



# All-in-one

Building management software for medium-sized and enterprise building automation projects

#### **NETxAutomation Software GmbH**



Austrian, globally active company

founded in 2001

#### Our customers

- Electrical planner
- Electricians
- System integrators

20

years of experience

100+

countries represented

500,000+

projects with over 500,000 data points

8,000+

active licenses

40

intern. sales- and R&D Partner

Software solutions for building automation systems

Management applications: visualization, energy reporting, automatic shading control, lighting control, project support

Integration of heterogeneous building automation networks: building management system platform (BMS Platform), OPC server

### **NETx** solutions – main goals



Applications are based on open, world-wide standards









Continuous development and enhancement of products



Member of OPC Foundation,
KNX Association, BACnet International,
Modbus Organization



Participation in the development of standard specifications



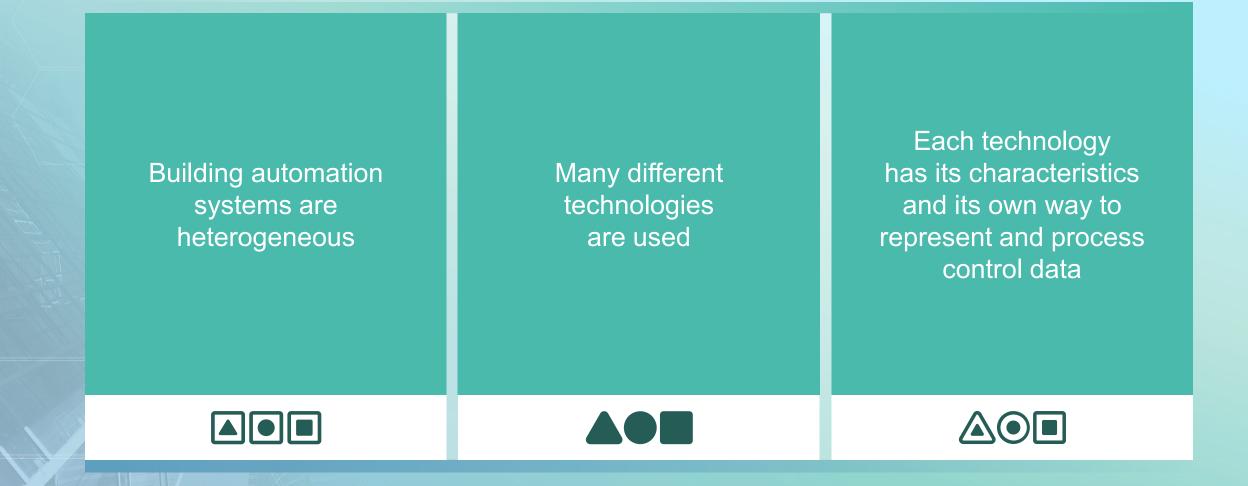
Close cooperation with universities: TU Vienna, University Antwerp, University Dresden for knowledge transfer



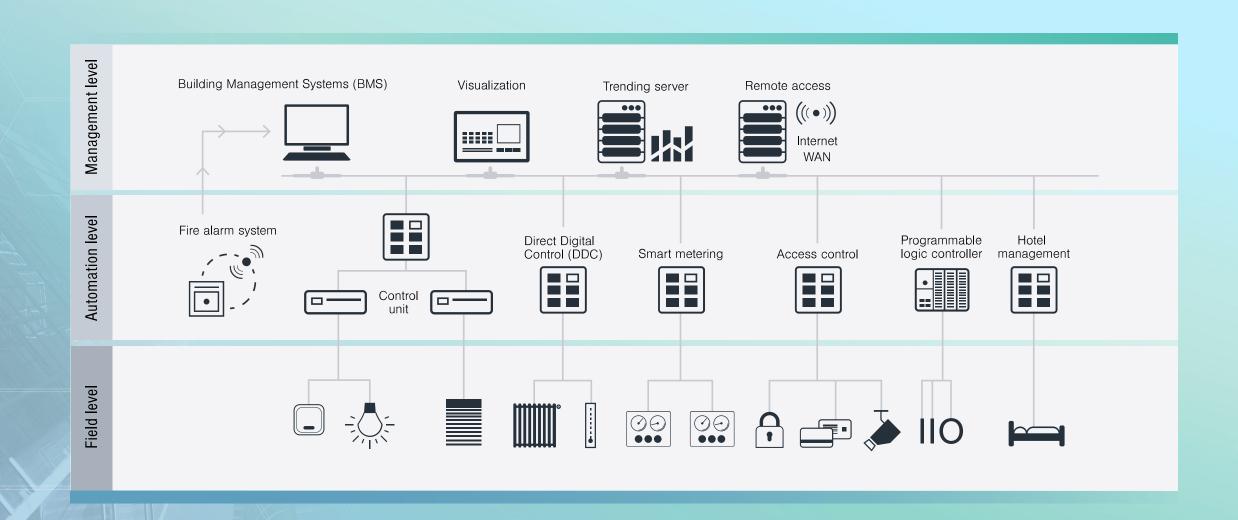
EU-wide research projects allow the integration of new systems and technologies

#### **Motivation**





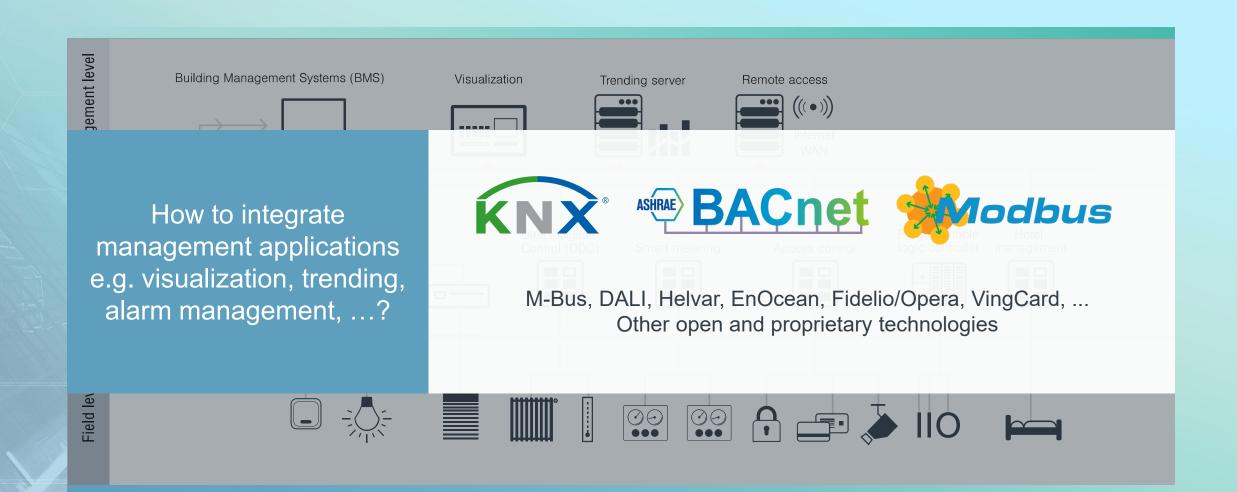










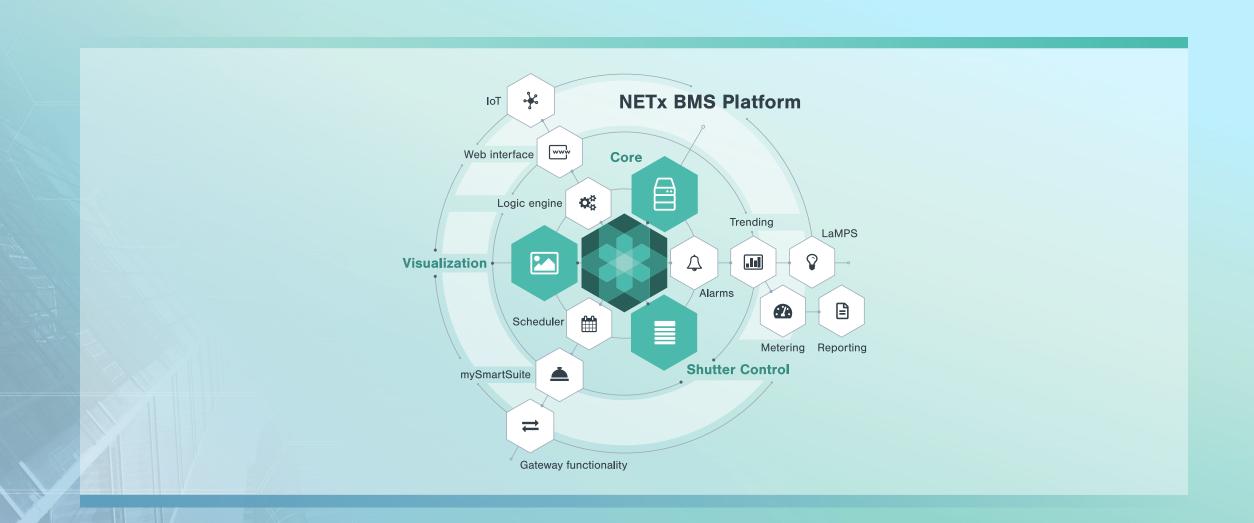






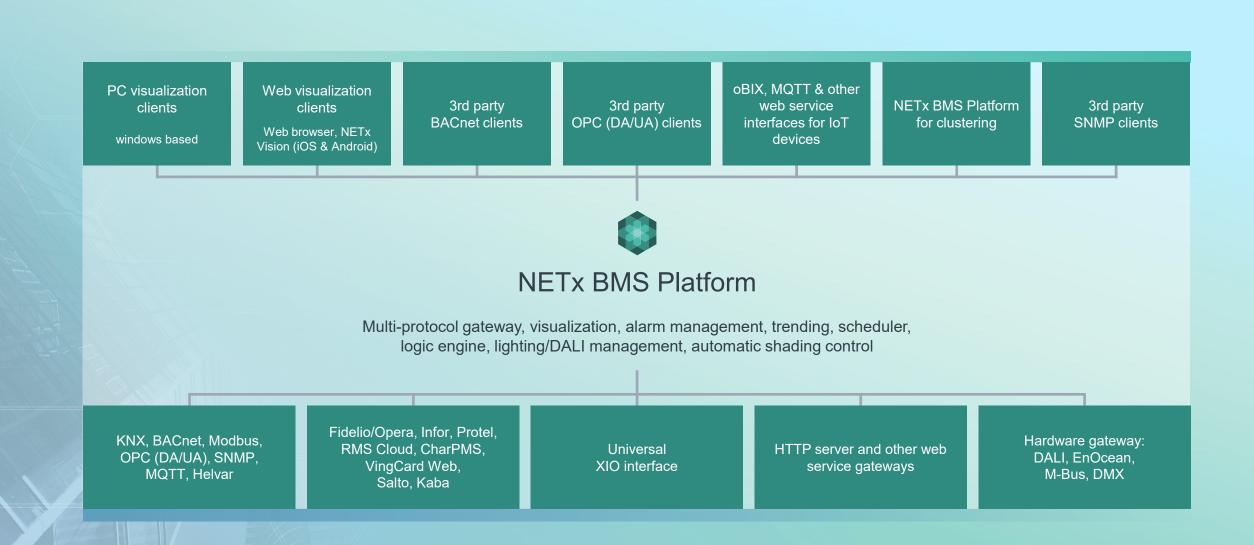
### **NETx BMS Platform**





#### **NETx BMS Platform**





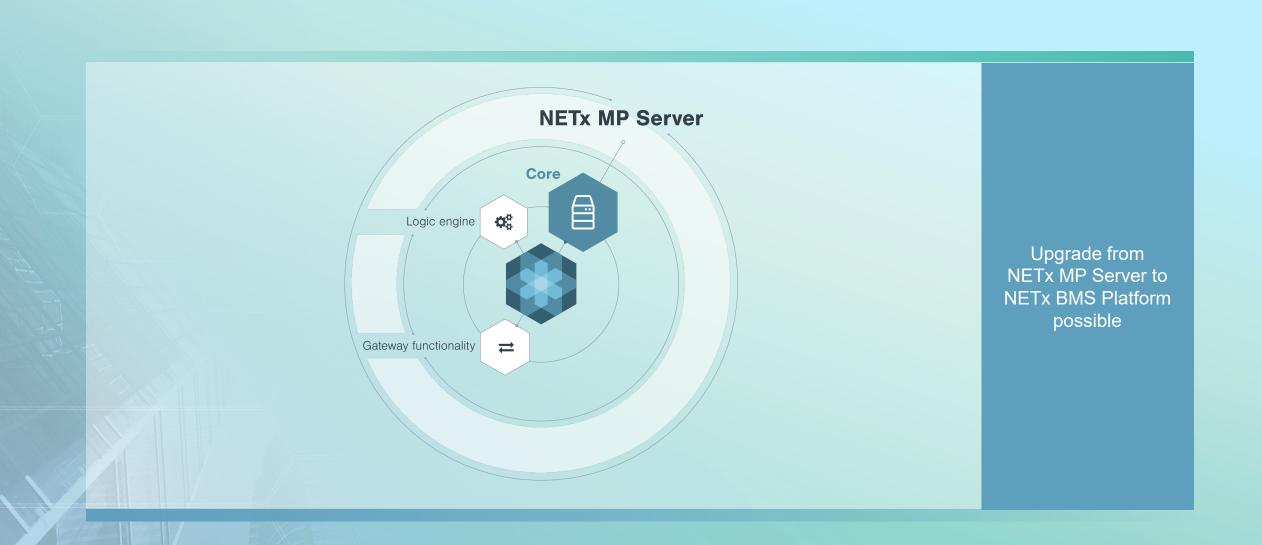
### **NETx BMS Platform**



Core	Visualization	LaMPS	Shutter Control	mySmartSuite		Add-ons
<ul> <li>Gateway functionality</li> <li>Alarm management</li> <li>Trending</li> <li>Reporting</li> <li>Scheduler</li> <li>Logic engine</li> <li>Metering</li> <li>GRMS</li> </ul>	<ul> <li>Visualization for small, medium and large projects</li> <li>PC and web-based clients</li> <li>Any number of clients possible</li> </ul>	<ul> <li>Lighting management</li> <li>DALI management</li> </ul>	<ul> <li>Automatic shading system</li> <li>Complex buildings</li> <li>Inclusion of weather data</li> <li>3D design and simulation</li> <li>Add-on for BMS Server</li> </ul>	<ul> <li>Overview of all rooms</li> <li>Guest information</li> <li>Check in and check out information</li> <li>Room status</li> <li>Message processing</li> </ul>		Functions
Web interface		Web interface • LaMPS app	Web interface • Shutter Control app	Web interface • mySmartSuite app		Web Manager apps
<ul> <li>BACnet</li> <li>Modbus</li> <li>OPC (DA/UA)</li> <li>I</li> </ul>	Fidelio/Opera • VingCard Infor • Salto Protel • Kaba RMS Cloud CharPMS	<ul><li>interface</li><li>HTTP Server and</li></ul>	<ul> <li>3rd party BACnet, oBIX, MQTT and OPC (DA/UA) clients</li> <li>3rd party web service clients</li> </ul>	Hardware gateways: <ul><li>Dali</li><li>EnOcean</li><li>M-Bus</li><li>DMX</li></ul>		Interfaces

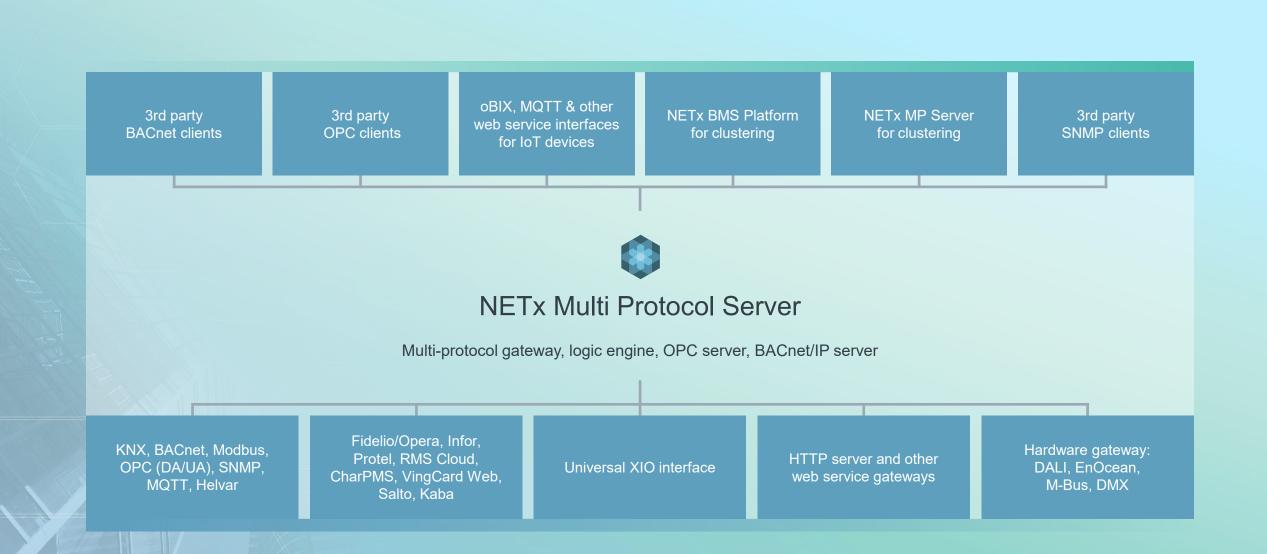
### **NETx Multi Protocol Server**





#### **NETx Multi Protocol Server**





### **NETx BMS Platform < > NETx MP Server**



Product features	NETx BMS Platform	NETx MP Server		NETx BMS Platform	NETx MP Server
Several interfaces to the field level KNX, Modbus, BACnet, SNMP, etc.	<b>~</b>	<b>~</b>	Alarm management definition of alarms, displaying alarm lists	<b>~</b>	×
Several interfaces to the management level OPC, BACnet/IP, oBIX, KNX WS, MQTT, etc.	<b>~</b>	<b>~</b>	Trending historical database	<b>~</b>	×
Multi-protocol gateway connects several interfaces to the field level	<b>~</b>	<b>~</b>	Scheduling time-based events	<b>~</b>	×
Import of the device configuration for KNX ETS projects, BACnet discovery, OPC/BMS explorer	<b>~</b>	<b>~</b>	Reporting create PDF, Excel, reports	<b>~</b>	×
Monitoring field level and management level analysis	~	<b>~</b>	Web-based visualization access with all devices with web browser	<b>~</b>	×
Programming logics LUA Script, graphical programming	~	<b>~</b>	Web-based management Web Manager including user management	<b>~</b>	×
Clustering data exchange between servers	<b>~</b>	<b>~</b>	PC-based visualization access with Windows devices	<b>~</b>	×

### **NETx BMS Platform < > NETx MP Server**



Product extensions	NETx BMS Platform	NETx MP Server		NETx BMS Platform	NETx MP Server
LaMPS Lighting and DALI management	<b>~</b>	<b>~</b>	Shutter Control Automatic shading of complex buildings	<b>~</b>	×
Metering Module  Monitor, analyze and process data from smart meters	<b>~</b>	<b>~</b>	mySmartSuite Integrated hotel solution	<b>~</b>	×

Interfaces to the management level	NETx BMS Platform	NETx MP Server		NETx BMS Platform	NETx MP Server
OPC provides data for other OPC clients	<b>~</b>	<b>~</b>	MQTT provides data via MQTT	<b>~</b>	<b>~</b>
BACnet/IP provides data for BACnet clients	<b>~</b>	<b>~</b>	SQL MariaDB, MS SQL Server for historical data	<b>~</b>	×
oBIX provides data for oBIX clients	<b>~</b>	<b>~</b>	Web Web Manager and Web Visualization	<b>~</b>	×

### **NETx BMS Platform < > NETx MP Server**



Interfaces to the field level	NETx BMS Platform	NETx MP Server		NETx BMS Platform	NETx MP Server
KNX Secure KNXnet/IP tunnelling   KNXnet/IP tunnelling/routing	<b>~</b>	<b>~</b>	Helvar lighting solution	<b>~</b>	<b>~</b>
BACnet BACnet/IP   other BACnet media (BACnet MS/TP,)	<b>~</b>	<b>~</b>	Hotel management Fidelio/Opera, Infor, Protel, RMS Cloud, CharPMS Door locking systems: VingCard   Kaba   SALTO	<b>~</b>	~
Modbus Modbus/TCP   Modbus RTU over IP	<b>~</b>	<b>~</b>	Own interfaces via LUA script, UDP, TCP, RS-232 protocol   via C# .NET API	<b>~</b>	<b>~</b>
SNMP v1, v2, v3	<b>~</b>	<b>~</b>	DALI Digital Addressable Lighting Interface	with hardwa	are gateway
OPC Integration of other OPC servers	<b>~</b>	<b>~</b>	DMX512 stage lighting and effects	with hardware gateway	
HTTP and web services Integration of data from HTTP servers & web service gateways	<b>~</b>	<b>~</b>	EnOcean wireless building automation	with hardware gateway	
Special interfaces on request	<b>~</b>	<b>~</b>	M-Bus europ. standard for remote reading of smart meters	with hardware gateway	

### **Operating system & hardware**



Operating system - Windows based operating system required

Windows 10 / Windows 11

Windows Server 2016 / Windows Server 2019 / Windows Server 2022

For maintainable systems we strongly recommend at least Windows 10 or Windows Server 2016 (or higher). Our products basically also run on older Windows versions down to Windows 7 and Windows Server 2008. However, due to limited future support for these operating systems by Microsoft we will not be able to provide full support for our software running on these systems.

Hardware

Any device that supports Microsoft Windows can be used

Use of virtualization environments possible

Requirements depend on project size (small embedded device up to server systems)

VMWare, Virtualbox, Hyper-V, ...

### **NETx BMS Platform licensing**



#### License

#### Number of data points

Integrated data points from field level like KNX group addresses, BACnet objects, Modbus registers, SNMP data points, ...

#### Licensing process

#### Hardlock

**USB Dongle** hardware independent

# Number of visualization clients

Web and/or PC based clients

#### Softlock

Unlock code dependent on hardware and operating system

## Optional: additional license fees for special modules and interfaces

- Hotel management interfaces
   Fidelio/Opera or Protel
   Fix fee + 5 data points for each room
- Door lock interfaces
   VingCard, Salto, Kaba
   Fix fee + 5 data points for
   each door lock
- NETx LaMPS
   Fix fee + 1 data point for each DALI ballast

- NETx Shutter Control Project specific fee
- NETx Metering Module
   Fix fee + 10 data points for each measurement value
- NETx mySmartSuite sufficent number of NETx visualization clients required
- · and more

### **NETx MP Server licensing**



#### License

### Number of data points

Integrated data points from field level like KNX group addresses, BACnet objects, Modbus registers, SNMP data points, ...

Licensing process

#### Hardlock

**USB Dongle** hardware independent

#### Softlock

Unlock code dependent on hardware and operating system Optional: additional license fees for special modules and interfaces

 Hotel management interfaces Fidelio/Opera or Protel

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 Door lock interfaces VingCard, Salto, Kaba

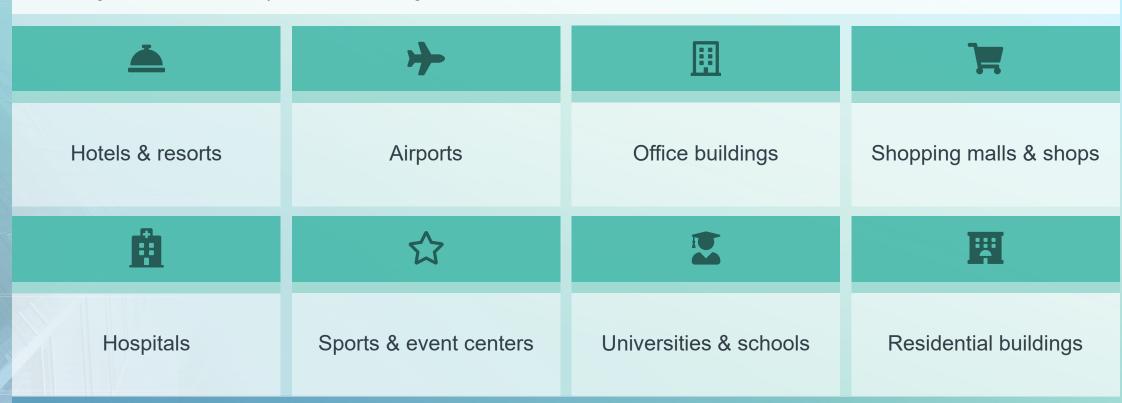
Fix fee + 5 data points for each door lock

and more

### **Application areas**

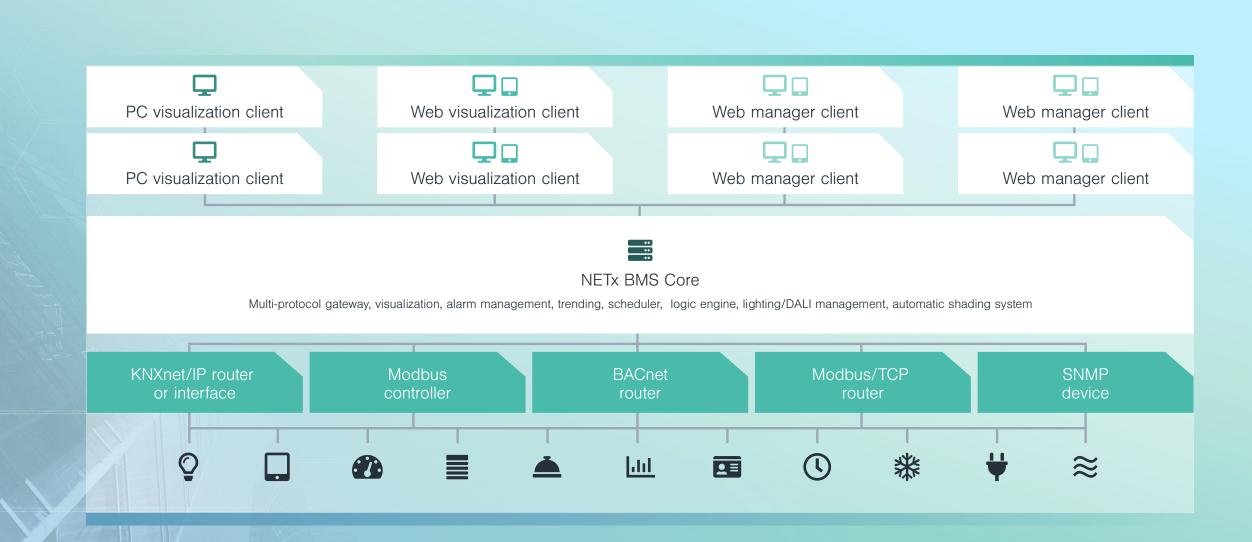


- BMS Solution for medium-sized and enterprise building automation projects
- Integration of different sub systems and technologies in all-in-one solution



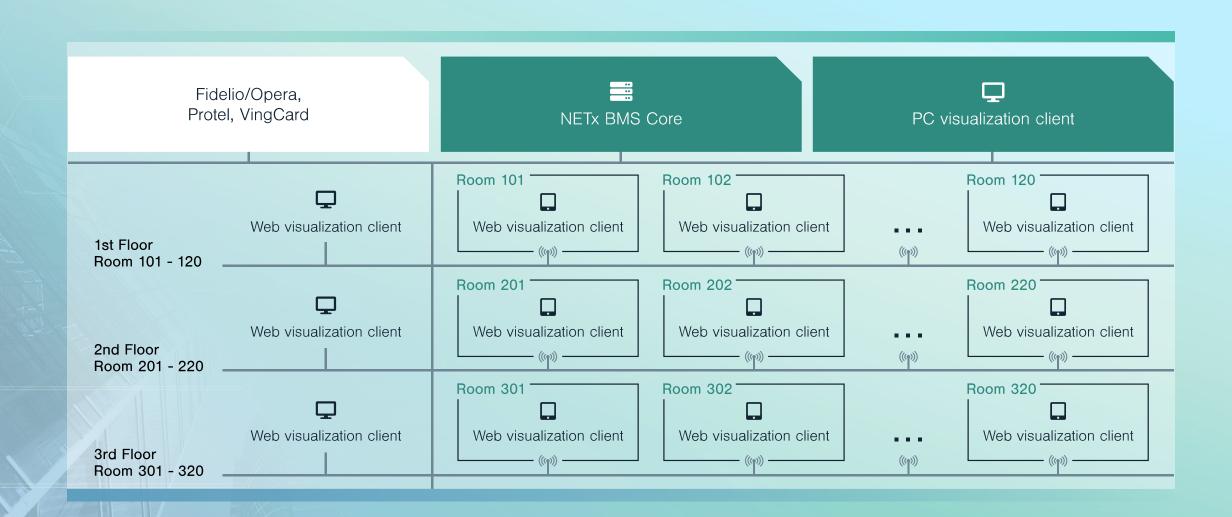
### **Applications – office buildings**





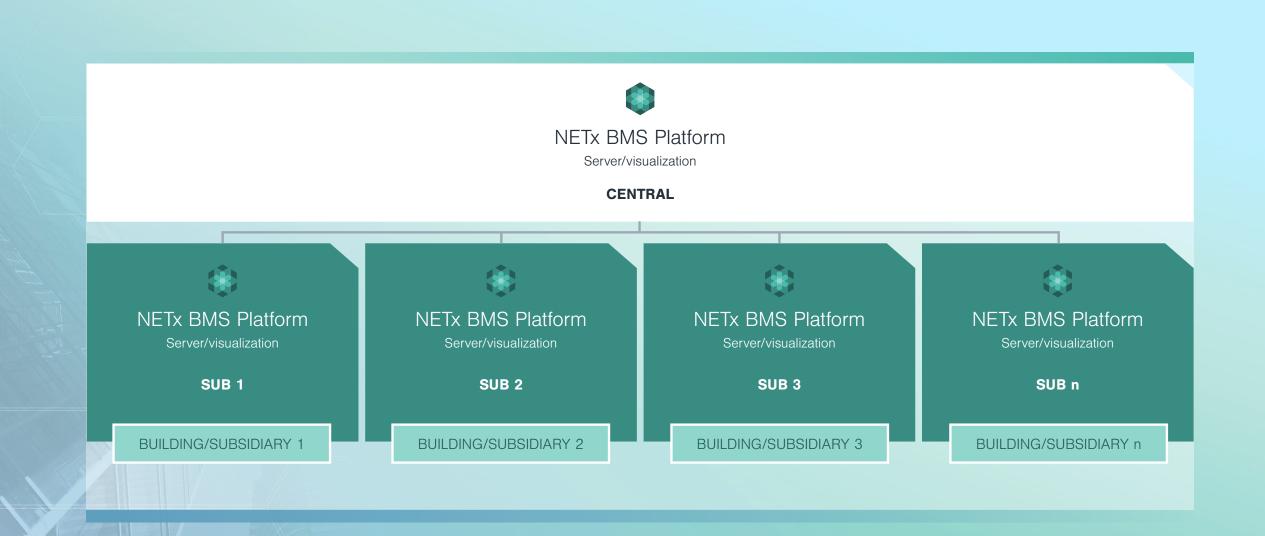
### **Applications – hotel**





### **Applications – large complex**





#### References



### www.netxautomation.com/netx/en/applications/references/

Airport Pudong Shanghai, China



Airport Bangkok



ANZ Tower

Australia



PlusCity Austria



The Yas Hotel
Abu-Dhabi



The Post Hotel
Belgium



Samsung Central
Seoul South Korea



Port of Antwerp

Belgium

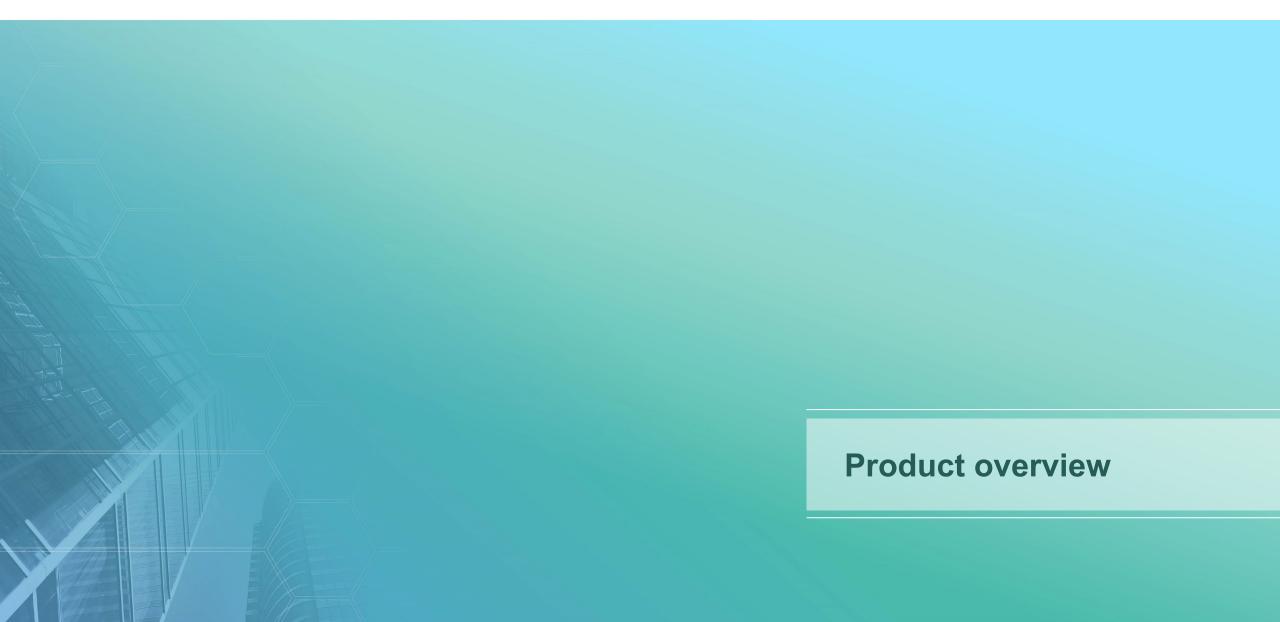


### **Awards - Light & Building Fair**



☆	☆	$\Rightarrow$	☆	$\Rightarrow$
International Award Asia	International Award Africa, America, Australia	Special Award	National Award	Energy Efficiency Award Asia
Princess Noura University for women	Surf Coast Shire Civic Building	Gran Melià Resort & Luxus Villas Daios Cove	HDI-Gerling Hauptverwaltung	GAMA Headqurters
Saudi Arabia	Australia	Greece	Germany	Saudi Arabia





#### **Product overview - NETx BMS Platform**



#### LaMPS **Shutter Control** Core Visualization mySmartSuite Server (optional) (optional) (optional) (optional) Multi protocol gateway: PC based and/or web Lighting and DALI Enhanced automatic **Guest Room** OPC (DA/UA) and management shading based management BACnet/IP server with interfaces to KNX. BACnet, Modbus, oBIX, Application-specific, additional interfaces for NETx BMS Platform MQTT, SNMP, Helvar BMS functions, e.g. Hotel management systems Access control systems alarm management, Fidelio/Opera, Protel, Infor, RMS Cloud, CharPMS VingCard, Kaba and Salto scheduler, trending and more NETx XIO interface mySmartSuite app Project-specific interface - on request

#### **Product overview - NETx MP Server**



#### Core

#### Server

Multi protocol gateway:
 OPC (DA/UA) and
 BACnet/IP server with
 interfaces to KNX,
 BACnet, Modbus, MQTT,
 oBIX, SNMP, Helvar

Application-specific, additional interfaces for NETx MP Server

Hotel management systems
Fidelio/Opera, Protel, Infor, RMS Cloud, CharPMS

Access control systems VingCard, Kaba and Salto

Janitza GridVis interface

NETx XIO interface Project-specific interface - on request

### **Integration of 3rd party systems**



Integration of Integration of Integration of **OPC** clients **BACnet clients OPC** servers 3rd party BMS systems from Fire detection systems, Siemens, Schneider Electric, 3rd party clients elevators, etc. with different Honeywell, Sauter proprietary systems



