-  
Certification



Inspection of  
Air Handling Units



Comfort-  
Monitoring



Corrosion  
Prevention & monitoring



Cloud  
platform



Building-Performance  
testing & monitoring



## Our Customers

- Building owners, investors
- Investment managers
- Real Estate Asset Managers
- Operators / Facility Managers
- Construction companies / engineers

## Your Benefits

- Faster, better planning & commissioning
- Shortest payback times in the industry!
- Energy savings of up to 30% and CO<sub>2</sub>
- Improvement of indoor climate
- Efficiency gains through digitization of up to 55%
- Real Estate value retention & increase

# EU is serious about driving sustainability

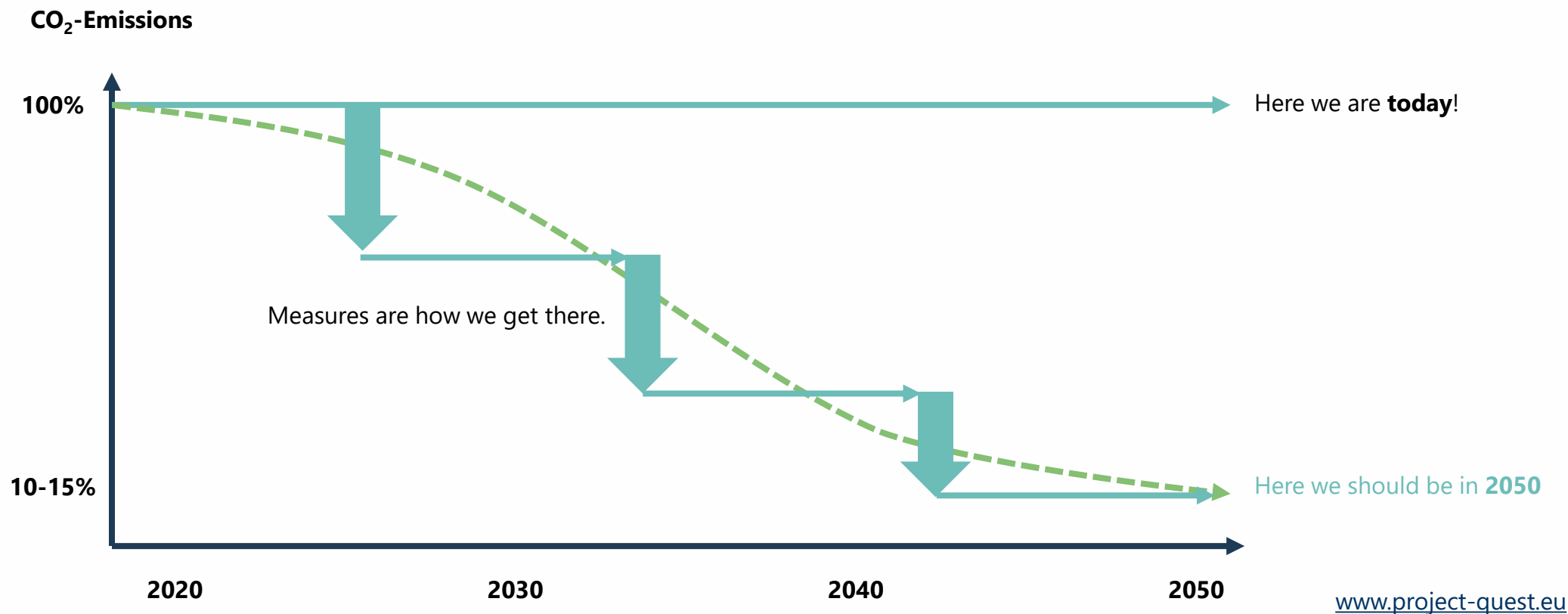


Global Real Estate Asset Managers need to massively invest in construction and modernization of real estate portfolios.

# The “Renovation-wave” is coming



As a consequence, **highly innovative technologies** will be deployed at **high speed** on a large scale to align comfort with sustainability.





# The Challenge



Smart Buildings are very complex,  
technical systems.

**Without quality...**

**... efficiency and sustainability  
targets will not be met.**



# Quality Management in leading industries



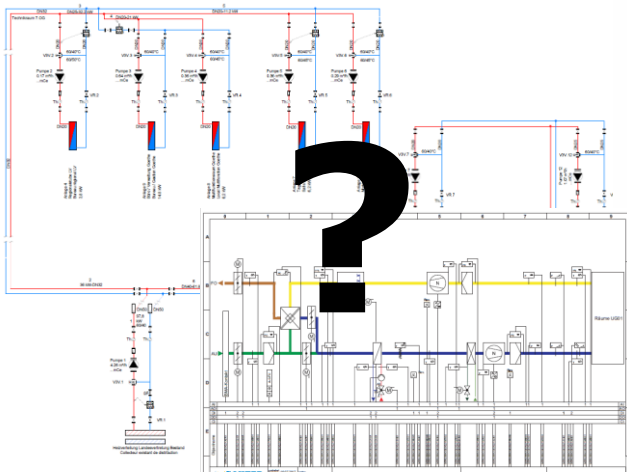
Automotive is at least as complex as  
construction & operation of real estate



# The reality in construction and operation of technical building equipment

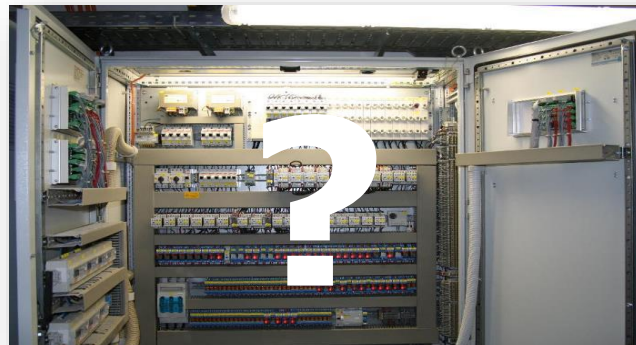


## Design



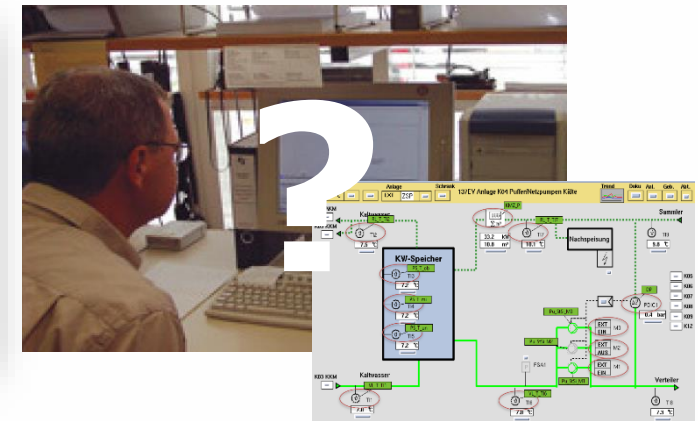
- Copy/paste
- Lack of documentation
- Lack of operational targets

## Construction



- Lack of transparency
- No testing possible with current tools & processes

## Operation



- State-of-the-art tools do not deliver the needed transparency in time and cost.

**No surprise that costs related to defects make up for 21 bn € or 19% of total construction industry's revenue<sup>1</sup>.**

Source: 1 Bauinfoconsult Report 2019

Our solution  synavision

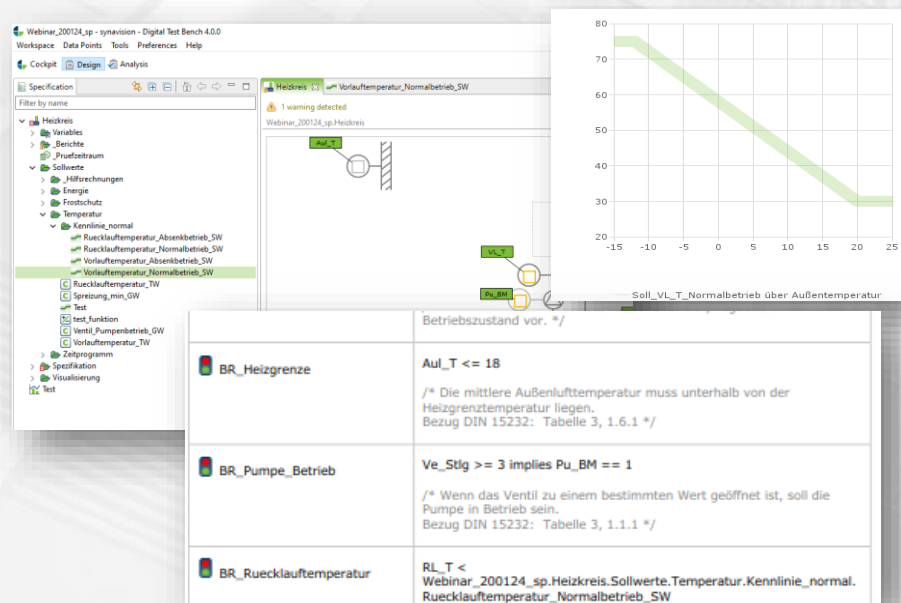




# BIM for building automation functions



## Unique digital specification method



## Unique data processing & evaluation



Building performance at a glance with the worldwide first digital quality management process!

# Our customers: Professional Building Owners & Operators





# Our projects: Optimizing high performance buildings





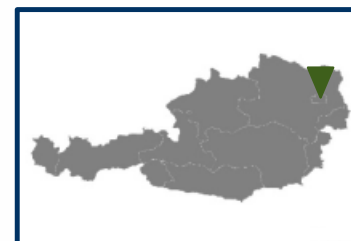
# Case Study synavision



# Asset Details



<b>Customer</b>	<b>CORESTATE Capital</b>
<b>Location</b>	Vienna
<b>Timeframe</b>	01.06.2020 – ongoing
<b>Category</b>	Micro Living
<b>Units</b>	589 units, parking, 2 restaurants, gym, office
<b>Surface</b>	c. 18.000 m <sup>2</sup>
<b>Floors</b>	11
<b>Constructed</b>	2015
<b>Technical equipment</b>	6 air handling units, district heat, cooling system (chiller, free cooling, cooling tower), circuits
<b>Calc. CO2 emissions</b>	1.225t CO2/a



# How It Works



## Easy Setup: Plug & Play

- Multiple access solutions, here:  
Setup of TÜV SÜD IT-Security cleared data interface for continuous and automatic data exchange
- Engineering of “Digital Twin”



## Fully automatized performance evaluation

- Automatic identification of optimization potential
- Development of actions and measures



## Continuous performance monitoring

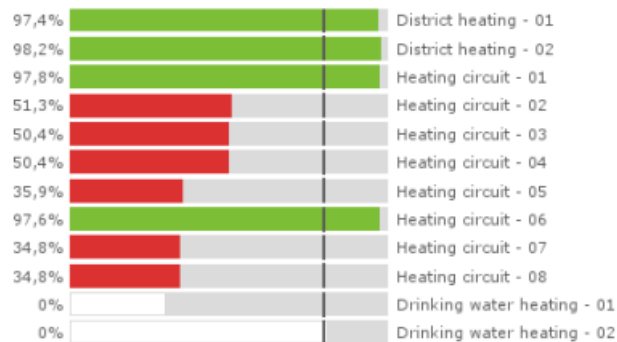
- Optimization & monitoring for securing maximum performance along the building's life-cycle
- Based on Software-as-a-Service technology



# Overview Results: Building Performance at a glance.

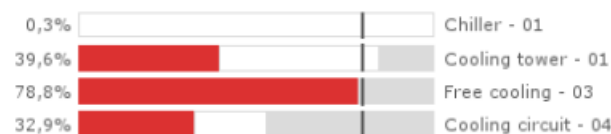


## Heating systems



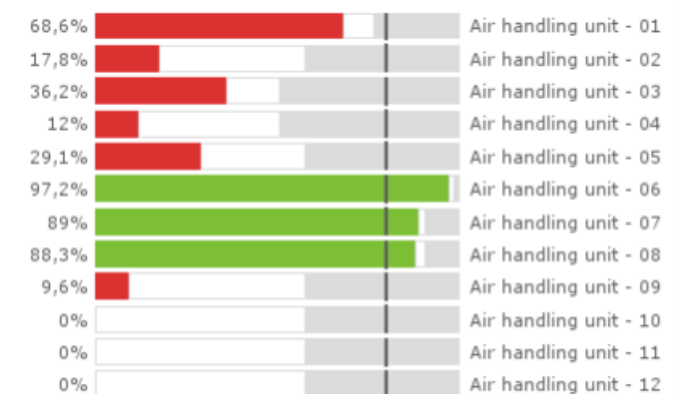
Von: 01.06.2020 00:00:00  
Bis: 31.08.2020 23:59:59

## Cooling systems



Von: 01.06.2020 00:00:00  
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## Air handling units



Von: 01.06.2020 00:00:00  
Bis: 31.08.2020 23:59:59

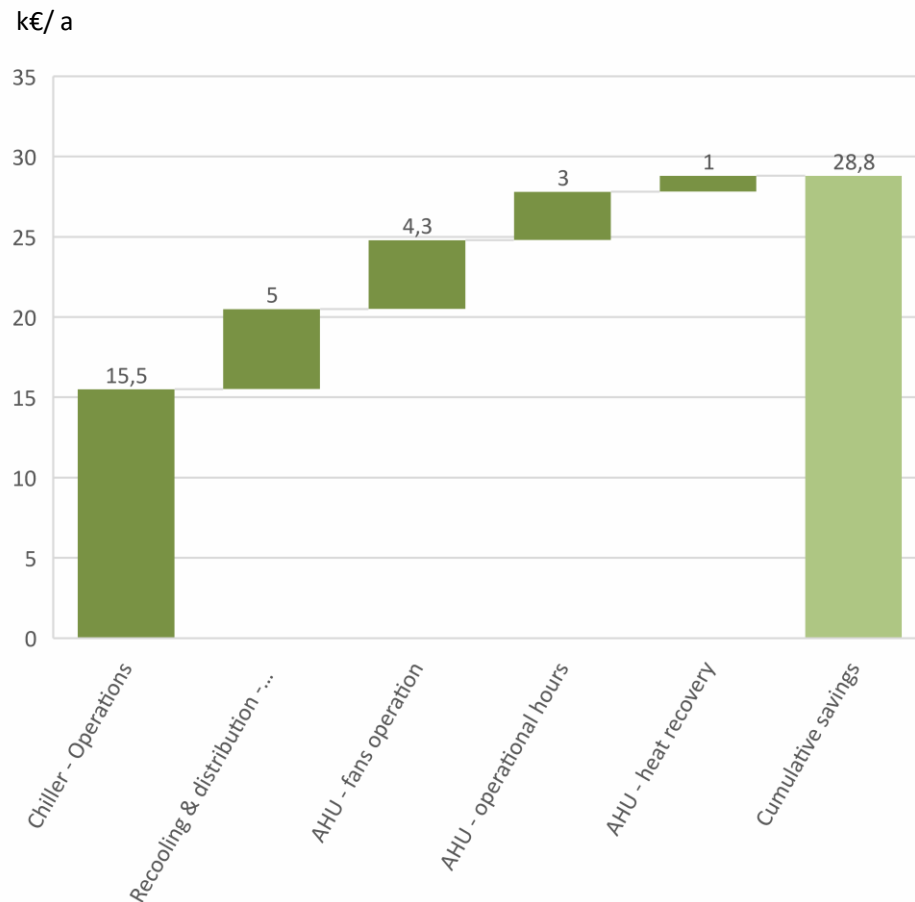
The savings potential is currently **~30 T€ / a** or **73 tCO<sub>2</sub> / a** based on data primarily from summer operation. Further savings in the other seasons can be expected.

**The identified optimization potentials can largely be implemented through non- or low-investment measures.**

# Top 10 results: ~ 90% of the potential

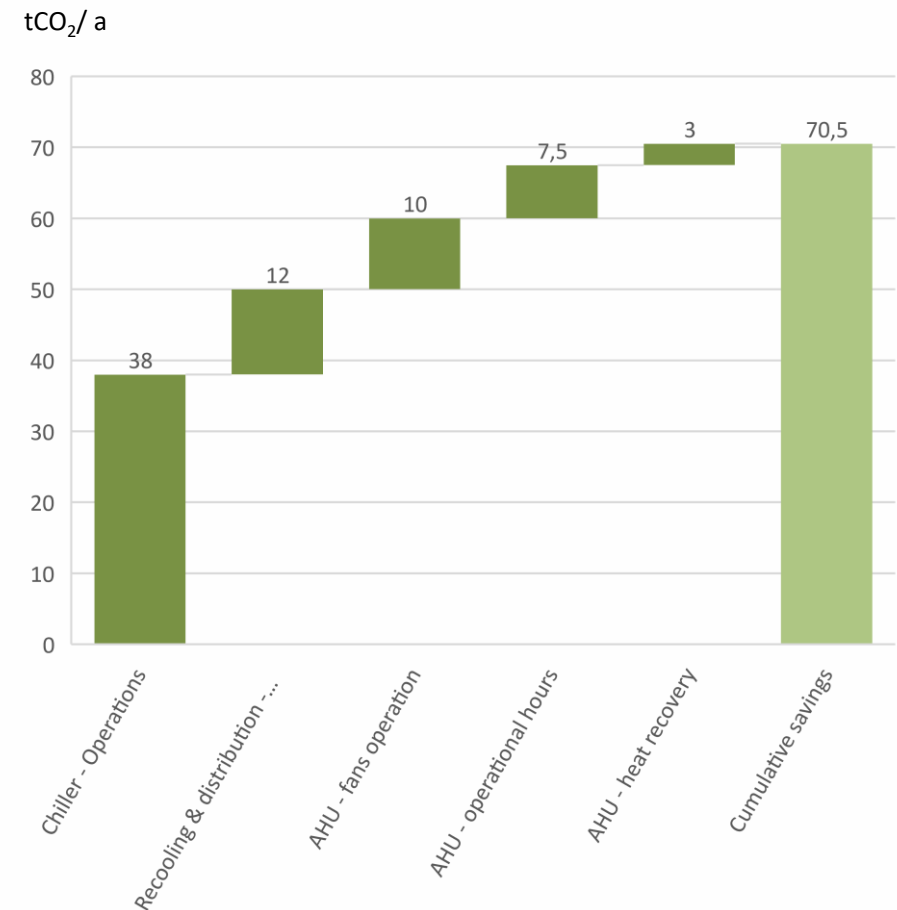


## Annual energy savings



**~14% of building's total  
energy costs**

## Annual CO<sub>2</sub>-savings



**~ 6% of buildings' total  
emissions**

# A certified process for request of subsidies from recovery plan



**First certification for digital quality management of technical building infrastructure**

synavision, EUROVENT and REHVA are shareholders.



The Certification

**COPILOT**  
Zertifizierung für digitales Technisches Monitoring

The Service



The Standard

AMEV recommendation „Technical Monitoring“



# Summary of Results



## OPEX:

OPEX can be reduced by up to **30 T €/a (~ 14% of total annual energy costs)** without any investments.

## Energy consumption:

Based on findings during summer operation energy consumption can be reduced by ~ **150 T KWh/a**.

## CO<sub>2</sub>:

CO<sub>2</sub>-emissions can be reduced by. **73 t CO<sub>2</sub>/a (~ 6% of the building's total CO<sub>2</sub>-emissions)**.

## Value increase:

Depending on financing structure, Real Estate **value is increased by k€ 900-600**

**Customer's payback time: < 3 months.**

Case Study:	€ p.a.
Units	589
<b>Net Rental Income</b>	<i>indirect</i>
Operating costs	-30.000
Rental loss	-
Property management	-
Maintenance and repairs	<i>indirect</i>
<b>Net Operating Income</b>	<b>+30.000</b>
<b>Impact on property value</b>	
5.0% NOI yield	600.000
4.0% NOI yield	750.000
3.3% NOI yield	900.000



It is only smart and sustainable if it really works.

Quality – the most attractive investment opportunity.

# Embark on our journey.

## Contact Us:

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