



# *VCOM*

QUICK START GUIDE



This brief guide is designed to help you get started with VCOM, especially if you're new to it or have not used it on a regular basis.

Here, you'll become acquainted with the fundamental navigation and essential functions for effectively working with VCOM.

## QUICK START GUIDE

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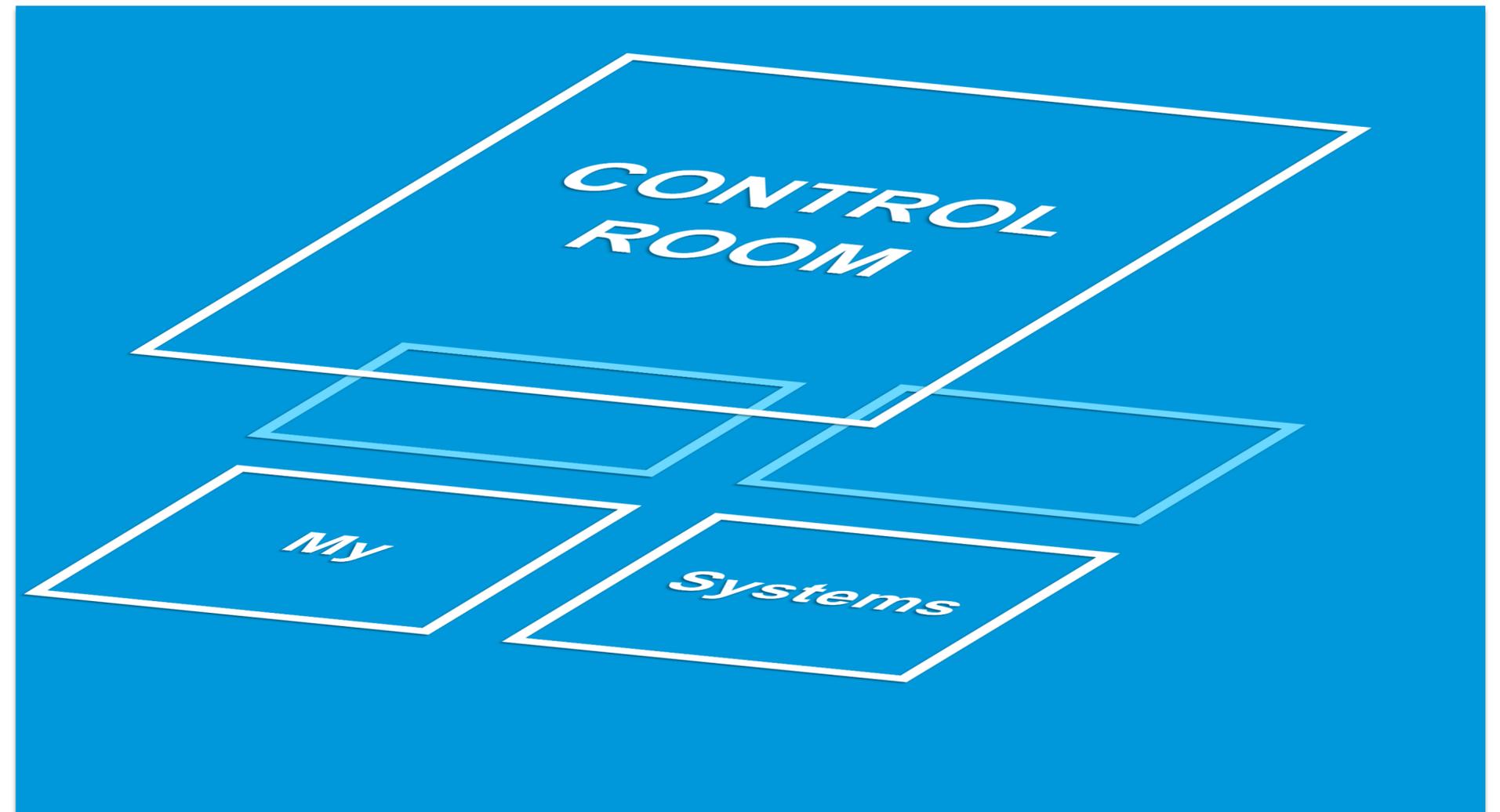
- ✓ Reference software in the PV market
- ✓ SAAS solution for professional monitoring
- ✓ Comprehensive performance and error analysis
- ✓ Ticket system
- ✓ Extensive report capabilities
- ✓ Compatibility with most major third-party systems
- ✓ Field service and monitoring app

# VCOM

## TWO LEVELS

VCOM distinguishes between the portfolio level and the system level. The **control room** provides an overview of the portfolio and an overall picture. In most cases, a large part of your daily work can already be carried out here.

When setting up your systems, or if you want to perform more in-depth analysis, you can switch to the system level, e.g. to the **cockpit** or **evaluation** section, and concentrate entirely on one system.

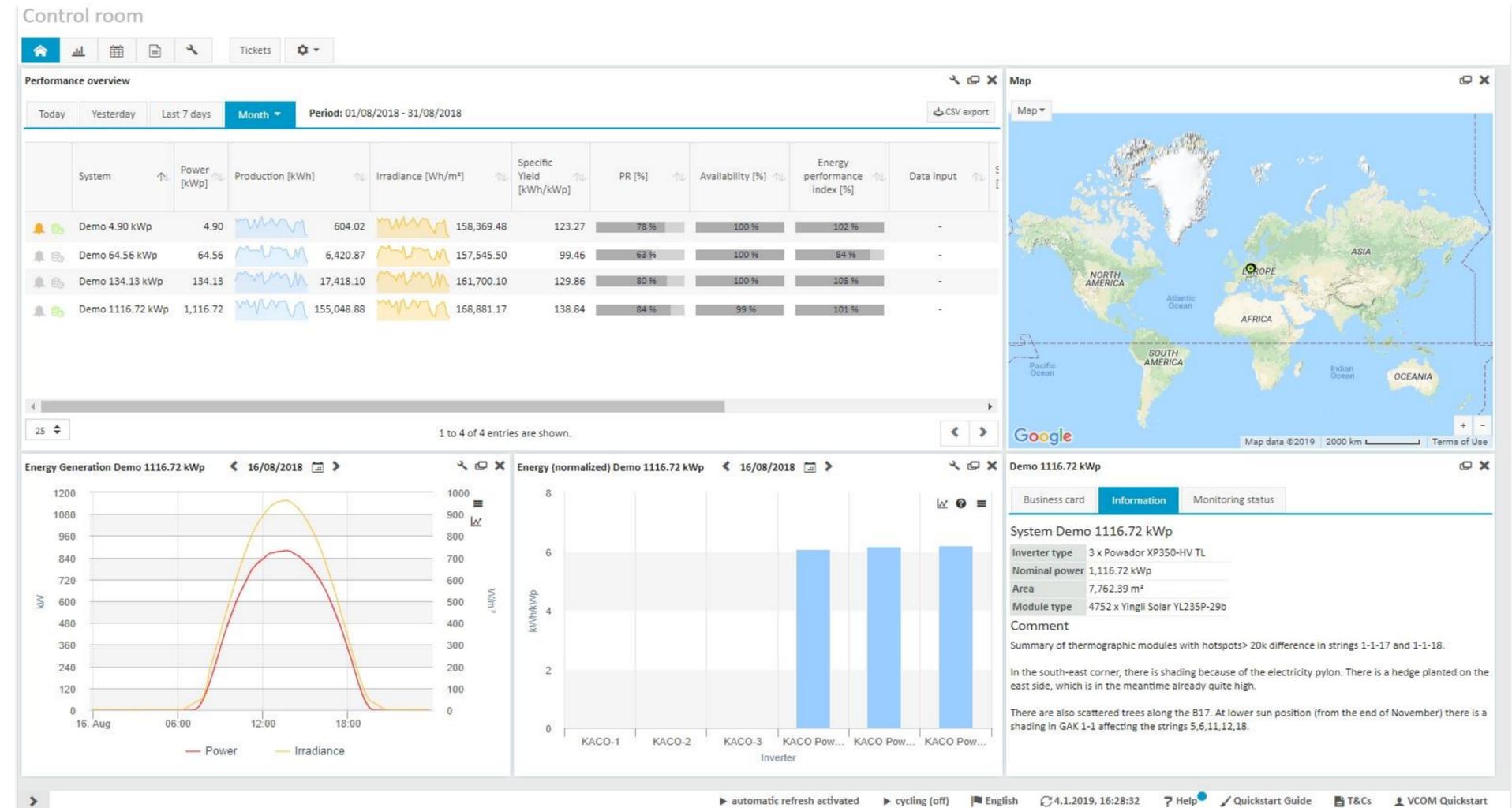


## THE CONTROL ROOM THE PORTFOLIO LEVEL

After logging in, you will be directed to the **control room**. This gives you a complete overview of all your systems, and the view is preconfigured to suit your authorization level. You may therefore not have all the functions described in this guide at your disposal.

The control room is the most important view in VCOM. The displayed content is updated automatically every 5 minutes. This applies to all pages in VCOM.

Each page is preconfigured with **portlets**, which are smaller individual windows that can be resized, moved or removed. You can also easily add new portlets via the **portlet center**.



# THE CONTROL ROOM OPERATIONS

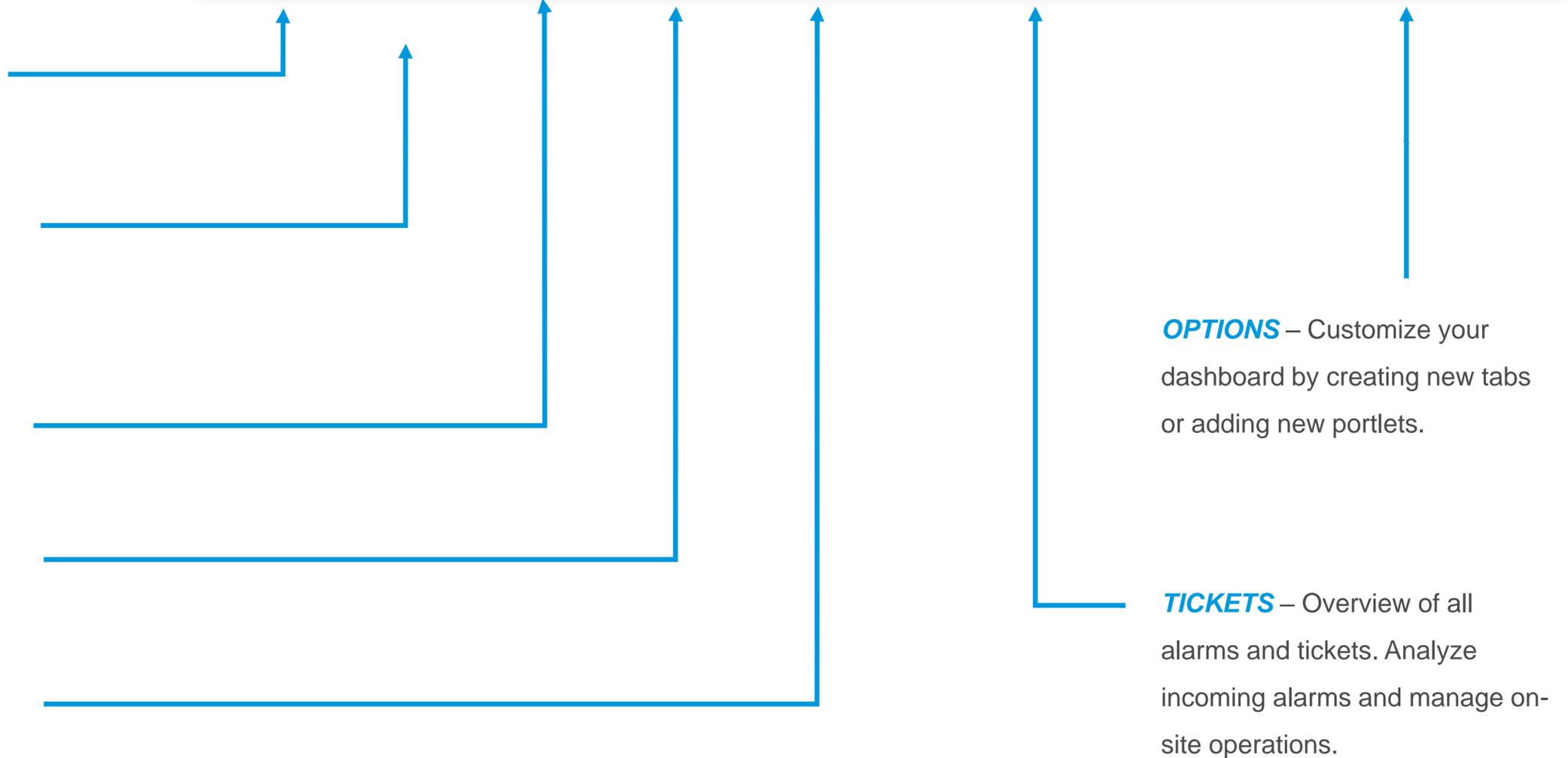
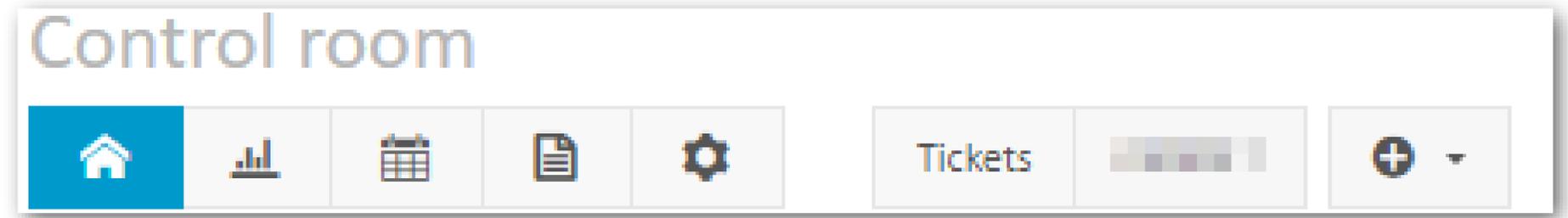
The **HOME BUTTON** will always bring you back to the control center's home page.

In the **ANALYSIS SECTION**, you can create your own diagrams for all systems. Analyses can be placed on your dashboards using a special portlet, the **analysis portlet**. You can also use the diagrams in your reports.

Use the **CALENDAR** to set one-time or regular appointments for your systems.

**REPORTS** – Create portfolio reports with charts and KPIs or generate CSV exports.

**ADMINISTRATION** – This opens a new window with various system or portfolio settings.



**OPTIONS** – Customize your dashboard by creating new tabs or adding new portlets.

**TICKETS** – Overview of all alarms and tickets. Analyze incoming alarms and manage on-site operations.

# THE FOOTER

You are currently logged in as this **USER**. Here you can edit your profile and log out.

Here you can change the **LANGUAGE** for your current session.

Select between a light and dark **THEME**.

When was your view last updated? New data is checked every 5 minutes. Click on the icon to reload immediately. You can also deactivate the automatic update.



The **CYCLING-MODE** runs through all your systems and loads a new system at an adjustable time interval. Ideal for a control room view.

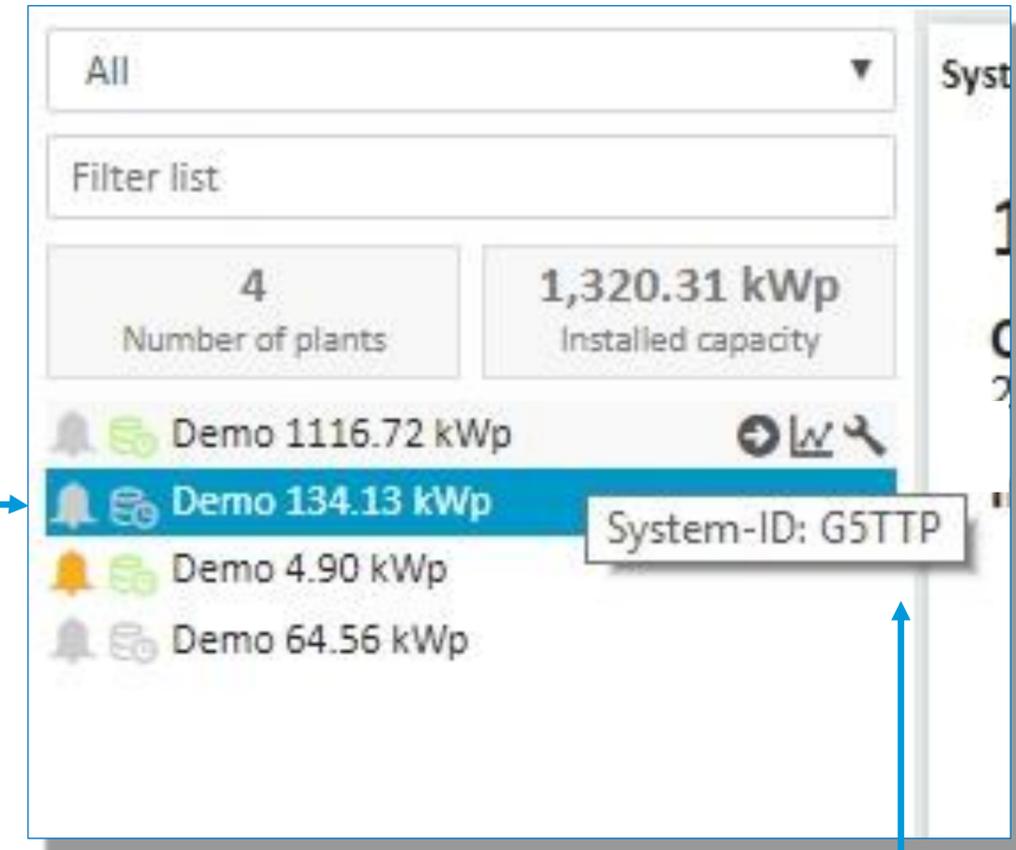
**HELP** – Get the welcome tour and view our privacy policy, release notes, keyboard shortcuts, system messages, and API documentation. The blue dot indicates that a new version of the VCOM has been released.

## THE SIDEBAR

The **sidebar** contains a list of all systems in your account. It is located on the left and can be hidden if you need more space for your dashboard. Use the arrow at the bottom of the sidebar to expand or collapse the view.

If hover over a system, a context menu appears, allowing you to jump to system-specific views.

- ➔ **COCKPIT** – The start page of a system for a quick overview
-  **EVALUATION** – Comprehensive, graphical insight into all measured data, KPIs, simulations and evaluations.
-  **CONFIGURATION** – Configure your system parameters here, from master data to alarm settings and data logger configurations.



**SYSTEM INDICATORS** – The bell icon indicates open alarms, and the database icon indicates data input problems. Ideally, both should be green. If the icons are gray, this means that alarms are in progress or that there is no available data input.

**SYSTEM ID** – Have the ID ready when you contact our tech support. You will certainly be asked for it.

# THE COCKPIT

## THE SYSTEM LEVEL

From the control room, you can switch to the **system level** for further analysis or configuration. All menu items from the **cockpit** (in blue) then refer to the selected system.

Click the **home icon** to return to the control room.

You can easily switch from one system to another via the sidebar.

You can also configure the portlets at the system level. The settings then affect all installations in your account.

For a better overview, the selected page and the name of the current system are shown at the top.

**Cockpit Demo 1116.72 kWp**

System profile: **1,116.72 kWp**, Commissioning: 20 December 2010, Inverter: 3 x Powador XP350-HV TL, Modules: 4752 x Yingli Solar YL235P-29b

Monitoring status:

Monitoring functions	Status
Inverter energy comparison	✓
Energy / Irradiance	✗
Data Input	✓
Comparison of Current Sensors	✓
System alarm	✓
Comparison of Meters	✗
Performance ratio	✓
Data logger communication	✓
Inverter	✓
Sensor monitoring	✓
Sensor group comparison	✗
String monitoring	✗

Current system status 16:25:00: Power 0.00 kW, 4.49 W/m<sup>2</sup>, 15.10 kWh

Energy Generation Demo 1116.72 kWp (16/08/2018):

Time	Power (kW)	Irradiance (W/m <sup>2</sup> )
08:00	0	0
12:00	~800	~1000
16:00	~800	~1000
20:00	0	0

Ticket overview:

Actions	Last change	Ticket	Designation	Error type	System	Date	Error status	Person in charge	Cause
✓ ✗	04/01/2019 16:32:58	T182887	bluelog Einbau in KW49	Ticket	Demo 1116.72 kWp	05/12/2018 10:11:30	In progress	Wecht, Simon	

Footer: automatic refresh activated, cycling (off), English, 4.1.2019, 16:31:56, Help, Quickstart Guide, T&Cs, VCOM Quickstart

# THE COCKPIT

## THE SYSTEM LEVEL

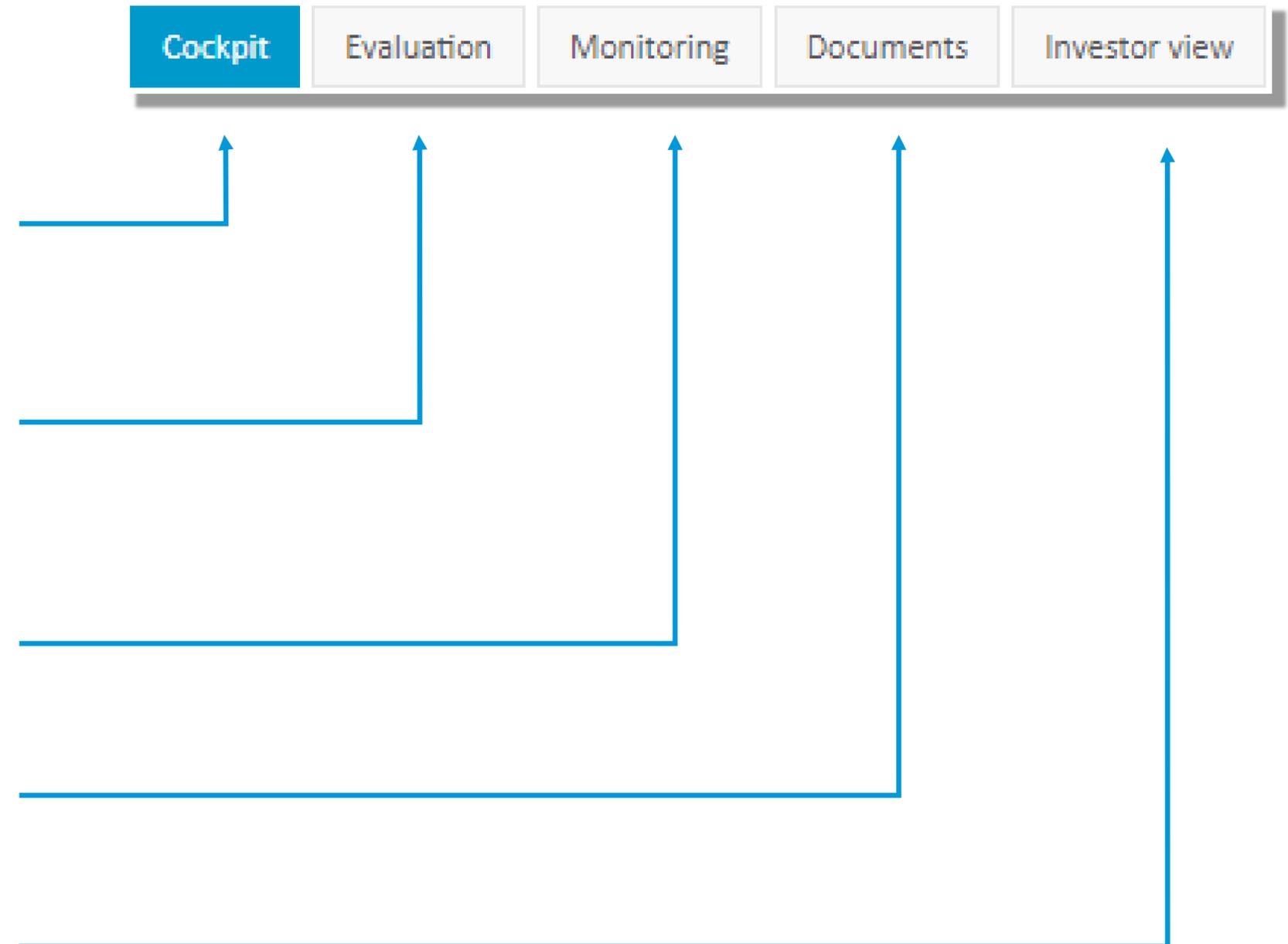
The **COCKPIT** serves as the system-level starting point, providing all the necessary information for a swift overview. If something is missing, explore the Portlet Center for additional resources.

In the **EVALUATION** section, you can gain rapid, visually intuitive access to all the measured data for the chosen system. Smart diagrams simplify the assessment of the entire system or individual components, such as inverters or strings. KPIs, including the performance ratio and system availability, are readily available..

On the **MONITORING** page you will find real-time or historical alarm messages.

To organize **DOCUMENTS**, you can create folders and upload system-relevant plans, contracts or other documents. You will also find the reporting function for creating monthly or annual system reports.

The **INVESTOR VIEW** allows you to examine the economic efficiency of the system.





***THANK YOU FOR READING THIS GUIDE!***

Now you have an initial overview of how **VCOM** works.

Give it a try, and you'll soon realize there's a lot more to explore.

We hope you enjoy using **VCOM** and eagerly anticipate your feedback.

Our team is committed to continuously enhancing our solution.

# ***ADDITIONAL INFORMATION***

# SERVICE LEVEL

Explore our range of service levels tailored to meet every requirement. Refer to the table to identify the functions that are most relevant to your needs.

	<b>BASIC</b>	<b>PROFESSIONAL</b>	<b>PREMIUM</b>
<b>Portfolio size</b>	up to 25 MWp and 25 systems	No restriction	No restriction
<b>Detailed data storage</b>	5 years	10 years	unlimited
<b>Administration permissions &amp; system setup</b>	Setup by meteocontrol (chargeable)	✓	✓
<b>VCOM-API</b>	API 500	API 10.000	API 100.000
<b>Messaging system</b>	-	✓	✓
<b>CSV-Export and portfolio reports</b>	-	✓	✓
<b>Individual VCOM user groups</b>	-	-	✓
<b>PR and availability editor</b>	-	-	✓
<b>Solar power forecast</b>	-	-	✓
<b>VCOM theme manager</b>	-	-	✓

## USER GROUPS

Choose from predefined user groups based on your specific application. Customize authorizations for user groups to ensure the appropriate level of access.

Please note that depending on the selected service level (Basic/Professional/Premium), certain functions may not be available.

	Administrator	Operations	Technician	Technical Customer	Customer	Investor
Template	O&M	O&M	O&M	Technical Customer	Customer	Investor view
Sample views of the template						
Change login data	✓	✓	✓	✓	✓	✓
System master data	Read/Write	Read/Write	Read/Write	Read	Read	
Evaluation	✓	✓	✓	✓	✓	
Alarms	✓	✓	✓	✓		
Set up revenue forecast	✓	✓	✓	✓		
Data logger overview	✓	✓	✓	✓		
Data logger configuration	✓	✓	✓			
Ticket system	✓	✓	✓			
Responsibilities	✓	✓	✓			
Terms configuration	✓	✓	✓			
Monitoring-menu	✓	✓	✓			
System administration	✓	✓				
System setup	✓	✓				
System filters	✓	✓				
User management	✓	✓				
Import overview	✓	✓				
KPI configuration	✓	✓				
VCOM configuration	✓					
Theme manager	✓					
Create VCOM API Key	✓					

## KPIs

You can effectively evaluate your systems with just a few KPIs, facilitating straightforward comparisons between different systems. These KPIs serve as crucial tools in the day-to-day monitoring of your systems.

We have compiled a list of the KPIs utilized in VCOM for your convenience..

### *Specific yield*

The specific yield is calculated as the ratio of the system's yield to the installed DC power. When assessed on an annual basis, it provides a location-specific evaluation to determine whether a system aligns with the pre-established expectations, often determined by yield report. It serves as a straightforward metric for considering economic efficiency.

### *Performance ratio*

The performance ratio is derived from the system's yield, the installed DC output, and the irradiation at the module level. It offers insight into how efficiently the system converts solar energy. A typical and favorable annual value falls within the range of 80 to 85%. By default, our calculations align with the current norm IEC 61724-1. However, given the various factors that can influence this calculation, VCOM provides an editor for fine-tuning.

### *System availability*

The availability metric represents the percentage of time a system was operational within a specific timeframe. It serves as an indicator for assessing how quickly faults can be identified and resolved. Since conditions for this metric can vary considerably, VCOM includes an editor for managing these factors.

### *Energy performance index*

The energy performance index describes the relationship between the specific yield and the simulated yield. It can assume values both below and above 100%, depending on the system's performance relative to the simulation. Our simulation process generates a daily value based on irradiation data (at module level), temperatures, and technical properties of the components, such as inverter characteristics or module efficiencies.

### *Power performance index*

The power performance index is similar to the energy performance index, with the distinction that it is not derived from yield but from power. This value is presented as a daily trend, calculated from the current power and the expected power. The expected power is determined via a configurable target performance ratio and irradiance.

### *Data availability*

Data availability quantifies the percentage of stored data that is complete over a specific timeframe. This is a crucial aspect of evaluation, since even the most robust KPIs lose their value if they are derived from incomplete data.

# DATA IMPORT

With VCOM, your data isn't confined to a one-way street. The flexibility of numerous import and export options ensures that you have the confidence to achieve your goals with your data at any given time.

## Compatibility

We would be thrilled if all our customers used our blue'Log data logger and VCOM in tandem. However, our system also supports a wide array of data loggers globally, and the compatibility list is continually expanding. For the most up-to-date overview, please visit our homepage. The compatibility list, available for download under : [VCOM import interface](#) provides comprehensive information

## Standard import format

Occasionally, we receive inquiries from manufacturers or developers seeking a data format that ensures compatibility with VCOM, even without engaging in a custom development project with us. In response to this demand, we have a ready-made solution that we've made publicly accessible. Explore our import specification on GitHub at [meteocontrol](#). Please note that this resource is tailored for developers. Feel free to check it out for detailed information: [Github](#)

## VCOM API

For developers, we provide an API that allows you to retrieve various data from VCOM. Moreover, you can also modify and store data within the VCOM, particularly useful for the ticket system where seamless interaction with other systems is crucial. The comprehensive documentation for the API is available on [Github](#). Explore the details to harness the full potential of our API capabilities.

## Reports

For those who prefer not to code, VCOM offers a range of reporting possibilities. From quick CSV exports to monthly investor reports at both system and portfolio levels, we provide numerous user-friendly options to meet your reporting needs.

## Portfolio migration

PV systems are frequently spread across numerous monitoring portals, complicating daily tasks and consuming valuable time. Our extensive compatibility is designed to assist you in consolidating your portfolio within VCOM. We're here to support you in configuring your system and transferring historical data, ensuring a streamlined and efficient process.

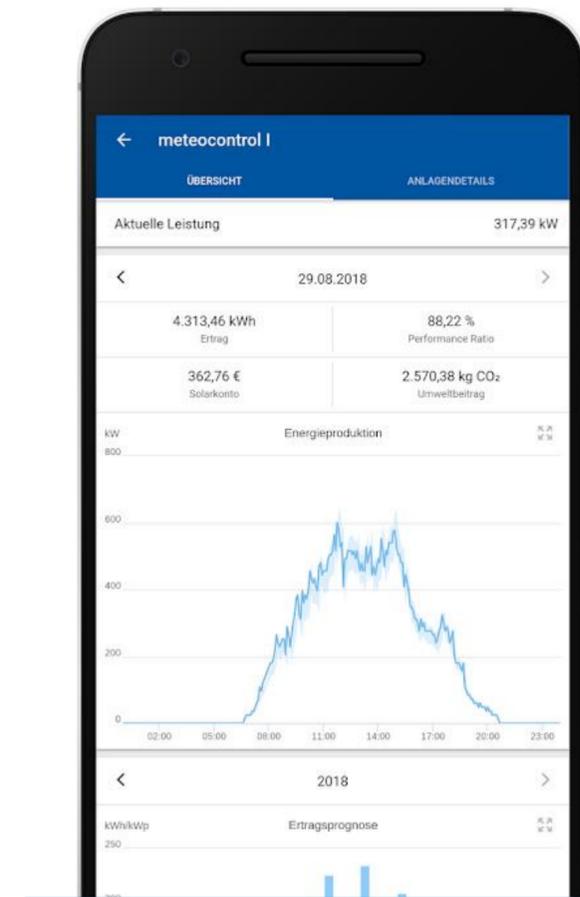
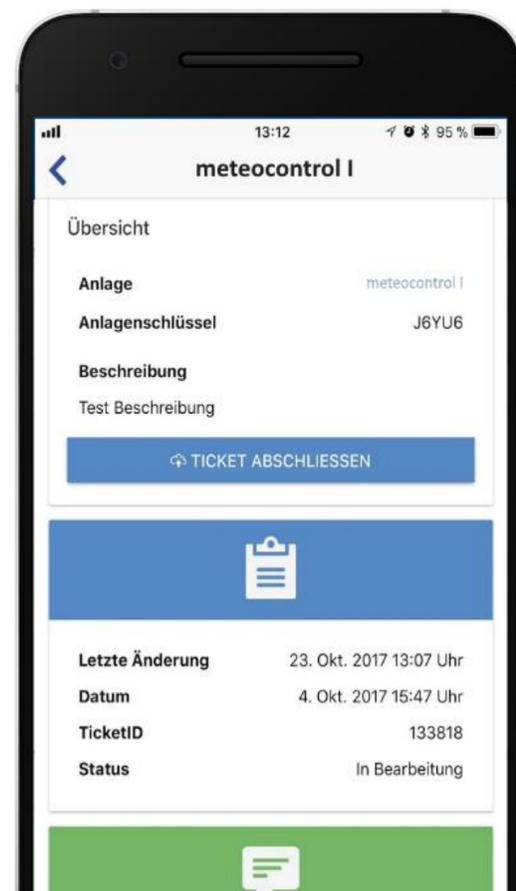
## Apps

In the Google and Apple app stores you can also find our two apps for monitoring and field service.

As a supplement to VCOM, you can keep track of your systems on the go and - if absolutely necessary - even on weekends.

### VCOM Monitoring App

Gain constant access to the performance of your systems anytime and anywhere with the VCOM Monitoring App. Track crucial key figures like energy and performance ratio, and monitor real-time performance of your systems.



### VCOM O&M App

Additionally, the VCOM O&M App allows you to view and manage your active VCOM tickets on the go. Document on-site operations by uploading comments and pictures. Upon completion, all information is seamlessly transferred to VCOM. The app ensures you always have access to essential system data, including location and contact information..





*Chicago*

*Santiago de Chile*

*Madrid*

*Lyon*

*Milan*

*Augsburg*

*Berlin*

*Dubai*

*Ahmedabad*

*Shanghai*

*Tokio*

*Melbourne*