

CBE Occupant IEQ Survey Data Explorer User Guide

The CBE Occupant Indoor Environmental Quality (IEQ) survey reporting tool v3 provides powerful datamining capabilities while including nearly every feature from the individual building report (reporting tool v2). Like version 2, results for a particular building can be displayed in full detail. In addition, results can be displayed for an entire *dataset*, which could be comprised of a single building as in v2, or could be made up of a set of buildings based on one or more building characteristics (e.g., all buildings surveyed in the United States that have operable windows). A dataset could also be made up of a set of respondents who answered one or more survey questions in a particular way (e.g., all occupants near a window who are dissatisfied with visual comfort of the lighting). Dataset creation is highly flexible and may consist of combinations of any of the above.

Datasets can be shown in detail, and also in comparison with one another. Up to 5 datasets can be compared simultaneously.

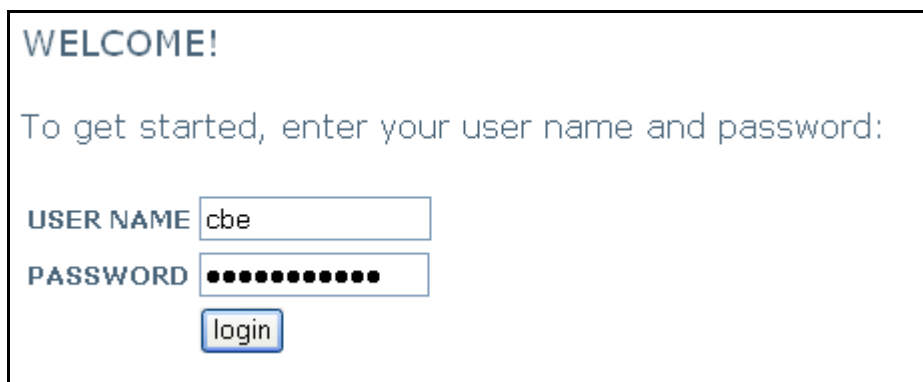
Future feature: Reporting tool v3 will allow comments and other open-ended text fields entered by respondents to be displayed in the next release. To view comments currently, use reporting tool v2.

Accessing the Reporting Tool

To access the reporting tool, please visit the following link in your browser:

<http://www.cbesurvey.org/explorer>

Enter the user name and password provided to you by CBE in the report notification Email, and click the login button (Figure 1). The user name and password is probably the same as that which you may have used to access the previous version of the tool. If you do not have a user name and password, contact cbe-survey@berkeley.edu or call (510) 643-4984.



WELCOME!

To get started, enter your user name and password:

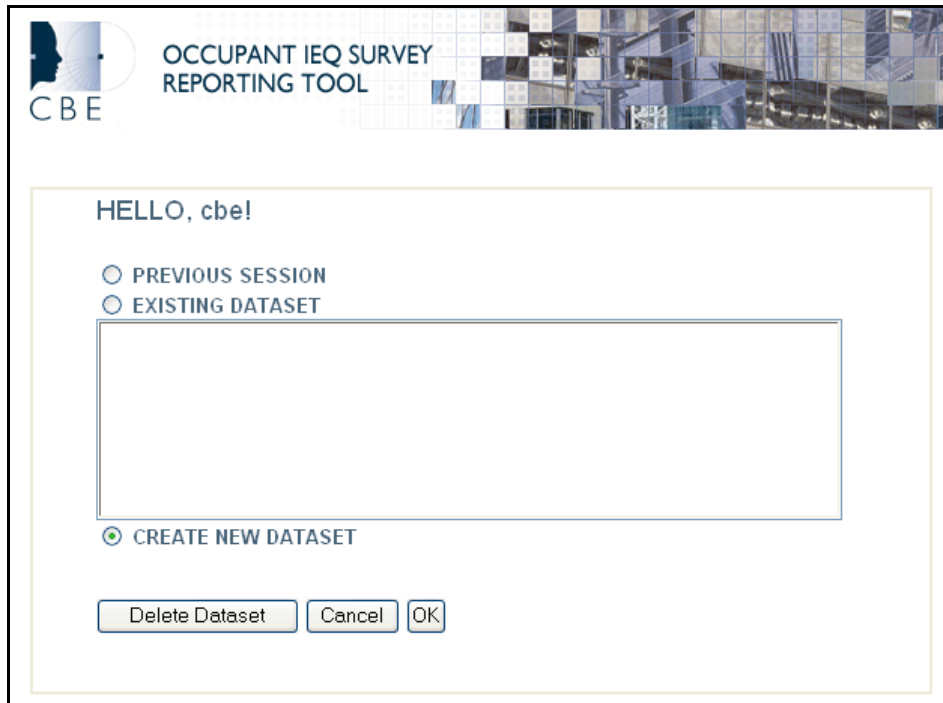
USER NAME

PASSWORD

Figure 1. Login screen

Choosing the initial display

After logging in, select what you want to see first. The Previous Session radiobutton will show the display you saw when you last used the reporting tool. Choosing Existing Dataset will display a single dataset. As a new user (Figure 2), we do not yet have any datasets and have not used the tool previously, so select Create New Dataset and click OK.



The screenshot shows the 'OCCUPANT IEQ SURVEY REPORTING TOOL' interface. At the top left is the 'CBE' logo. The main content area is titled 'HELLO, cbe!' and contains three radio button options: 'PREVIOUS SESSION', 'EXISTING DATASET', and 'CREATE NEW DATASET'. The 'CREATE NEW DATASET' option is selected, indicated by a green dot. Below the radio buttons is a large empty rectangular box. At the bottom of the interface are three buttons: 'Delete Dataset', 'Cancel', and 'OK'.

Figure 2. Choosing initial display - create new dataset

Create a new dataset

Datasets are comprised of one or more filters. A filter is a set of criteria based on either how occupants responded to a survey question, or on known design characteristics of the buildings in the survey database. As shown in Figure 3 we do not yet have any filters to add to our dataset, so click the Create new filter button.

Future feature: You will also have the option of creating filters based on a time range, for example to view responses made during the summer months.

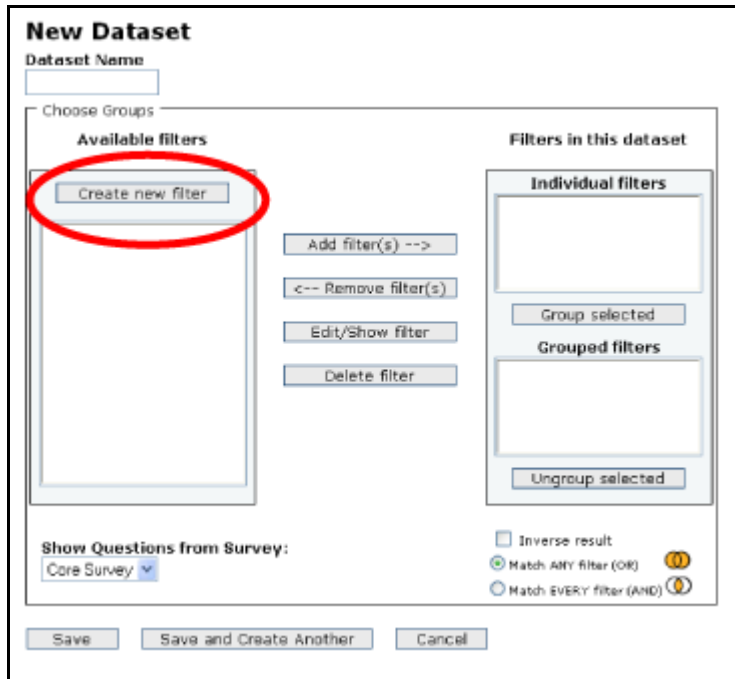


Figure 3. New Dataset window - click Create new filter button

Creating a filter based on occupant responses to a survey question

To create a filter based on how occupants responded to a particular question, choose Based on answers to a question from the Filter type drop-down in the New filter panel, as shown in Figure 4.

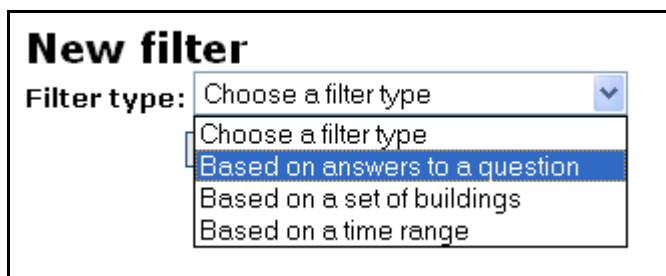


Figure 4. New filter based on answers to a question

Choose the category (usually this will have the same name as a survey page), question, and answer you wish to filter on. In Figure 5, selecting the Background category shows the survey questions that appear on the Background page. Selecting the “What is your gender?” question shows the possible answers to that question. This example will show responses only from those occupants who indicated that they are female. This survey question is a radiobutton question, and only one answer can be selected at a time. Give the filter a name and click the Save button.

New filter

Filter type: Based on answers to a question

Question filter

Filter name:

Category:

Question:

Match ANY answer (OR)
 Match EVERY answer (AND)

Answers:

- Female
- Male

Save

Cancel

Figure 5. Question filter - shows respondents who indicated they are female

New filter

Filter type: Based on answers to a question

Filter name:

Category:

Question:

Match ANY answer (OR)
 Match EVERY answer (AND)

Answers:

- 3 : Very Dissatisfied
- 2 : Very Dissatisfied
- 1 : Very Dissatisfied
- 0 : Neutral
- 1 : Very Satisfied
- 2 : Very Satisfied
- 3 : Very Satisfied

Save

Cancel

Figure 6. Question filter - shows respondents dissatisfied with temperature

Satisfaction scale questions are also a type of radiobutton question, in which the respondent can choose only one answer at a time. You may wish to create a filter that shows a range of such responses, such as people who indicated dissatisfaction (the bottom 3 points) on the 7-point scale. To do this, highlight all the desired answers as shown in Figure 6. For a radiobutton question such as shown here, the default is to show respondents who picked *any* of the selected answers (Boolean OR). The Venn diagram illustrates that this combination is inclusive.

The survey also contains check-all-that-apply questions, in which the respondent can choose more than one answer simultaneously. For such questions, you may choose whether to show respondents who picked *any* of the selected answers (Boolean OR) or *every* one of the selected answers (Boolean AND). In Figure 7, the filter will show respondents who have both an operable window and a thermostat. The Venn diagram illustrates that this is less inclusive than if we had combined them with OR.

If we use OR, the filter would show the same respondents as in Figure 7, plus also those who had only an operable window (but no thermostat) as well as those who had a thermostat (but no operable window).

New filter

Filter type: Based on answers to a question

Filter name: Window and Therm

Category: Thermal Comfort

Question: Which of the following do you personally adjust or control in your workspace?

Match ANY answer (OR)

Match EVERY answer (AND)

Answers:

- Operable window
- Other:
- Permanent heater
- Portable fan
- Portable heater
- Room air-conditioning unit
- Thermostat

Figure 7. Question filter - shows respondents who have both operable window and thermostat

Creating a filter based on building characteristics

To create a filter based on how occupants responded to a particular question, choose Based on a set of buildings from the Filter type drop-down in the New filter panel.

Buildings you have permission to access (usually buildings your organization has surveyed) will be listed in the upper panel, as shown in Figure 8. Select a building, name the filter, and click Save.

New filter

Filter type:

Building filter

Filter name:

Buildings I have surveyed

My buildings:

- Philip Merrill Envi Center LEED NC 1.0
- PNNL - Sigma 2
- PNNL - Sigma 3
- San Mateo Crime Lab POE LEED NC (pending silver)

Building characteristics

Category:

Characteristic:

Figure 8. Building filter - shows responses from Chesapeake Bay Foundation

Building filters can also be created based on known information collected about each building in the building characteristics form. Choose the Building characteristics radiobutton on the New filter panel, and then the category and characteristic of interest. Figure 9 shows an example of the Predominant exterior wall material characteristic, which has a series of pre-set choices. Select one of the choices, give the filter a name, and click Save.

Figure 10 shows a building filter based on the construction year. When filling out the building characteristics form, survey clients enter the year construction was completed and the building was available for occupancy. The list of values in the New filter panel shows the construction year for every building in the database. You can either select values in the list, or choose to enter a range as shown in Figure 11.

New filter

Filter type: Based on a set of buildings

Filter name: Glass facade

Buildings I have surveyed

My buildings:

- Philip Merrill Envi Center LEED NC 1.0
- PNNL - Sigma 2
- PNNL - Sigma 3
- San Mateo Crime Lab POE LEED NC (pending silver)

Building characteristics

Category: Physical Features

Characteristic: Predominant exterior wall material

- concretePanels
- glass
- masonry
- metalPanels
- other
- siding

Save

Cancel

Figure 9. Building filter - shows buildings with predominantly glass exteriors

New filter

Filter type: Based on a set of buildings

Filter name: 1970s

Buildings I have surveyed

My buildings:

- Philip Merrill Envi Center LEED NC 1.0
- PNNL - Sigma 2
- PNNL - Sigma 3
- San Mateo Crime Lab POE LEED NC (pending silver)

Building characteristics

Category: General Information

Characteristic: Year Constructed

Select values Enter ranges/values

- 1973
- 1974
- 1975
- 1978
- 1981
- 1982

Save

Cancel

Figure 10. Building filter - shows buildings constructed in 1970s

New filter

Filter type: Based on a set of buildings

Filter name: 1990-2006

Buildings I have surveyed

My buildings:

- Philip Merrill Ervi Center LEED NC 1.0
- PNNL - Sigma 2
- PNNL - Sigma 3
- San Mateo Crime Lab POE LEED NC (pending silver)

Building characteristics

Category: General Information

Characteristic: Year Constructed

Select values Enter ranges/values

Between 1990 and 2006

(leave the first text box blank to enter a single value instead of a range)

Add Range Remove Range

1990-2006

Save Cancel

Figure 11. Building filter - shows buildings constructed after 1990

For many building filter characteristics, the building either has or doesn't have the feature, as in the example in Figure 12. Select either yes (show all buildings that are known to have the feature) or no (show all buildings that are known to *not* have the feature). Buildings in which it is not known whether the feature exists are ignored – they are not included whether yes or no is chosen.

New filter

Filter type: Based on a set of buildings

Filter name: Hi-perf glass

Buildings I have surveyed

My buildings:

- Philip Merrill Ervi Center LEED NC 1.0
- PNNL - Sigma 2
- PNNL - Sigma 3
- San Mateo Crime Lab POE LEED NC (pending silver)

Building characteristics

Category: Building Envelope

Characteristic: High performance glass

Yes No

Save

Cancel

Figure 12. Building filter - shows buildings using high-performance glass

Constructing a dataset

To create the dataset, combine one or more filters using AND or OR. Select the desired filters from the Available filters panel on the left (Figure 13), and move them into the Filters in this dataset panel on the right by clicking the Add filters button. (Hold down the Ctrl or Apple key to make a non-contiguous selection.) Figure 14 shows the filters moved into the current dataset.

By default, the filters are combined using Boolean OR: if we saved the filter now, we would see everyone who was in a cubicle with a high partition OR a cubicle with a low partition OR who is male. That isn't what we want. We want to show occupants in either a cube with a high partition OR a cube with a low partition AND who also are male.

We use a combination of Boolean connectors by grouping some filters together. In this example, we group the cubicle filters together, and OR them. Select the Cubicle-HI and Cubicle-LO filters and click the Group selected button. In the Grouped filter panel (Figure 15), give the grouped filter a name, choose to group by matching *any* filter (OR), give it a name, and click Save.

New Dataset

Dataset Name

Choose Groups

Available filters

Create new filter

- Cubicle-HI
- Cubicle-LO
- Female
- Male
- Temp dissat
- Window and Therm
- Chesapeake Bay Fnd
- Glass facade
- 1970s
- 1990-2006
- Hi-perf glass
- Insulating glass

Add filter(s) -->

<-- Remove filter(s)

Edit/Show filter

Delete filter

Filters in this dataset

Individual filters

Group selected

Grouped filters

Ungroup selected

Show Questions from Survey: Core Survey

Inverse result

Match ANY filter (OR)

Match EVERY filter (AND)

Save Save and Create Another Cancel

Figure 13. Create dataset - select from available filters panel

New Dataset

Dataset Name

Choose Groups

Available filters

Create new filter

- Female
- Temp dissat
- Window and Therm
- Chesapeake Bay Fnd
- Glass facade
- 1970s
- 1990-2006
- Hi-perf glass
- Insulating glass

Add filter(s) -->

<-- Remove filter(s)

Edit/Show filter

Delete filter

Filters in this dataset

Individual filters

- Cubicle-HI
- Cubicle-LO
- Male

Group selected

Grouped filters

Ungroup selected

Show Questions from Survey: Core Survey

Inverse result

Match ANY filter (OR)

Match EVERY filter (AND)

Save Save and Create Another Cancel

Figure 14. Create dataset - individual filters combined with OR

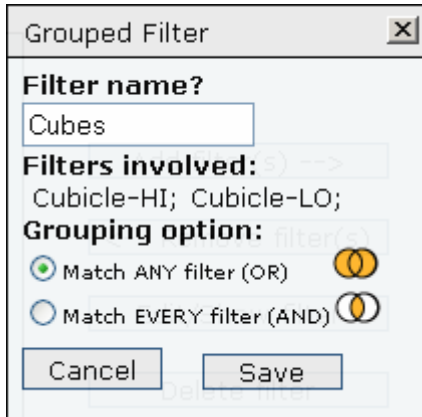


Figure 15. Create dataset - grouping filters

This dataset now contains an individual filter (Male) and a grouped filter (Cubes). (Note that the individual filters comprising the grouped filter are visible again in the Available filters panel on the left.) To show responses from male occupants who work in cubicles, combine the filters using AND, as shown in Figure 16. Give the dataset a name and click the Save button to view the dataset, or the Save and Create Another button to continue making datasets.

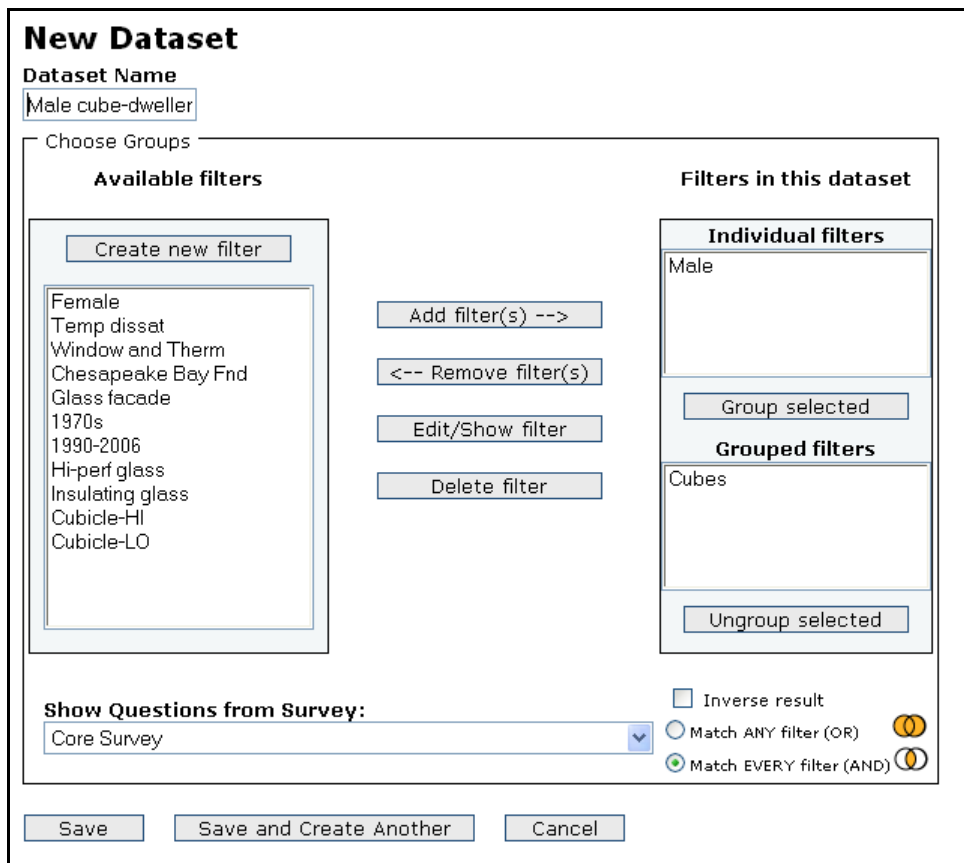




Figure 16. Create dataset - naming the dataset

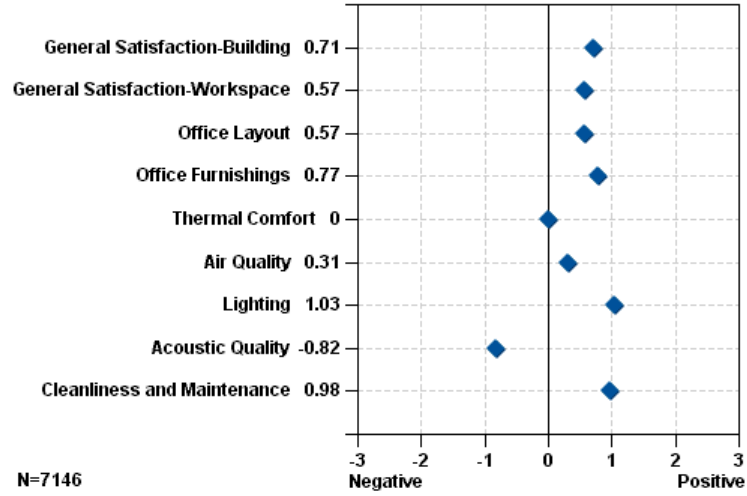


Male cube-dv 

[Show datasets](#)
[Create/edit datasets](#)

- Background**
- Personal Workspace...**
- Personal Workspace...**
- Office Layout**
 - available space
 - visual privacy
 - ease of interactio...
- Office Furnishings**
- Thermal Comfort**
 - temperature
- Air Quality**
 - air quality (conti...
- Lighting**
 - lighting (continue...
- Acoustic Quality**
 - acoustic quality (...
- Cleanliness and Ma...**
 - cleaning service
- Building Features**
- General Comments**

Summary

Average Scores by Category



N=7146



Summary

Male cube-dv

Female cube

Show datasets

Create/edit datasets

Background

Personal Workspace...

Personal Workspace...

Office Layout

available space
visual privacy
ease of interactio...

Office Furnishings

Thermal Comfort

temperature

Air Quality

air quality (conti...

Lighting

lighting (continue...

Acoustic Quality

acoustic quality (...

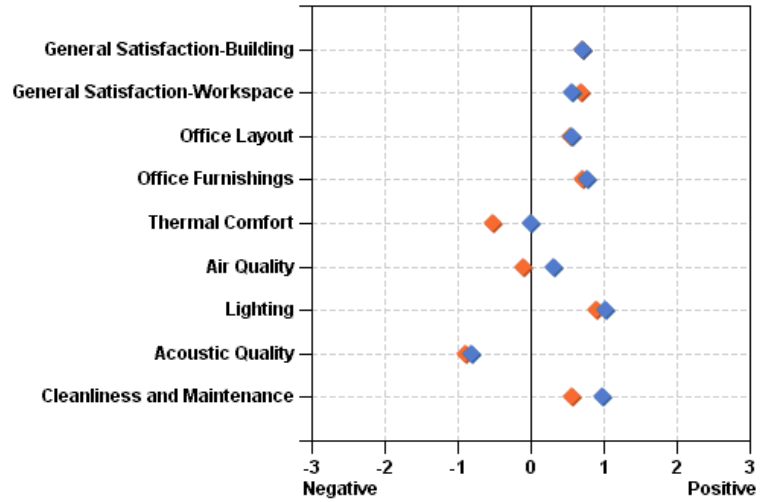
Cleanliness and Ma...

cleaning service

Building Features

General Comments

Average Scores by Category



Show Datasets

Select datasets:

Female cube-dwellers

Male cube-dwellers

Cancel

Show

Edit selected dataset

Create new dataset