



**IoT-TICKET®**

Create production-grade IoT applications



# IoT-TICKET®



## CREATE APPS, FAST

Arrive at solutions

– start now, deliver tomorrow

We provide free multi-platform apps and APIs to provide you the means to start acquiring data and start creating functional applications right now.



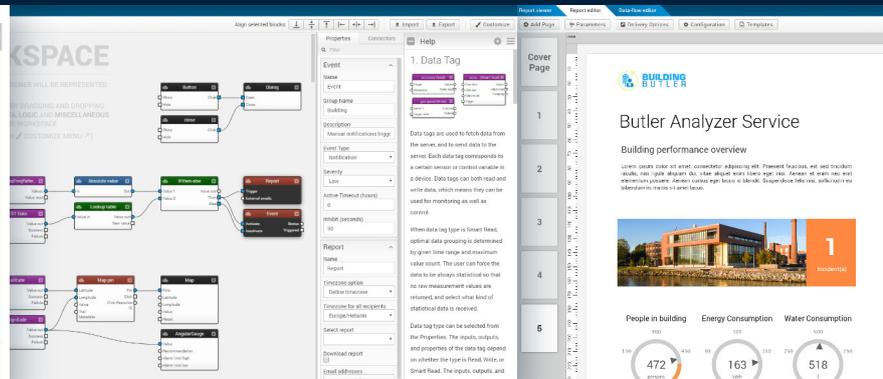
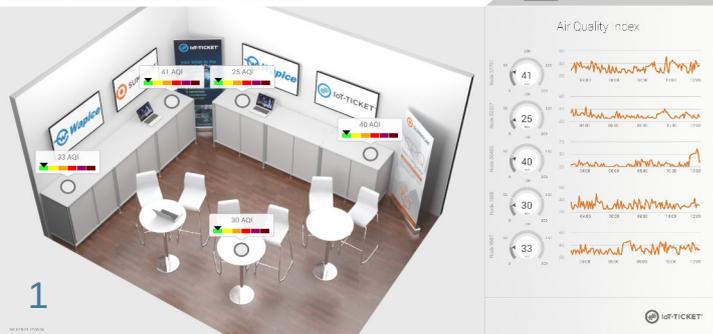
## THE IoT PRODUCTIVITY STUDIO

Cut down the costly software development

– empower anyone to build apps

IoT-TICKET® includes web-based drag & drop tools for application building: create Dashboards with over 30 customizable widgets and add the logic *visually* by connecting data blocks.

## CLOUD ENABLED MESH NETWORKS





# Build Your Own Vertical Solution

## SMART ENVIRONMENT

- Air Pollution
- Water Monitoring
- Flood Control
- Fire Detection
- Leakage Detection

## SMART ENERGY

- Energy Optimization
- Energy Trading
- Smart Grid
- Condition Monitoring
- Consumption Forecasting

## SMART CITIES

- Smart Buildings
- Traffic Congestion
- Smart Parking
- Urban Noise Control
- Waste Management

## SMART LOGISTICS

- Fleet Tracking
- Shipping Conditions
- Location Tracking
- Geofencing
- Storage Optimization

## SMART MANUFACTURING

- OEE & TEEP Monitoring
- Employee Safety
- SCM Optimization
- Digital Twin
- Digital Services



# Integration to Existing Systems



## DEPLOY TO ANY ENVIRONMENT

 Cloud Native  Unlimited Scalability

IoT-TICKET® is cloud native and can be deployed to any environment; your own data center, Amazon Web Services (AWS), Microsoft Azure, IBM Softlayer or our own cloud service (SaaS or PaaS).



## ECOSYSTEM INTEGRATION

 140+ Protocols Supported  Big Data Enabled

IoT-TICKET® can be integrated into most industrial systems with standard communication protocols such as OPC, OPC-UA, Modbus, CAN, IEC 61850 or 1-wire.

The collected data can then be utilized by external applications, for example, Simulink or R for further analysis. The IoT-TICKET® server offers REST interface which enables easy integration possibilities with other applications such as SharePoint, SAP, CRM or ERP systems.





## BENEFITS

### INCREASED EFFICIENCY

- ✓ Real-time operational insight
- ✓ Improved employee productivity
- ✓ Better resource management

### COST SAVINGS

- ✓ Reduced operating costs
- ✓ Better asset utilization
- ✓ Reduced maintenance costs

### BETTER SERVICE

- ✓ Process automation
- ✓ User behaviour prediction
- ✓ More responsive services



**IoT-TICKET®**



DASHBOARD



REPORTS



ALARMS



ANALYTICS

## CLOUD

### CLOUD NATIVE

Big Data enabled, unlimited scalability

### DEPLOY ANYWHERE

AWS, Azure, SoftLayer, your own data center or Wapice's cloud service

### ECOSYSTEM INTEGRATION

SharePoint, SAP, CRM, ERP et al.

## DATA ACQUISITION

### IoT EDGE DEVICE

WRM247+, IoT-Tracker or third party

### SUPPORTED PROTOCOLS

MQTT, OPC, OPC-UA, CAN et al.

### DEVELOPER LIBRARIES

IoT-TICKET® APIs





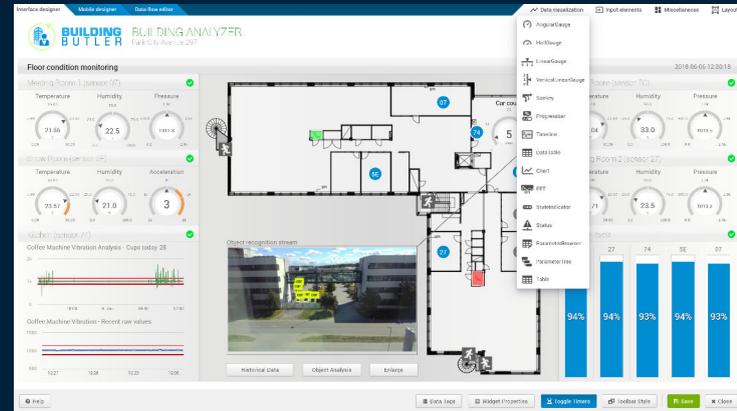
# Tool Suite

For creating IoT applications

## DASHBOARD & INTERFACE DESIGNER

### Track your KPIs, Prototype, Control, Innovate

The *Dashboard* is a web-based and user-friendly application for end-users. The Dashboard is created using *the Interface Designer* which offers a variety of widgets for designing the layout in your brand colors, visualizing the collected data, user interaction and also multiple embedded widgets.



## 40+ AVAILABLE WIDGETS

### DATA VISUALIZATION

- 3D MODEL
- ANGULAR GAUGE
- CHART
- DATA TABLE
- EMBED WEB PAGE
- FFT
- HALF GAUGE
- LINEAR GAUGE
- MAP
- PDF
- PARAMETER BROWSER
- PARAMETER TREE
- POLAR CHART
- PROGRESS BAR
- SANKEY DIAGRAM
- SCATTER CHART
- STATE INDICATOR
- STATUS
- TABLE
- TIMELINE
- VERTICAL LINEAR GAUGE

### INPUT ELEMENTS

- BUTTON
- TOGGLE BUTTON
- CHECKBOX
- COMBOBOX
- DATA TAG SELECTOR
- DATEPICKER
- TIMERANGE
- TEXTBOX
- TEXTAREA
- SLIDER
- RESOURCE SELECTOR

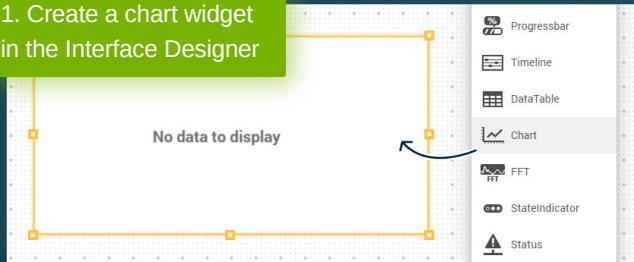
### LAYOUT

- ACCORDION
- CIRCLE SHAPE
- DIALOG
- DYNAMIC LABEL
- IMAGE
- TEXT LABEL
- LINE SHAPE
- RECTANGLE SHAPE
- SCROLLABLE CONTAINER
- TABS

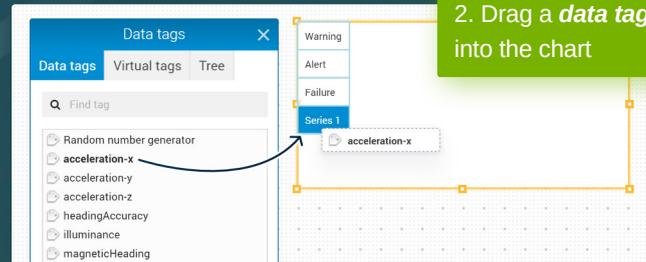


# An example of how easy it is to create a simple application

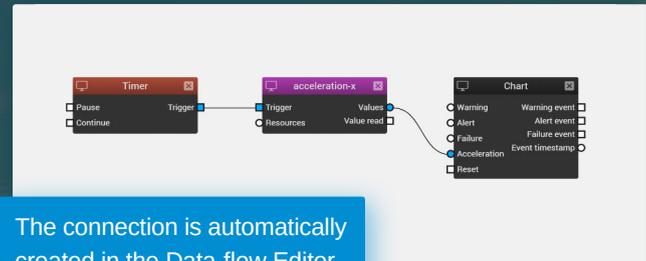
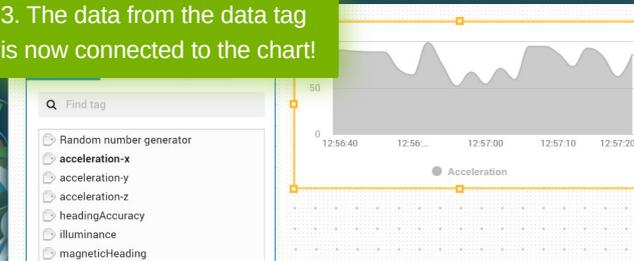
1. Create a chart widget in the Interface Designer



2. Drag a *data tag* into the chart



3. The data from the data tag is now connected to the chart!

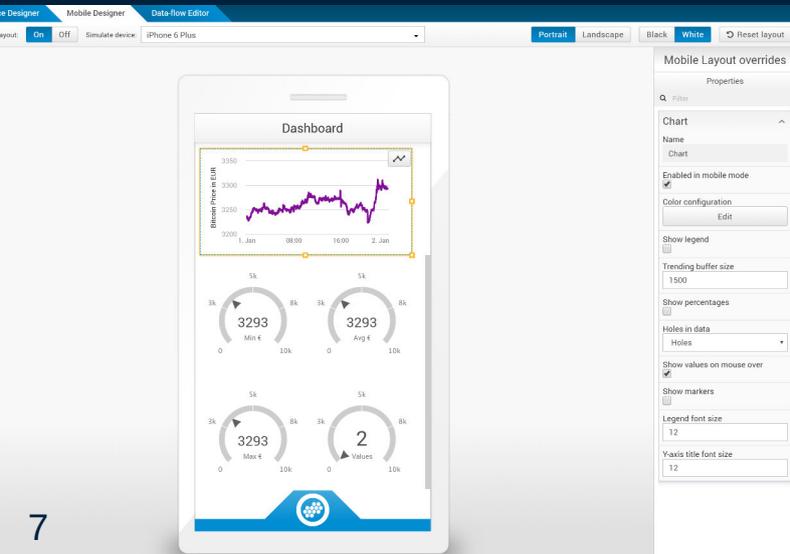
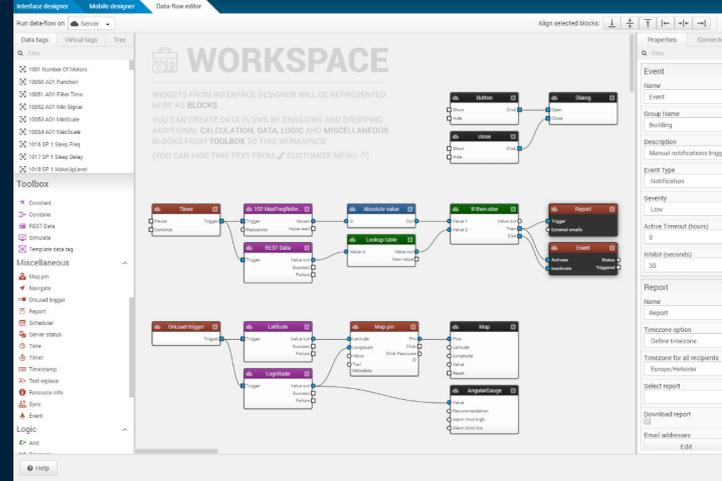


The connection is automatically created in the Data-flow Editor

# DATA-FLOW EDITOR

Create complex operations and interactions by simply connecting blocks

The Dashboard and the reports are configured using the Data-flow Editor, a graphical block programming editor. You can design the Dashboard's interactivity by connecting *blocks* to implement complex logic operations which can then be used to execute control actions or routed to user interface elements for monitoring, reporting and other purposes. With over 50 calculation, logic, data and other blocks at your disposal, the possibilities are virtually limitless – and for most cases only a few blocks will be necessary.



# MOBILE DESIGNER

An easy way to make your Dashboards work flawlessly on any device

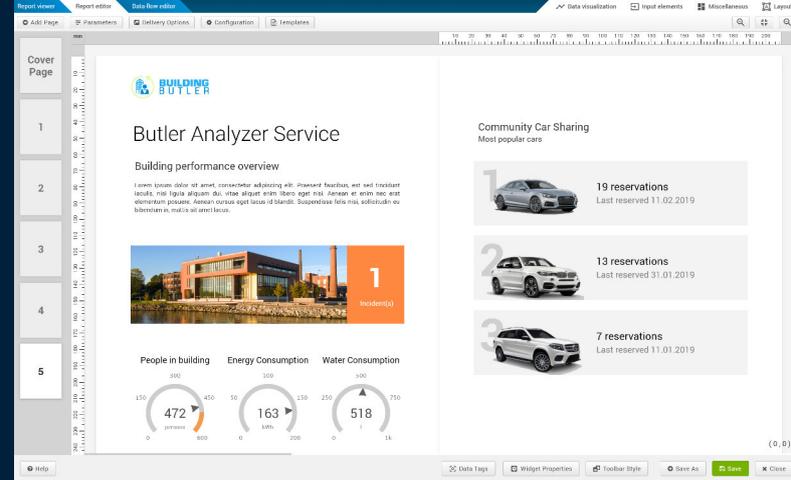
By default the Dashboards' canvas scales to fit any device, and can be used normally when zoomed into. However, with *Mobile Layout* enabled, the Dashboard will no longer be scaled and all the widgets can be placed in the Dashboard in completely customized order, independent of the Interface Designer layout.

The Mobile Designer allows you to hide widgets in Mobile Layout and to use different widget properties from the desktop version. Additionally the editor also allows you to quickly test how the layout will look on different devices.

# REPORTS & REPORT EDITOR

Trigger reports on schedule or based on conditions of your own choosing

Reports are created like the Dashboard, using the comprehensive set of widgets, providing you with a blank slate on how to design your reports – you can fully customize your reports as you would your Dashboards. Reports are automatically generated at the moment they are triggered, on schedule or from data-flow of a Dashboard, and then sent as PDF file to configured email addresses.



Type	DateTime ↓	Group	Message	Resource	Severity	Active Time	
Warning	26.03.2019 14:57:42	Warnings	No data received within 3 days	DemoEnterprise/Harbour Lights	NORMAL	0d 0h 5m 3s	<a href="#">Acknowledge</a>
Abnormalities (2)				DemoEnterprise/Harbour Lights	HIGH		<a href="#">Acknowledge group</a>
Abnormalities	26.03.2019 14:57:42	Abnormalities	Abnormal temperature detected	DemoEnterprise/Harbour Lights	HIGH	0d 0h 10m 6s	<a href="#">Acknowledge</a>
Abnormalities	26.03.2019 14:57:42	Abnormalities	Voltage above set limit detected	DemoEnterprise/Harbour Lights	HIGH	0d 0h 10m 6s	<a href="#">Acknowledge</a>
Building	19.03.2019 11:23:01	Building	Manual notifications triggered	Building Butler	LOW	7d 3h 39m 44s	<a href="#">Acknowledge</a>

## EVENTS

Activate events based on abnormalities in your data

Events can be triggered from Dashboard's data-flow and the conditions for event activation can be anything the user specifies. The Events view allows user to acknowledge and export the events. The full event history of acknowledged events is retained and can be viewed from the interface.



## Use Cases

How companies operating in diverse areas are utilizing **IoT-TICKET®**

“ With the help of IoT-TICKET®, even new technologies can be introduced at almost routine pace, and the development and maintenance of the service level has been smooth. ”

– Tuomo Härkönen  
Chief Digital Officer, Caverion

“ Developing new business models based on real-time and historical machine data has never been easier. ”

– Marko Takkula  
Business Development Manager, Epec

## SMART INDUSTRY

Enabling the digital industry: from digital twins, process optimization to predictive and preventive maintenance supported through Big-Data and Analytics.

**Caverion**

*Danfoss*

**MITSUBISHI**  
HEAVY INDUSTRIES, LTD.

**moventas**

**YASKAWA**

## SMART MACHINES

Intelligent machines supported through fleet management, performance based services and smart services to build new digital business models.

**EPEC**

James Fisher  
Prolec



**Junttan**

**KESLA**

**MOVAX**

## SMART BUILDINGS

Remote monitoring and optimization of buildings. Improve the quality of living while improving the energy and water consumption as well as providing superior services to tenants.



## SMART ENERGY

Optimizing the energy flow from production to consumption utilizing demand-response and demand elasticity mechanisms. Integrate to external data sources such as the energy trading system.



## SMART CITY



## CONNECTIVITY

# DIGITA

## SMART TOOLS



## SMART MARINE



# Shape the world of tomorrow, start creating today

Transform into a digital champion: build IoT applications or business models in minutes. No need for additional, expensive, software development. Capitalize on your most important assets, your users, and give them the right tools to turn your ideas into profit by giving them the right tool suite.

Join IoT-TICKET® and experience how easy it is to build modern massive scale Internet of Things applications.



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