



Quick Start Guide

Version 02.2013

22/10/2013



Dear iSERVcmb participant,

Welcome to the iSERVcmb project.

This guide was designed to help you get started with your participation to the iSERVcmb project.

The following pages demonstrate how to:

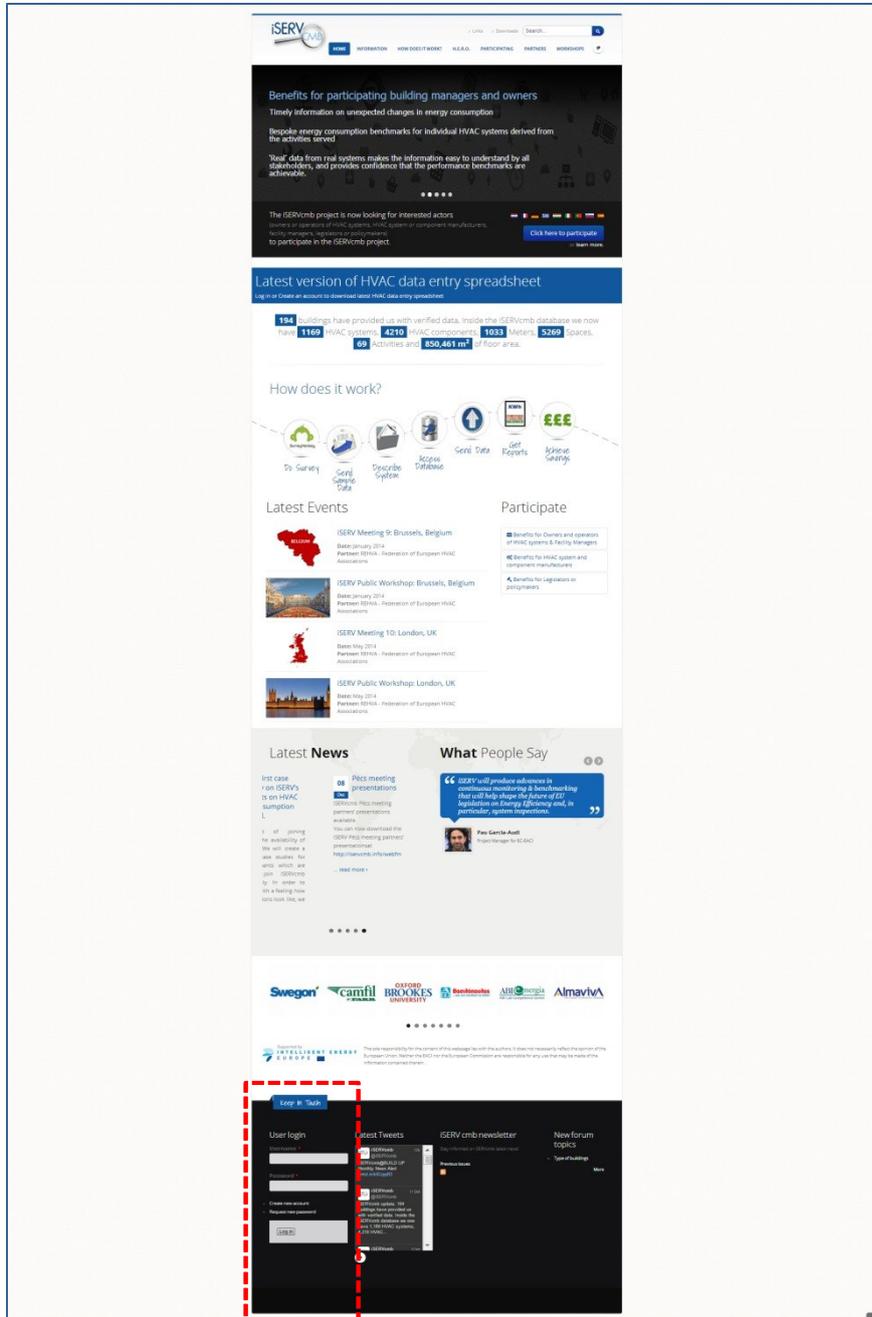
- Register on the iSERVcmb official website to ensure you receive all the latest updates and information on the project, as well as being able to download the latest iSERV spreadsheet.
- Upload your building to the iSERVcmb database.
- Advertise your organisation in the iSERVcmb official website and acquire the iSERVcmb logo.

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1 Registering on the iSERV official website

Open the website: www.iservcmb.info



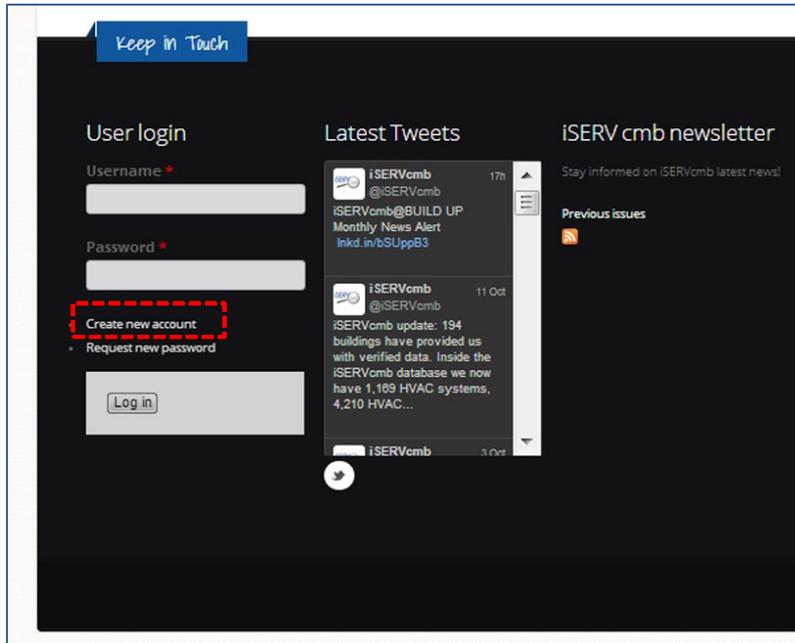
If you have a username and password click on the link **Log In** and jump to chapter 2, page 6.

If you have no username and password, click on the link **Register** and follow the instructions on page 4.

Open the website: www.iservcmb.info

Click on the link **Register** (see chapter 1, page 3)

Now you can create your personal account through the **Create new account** page:



Please fill in your account information in the user account template.

The marked fields * are mandatory fields.

Confirm your information by clicking the button **Create new account**.

If all information is correct you will get the following email in the email address you have provided:

Name,

Thank you for registering at iSERV cmb. Your application for an account is currently pending approval. Once it has been approved, you will receive another e-mail containing information about how to log in, set your password, and other details.

-- iSERV cmb team

Now you are registered on the iSERV official homepage.

2 Uploading your building to the iSERV database

To upload your building to the iSERVcmb database you will need to complete the following steps described in details in pages 6 to 18:

- Send your sample data to the iSERV database for checking (p. 7)
- Download the iSERV HVAC Template Data Sheet (p. 8)
- Activate the iSERV HVAC Template Data Sheet's macros (p. 11)
- Insert your building data to the iSERV HVAC Template Data Sheet (p. 13)
- Send your data sheet and full metering data to the iSERV database (p. 18)

2.1 Sending your sample data to the iSERV database

Before providing further details of your building and systems, please send a sample of your metering data to your local partner. The sample will be sent to the iSERV database in order to ensure that your metering data are in a compatible format. As a standard, we accept data files in .txt or .csv format. If your data is not in any of these formats, you can still send a sample to your local partner for them to check whether it is in a useable format.

The examples below show two potential data file formats. The 1st format is a utility bill (1st 6 hours) for a half hourly meter. The 2nd format is generated by quarter hourly meters attached to a set of chillers. K2n will be able to load any format as long as the date is in the form of a header followed by repeating rows. K2n will need unique identifiers for each meter being loaded.

In this first example the Unique ID is contained in the COREMPAN Column on every row. This type of file could hold multiple meters in it.

The data in this example contains CONSUMPTIONS per interval. The HERO database will use this data directly. Accuracy is lost if any data is missing as estimates are then used for this missing data.

COREMPAN	Date	Reading Type	00:00	00:30	01:00	01:30	02:00	02:30	03:00	03:30	04:00	04:30	05:00	05:30	06:00
2100040172872	01/04/2011	kWh	196.10	199.90	197.80	198.80	199.20	195.50	197.90	196.80	199.00	194.50	201.30	221.00	222.70
2100040172872	02/04/2011	kWh	186.40	181.50	182.60	184.00	186.10	188.20	186.20	191.80	187.50	200.80	221.60	219.80	226.80
2100040172872	03/04/2011	kWh	193.10	193.50	191.40	192.10	195.20	194.50	193.90	196.80	197.40	196.80	196.00	192.50	211.00
2100040172872	04/04/2011	kWh	198.40	199.80	198.30	196.60	198.50	197.50	193.70	196.00	200.50	194.60	206.30	205.40	214.20
2100040172872	05/04/2011	kWh	204.30	207.60	202.00	207.90	210.70	209.50	214.70	211.00	207.40	211.30	221.00	216.30	232.30
2100040172872	06/04/2011	kWh	231.00	233.20	231.20	233.80	230.40	231.50	230.10	231.60	231.30	231.80	234.10	232.60	249.20
2100040172872	07/04/2011	kWh	203.50	198.90	199.40	206.40	206.40	207.30	208.10	206.10	210.70	210.90	209.90	210.20	223.40
2100040172872	08/04/2011	kWh	202.60	202.10	201.80	200.80	200.90	207.90	208.80	206.50	207.90	212.60	207.00	212.80	218.00
2100040172872	09/04/2011	kWh	193.20	190.60	192.40	190.00	191.40	185.00	187.90	188.80	186.30	190.10	188.40	189.00	204.80
2100040172872	10/04/2011	kWh	194.10	196.30	193.20	184.80	188.10	186.10	182.80	188.70	187.30	190.80	192.20	187.00	198.10
2100040172872	11/04/2011	kWh	193.80	192.60	193.40	194.30	193.20	191.90	192.40	195.50	196.50	196.30	207.30	209.10	212.00
2100040172872	12/04/2011	kWh	194.80	189.80	192.40	194.30	191.60	192.50	193.80	191.40	192.20	193.50	194.30	193.40	209.50
2100040172872	13/04/2011	kWh	193.40	191.50	191.80	192.30	193.80	192.40	192.30	192.80	193.10	196.20	194.40	191.70	206.70

In the second example below, the Unique ID is the name assigned for each column. This is not always generated by the meter and this example shows meter data generated by manual intervention. It is important the end user knows that if these Unique ID header names are altered then the names in the iSERV database must be updated to reflect the change (FROM the month of alteration only).

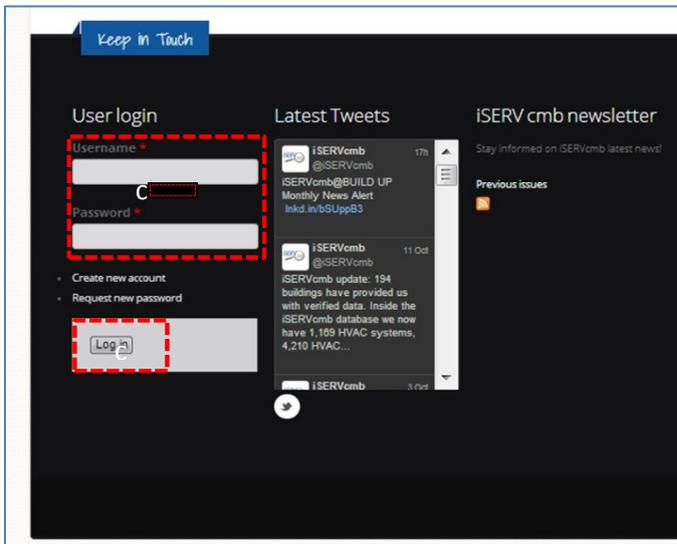
The data in this example contains meter READINGS. The iSERV database will convert these into interval consumptions. This type of data is most accurate for overall consumption as the readings allow any missing consumption from missing readings to be accurately known once the readings resume.

	SWB_A_Incomer	SWB_B_Incomer	SWB_A_Chiller_1	SWB_A_Chiller_2	SWB_B_Chiller_3
2009-Oct-01 00:00:00.000	6,164,825	3,565,660	431,465	461,417	733,169
2009-Oct-01 00:15:00.000	6,164,884	3,565,701	431,465	461,419	733,175
2009-Oct-01 00:30:00.000	6,164,940	3,565,739	431,465	461,421	733,180
2009-Oct-01 00:45:00.000	6,164,994	3,565,777	431,466	461,422	733,185
2009-Oct-01 01:00:00.000	6,165,049	3,565,817	431,466	461,425	733,191
2009-Oct-01 01:15:00.000	6,165,096	3,565,855	431,467	461,426	733,195

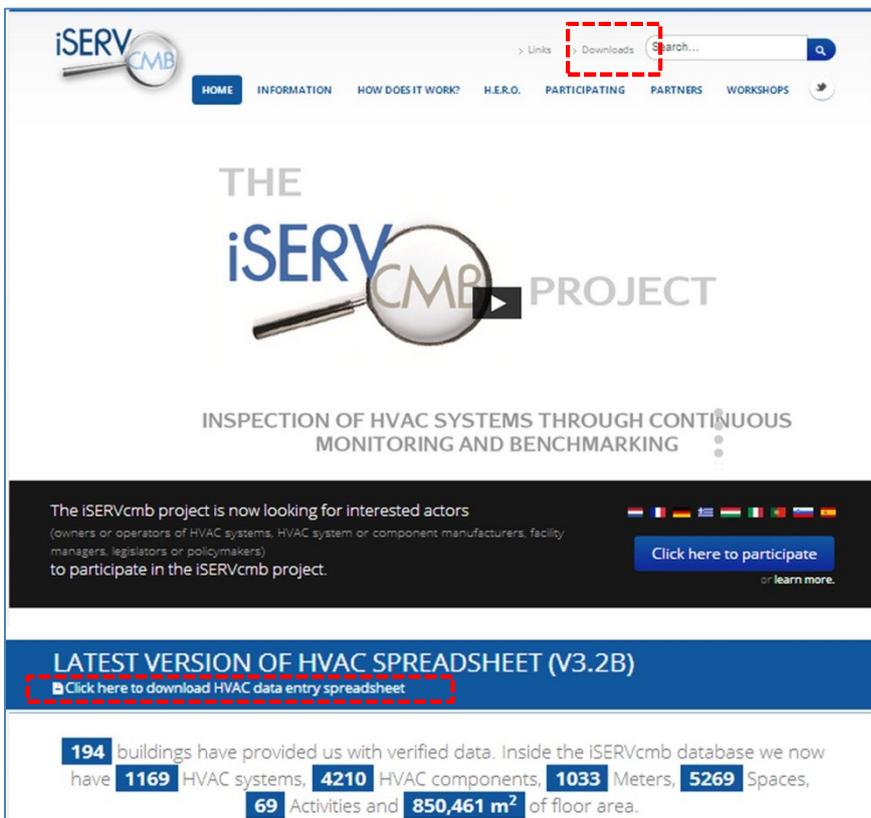
The final example of a Unique ID is for a meter where the Unique ID is the File name. In this case the file can contain data only for a single meter. The file can be with or without headers in the data provided it is clear what each column of data contains e.g. data, time, meter reading/meter consumption, etc.

2.2 Downloading the iSERV HVAC Template Data Sheet

Open the website www.iservcmb.info and click on the link **Log In** (see chapter 1, page 2). In the **Log in** page, insert your username and password and click on the **Log In button**:



After logging in, you will get an **overview** of your account:



To acquire the iSERVcmb HVAC Data spreadsheet, click on the link **Downloads** at the top right or click on the **“Click here to download HVAC data entry spreadsheet”** link at the middle of the page.

You will access a list of the available files you can download:

LATEST VERSION OF HVAC SPREADSHEET (V3.2B)
[Click here to download HVAC data entry spreadsheet](#)

View Edit

iSERVcmb Forum
 Have a question?

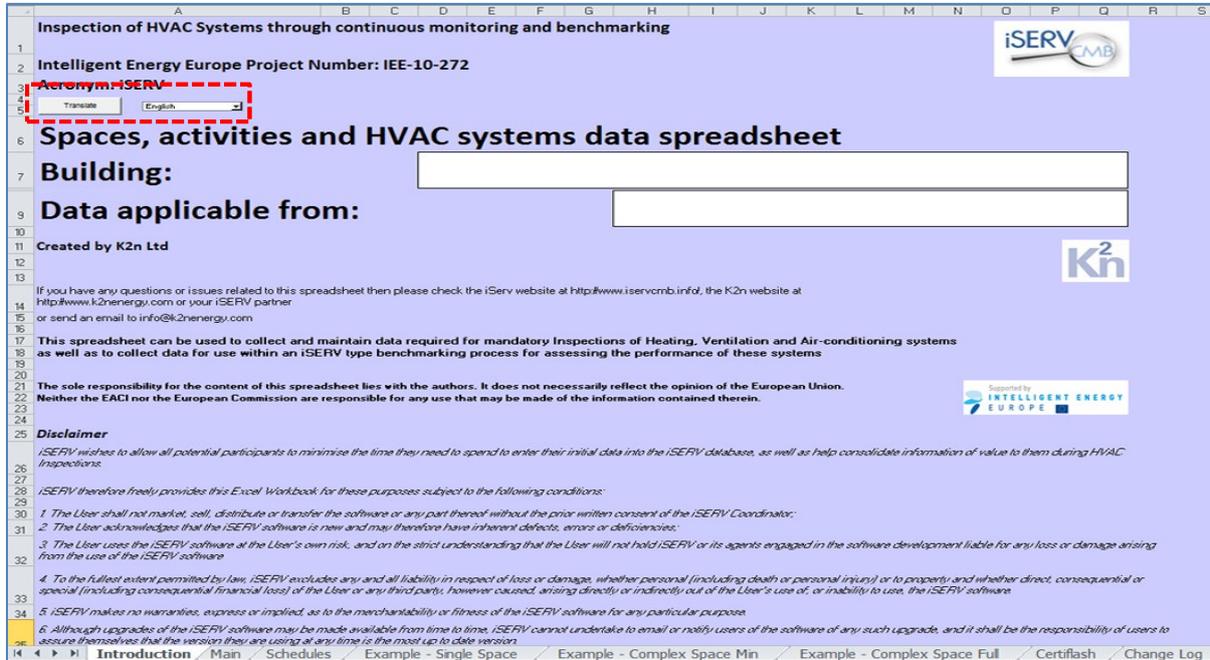
Download files for iSERV users

Post date	Public documents	User documents
10-10-13		iSERVcmb Peak Electricity Load CLIMA 2013
10-10-13		iSERVcmb Case Study CLIMA 2013
10-10-13		iSERVcmb Building Envelope CLIMA 2013
10-10-13		iSERVcmb Benchmarking CLIMA 2013
10-10-13		iSERVcmb REHVA Workshop Timisoara 2012
10-10-13		iSERVcmb Presentation of Paper REHVA Workshop Timisoara 2012
10-10-13		iSERVcmb Convegno Nazionale Padova 2012
3-10-13		Instructions for exporting building from the database_v02
16-05-13		How energy efficient are you?
20-02-13	iSERVcmb Press Release	
18-02-13	iSERVcmb Best Practice: McKenzie House	
10-01-13	iSERVcmb Mock Up Report	
9-01-13	iSERVcmb Quick Start Guide	
24-09-12	iSERVcmb Overview Presentation	
20-09-12	iSERVcmb Flyer	
7-08-12		iSERV HVAC Template Data Sheet - v3_2b.xls
14-12-11		iSERVcmb Spreadsheet FAQ v1.11

Keep in Touch

To download the latest version of the iSERVcmb HVAC Data spreadsheet, click the following Excel file: [iSERV HVAC Template Data Sheet v3.2b.xls](#) or click on the “**Click here to download HVAC data entry spreadsheet**” link at the top of the page.

Once the download is complete, open the iSERVcmb HVAC Data spreadsheet:



Choose your language and click on the button **Translate**.

The iSERV spreadsheet requires MACROS to be enabled. These macros are required to help you connect your information together within the spreadsheet.

If you receive security warnings regarding macros and content, please accept them all. Then save the file to your hard drive and re-open it. All the macros should then work and you will be able to use the spreadsheet.

'Chapter 2.3: Activating macros in Excel 2010' provides a step-by-step guide for that version of Excel.

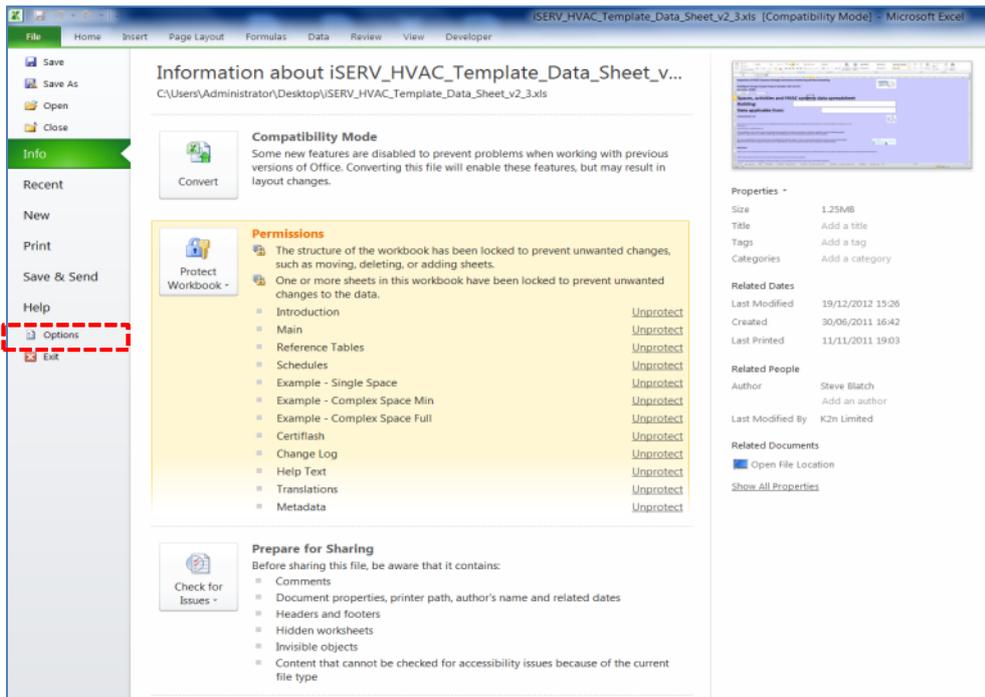
If you do not receive any security warning, please jump to chapter 2.4.

2.3 Activating macros in Excel 2010

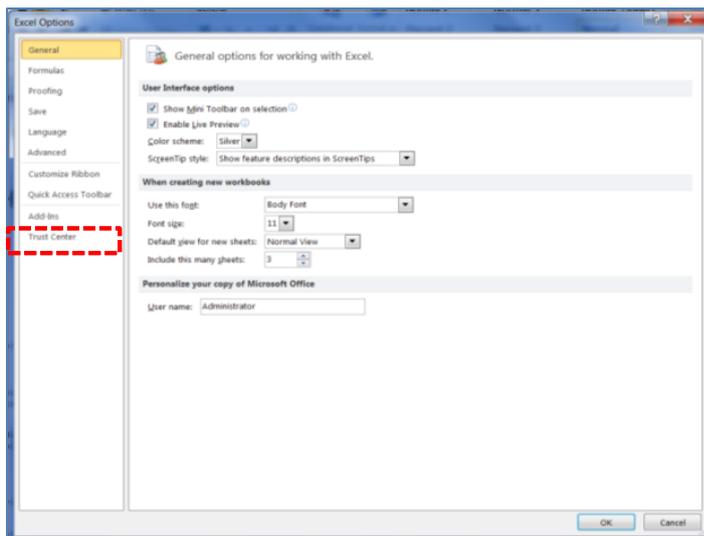
Open the iSERVcmb HVAC Data spreadsheet.

Click on **File** tab.

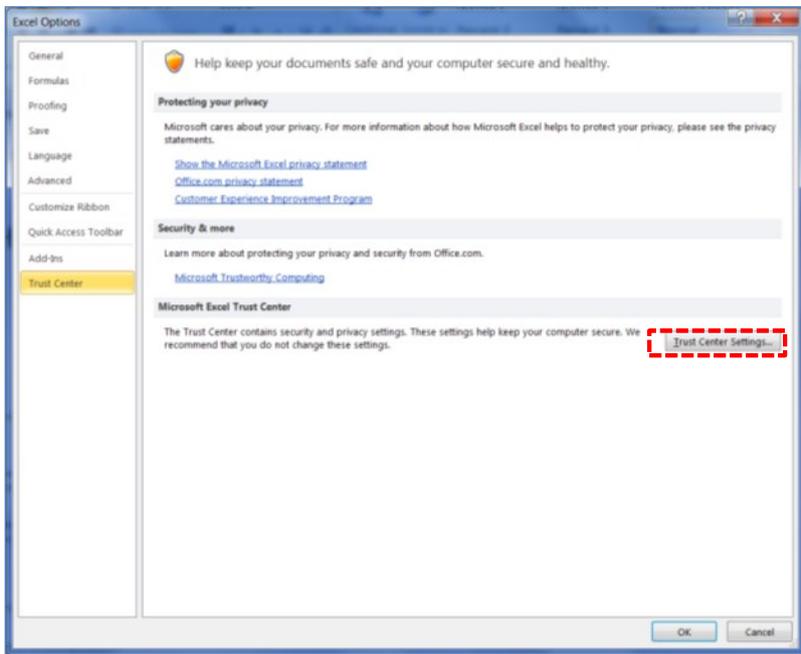
Once on the **File** tab, click the **Options** button:



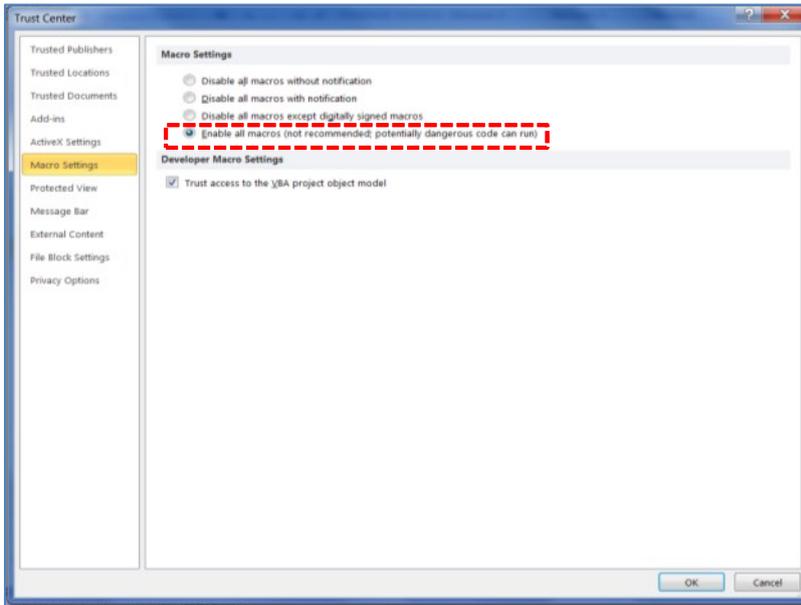
Once on the **Excel-Options** window, click the **Trust Center** (or Security Center in older versions) tab:



Once on the Trust Center tab, click the **Trust Center Settings** button.



Once on the **Trust Center Settings** window, click the Macro Settings Tab:

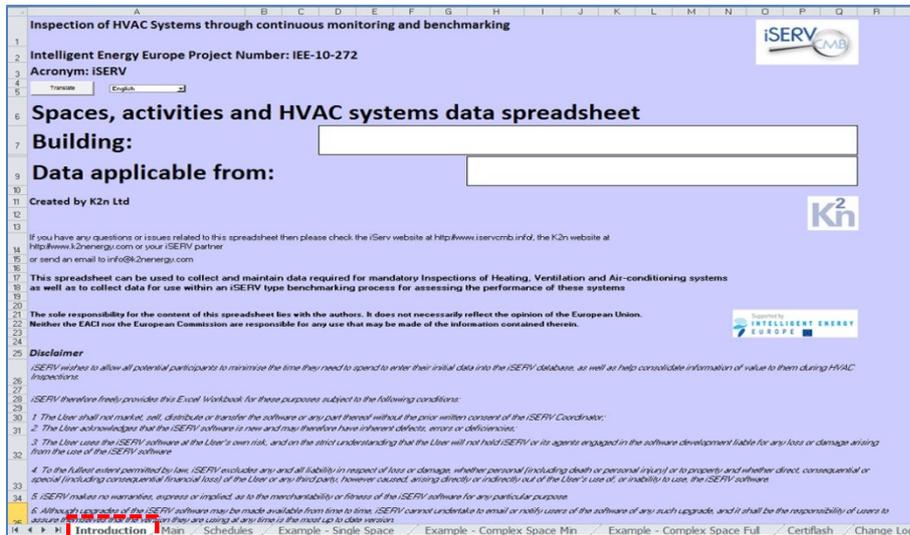


Once on the **Macro Settings** tab, click the **Enable all macros** option.
 Confirm your settings by clicking the **OK** button and close the Excel file.

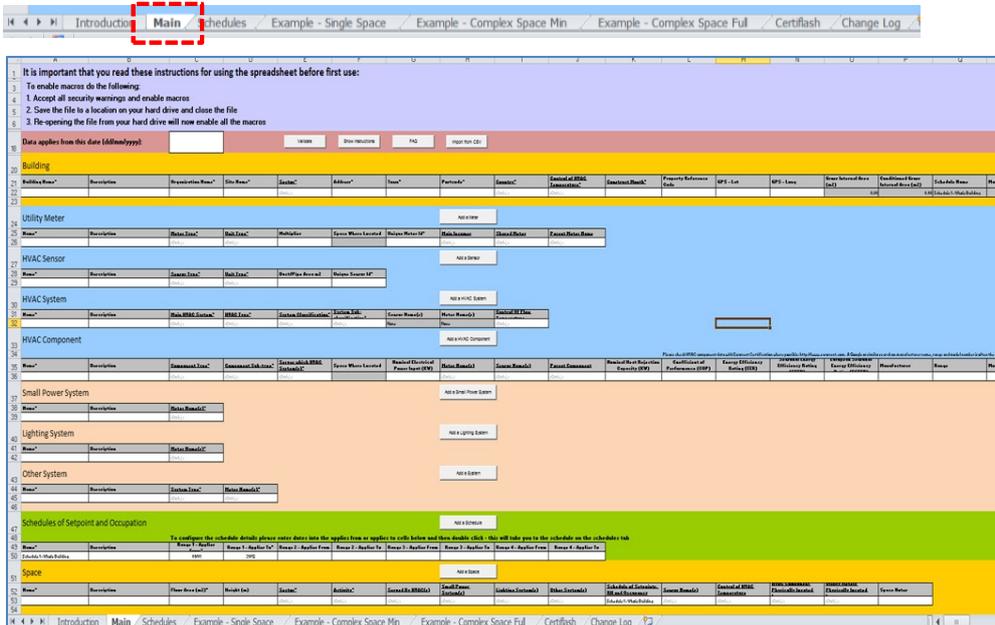
2.4 Inserting your building data

Open the iSERVcmb HVAC Data spreadsheet.

You will find yourself in the **Introduction** Tab:



Choose the **Main** tab to bring up the sheet shown below:



Fill in the details of your building. A suggested methodology is presented in the next few pages but you can complete the sections on the sheet however you wish.

2.5 Suggested methodology for completing the iSERV spreadsheet

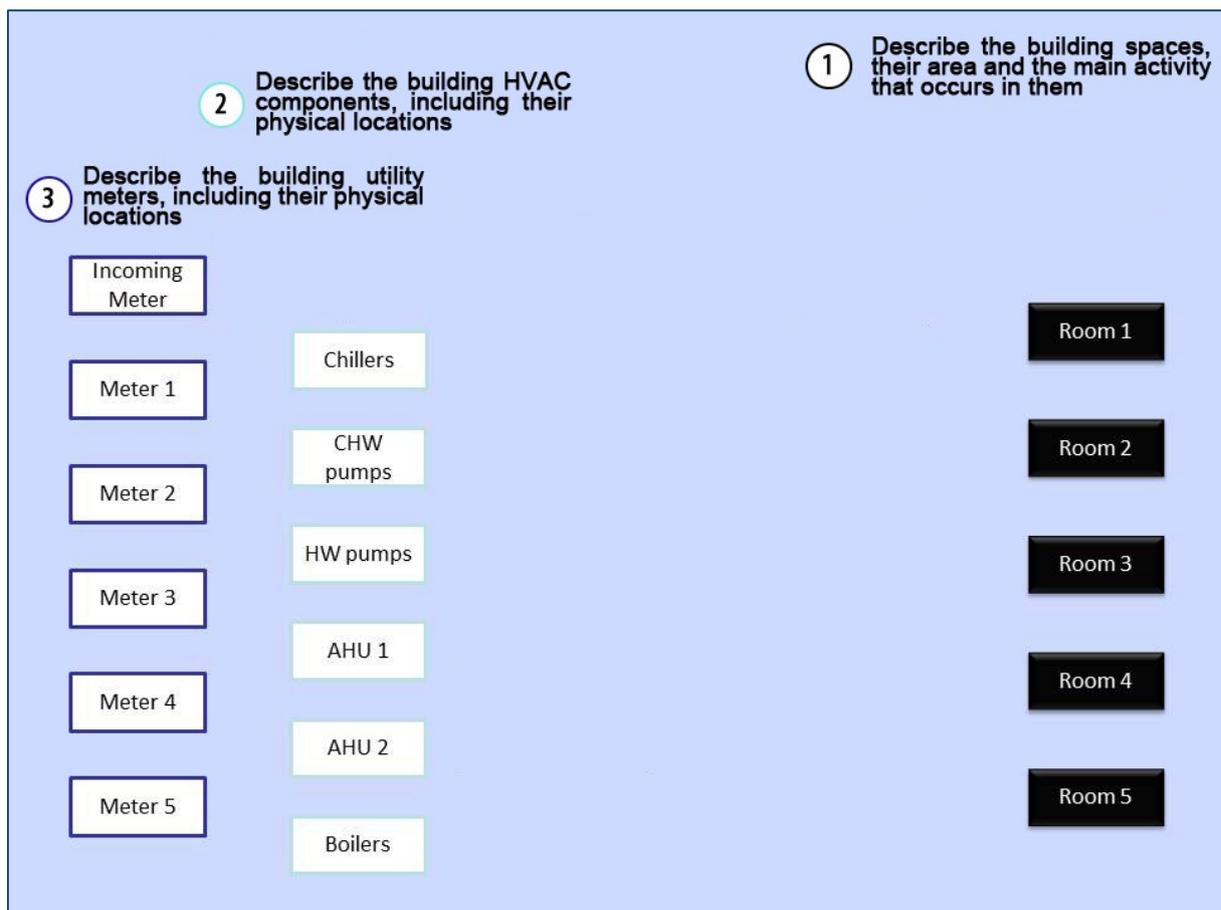
To describe your building using iSERVcmb spreadsheet, please complete the following steps:

- **Describe the building spaces and the main activity** that occurs in each of them by acquiring a list of all conditioned spaces in your building. To describe each space you will need to provide its name, gross floor area, and activity.

You should treat a space as conditioned by a HVAC system if it is clear that its temperature and ventilation will be achieved by the HVAC system either directly or indirectly e.g. a small store room/cupboard may not have any direct connection to the HVAC system but may be heated and ventilated indirectly from the adjoining space.

It is not mandatory to list unconditioned spaces, however, it is advisable to record and list all spaces in each building so that all areas are accounted for when the Gross Building Area is calculated.

Describing the spaces first allows you to then locate meters and HVAC components in the spaces they occupy as you describe them in the next stages.



- **Describe the building HVAC components** including their physical locations, by listing all the elements of your HVAC system noted individually i.e. pumps, fans, boilers, chillers, etc., with their attendant data such as nominal power ratings, manufacturer, serial numbers, etc..

ALL Components should be recorded e.g. if you have 500 Fan Coil Units they must each be recorded individually. The reason for this is that they collectively form an important and controllable load.

For some components you can check the HVAC component data with Eurovent Certification by using the following link: <http://www.eurovent.com>

The more technical specification details you can provide for each HVAC component, the more ECOs you will potentially have access to.

As a minimum you should provide the 'nominal power rating' where possible i.e. the amount of power this system would normally expect to draw when running at full speed.

- **Describe the building HVAC SYSTEMS.** These are simply aggregations of individual HVAC components into the individual HVAC systems that serve the building. Only an HVAC SYSTEM can be connected to a Space. A System will normally be described at the level of e.g. an AHU or an individual split Air-Conditioning Unit.

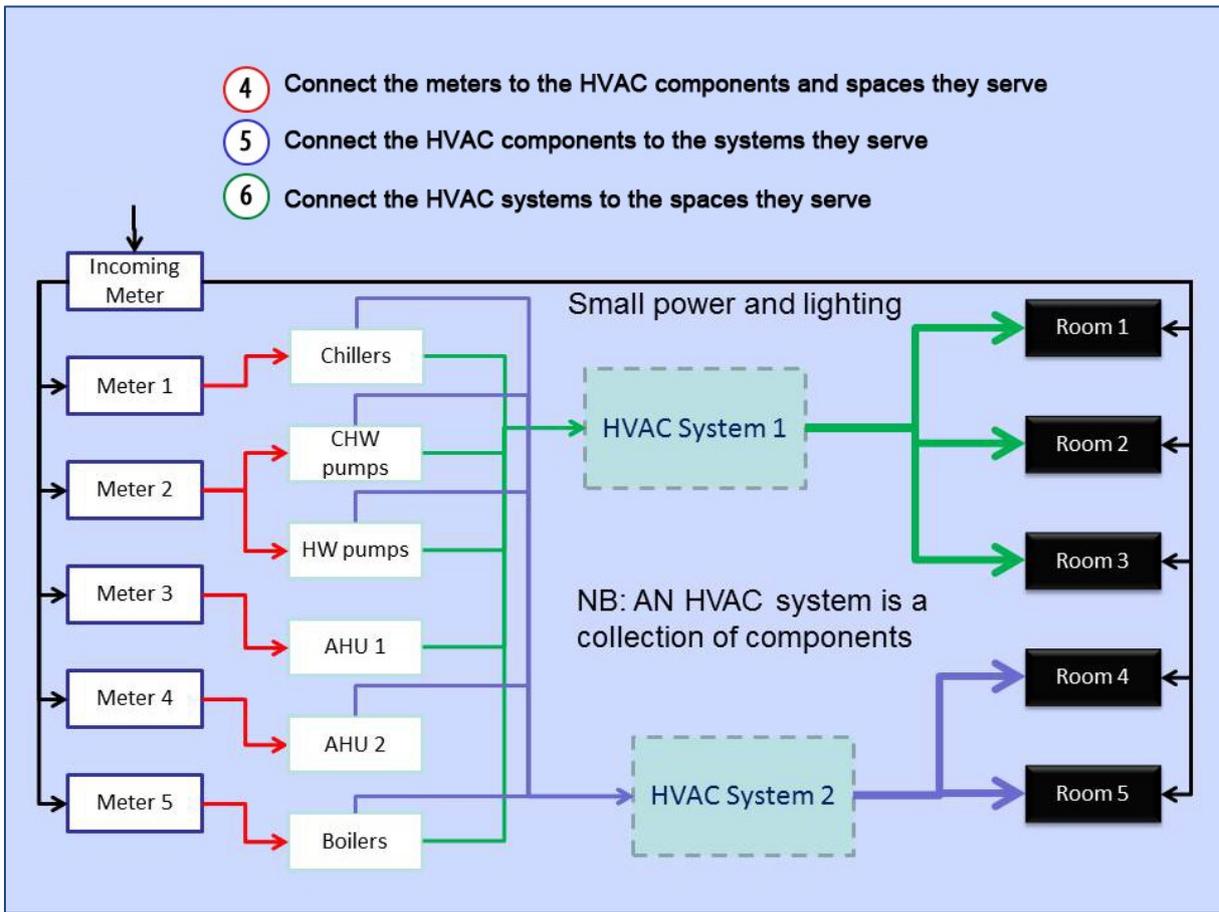
An HVAC component can serve more than System e.g. the Heat Generators will probably serve most of the major HVAC systems in a building.

An HVAC component can also be a system e.g. a toilet extract fan.

- **Describe the building utility meters,** including their physical locations by acquiring a list of list all meters and sub-meters in your building including the main incomer meter. When describing your meters and sub-meters, you will need to define their type and units and the unique meter ID which describes the header of the sub-hourly data files for each meter.

After the meters, spaces and HVAC components are described, you should proceed to connect them by connecting:

- the meters to the HVAC components and other processes, such as lighting and small power, that they serve,
- the HVAC components to the systems they serve,
- the HVAC systems to the spaces they serve.
- the lighting and small power processes to the spaces they serve



Once the MAIN tab is complete, press the VALIDATE button and amend any errors highlighted.

Choose the Schedules tab:

Schedule or Heating (H), Cooling (C), Relative Humidity (RH) and Occupancy (Occ)

Use this tab to enter schedules of setpoints for the whole building and/or individual spaces. "Schedule 1-Whole Building" is a special setpoint and should always be completed. This schedule will be used for all the spaces in the building unless specifically noted otherwise by defining additional schedules here and assigning these to the spaces in the main tab. All schedules can either be added in the spreadsheet now or via the online interface at a later stage. It is recommended that at least the main building schedule is defined in this spreadsheet before uploading.

The grid in this spreadsheet only allows you to roughly define the time schedules. Once the data is on the database it will be possible to configure schedules to the nearest minute.

1 Enter the date ranges that each schedule applies for - this is to enable seasonal variations to be configured.
 2 Enter the heating setpoint (H), cooling setpoint (C), relative humidity (RH) control (y/n or blank) and occupancy (Occ) in each time slot.
 3 Enter the estimated average occupancy number expected in the building at each hour. This is used to help with ECO's determination.
 4 The heating setpoint (H) defines the temperature to which the spaces will be heated and the cooling setpoint (C) the temperature to which the space will be cooled.
 5 For the RH values in the grid enter "Y" if RH is controlled during the time period or "N" or leave it blank if no RH control is active.
 6 The timeslot in the schedule are based on hour boundaries - if you have meters that are not on hour boundaries - 00:30 for example - then schedule round up to the nearest hour and then fine tune/adjust using the online application.
 7 An example schedule of setpoints is defined to the right of the first schedule below. This is purely for information purposes and not used for any calculations in the spreadsheet.
 8 Additional schedules can be defined by pressing the 'Add a Schedule' button on the Main tab.

Schedule Name	Applies From	Applies To
Schedule 1-Whole Building	0901	3112

Time Control Method	RH Range	Upper Limit	Lower Limit
Optimum Step/Start		65%	35%

Schedule Name	Date Range	Applies From	Applies To
Schedule 1-Whole Building		0901	3112

Time Control Method	RH Range	Upper Limit	Lower Limit
Optimum Step/Start		65%	35%

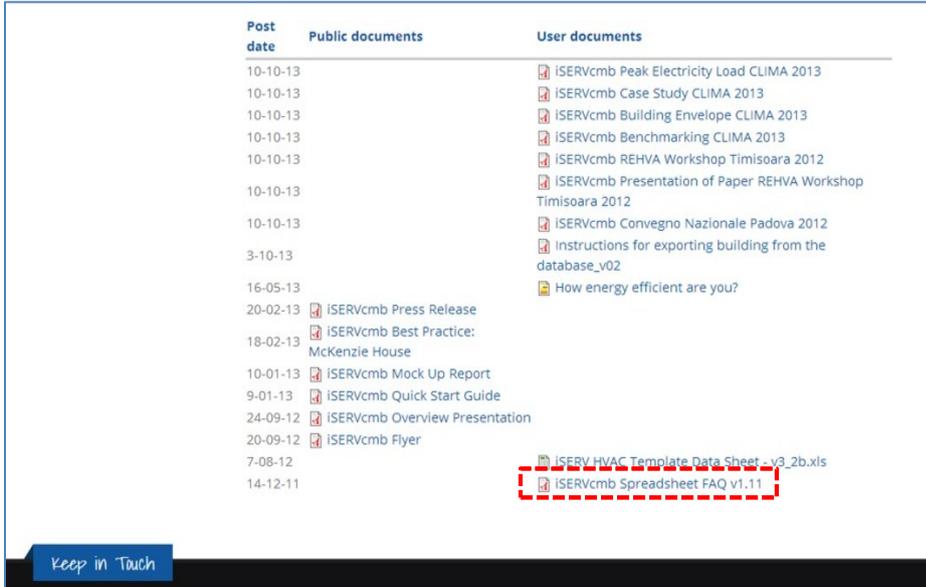
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon	H																							
Mon	C																							
Mon	RH																							
Mon	Occ																							
Tue	H																							
Tue	C																							
Tue	RH																							
Tue	Occ																							
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Fri	C																							
Fri	RH																							
Fri	Occ																							
Sat	H																							
Sat	C																							
Sat	RH																							
Sat	Occ																							
Sun	H																							
Sun	C																							

The sole responsibility for the content of this report lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein

Fill in the details of your building’s schedule(s). This is only to give the system an indication of schedules in the building as a whole. More detailed schedules can be entered if required within the online system.

If you need help to fill in the information of your building:

- Have a look at the **Example – Single Space** tab of the iSERVcmb spreadsheet.
- Have a look at the **Example – Complex Space Min** tab of the iSERVcmb spreadsheet.
- Have a look at the **Example – Complex Space Full** tab of the iSERVcmb spreadsheet.
- Download the [iSERVcmb_FAQ_vx.xx.pdf](#) from the iSERVcmb website available in the download area. The iSERVcmb FAQ document is available in English and contains 56 questions and answers regarding the spreadsheet’s function and content.



- Contact your local iSERVcmb Partner

2.6 Sending your data sheet and full metering data

After completing the iSERV HVAC Template Data Sheet, please send it to your local partner. You will then be notified if any corrections are needed. Once your local partner confirms that your data sheet is ready, he/she will send it to the iSERVcmb database along with your metering and sensor data for verification and configuration.

Once the building and data have been added to the database, you will be notified by your local partner who will also provide you with:

- a username and a password to access the iSERV online application,
- an email address for the meter and sensor data files to be sent on a monthly basis.

Building overview report with Benchmarks

McKenzie House

Report Type: Consumption
 Date Range: Monthly Rolling Annual Consumption
 Report By Area: Per m2
 Reports: Monthly Rolling Annual Consumption per m2
 Output Type: Column
 Utility: Electricity
 * From: January 2002
 * To: December 2012

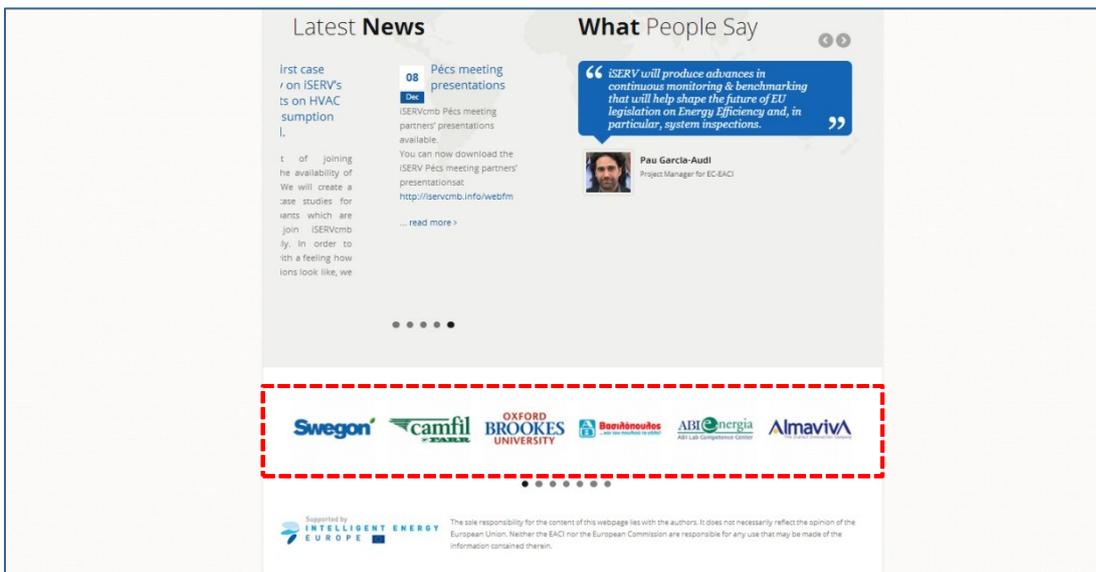
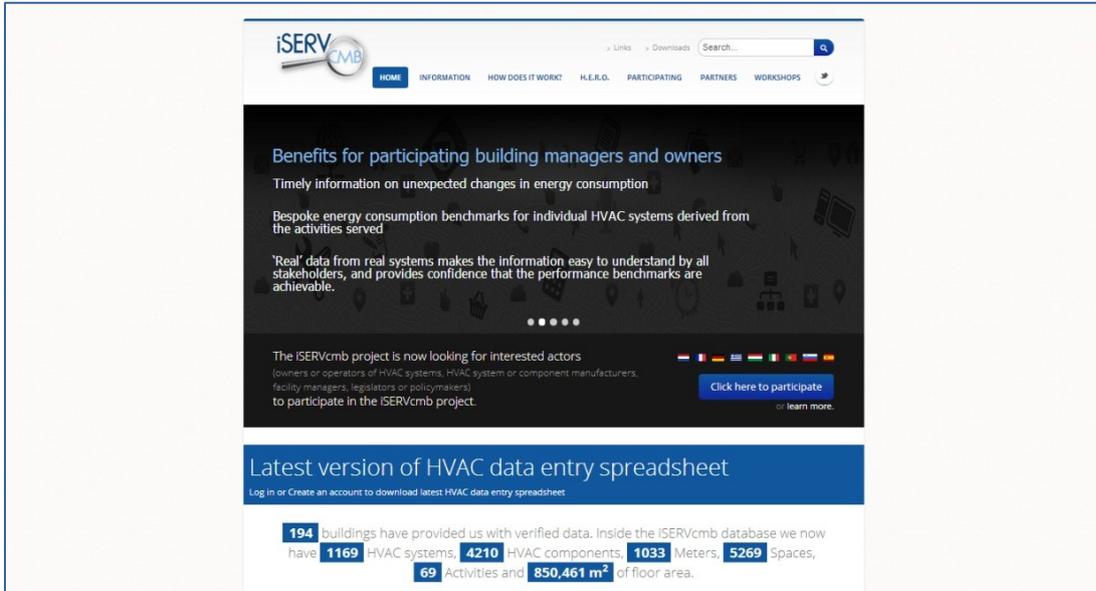
Description: Shows monthly rolling annual consumption per m2 for a Building over a configurable date range. The values are calculated by taking the Building's monthly rolling annual consumption and dividing it by the Building area. Rolling Annual Consumption is the sum of the previous 12 months consumption. It allows users to more easily examine trends in consumption by smoothing out annual temperature variances.

McKenzie House Average Rolling Annual Electricity Consumption per m2

The chart displays consumption trends from 2002 to 2012. The y-axis represents 'Average Annual kWh per m2' ranging from 0 to 600. The x-axis shows 'Year to end of month shown' from 01/01/02 to 31/12/12. A legend indicates performance levels: Poor (red), Average (yellow), and Good (green). The consumption starts high (around 500 kWh/m2) in 2002 and shows a general downward trend, ending around 150 kWh/m2 in 2012, which is in the 'Average' to 'Good' range.

3 Advertising your organisation

If you want to share your logo for publication to the iSERVcmb official website, send the logo to your local iSERV partner. Your logo will be published here:



Once the iSERV Partner receives your logo, he will send you the joined iSERVcmb / IEE logo.



HOW ENERGY EFFICIENT ARE YOU REALLY?



www.iSERVcmb.info

