

Training ClimaECO, 2019

ClimaECO: ABB i-bus[®] KNX HVAC Solution

Introduction

Thorsten Reibel, Competence Center Europe

ClimaECO: ABB i-bus® KNX HVAC Solutions

What is ClimaECO?



ClimaECO is our campaign to **highlight** our **HVAC Solutions** inside the **ABB i-bus® KNX** System.



Our ClimaECO offering consists of the **new developed Products** and the **established KNX HVAC range**.

The ClimaECO offering will be as well **extended** by **further developments**.

ClimaECO: ABB i-bus® KNX HVAC Solutions

Objectives and Motivation

Future Growth

Beside Lighting HVAC is the most significant application area to grow in the field of building automation

- Both applications are always needed in every Building
- Request and space for KNX solutions out of the room level

Upgrading KNX

Strengthen the acceptance and extending the scope of KNX for building control

- Products and solutions both for field- and automation Level
- Easy and fast implementation compared with competitor solutions

New Customers

HVAC Applications are handled often by other market player and not really covered by ABB's KNX range up to now

- New customers with more business
- Necessity to offer more and/or different solutions

Competition

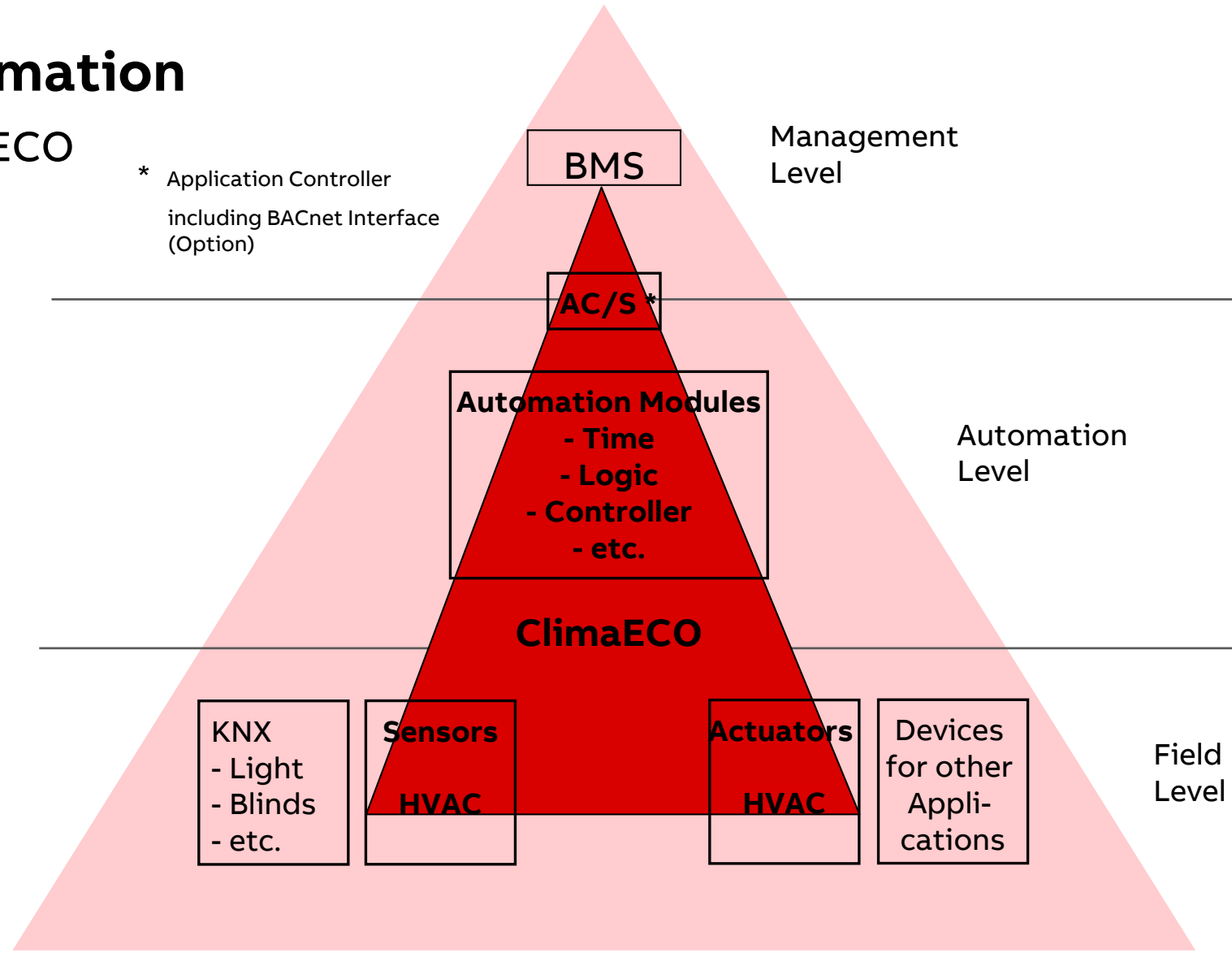
Other systems and partly KNX offer already solutions

- Proprietary technology often used
- More and more HVAC systems offer also lighting solutions

Growing, developing, acquiring and being competitive

Building Automation

Positioning ClimaECO

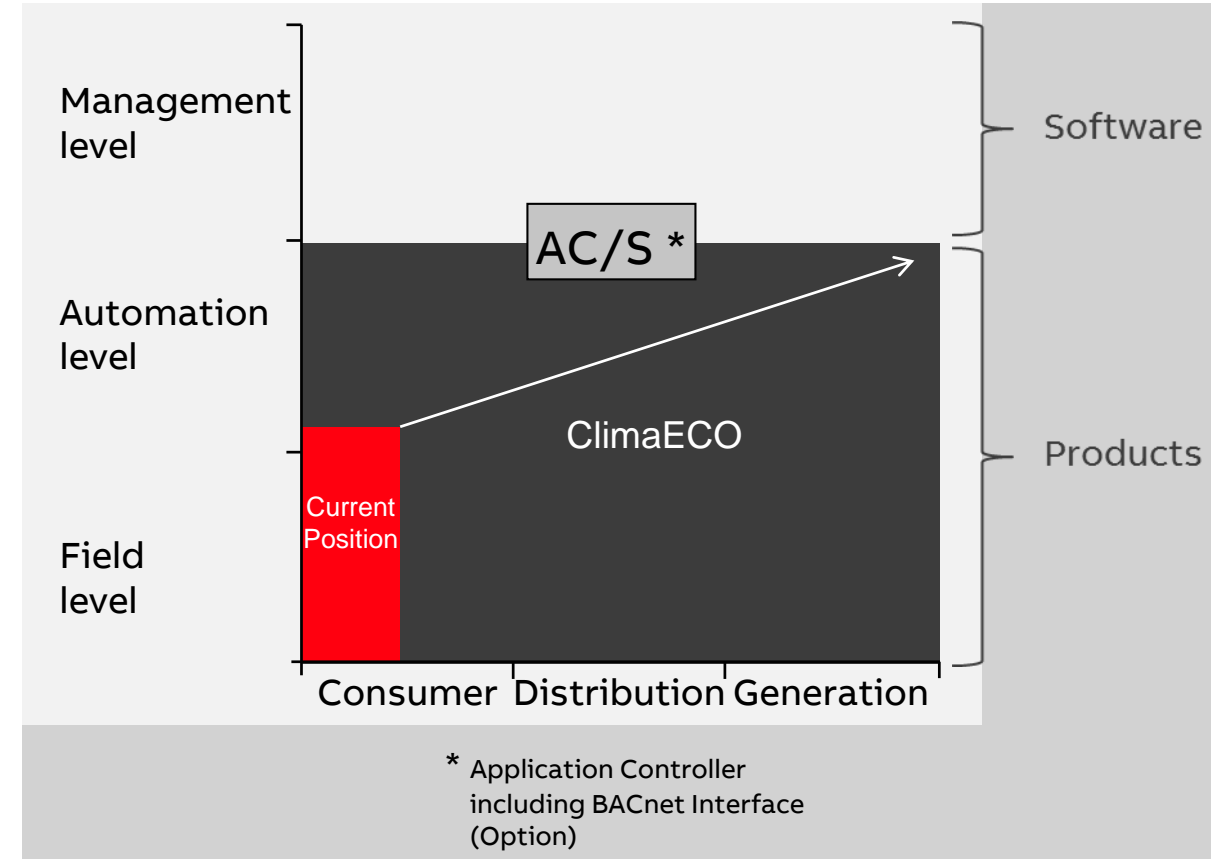


Building Automation

Positioning ClimaECO

Project ClimaECO

- Expand the product range to provide a complete automation solution especially for the two HVAC system segments Field- and Automation Level.
- Providing hard- and software (Field- and Automation level, partly also Management level)
- Application Controller AC/S with superior intelligence, optional interface (BACnet) to the Management level



ClimaECO: ABB i-bus® KNX HVAC Solutions

Customer Value Proposition



Room

Room Solutions

A complete room automation solution for all types of commercial buildings



Building

Building Solutions

A holistic automation solution for small to medium commercial buildings



System Integrator



Consultant



Building Operator



Investor / Owner

Sales Channel Harmony

ABB as a product solution supplier presents no channel conflict to its partners as compared to notable 'turn key' competitors

Secure Investment

ABB is a reliable partner especially for Investors and Building owners as compared to the small / local supplier.

Solutions based purely on open and standardized technologies thus no single source and reducing system dependencies.

Cost Saving

During planning, integration, maintenance and by energy efficiency. Achievement of energy efficiency class A according to EN 15232 with up to 30 percent energy savings

ClimaECO: ABB i-bus® KNX HVAC Solutions

Customer Value Proposition



System Integrator



Consultant



Building Operator



Investor / Building Owner

Consistent solution from Consumption to Generation

Customers expect as much as possible from one provider, both in software, hardware and service like consulting by ABB

Sophisticated Hardware

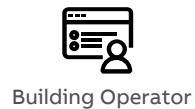
All necessary components from ABB made in Germany

Local Sales and worldwide Support

ABB as an international company with its impeccable reputation, proven in numerous projects at different locations all over the world, can give the necessary assistance to implement HVAC solutions based upon ClimaECO from ABB

ClimaECO: ABB i-bus® KNX HVAC Solutions

Customer Value Proposition



Intelligence

ASM (Automation Specific Module) running in the Application Module

Application Controller AC/S guarantees proven and easy to handle central intelligence, covering most of the applications

On request extendable inside AC/S with further generic function modules, known from Logic Controller ABA/S 1.2.1

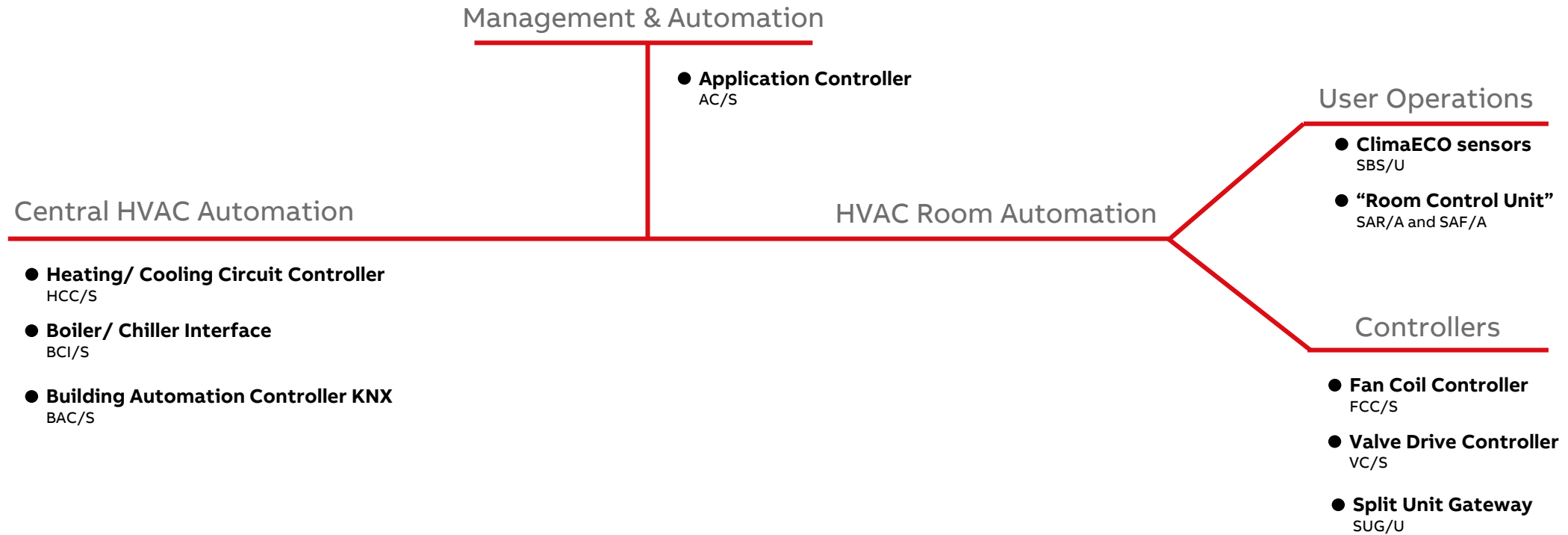
Immediate access via browser thanks to integrated WebUI for easy operation and display

Optional BACnet interface for integration of BMS

Furthermore integration of ABB's PLC based on the software platform CODESYS possible, offering even more options and a huge library of all kind of functions

ClimaECO: ABB i-bus® KNX HVAC Solutions

Portfolio Overview of new Products

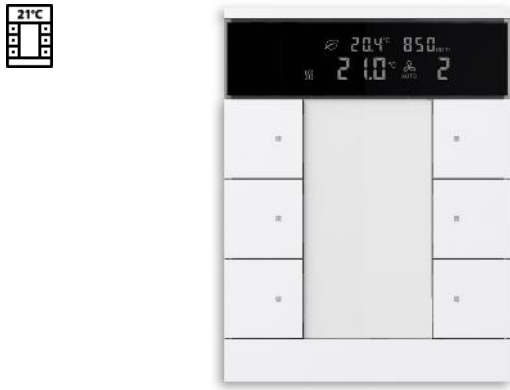


Complete HVAC Building Automation System

ClimaECO: ABB i-bus® KNX HVAC Solutions

Portfolio Overview: new User Operation Products

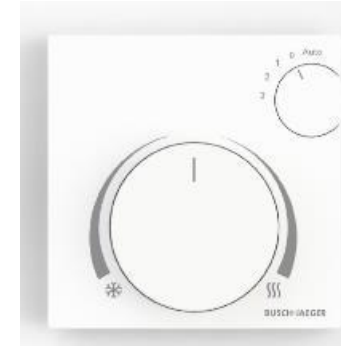
ClimaECO sensors



An entire range of KNX Room Operation Units optimized for commercial applications

- Variants with Air Quality Sensor
- Can be flush or surface mounted
- No additional power supply required

SAR/A and SAF/A Room Control Units



Simple, cost efficient Room Temperature Control Units connecting directly to FCC/S Fan Coil or VC/S Valve Controllers

- No power supply required
- Easy installation / no commissioning
- optimal price / performance

ClimaECO: ABB i-bus® KNX HVAC Solutions

Portfolio Overview: new HVAC Room Automation Products

SUG/U Split Unit Gateway



Simple integration of Air Conditioning Split Units into KNX installations via emulation of infrared remote control signals

- Pre-programmed with the IR control codes of major split unit manufacturers
- Compact format for simple installation

FCC/S Fan Coil Controllers



Control of the complete spectrum of Fan Coil Units.

- Successor to the FCA/S series.
- With integrated Room Temperature Controller
- Support of variable 0-10V fans
- Support of 6-way valves

VC/S Valve Drive Controllers



Valve control for radiator, floor heating and cooling ceiling applications.

- With integrated Room Temperature Controller
- Integrated inputs for sensors
- In addition to VAA/S Product Range

ClimaECO: ABB i-bus® KNX HVAC Solutions

Portfolio Overview: new Central HVAC Automation Products

HCC/S Heating/ Cooling Circuit Controllers



Control of Distribution Circuits for Heating or Cooling based on the room demand.

- For 3-point or 0-10V Valve Drives
- Support for double-pumps
- Inputs for all required sensors

BCI/S Boiler/ Chiller Interface



For interfacing to the controllers of self-contained Heating Boilers or Chillers to monitor and control them.

- Interfacing by standard analogue signals
- Pump switching
- Also support for heat pumps

BAC/S Building Automation Controller KNX



Advanced freely-programmable KNX Building Automation Controller

- Easy creation and reuse of Automation Software by IEC 61131-3 Programming Languages in ABB Automation Builder with base on established Codesys Software
- Seamless integrated in KNX and ETS
- Modular extension of In-/ Outputs

ClimaECO: ABB i-bus® KNX HVAC Solutions

Portfolio Overview: new Management & Automation Products

AC/S Application Controllers

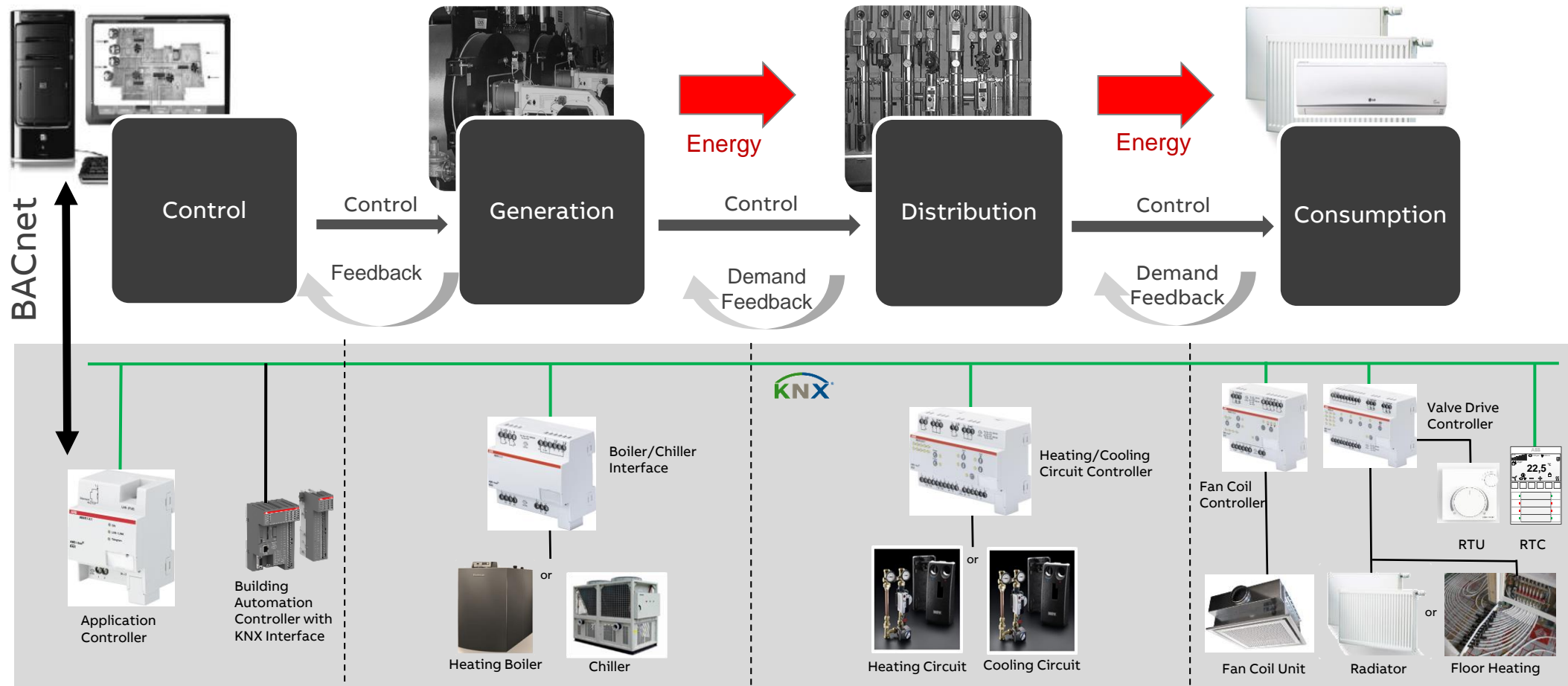


Run predefined Automation Modules for a holistic HVAC Automation Solution from Central HVAC to Room. For example Heat Demand Calculation, Schedules and Trends Logs. With WebUI for Operation.

- Own Automation Modules can be created by a graphical Logic Editor
- Variant with embedded KNX-BACnet Gateway for integration of KNX into BACnet Systems

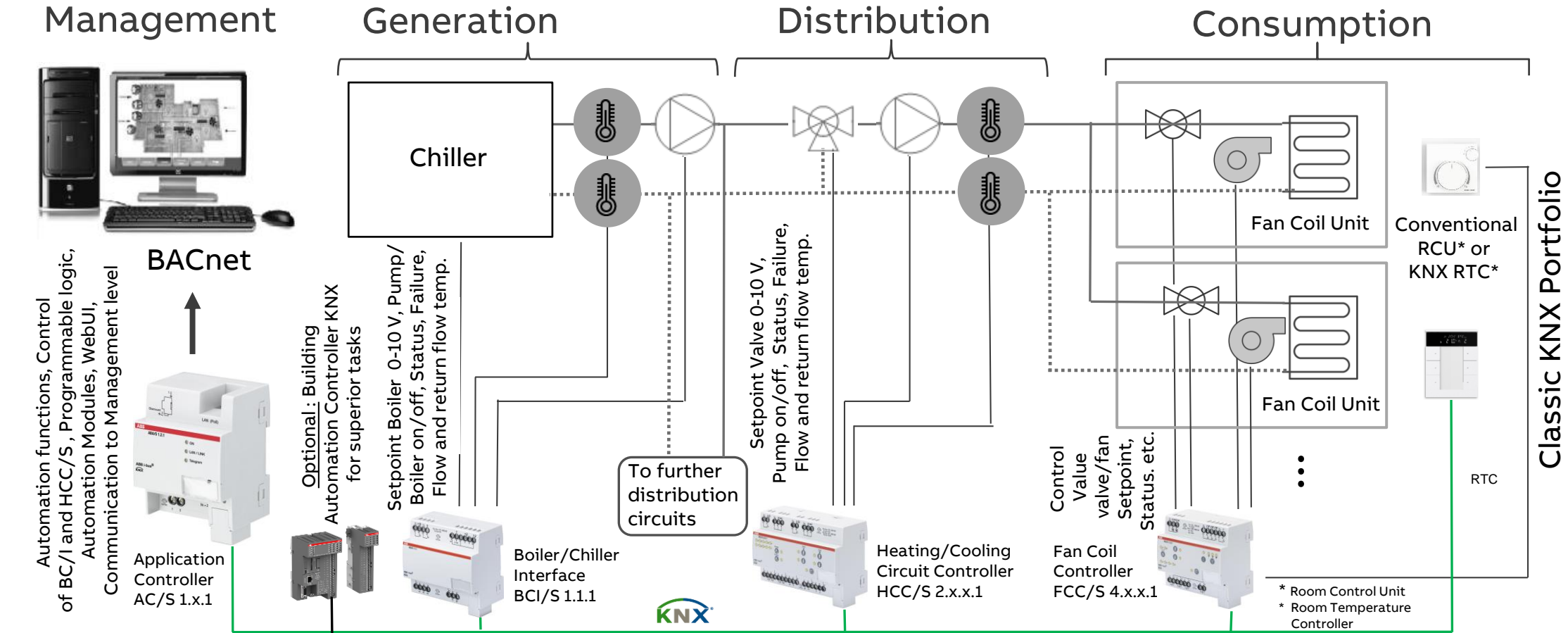
ClimaECO: ABB i-bus® KNX HVAC Solutions

Principle (Schematic)



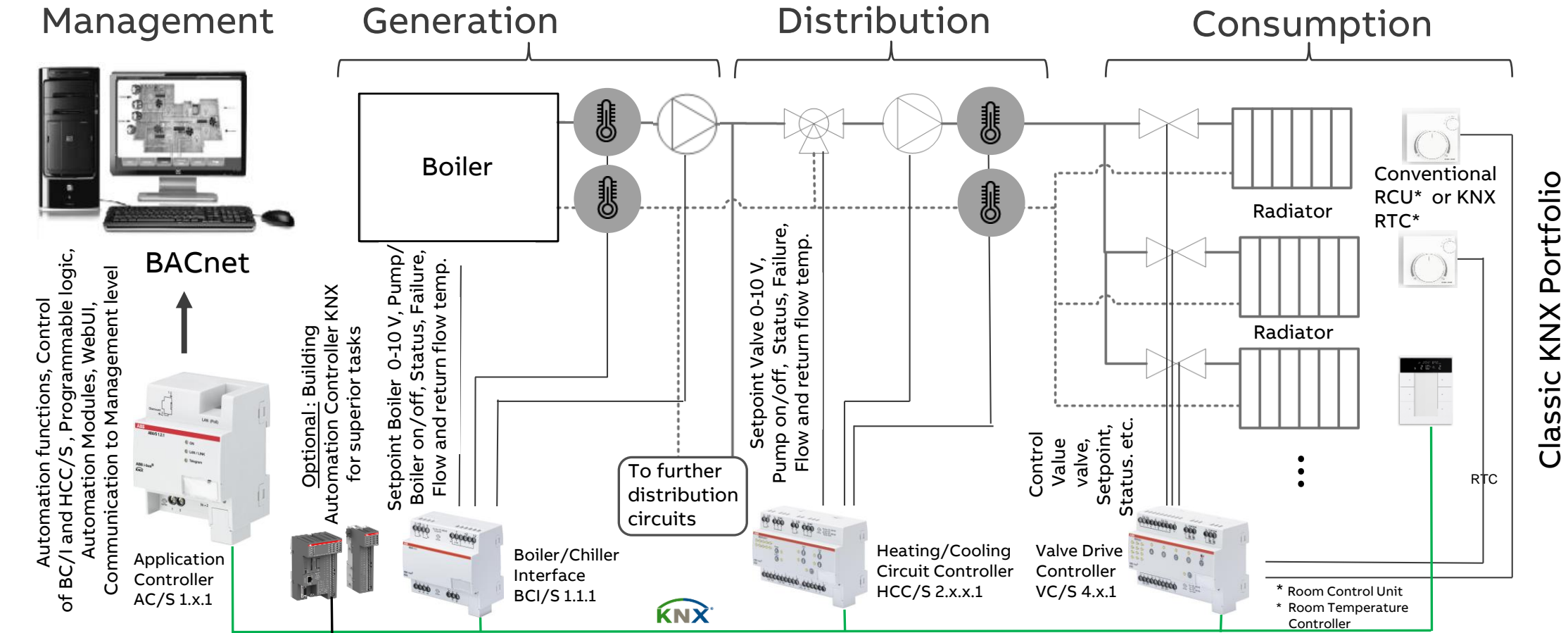
ClimaECO: ABB i-bus® KNX HVAC Solutions

Principle Cooling with Fan Coil Unit



ClimaECO: ABB i-bus® KNX HVAC Solutions

Principle Heating with Radiator



ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 1

What does ClimaECO stand for?

A

Name for ABB i-bus KNX

B

Name for HVAC solutions with ABB i-bus KNX

C

Name for energy efficient Building Automation solution

ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 1

What does ClimaECO stand for?

A

Name for ABB i-bus KNX

B

Name for HVAC solutions with ABB i-bus KNX

C

Name for energy efficient Building Automation solution

ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 2

ClimaECO ...

- A** offers a HVAC solution from generation over distribution to consumption
- B** covers only the field level in building automation
- C** allows to achieve buildings with energy efficiency class A according to EN 15232

ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 2

ClimaECO ...

- ☒ **A** offers a HVAC solution from generation over distribution to consumption
- ☐ **B** covers only the field level in building automation
- ☒ **C** allows to achieve buildings with energy efficiency class A according to EN 15232

ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 3

ClimaECO ...

- A** has over 30 new devices based on a proprietary communication protocol
- B** has over 50 new devices based on KNX
- C** has over 30 devices based on an open and standardized bus system

ClimaECO: ABB i-bus® KNX HVAC Solutions

Which answer is correct?

Question 3

ClimaECO ...

- ☐ A has over 30 new devices based on a proprietary communication protocol
- ☐ B has over 50 new devices based on KNX
- ☒ C has over 30 devices based on an open and standardized bus system

Disclaimer

The information in this document is subject to change without notice and should not be construed as a commitment by ABB. ABB assumes no responsibility for any errors that may appear in this document.

In no event shall ABB be liable for direct, indirect, special, incidental or consequential damages of any nature or kind arising from the use of this document, nor shall ABB be liable for incidental or consequential damages arising from use of any software or hardware described in this document.

© Copyright [2019] ABB. All rights reserved.



ABB