

Building Transparency through IoT

ISH, March 2019

Forest Reider



About Belimo

Active worldwide and at home in more than 80 countries

Group net sales

CHF m 642 (2018)

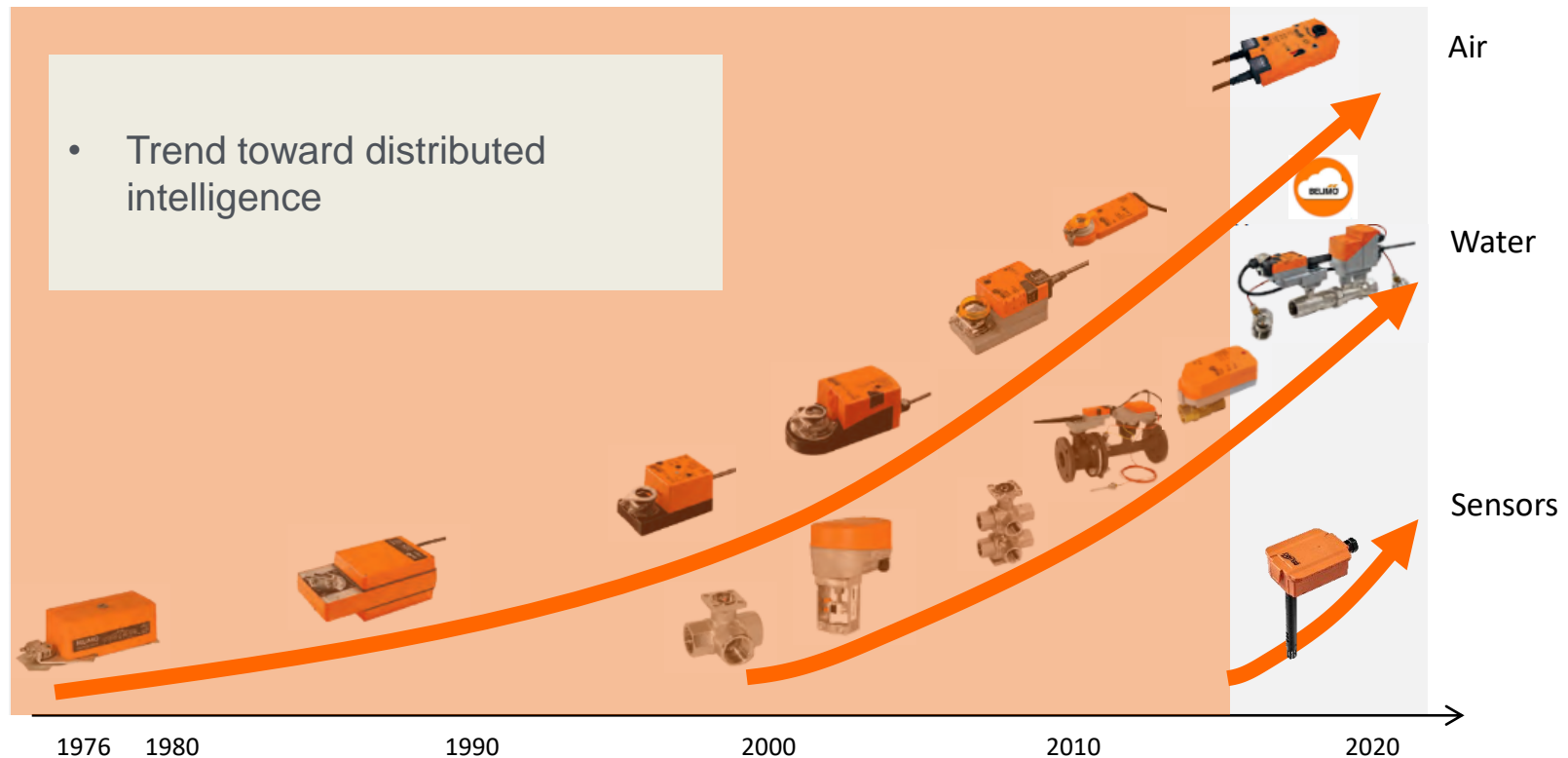
Innovation investment

CHF m 47.2 (7.4%)

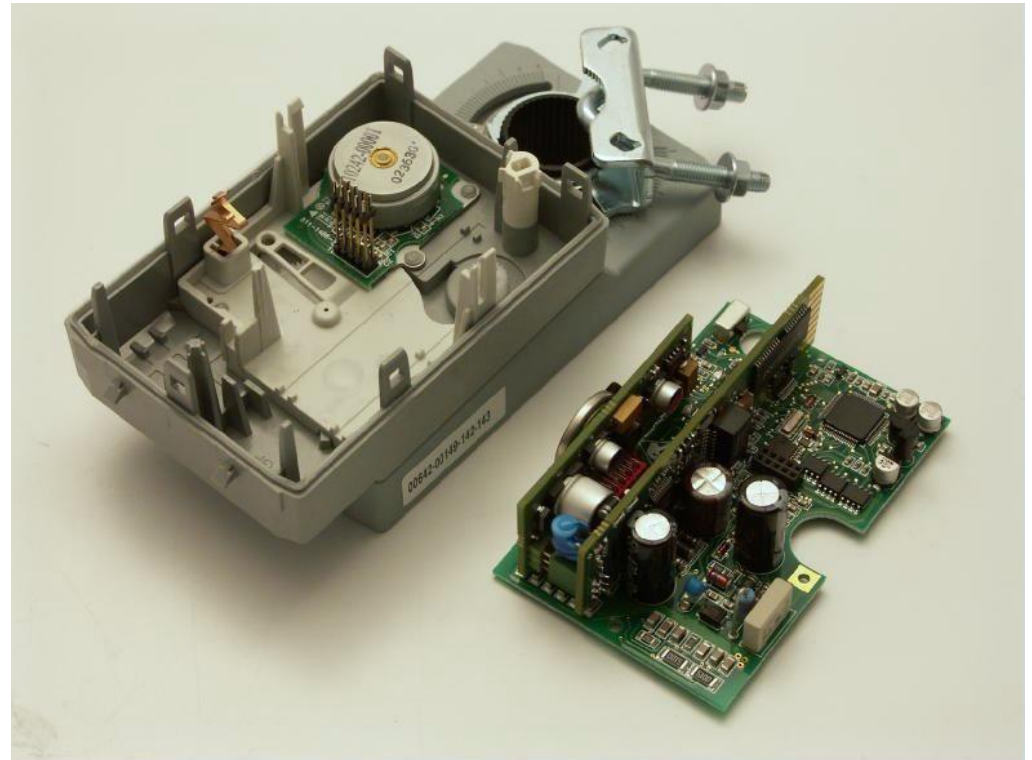
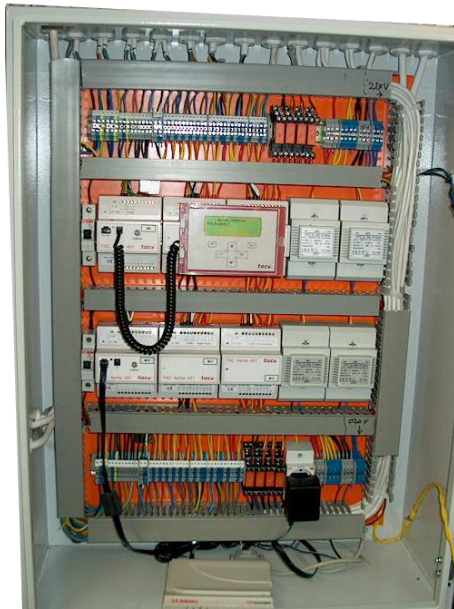


● Regional Headquarters ● Subsidiaries ● Branches / Representative Offices / Distributors

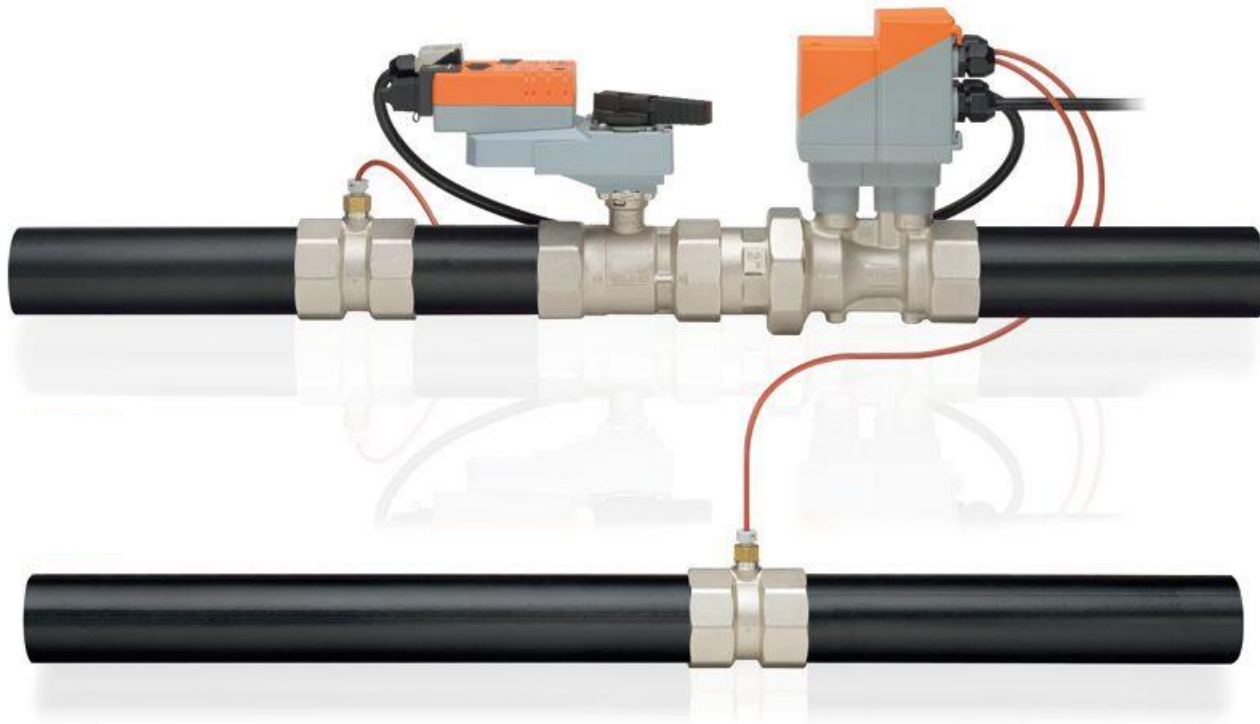
Transparency Evolution: Past to present



Performance Devices: Simple Integration



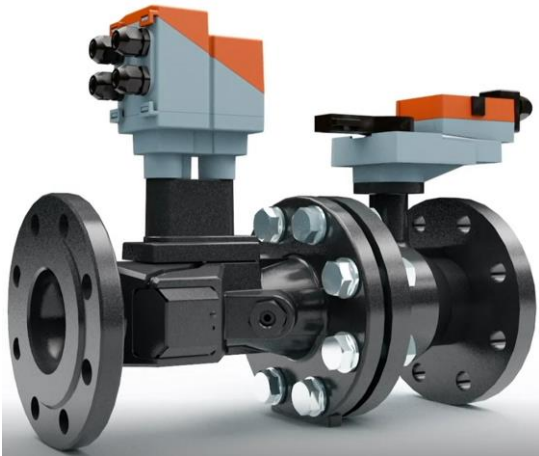
Performance Device: Concrete Example



Performance Devices: Distributed Applications



Performance Devices: Distributed Applications



ZWT-Belimo E-Valve 51

LanguageEnglishLogout

Current status

Media

Flow

Power

Sensor

Actuator

OK

OK

OK

OK

OK

History

Counter

Last occurrence

Media

Flow

Power

Too many airbubbles

Reverse Flow

Flow not reached

Flow with closed valve

T1 error

T2 error

Flow sensor error

3

17

3

0

0

0

3

0

72 d 3 h

0 d 23 h

276 d 4 h

?

?

?

?

?

?

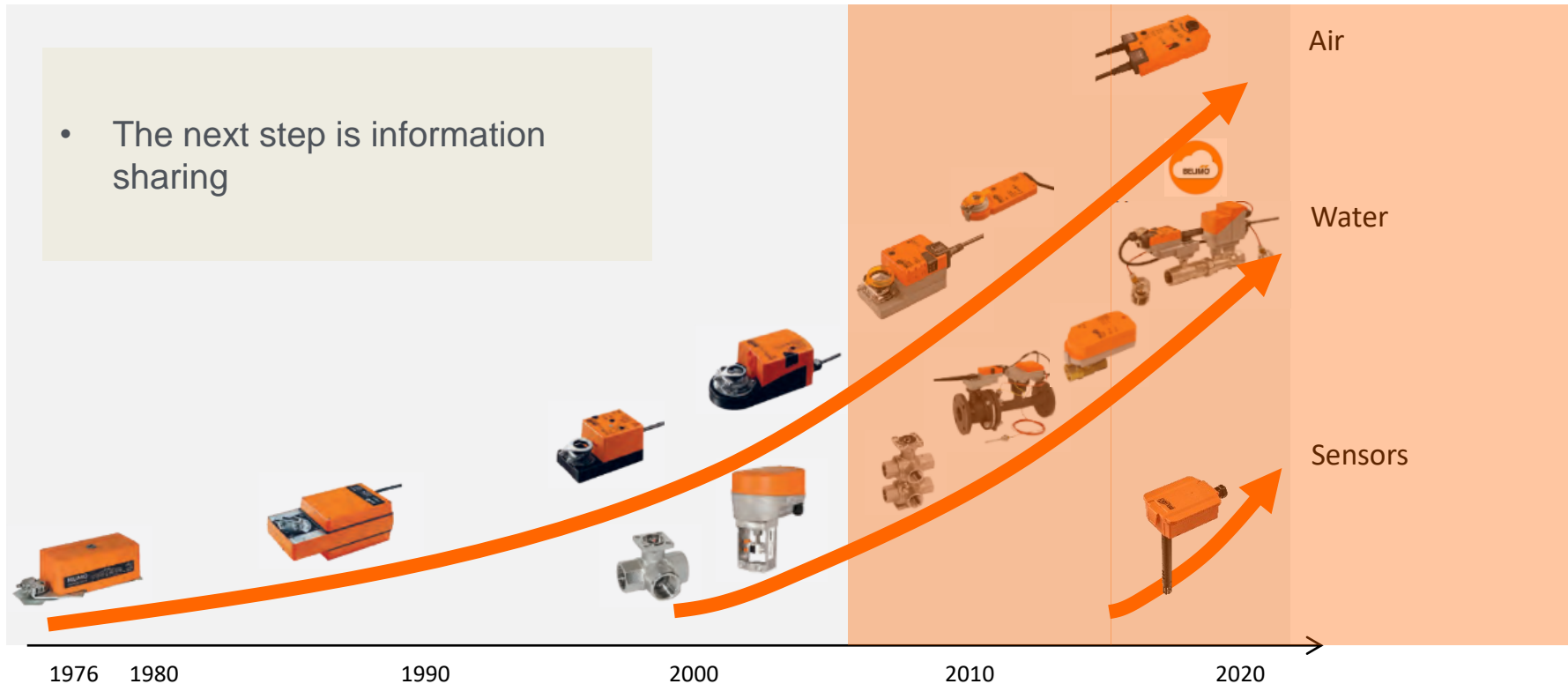
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Reset

Can make sense of the detailed local information

Transparency Evolution: Present to the future

- The next step is information sharing

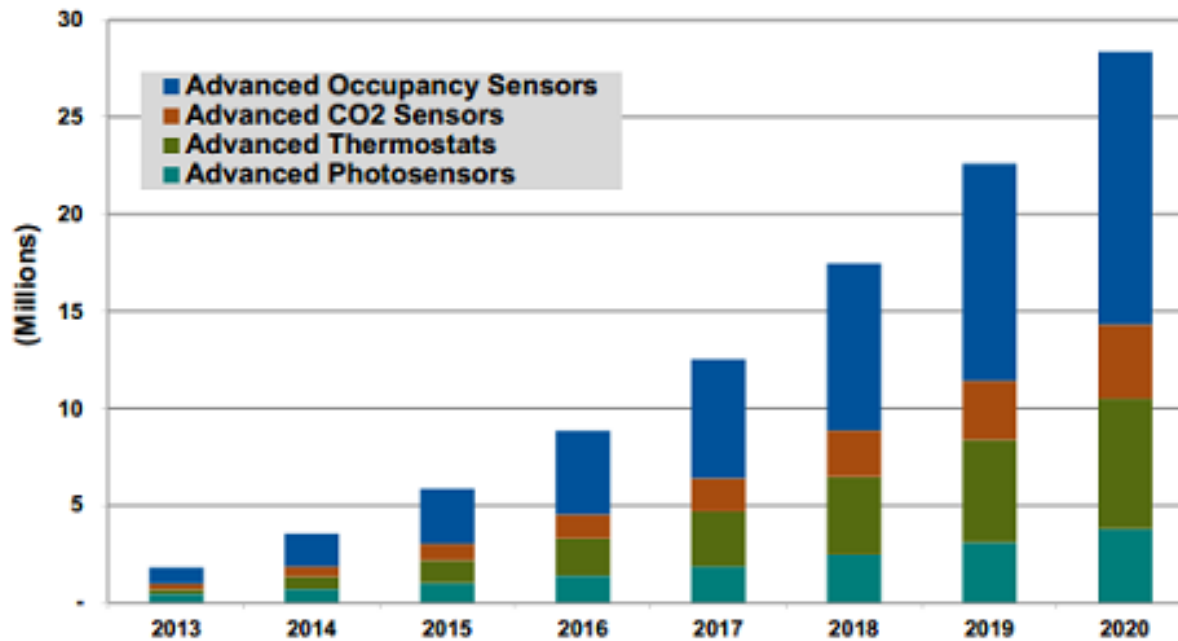


Sensors for HVAC – Where we find them in Buildings



Information Trend

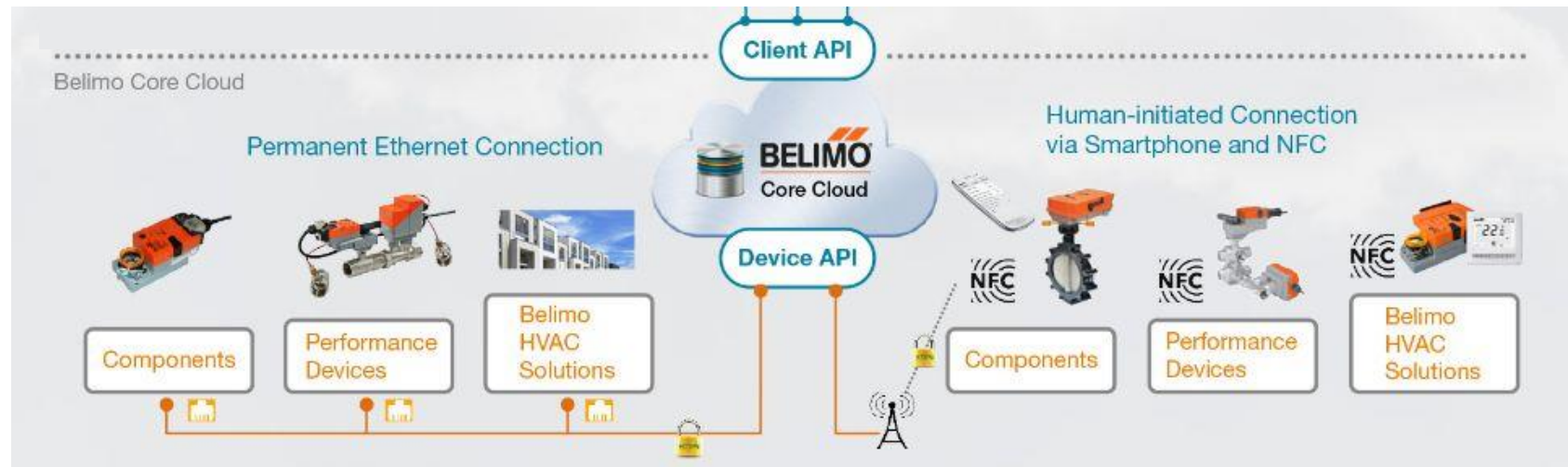
Chart 1.1 Advanced Sensor Unit Shipments by Product Type, World Markets: 2013-2020



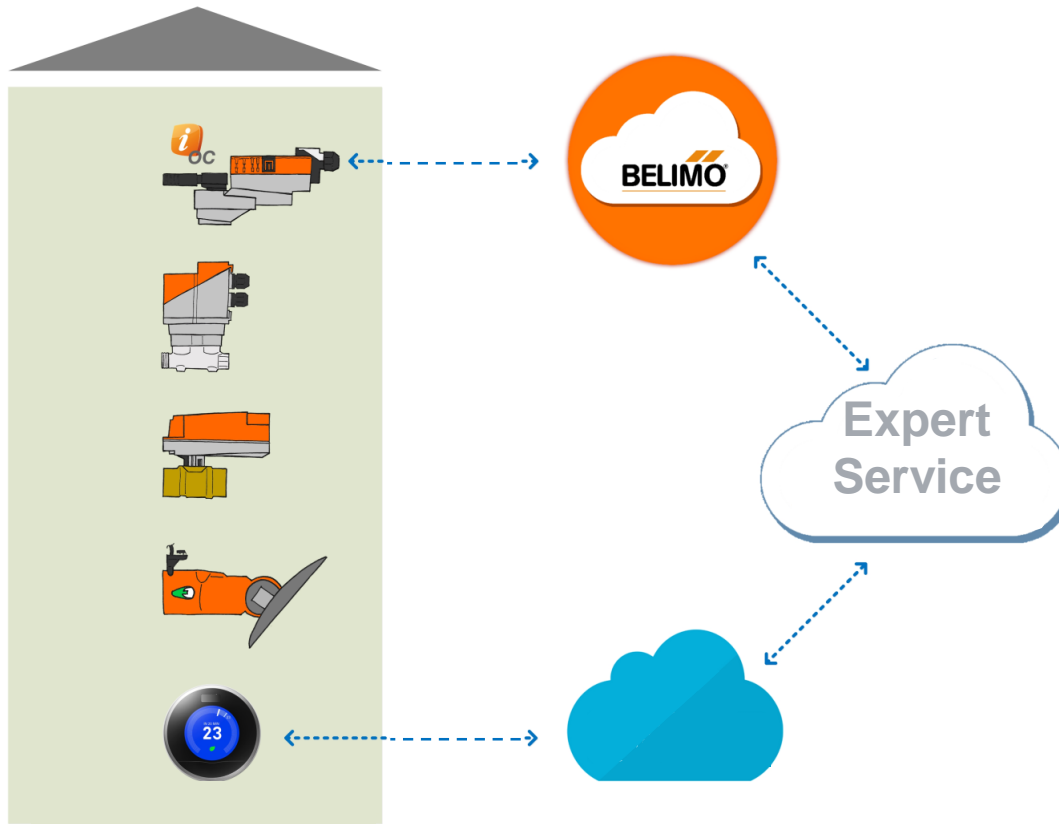
(Source: Navigant Research)



Example of an IoT Ecosystem



Building Transparency and IoT

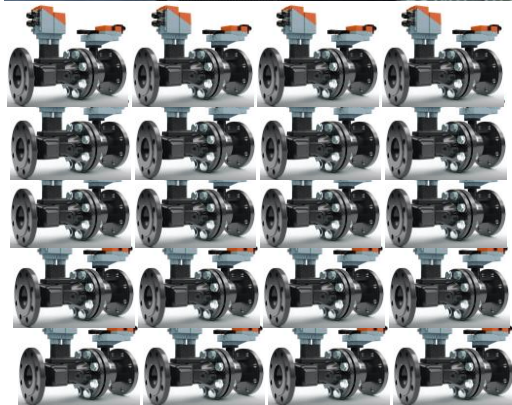


Brick Schema

A metadata schema for buildings

Project  Haystack

Building and IoT



Name	Status	Total Energy Q3, 2018	Serial Number
TABS EG Nord Comfort@HQBelimo		4'548 kWh	21815-20176-022-135
TABS EG Süd Comfort@HQBelimo		5'169 kWh	21815-20169-022-135
TABS 1.OG Nord Comfort@HQBelimo		3'602 kWh	21821-30003-022-136
TABS 1.OG Süd Comfort@HQBelimo		5'737 kWh	21815-20167-022-135
TABS 2. OG Nord Comfort@HQBelimo		4'915 kWh	21821-30008-022-136
TABS 2.OG Süd Comfort@HQBelimo		6'827 kWh	21815-20161-022-135
TABS 3.OG Nord Comfort@HQBelimo		4'153 kWh	21815-20160-022-135
TABS 3.OG Süd Comfort@HQBelimo		5'523 kWh	21821-30003-022-160
TABS 4.OG Nord Comfort@HQBelimo		2'427 kWh	21815-20177-022-135
TABS 4.OG Süd Comfort@HQBelimo		3'335 kWh	21819-00275-022-135
E-Valve S1		8'190 kWh	21708-40017-001-160
E-Valve S2		134'168 kWh	21708-00103-001-126
E-Valve S3		164'665 kWh	21706-40005-001-126
E-Valve S4		79'276 kWh	21708-40020-001-160

