INDIVIDUAL ROOM CONTROL

Efficient heating with KNX

Frederik Riedel & Karim Bou Diab | 22.04.2026

» We are your speakers today!

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- Support, Product Advice

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- Application Engineer
- KNX & product applications support

Which of you turned down the heating control when you left the house this morning?

Is the comfort temperature subjective?

| What do you think?

People's perception of warmth varies greatly.

Nevertheless, “comfort” can also be achieved with comparatively low room temperatures.

- Avoid draughts
- Avoid temperature differences

Because most people find this unpleasant.

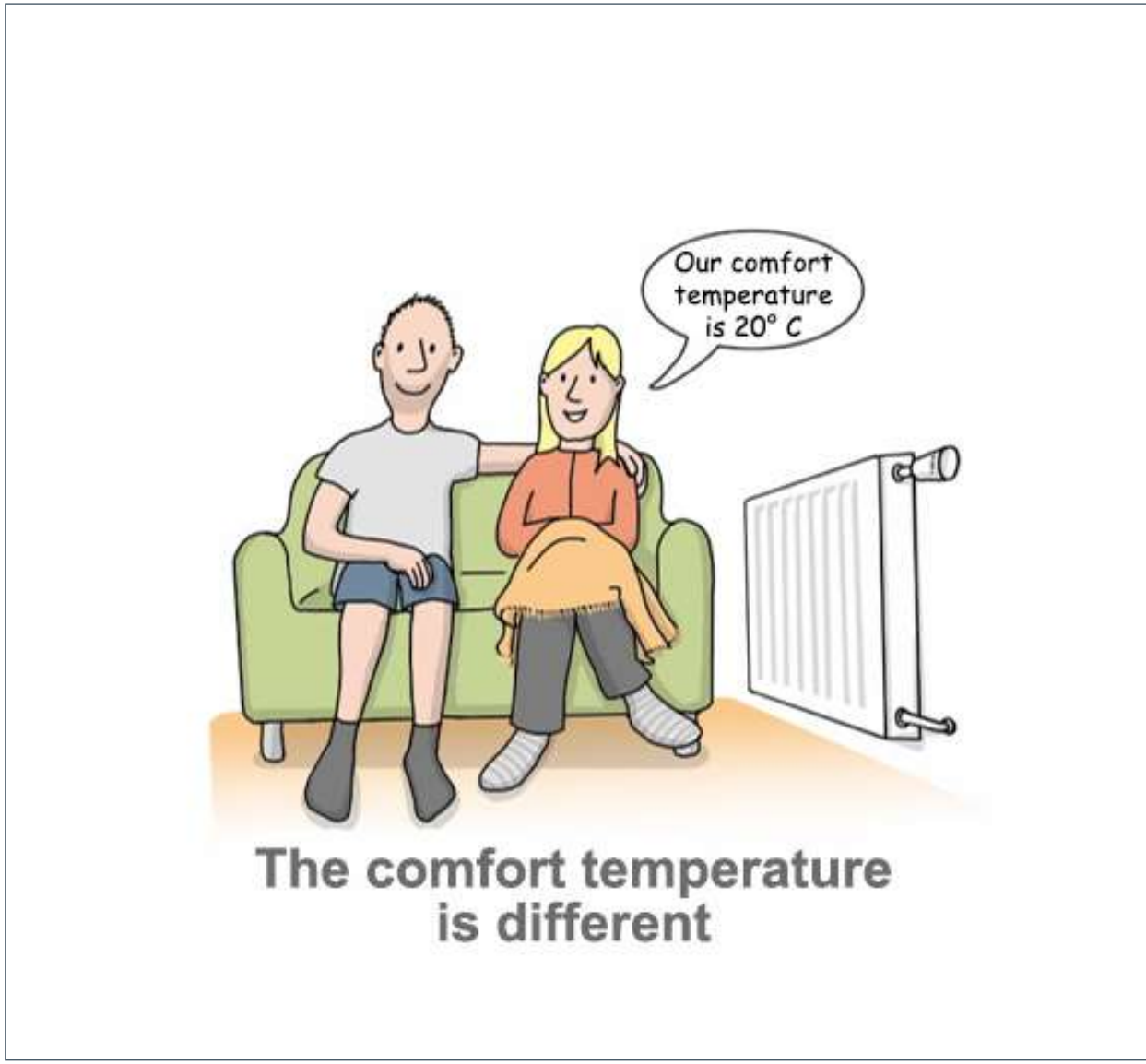

Image source: Die optimale Raumtemperatur für jeden Wohnraum (heizsparer.de)

Learning goals

After this webinar you will be able to:

- ✓ Determine the optimum temperature in different rooms
- ✓ Applying the principle of individual room control
- ✓ Distinguish between the different modes of operation of the control types and apply them correctly
- ✓ Selecting the right room controller for the project

AGENDA

1. Optimum room temperatures
2. Principle of individual room control
3. Two-stage heating
4. Overview of Elsner room controllers
5. Room/Climate Control
6. ETS Configuration / Examples
7. Data visualization and reports

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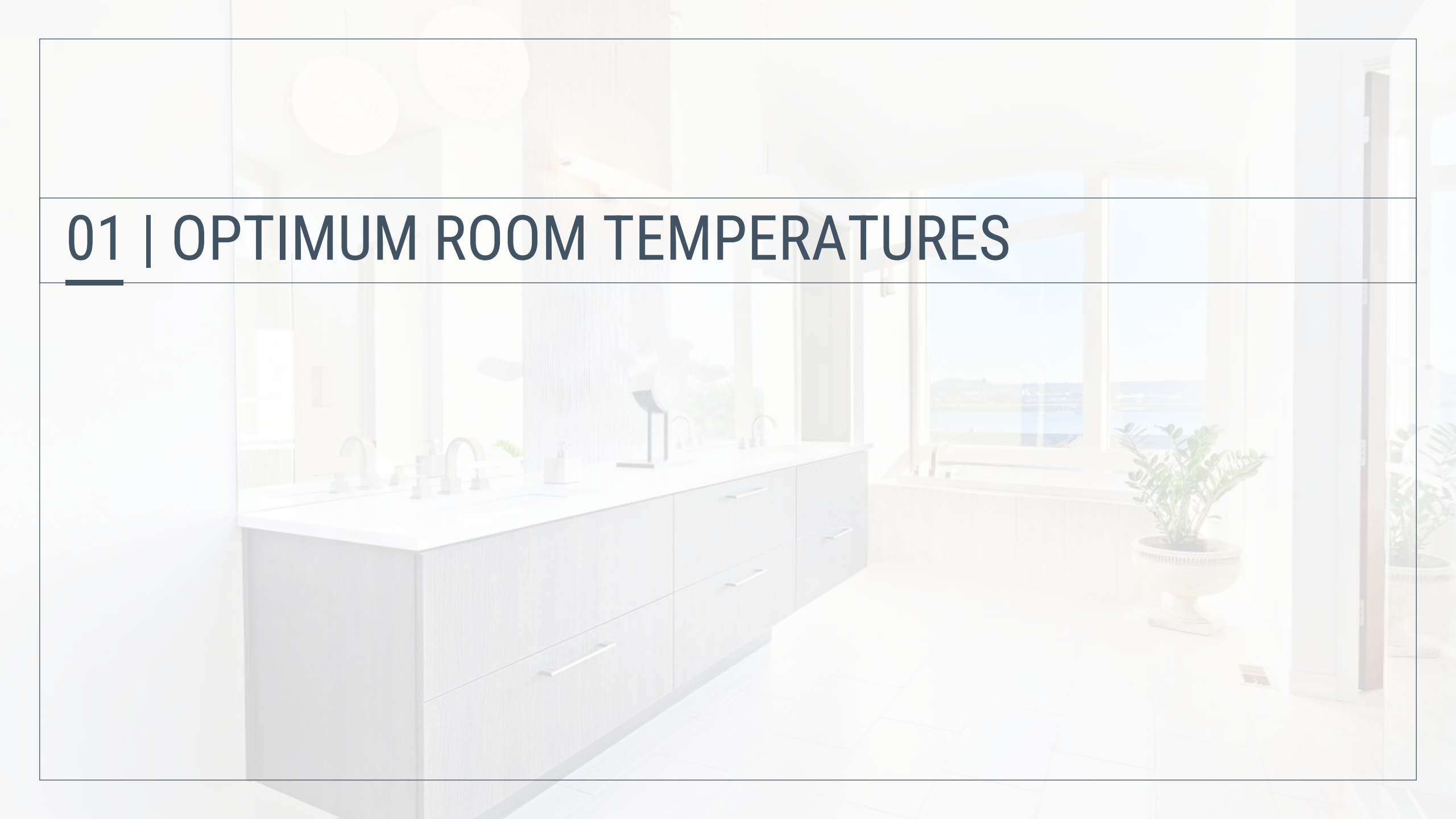
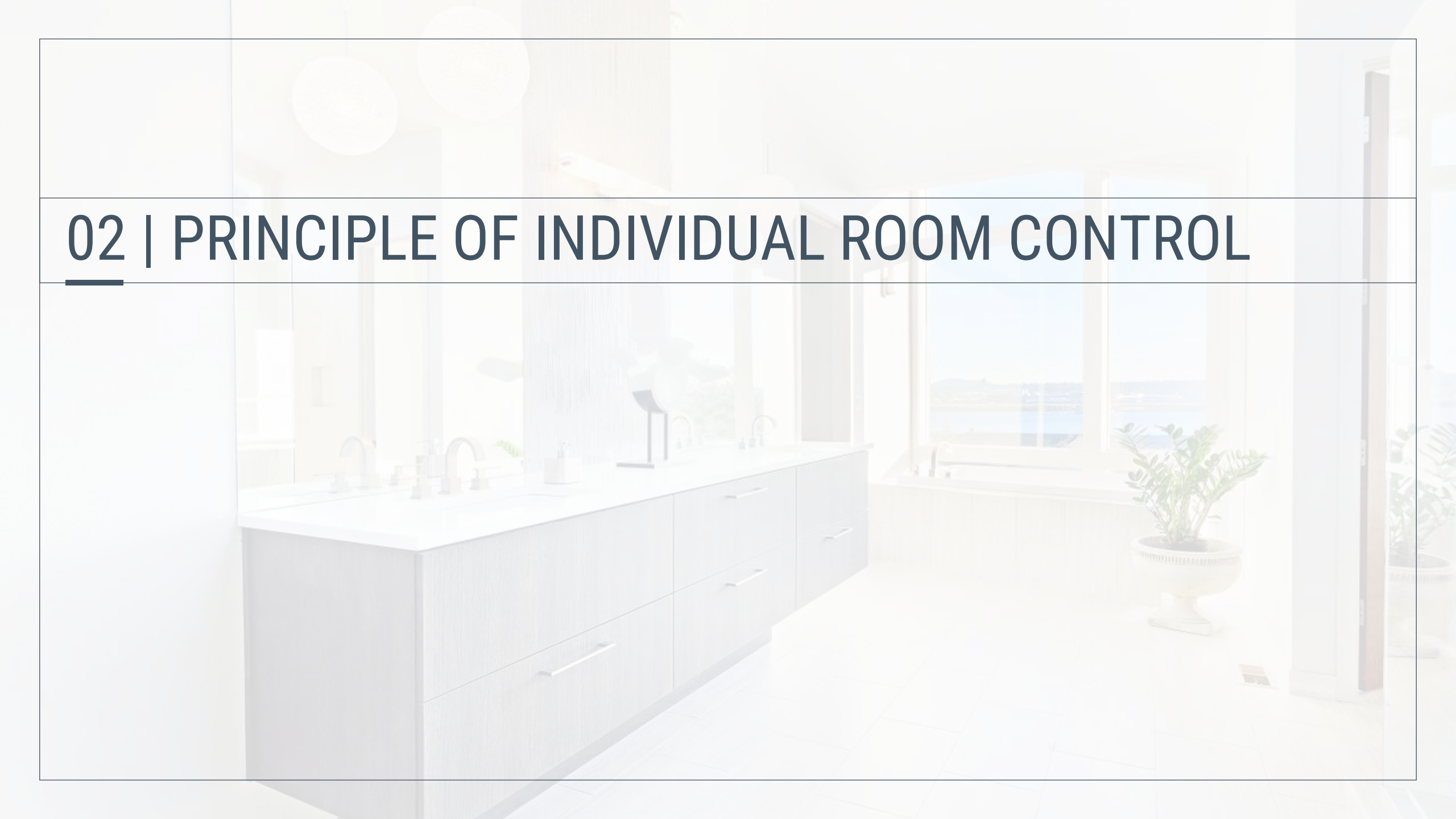
01 | OPTIMUM ROOM TEMPERATURES



Optimum room temperatures in different rooms

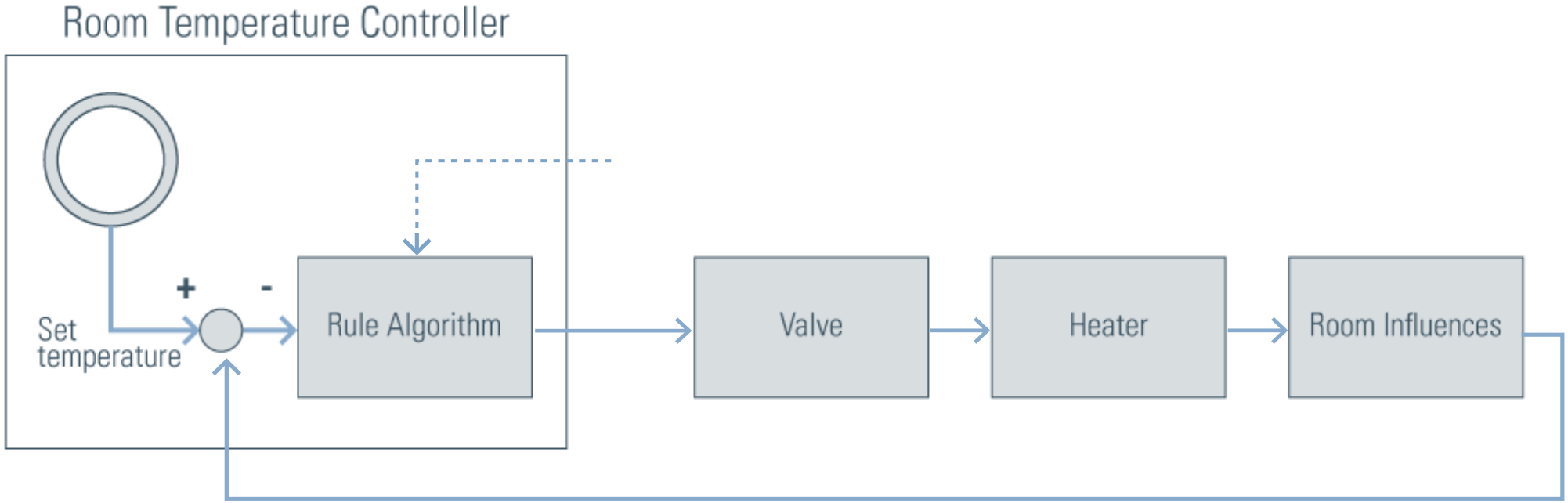
| These temperatures are considered pleasant

02 | PRINCIPLE OF INDIVIDUAL ROOM CONTROL

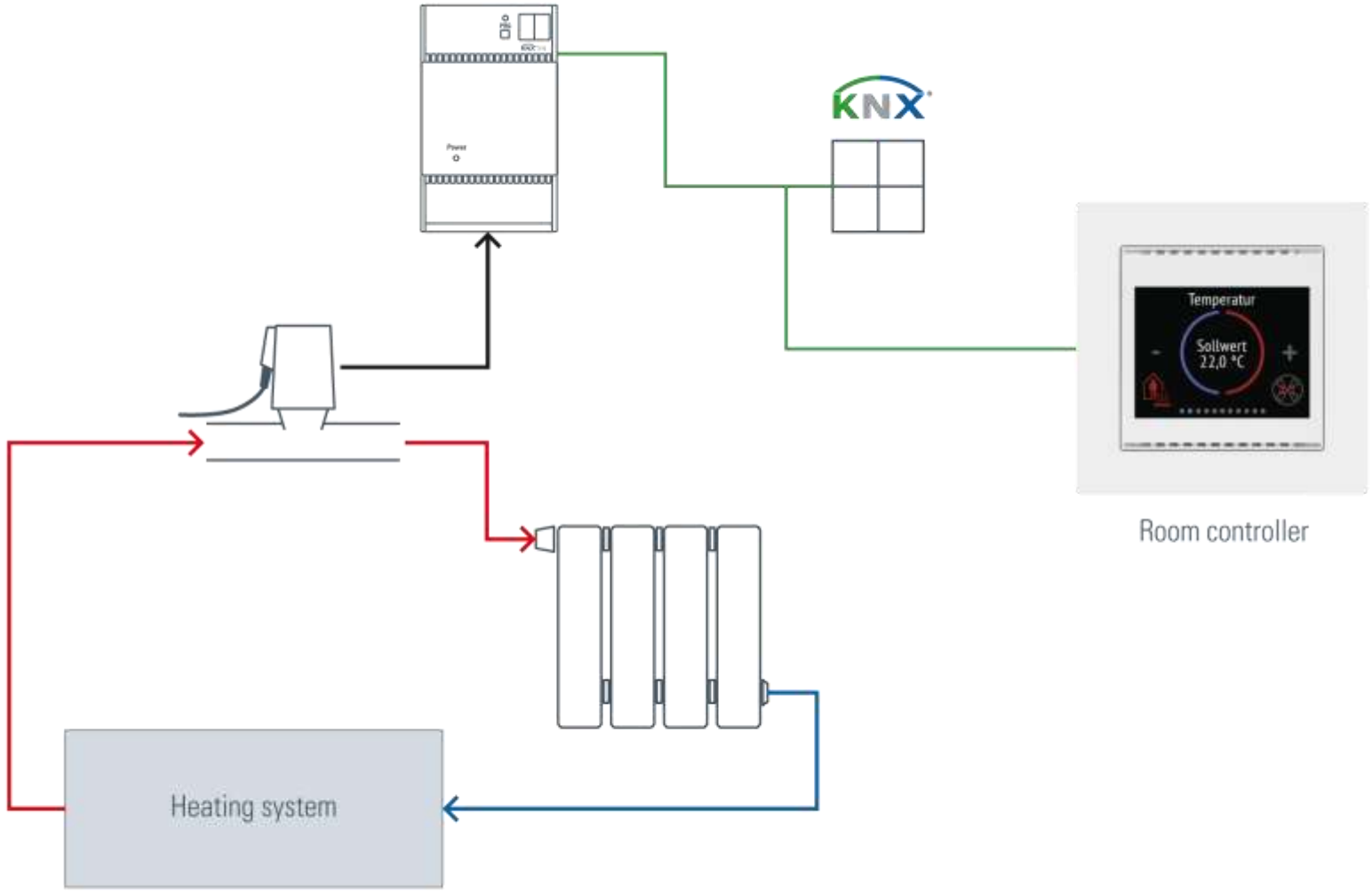


Schematic diagram of a room temperature controller

| Influence of actual temperature and setpoint temperature on the manipulated variable



Schematic representation of an individual room control

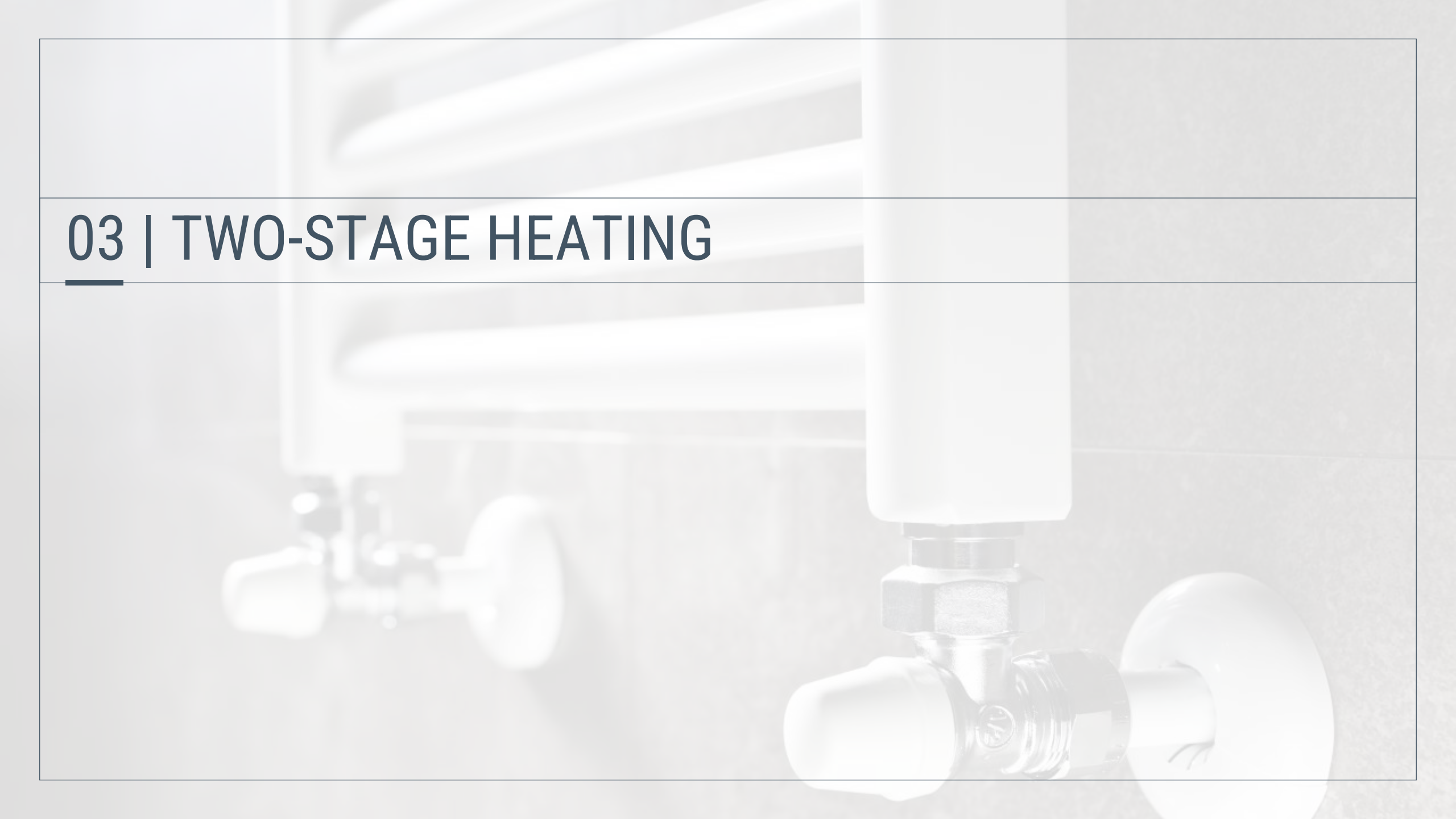


Selection of control according to heating type

Overview

Heating system	Recommended regulation
Hot water convector heating	At low flow temperature (30-45°C): PWM/continuous controller or 2-point control. For normal flow temperature (45-70°C): PWM control.
Floor/wall heating	Very inert system, therefore PWM / continuous control with long cycle time.
Hot water fan heating	To control the water circuit: Continuous PI control. If a fan is switched together with the hot water circuit: 2-point control.
Electric heating	For convector heating: Continuous PI control. For fan heating: 2-point control.

03 | TWO-STAGE HEATING



Two-stage heating

| Combined heating with two heating systems

- Inert heating
- Combined with an additional heater for rapid heating

Example bathroom:

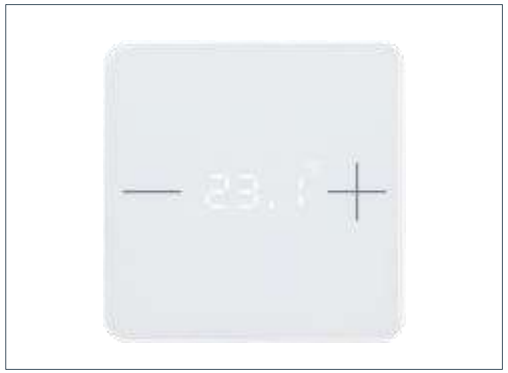
The floor heating maintains the standard room temperature.

If a significantly higher temperature is required (set/actual difference e.g. 3°C), the wall heating is also activated. The desired room temperature is reached quickly.

04 | OVERVIEW ELSNER ROOM CONTROLLER

KNX eTR series

| Room Controller



KNX eTR 101

- Integrated temperature measurement
- Temperature control
- Also available as version with binary input (eTR 101-BA2)

KNX eTR 208

- Integrated temperature measurement
- Temperature control
- Switch / dim light
- Sunshade / Window

KNX eTR 102 FC

- Integrated temperature measurement
- Temperature control
- Fan level control

119 €
Brutto List

KNX eTR 103 AC sec

- Integrated temperature and humidity measurement
- Temperature control
- Fan level control
- Mode selection
- Available starting in March 2026


21.5

KNX eTR 101

KNX eTR 201

KNX eTR M1

Series Cala KNX

| Room Controller

[Cala Touch KNX T]
(Item no. 7080x)

- Integrated temperature measurement
- Temperature control
- Switch / dim light
- Sunshade / Window
- 4 binary inputs

[Cala KNX T 101]
(Item no. 7098x)

- Integrated temperature measurement
- Temperature control

[Cala KNX MultiTouch T Light/ Sunblind]
(Item no. 7089x)

- Integrated temperature measurement
- Temperature control
- Switch / dim light
- Sunshade / Window


Gallery
60%

Cala Touch KNX AQS/TH

Install intelligent control units for the smart KNX building as easily as a light switch?
With the Cala KNX series, of course!

05 | ROOM/CLIMATE CONTROL

KNX eTR 102 FC

| Overview

- Room climate controller/thermostat
- FC = Fan Coil
- Individual control of heating and cooling output for fan coil units
- 3-speed fan control

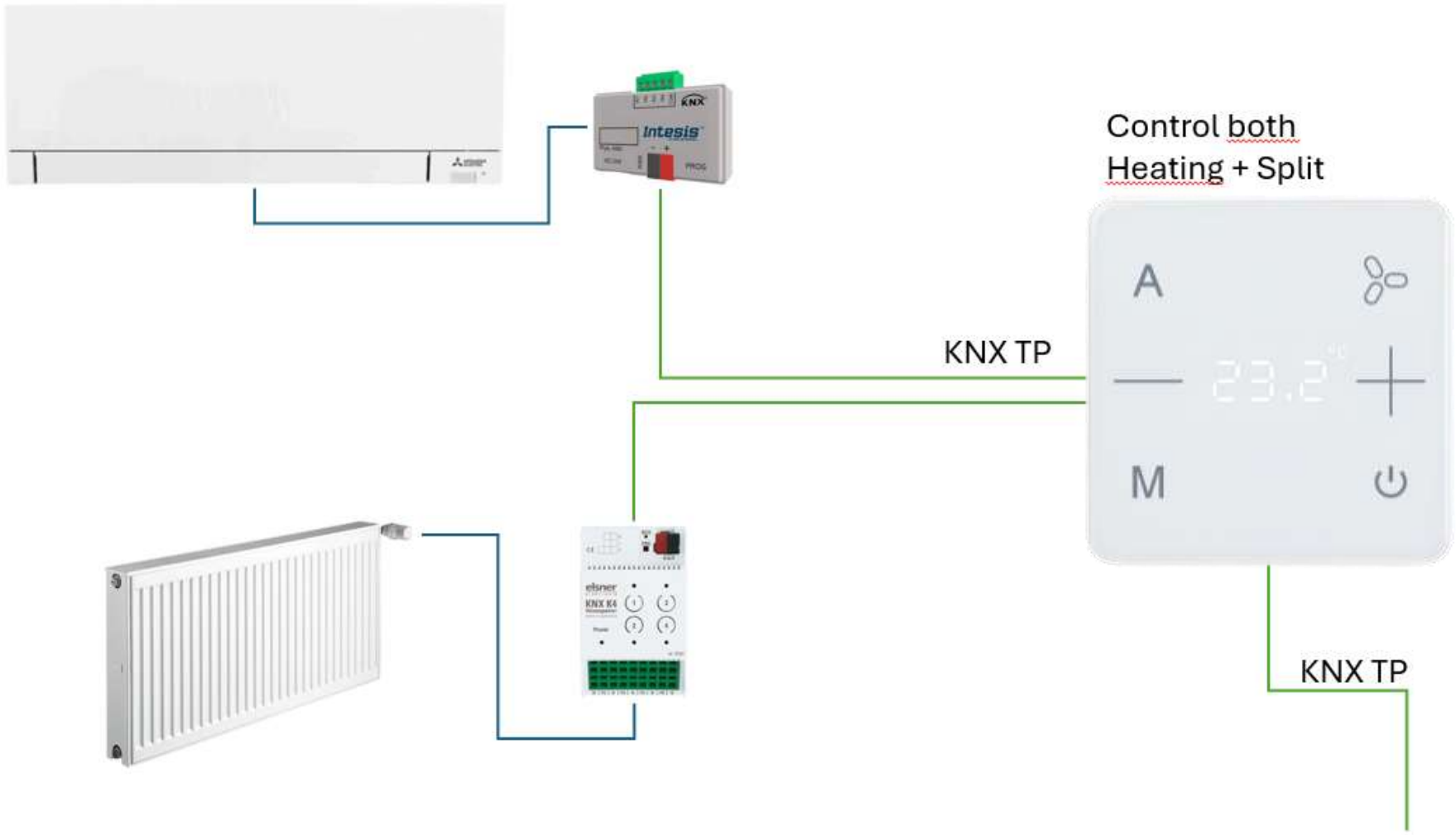
KNX eTR 103 AC sec

| Overview

- Room climate controller/thermostat
- AC = Air Conditioning
- Individual climate control
- 3-speed fan control
- Compatible with KNX AC gateways from leading manufacturers

Application example: KNX eTR 103 AC sec / Gateway

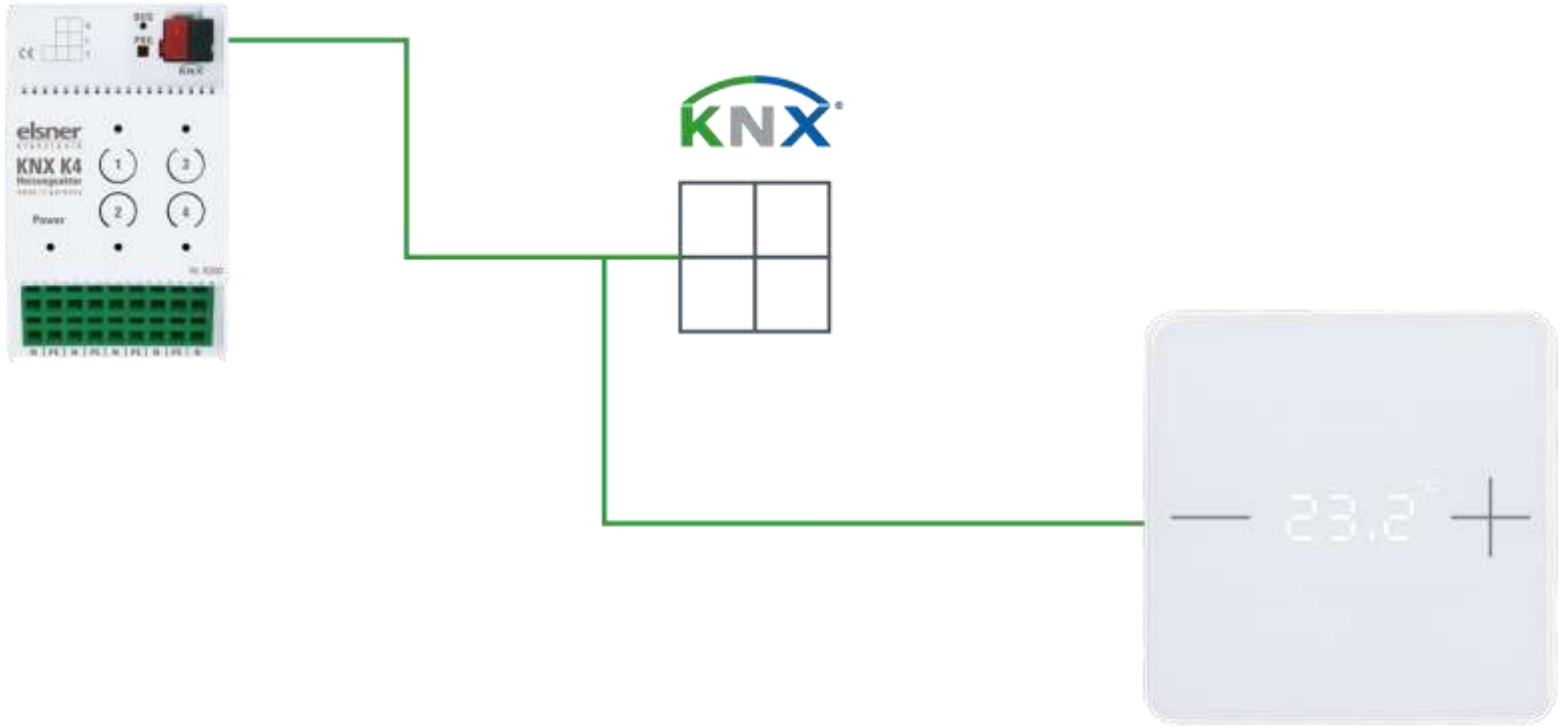
| Heating / Cooling with eTR 103 AC sec



06 | ETS CONFIGURATION / EXAMPLES

1. Structure

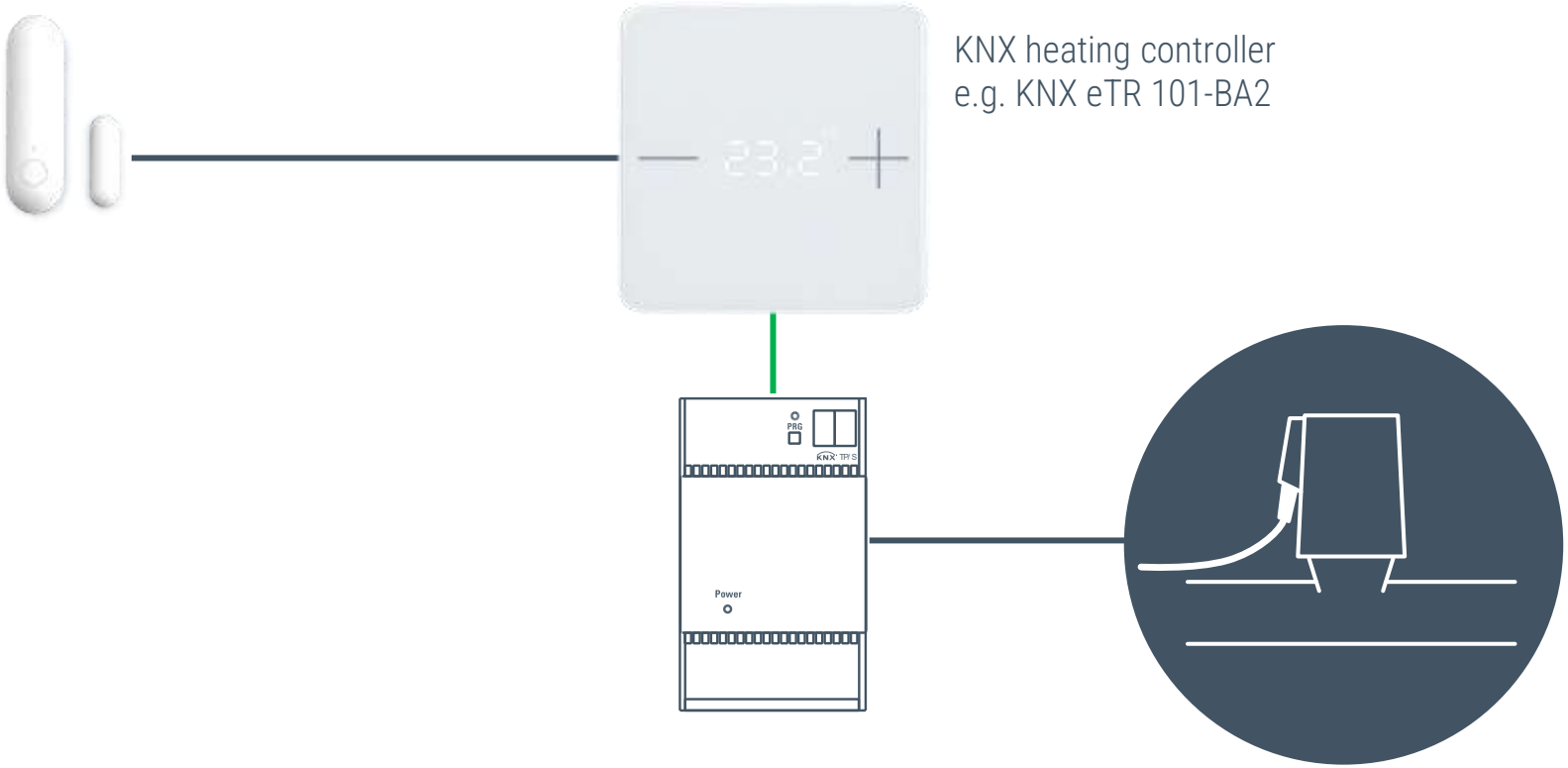
Single-stage heating with the KNX eTR 101 sec



Room temperature controller

1. Living area: KNX eTR 101 heating controller with window contact and heating actuator

| Parameterization in the ETS

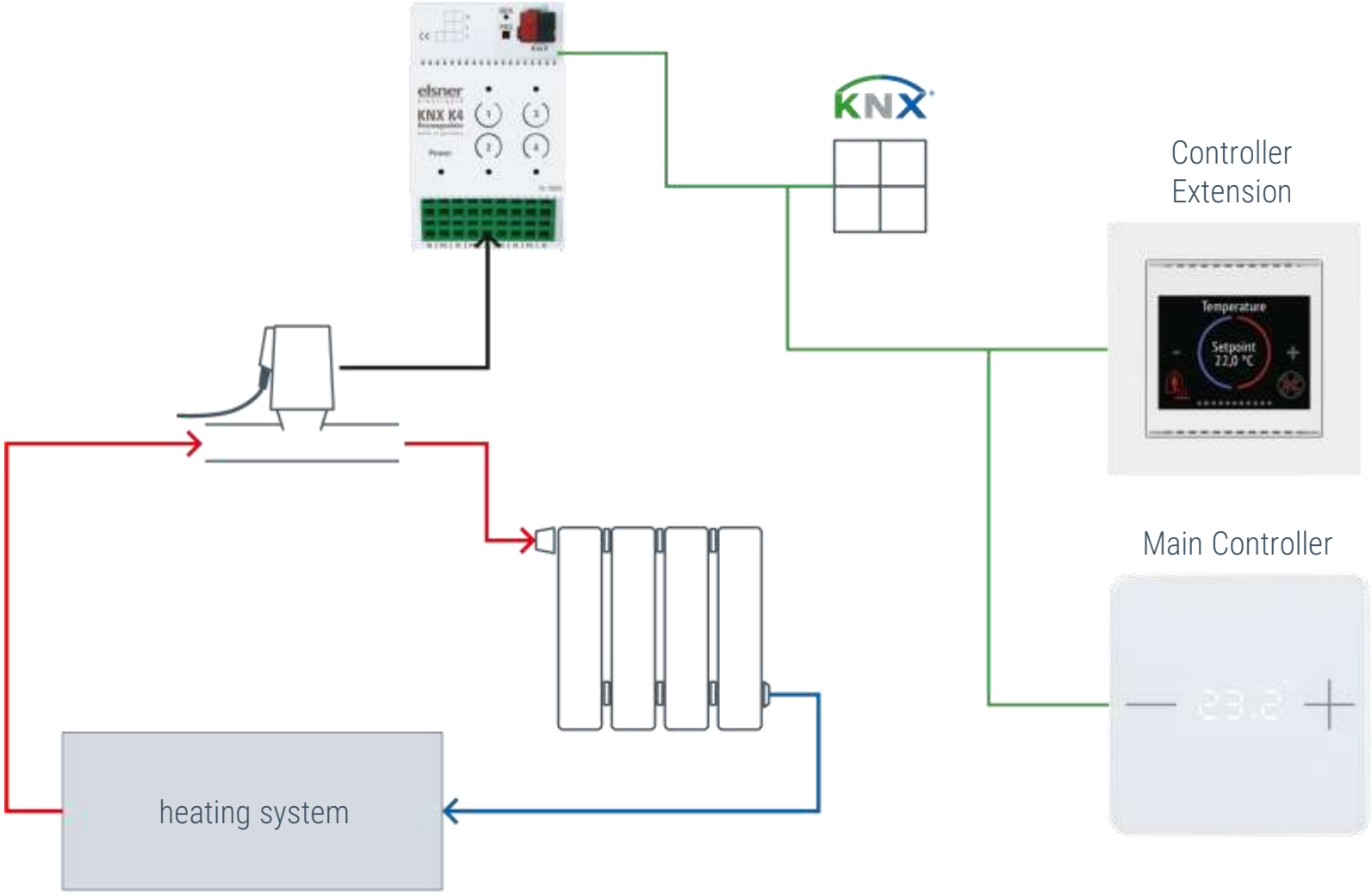


2. Office space: Heating control with Cala

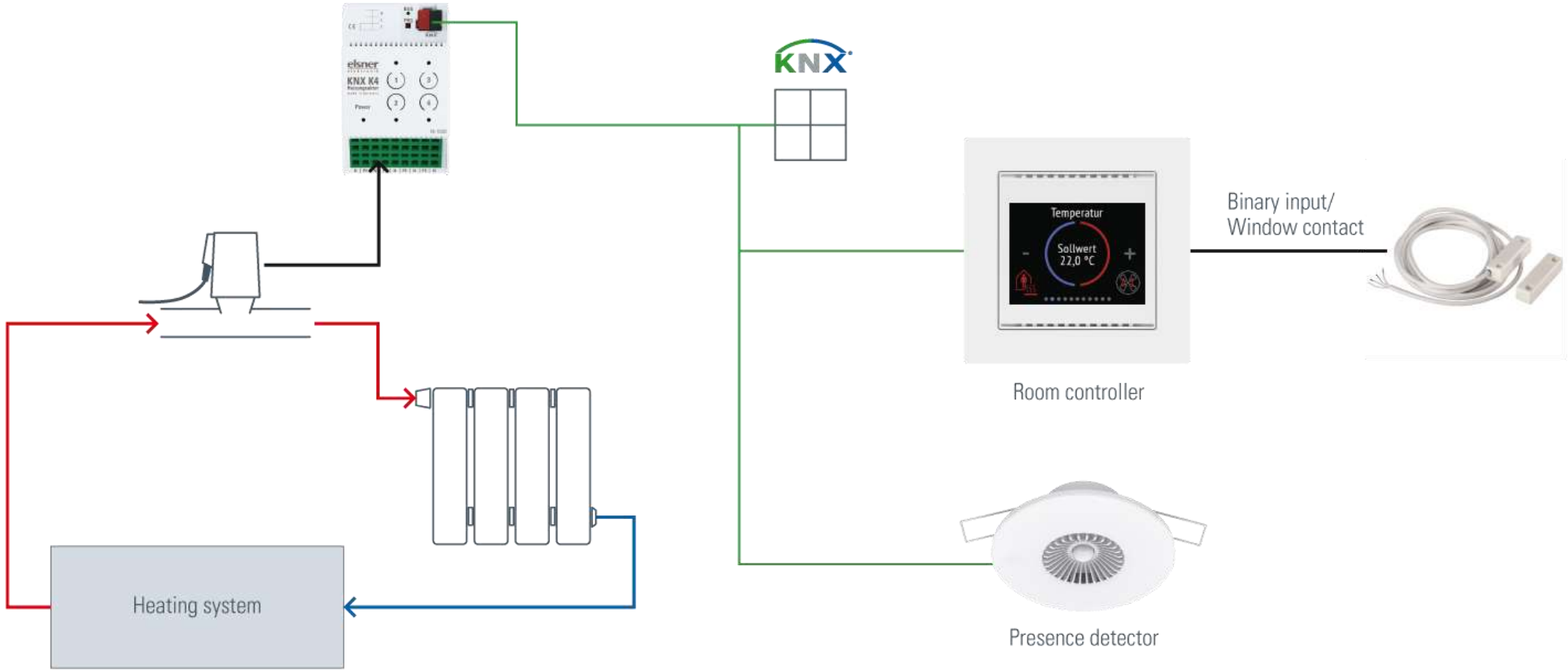
| Parameterization in the ETS

3. Office space: Heating control with Cala

| Technical configuration of the main controller and extension



4. Schematic diagram of a smart single-room control system



5. Living area: Temperature control with Corlo + mobile app

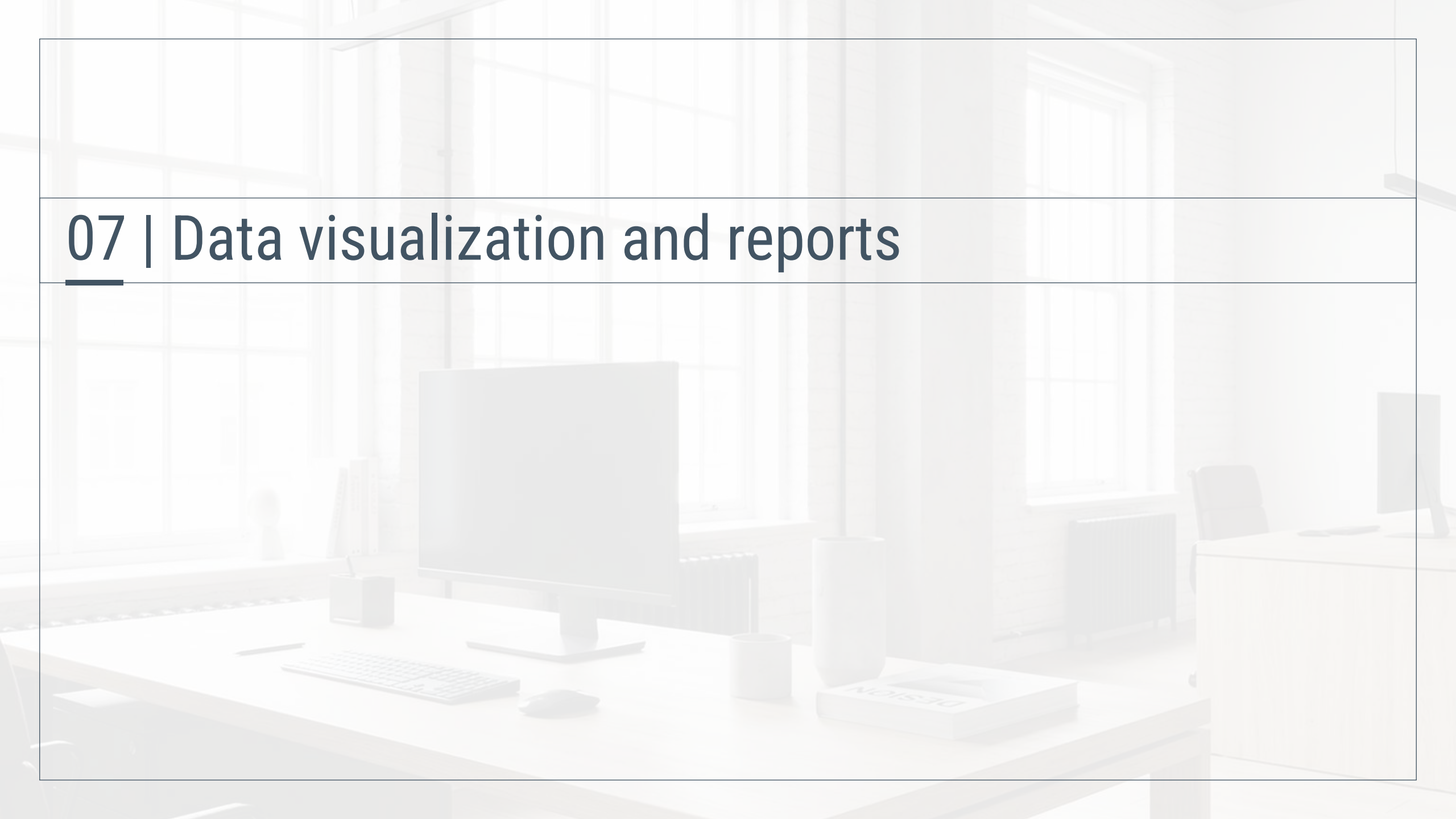
| Parameterization in the ETS

Corlo & Mobile App

| Implementation

- Corlo Display data is displayed directly in the app
- No cloud

07 | Data visualization and reports

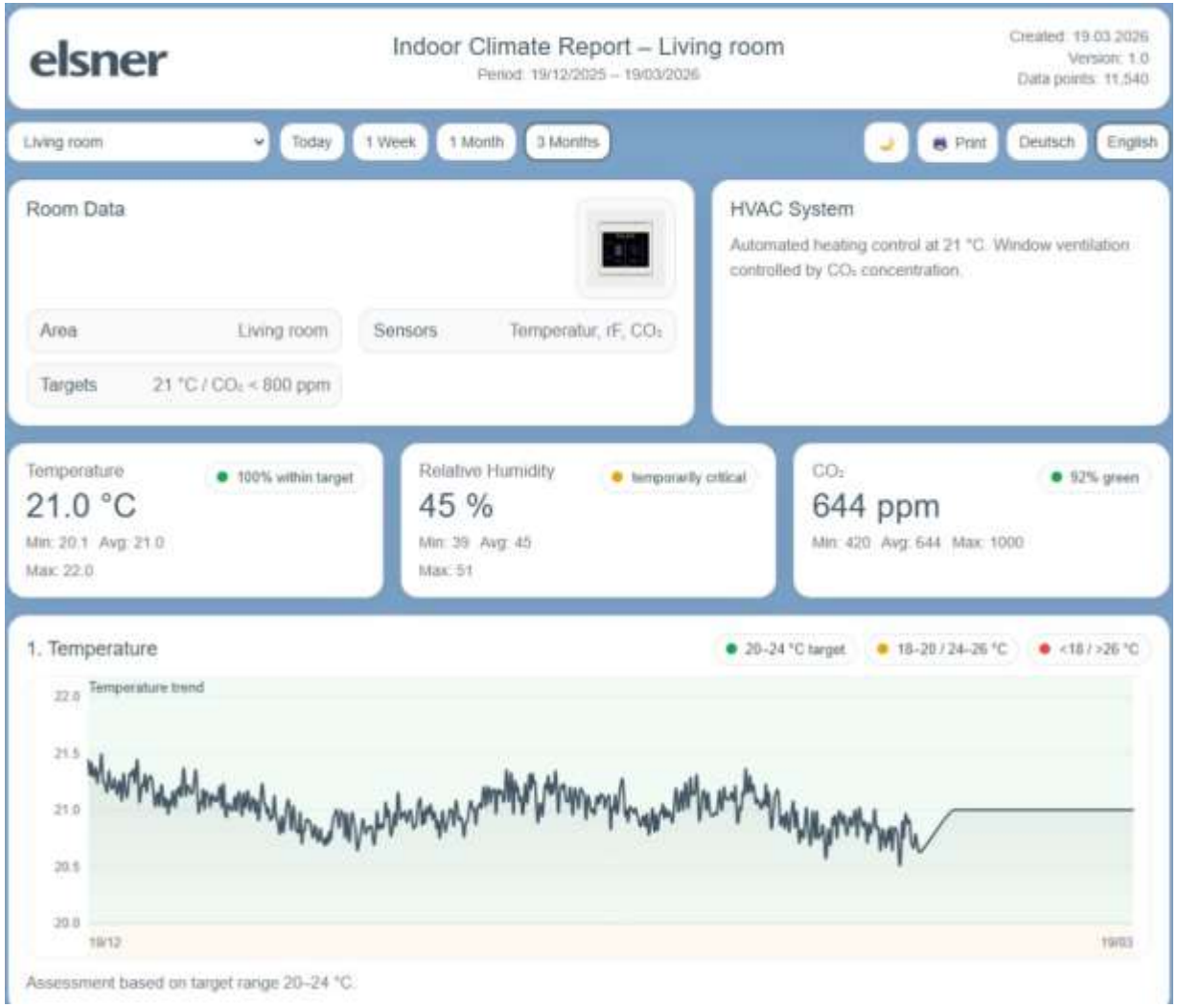


Visualize Measurement Data

| Room Overview

Report Measurement Data

| Room Report



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