

Introduction to Advisor Services

1. What is a Smart Lab
2. Background on Aircuity Advisor Services
3. Software requirements
4. Login and Navigation
5. Fume hood sash management
6. Next steps

What is a “Smart Lab”

“Smart Labs” are newly constructed or retrofitted laboratories that reduce building system energy consumption by 50% or more, augment established safety protocols and designs, and provide a data stream effectively commissioning the building at all times.

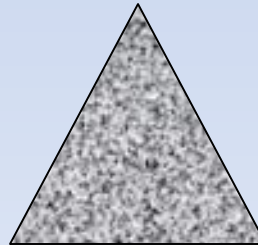
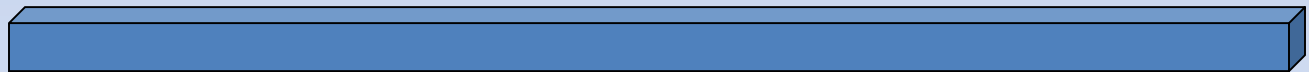


Mechanical System Balance

Autoclaves
Ultra -low temp freezers
Refrigerators
Incubators
Water purification systems
Microscopes
Computers
Shake tables

Lighting
Occupants
Building Shell
Windows

2-4 ACH

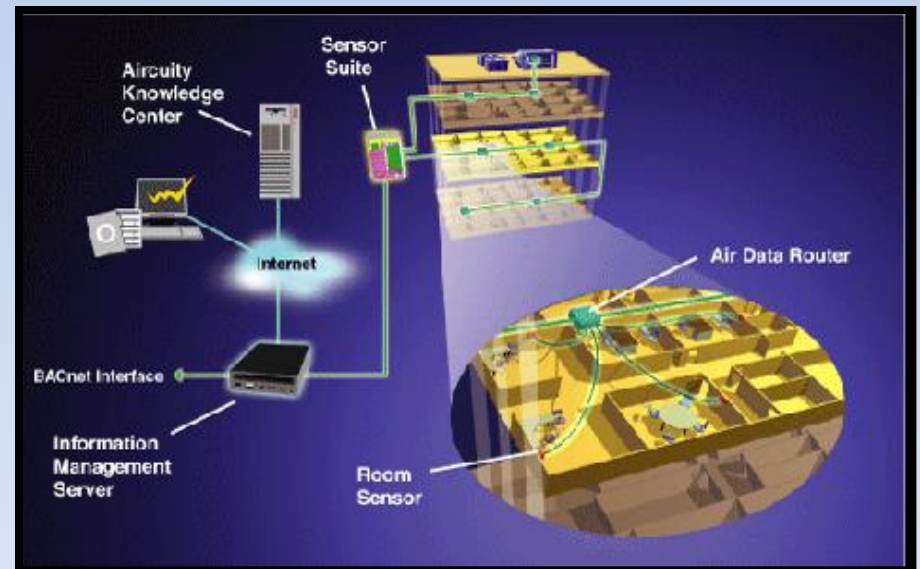


**Lower air change rates more closely match the natural lab process load,
reducing both fan power and reheat.**

The Smart Lab Information Layer

Dashboard and Data Trends for Each Zone

- Air change rates (ACR)
- Internal air quality (IAQ)
- Sash position of each fume hood
- Occupancy
- Relative humidity
- Temperature
- Total supply
- Total exhaust



Why did FM invest in Advisor?

What benefit is Advisor to BFMI?

Where can I learn more?

<http://www.aircuity.com/services/aircuity-advisor-program/>

Benefits

Owners

Aircuity Advisor tools monitor a building's performance to determine whether it is operating at peak efficiency.

- **Dashboards provide airside usage over time**
 - View average total supply by AHU zone or space
 - Analyze usage over time
 - Verify desired ventilation rates are achieved/maintained
 - Display "Excess Supply Flow" compared to the desired target
 - View estimated savings in dollars
- **Summary Reports show at a glance view**
 - Is efficiency improving, declining, staying the same over time?

Monitor the building portfolio for efficiency while being informed of any potential issues.

Facilities

Aircuity Advisor tools aid Facilities personnel in assuring the HVAC equipment is functioning properly.

- **Smart Notifications function as a call to action**
- **Dashboards provide insight to:**
 - Over/under ventilated spaces
 - Driven by usage patterns
 - Due to changes in thermal demand
 - Filter issues based on particle count
 - Identify HVAC equipment malfunctions
 - Trends over time, across building
- **Summary reports show HVAC performance over time**

Deploy your resources more efficiently to diagnose and resolve issues as well as perform continuous commissioning to ensure optimum performance.

Sustainability

Aircuity Advisor provides Sustainability Managers insight to airside energy usage and savings opportunities.

- **Smart Notifications alert if desired cfm thresholds are exceeded**
- **Dashboards analyze energy drivers**
 - Spaces with highest energy consumption
 - Thermal, fume hood or DCV driven
 - Identify spaces/areas for energy optimization initiatives
- **Summary Reports provide a comparison of current versus previous HVAC energy performance.**

Proactively monitoring building performance enables you to achieve the energy savings entitlement provided by the OptiNet system.

Health and Safety

Aircuity Advisor provides Health and Safety professionals a means of ensuring that building occupants adhere to established protocols.

- **Smart Notifications alert officials of IEQ events**
- **Dashboards provide details in graphical format**
 - Time of incident
 - Location of events
 - Severity and duration
 - Frequency of occurrence
- **Summary Reports provide a record of ventilation and IEQ performance for reporting or documentation purposes**

Track IEQ events to establish and reinforce protocols ensuring all occupants are provided a healthy, safe and productive work space.

Getting Started

1. Internet Explorer
2. Microsoft Silverlight

There is a push to re-develop the entire dashboard system into HTML5 but this may take some time. Please call OIT and request Silverlight be installed if it was not part of the installation package you received.

http://www.aircuity.com

The image shows a screenshot of a web browser displaying the Aircuity website. The browser's address bar shows the URL <http://www.aircuity.com/>. The page features the Aircuity logo at the top left, followed by a navigation menu with links for SOLUTIONS, TECHNOLOGY, SERVICES, NEWSROOM, and RESOURCES. Below the navigation is a large heading "Welcome to Aircuity" and a sub-heading "Aircuity delivers safe, smart and efficient airside solutions for energy savings and improved indoor environmental quality. See how Aircuity can help your facility by clicking on a building below." The main content area contains a 3D architectural rendering of various building types, each with a label and a line pointing to it: Commercial Office, Healthcare, Higher Education, K-12 Schools, Life Sciences, Government, and Public Assembly. The "Advisor Login" link in the top navigation bar is circled in red. The Windows taskbar is visible at the bottom of the screen, showing the time as 2:25 PM on 4/8/2013.

http://www.aircuity.com/

Search Share More >>

About Us Customer Support Contact Us **Advisor Login** Optima Login Salesforce Portal

AIRCUIITY

SOLUTIONS TECHNOLOGY SERVICES NEWSROOM RESOURCES

Welcome to Aircuity

Aircuity delivers safe, smart and efficient airside solutions for energy savings and improved indoor environmental quality. See how Aircuity can help your facility by clicking on a building below.

- Commercial Office
- Healthcare
- Higher Education
- K-12 Schools
- Life Sciences
- Government
- Public Assembly

2:25 PM 4/8/2013

Advisor Login

User Name = ucirvine

Password = anteater

File Edit View Favorites Tools Help

https://dashboard.aircuity.com/advisor

Aircuity - Indoor Environment... Login Advisor

VERIFIED
Norton
SECURED
powered by VeriSign
ABOUT SSL CERTIFICATES

Welcome to the **Aircuity Advisor™** portal.

The user interface

Enter:
User Name
Password
Click Login

AIRCUITY
Safe, Smart & Efficient Airside Solutions

Log In

User Name:

Password:

Login

Use your Known Credentials

Click on the GRAPHING/EXPORT button to access the Graphing and Exporting tool.

Select a building you wish to review:

AIRCURITY
Safe, Smart & Efficient Airside Solutions

Advisor Services

SELECT A BUILDING :

CLIENT	BUILDING	SELECT
UCI	UCI Biosci 3 Lab Archive through 2-20-13	Go ...
UCI	UCI Biosci 3 Lab Current System	Go ...
UCI	UCI Cal IT 2	Go ...
UCI	UCI Croul Hall	Go ...
UCI	UCI Engineering Gateway	Go ...
UCI	UCI Engineering Hall	Go ...
UCI	UCI Gillespie Hall	Go ...
UCI	UCI Gross Hall Archive through 3-13-2013	Go ...
UCI	UCI Gross Hall Current System	Go ...
UCI	UCI Hewitt Hall	Go ...
UCI	UCI McGaugh Hall	Go ...
UCI	UCI Natural Sci 1	Go ...
UCI	UCI Natural Sci 2	Go ...
UCI	UCI Reines Hall	Go ...
UCI	UCI Sprague Hall	Go ...

Select the building you are interested in viewing

Dashboards is the most common selection

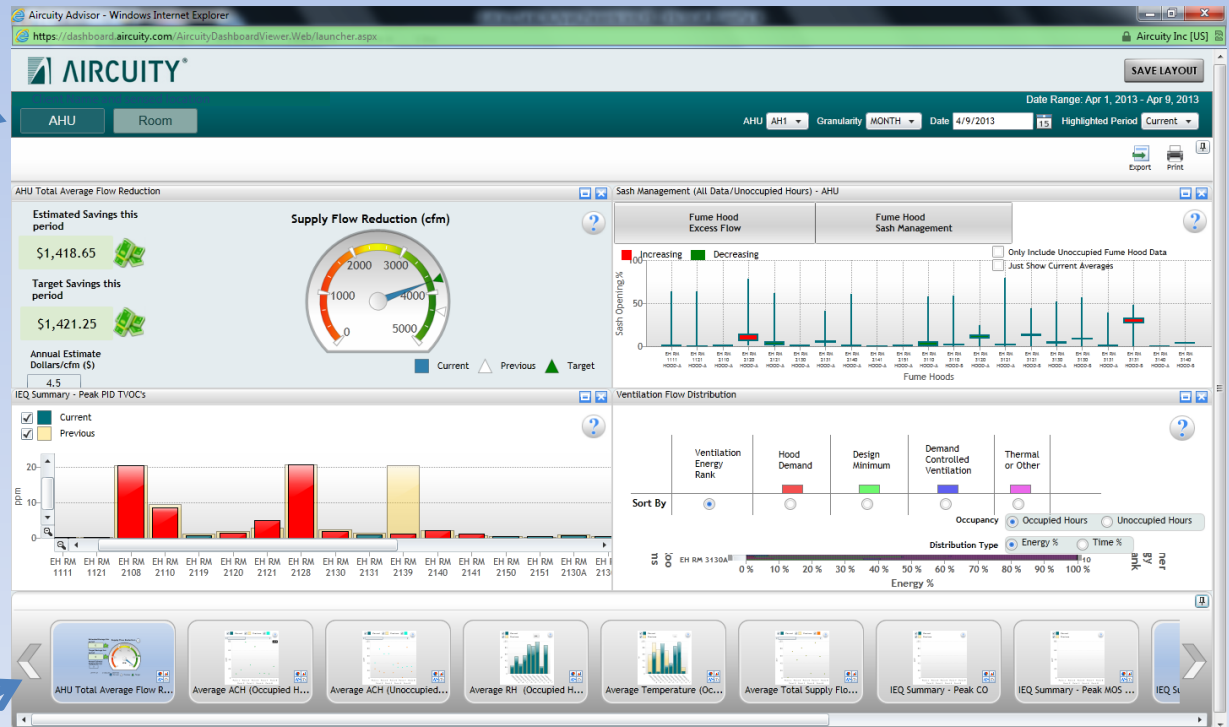
The screenshot shows a web browser window with the URL <http://dashboarddev.aircuity.com/DemoPortal/View>. The page features the Aircuity logo and tagline "Safe, Smart & Efficient Airside Solutions". Client information is displayed as "CLIENT: Dashboard Demo Client" and "BUILDING: Dashboard Demo Bldg". A central navigation menu contains four buttons: "DASHBOARDS", "SMART NOTIFICATIONS", "SUMMARY REPORTS", and "GRAPHING/EXPORT". A blue oval highlights these buttons, and a red arrow points from a red-bordered text box at the bottom to the "GRAPHING/EXPORT" button. The text box contains the instruction: "Click the desired Advisor button to access that feature. A new page will open." On the right side, there are sections for "ACCOUNT STATUS" (Advisor: Active, Start Date: 1/1/2012, End Date: 1/1/2013) and "PRESS RELEASES" with three entries dated 4/9/2012, 3/19/2012, and 3/7/2012. A "Customer Support" section at the bottom left provides contact information: "Toll free : 866-602-0700 option 3" and "Email : techsupport@aircuity.com".

Use controls to set scope and time frame to view
Drag dashblocks between the dashboard and palette

Dashboard
Controls

Dynamic
Dashboard

Dashblock
Palette



Often an overwhelming number of dash blocks are loaded. Close them out until you are able to view a manageable amount of data.

The screenshot shows the AirCuity dashboard interface. At the top, there is a navigation bar with the AirCuity logo, a 'SAVE LAYOUT' button, and a date range selector set to 'Apr 1, 2013 - Apr 7, 2013'. Below this, there are filters for 'AHU' and 'Room', and a 'Date Range' dropdown set to '4/7/2013'. The main content area displays two bar charts: 'Average ACH (Occupied Hours) per Room' on the left and 'Average ACH (Unoccupied Hours) per Room' on the right. Both charts show data for various rooms (e.g., GH RM 1101, 1102, 1130, 1200, 1201, 1227, 1235, 1301, 1302, 1313, 1401, 1402, 1406) and include a legend for 'Current', 'Previous', 'Design Min. w OptiNet', and 'Design Min. w/o OptiNet'. A callout box with a red border highlights the close buttons (represented by a square with an 'X') on the top right of the chart windows. The bottom of the dashboard features a row of dashboard blocks, including 'Average Total Supply Flo...', 'CO2 Differential - AHU', 'IEQ Summary - Peak MOS ...', 'IEQ Summary - Peak PID T...', 'IEQ Summary - Peak Small...', 'Sash Management (All Dat...', and 'Ventilation Flow Distribut...'. The Windows taskbar at the bottom shows the system clock at 2:46 PM on 4/8/2013.

Dashblocks can be added by dragging them into the window

The screenshot displays the AirCuity dashboard for the UCI Gross Hall. The interface includes a header with the AirCuity logo, a 'SAVE LAYOUT' button, and navigation controls for 'AHU' and 'Room'. The date range is set to 'Apr 1, 2013 - Apr 7, 2013', with the current date being 4/7/2013. Two bar charts are shown, both comparing 'Current' (dark teal) and 'Previous' (yellow) data against 'Design Min. w/ OptiNet' (cyan) and 'Design Min. w/o OptiNet' (orange). The left chart shows 'Average ACH (Occupied Hours) per Room' for rooms 1101 through 1406. The right chart shows 'Average ACH (Unoccupied Hours) per Room' for rooms 2101 through 2406. A red circle highlights the 'Sash Management (All Dat...' dashblock in the bottom toolbar, with a red arrow pointing to the right chart.

UCI Gross Hall

SAVE LAYOUT

AHU GH Room

Date Range: Apr 1, 2013 - Apr 7, 2013

4/7/2013 15 Highlighted Period Current

Export Print

Average ACH (Occupied Hours) per Room

Average ACH (Unoccupied Hours) per Room

Current Previous Design Min. w/ OptiNet Design Min. w/o OptiNet

ACH

GH RM 1101 GH RM 1102 GH RM 1130 GH RM 1200 GH RM 1201 GH RM 1227 GH RM 1235 GH RM 1301 GH RM 1302 GH RM 1313 GH RM 1401 GH RM 1402 GH RM 1406

GH RM 2101 GH RM 2102 GH RM 2112 GH RM 2124 GH RM 2200 GH RM 2211 GH RM 2227 GH RM 2235 GH RM 2301 GH RM 2302 GH RM 2401 GH RM 2405 GH RM 2406

Sash Management (All Dat...

Ventilation Flow Distribut...

2:46 PM 4/8/2013

Dashblocks can be moved and placed in any order you wish

The screenshot displays the Aircuity Advisor dashboard for the UCI Gross Hall. The interface includes a navigation bar with 'AHU' and 'Room' buttons, a date range of 'Apr 1, 2013 - Apr 7, 2013', and a 'SAVE LAYOUT' button. Two main charts are shown: 'Average ACH (Occupied Hours) per Room' and 'Average ACH (Unoccupied Hours) per Room'. Both charts compare 'Current' performance against 'Design Min' scenarios (with and without OptiNet). A red arrow points from the Unoccupied chart to the Occupied chart, and a red circle highlights the 'Sash Management (All Dat...)' dashblock in the bottom toolbar.

Legend for Average ACH (Occupied Hours) per Room:

- Current (Dark Blue)
- Design Min w OptiNet (Light Blue)
- Previous (Light Yellow)
- Design Min w/o OptiNet (Orange)

Legend for Average ACH (Unoccupied Hours) per Room:

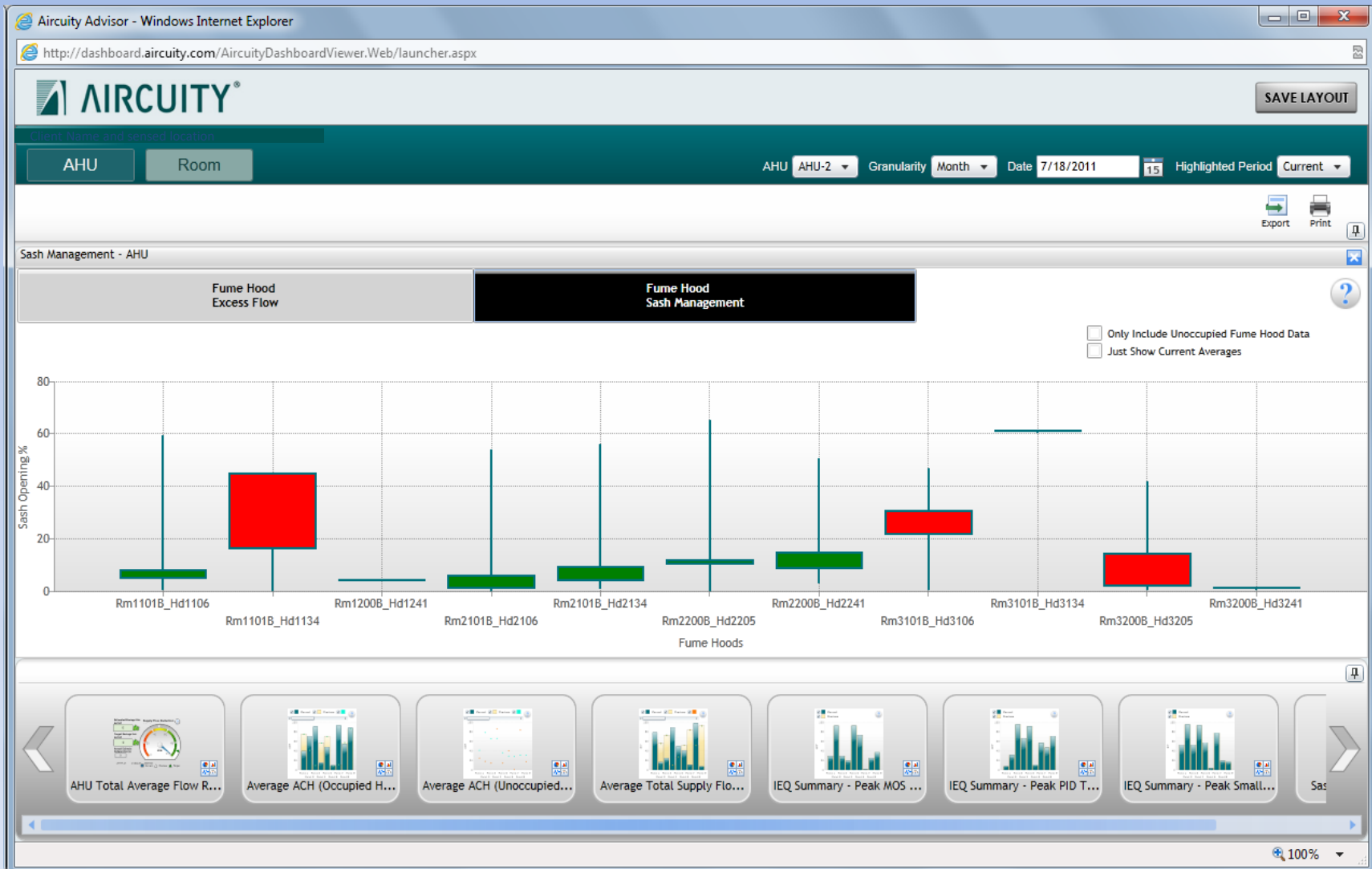
- Current (Dark Blue)
- Design Min. w OptiNet (Light Blue)
- Previous (Light Yellow)
- Design Min. w/o OptiNet (Orange)

Bottom Toolbar Dashblocks:

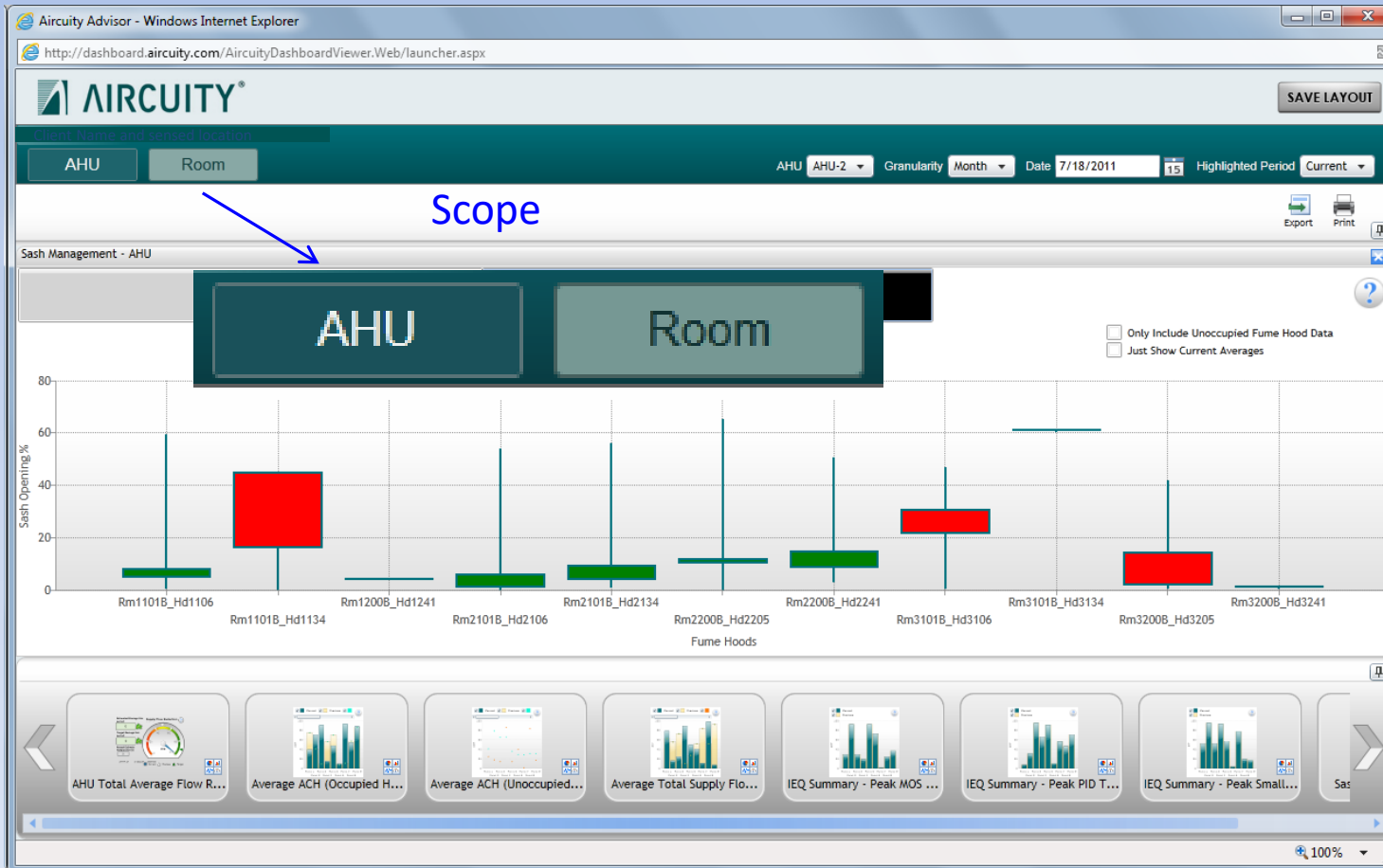
- (Oc...
- Average Total Supply Flo...
- CO2 Differential - AHU
- IEQ Summary - Peak MOS ...
- IEQ Summary - Peak PID T...
- IEQ Summary - Peak Small...
- Sash Management (All Dat...**
- Ventilation Flow Distribut...

System Tray: 2:46 PM, 4/8/2013

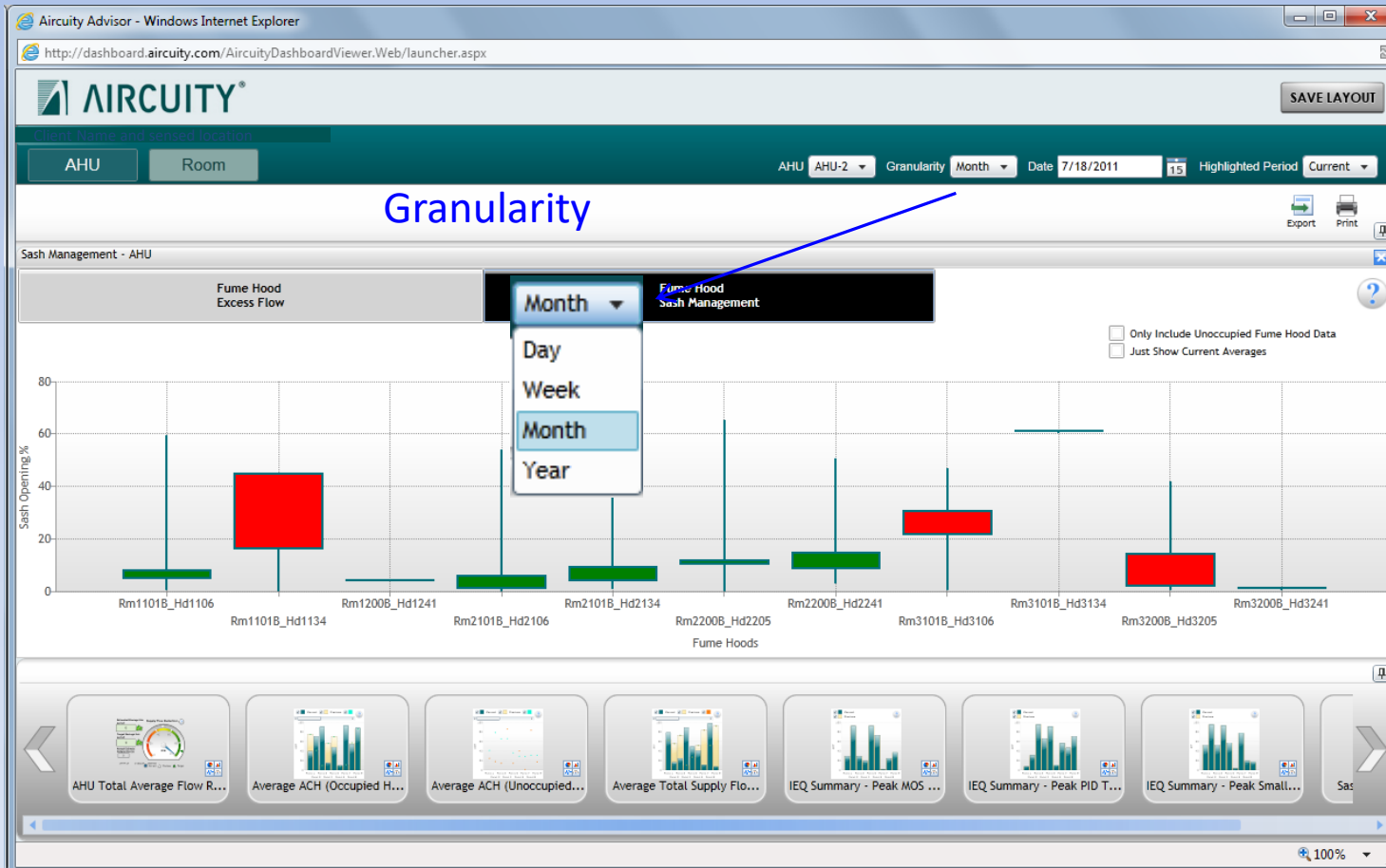
This is the most useful report to share with the lab users. Sash management can save UCI thousands of dollars a year. We encourage you to distribute this report monthly.



Select the “scope” of the view



Select the time period over which data is analyzed



- Select the start date

The screenshot shows the AirCuity Advisor web interface. At the top, the browser title is "AirCuity Advisor - Windows Internet Explorer" and the URL is "http://dashboard.aircuity.com/AircuityDashboardViewer.Web/launcher.aspx". The interface includes a "SAVE LAYOUT" button and a search bar for "Unit Name and sensed location". Below this, there are tabs for "AHU" and "Room", and a filter for "AHU: AHU-2". The "Date" field is set to "7/18/2011" and the "Highlighted Period" is "Current". A blue arrow points to the "Date" field, with the text "Start Date" written above it. A calendar pop-up is displayed, showing the date "7/18/2011" and "15" highlighted. The calendar is for "July, 2011" and shows the following dates:

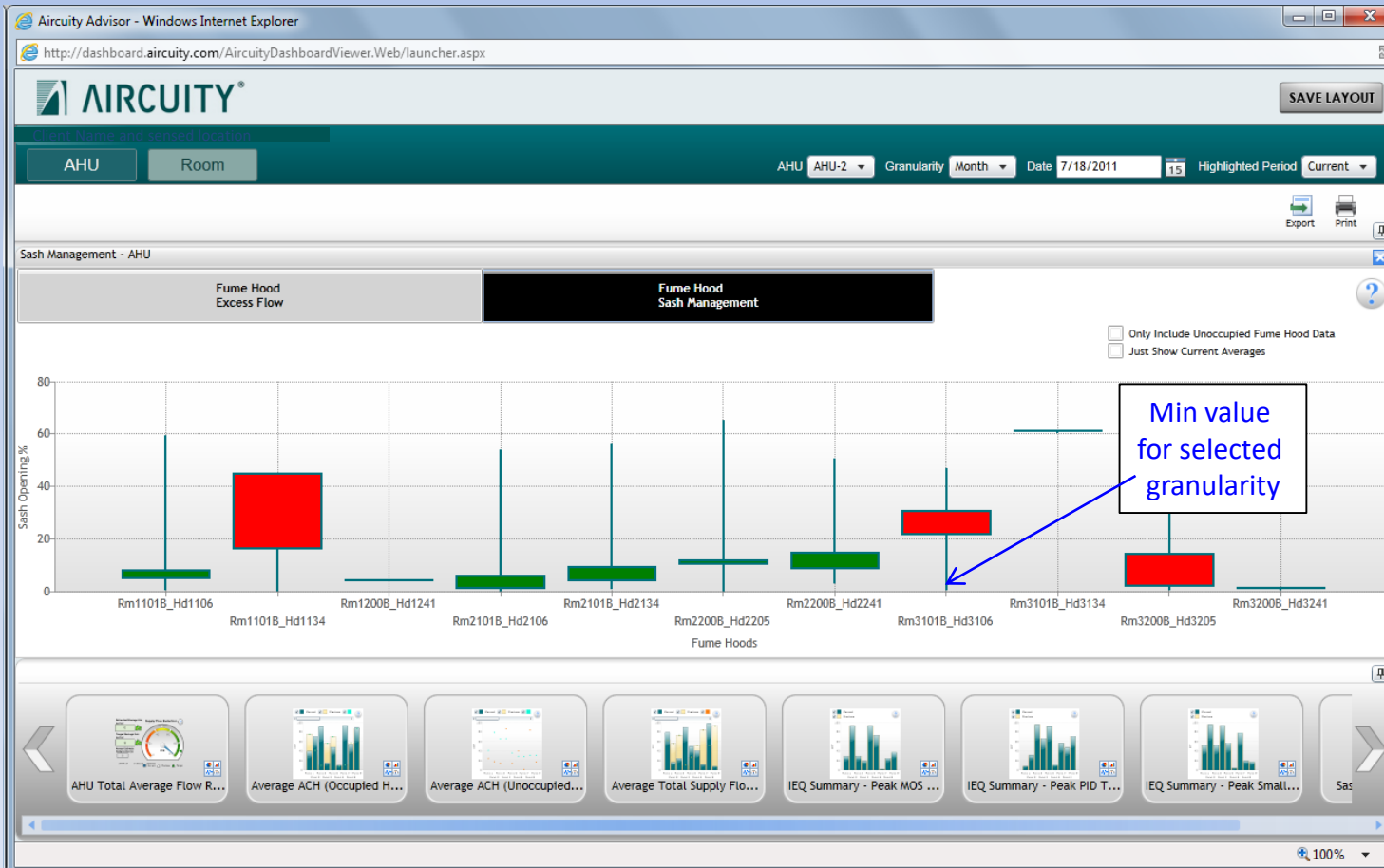
Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

The main chart area displays "Sash Opening %" for various "Fume Hoods". The chart shows box plots for each fume hood, with the y-axis ranging from 0 to 80. The fume hoods listed are: Rm1101B_Hd1106, Rm1101B_Hd1134, Rm1200B_Hd1241, Rm2101B_Hd2106, Rm2101B_Hd2134, Rm2200B_Hd2205, Rm2200B_Hd2241, Rm3101B_Hd3106, Rm3101B_Hd3134, Rm3200B_Hd3205, and Rm3200B_Hd3241. A legend indicates that red boxes represent "Only Include Unoccupied Fume Hood Data" and green boxes represent "Just Show Current Averages".

At the bottom of the interface, there is a navigation bar with several icons and labels: "AHU Total Average Flow R...", "Average ACH (Occupied H...", "Average ACH (Unoccupied...", "Average Total Supply Flo...", "IEQ Summary - Peak MOS ...", "IEQ Summary - Peak PID T...", "IEQ Summary - Peak Small...", and "Sas".

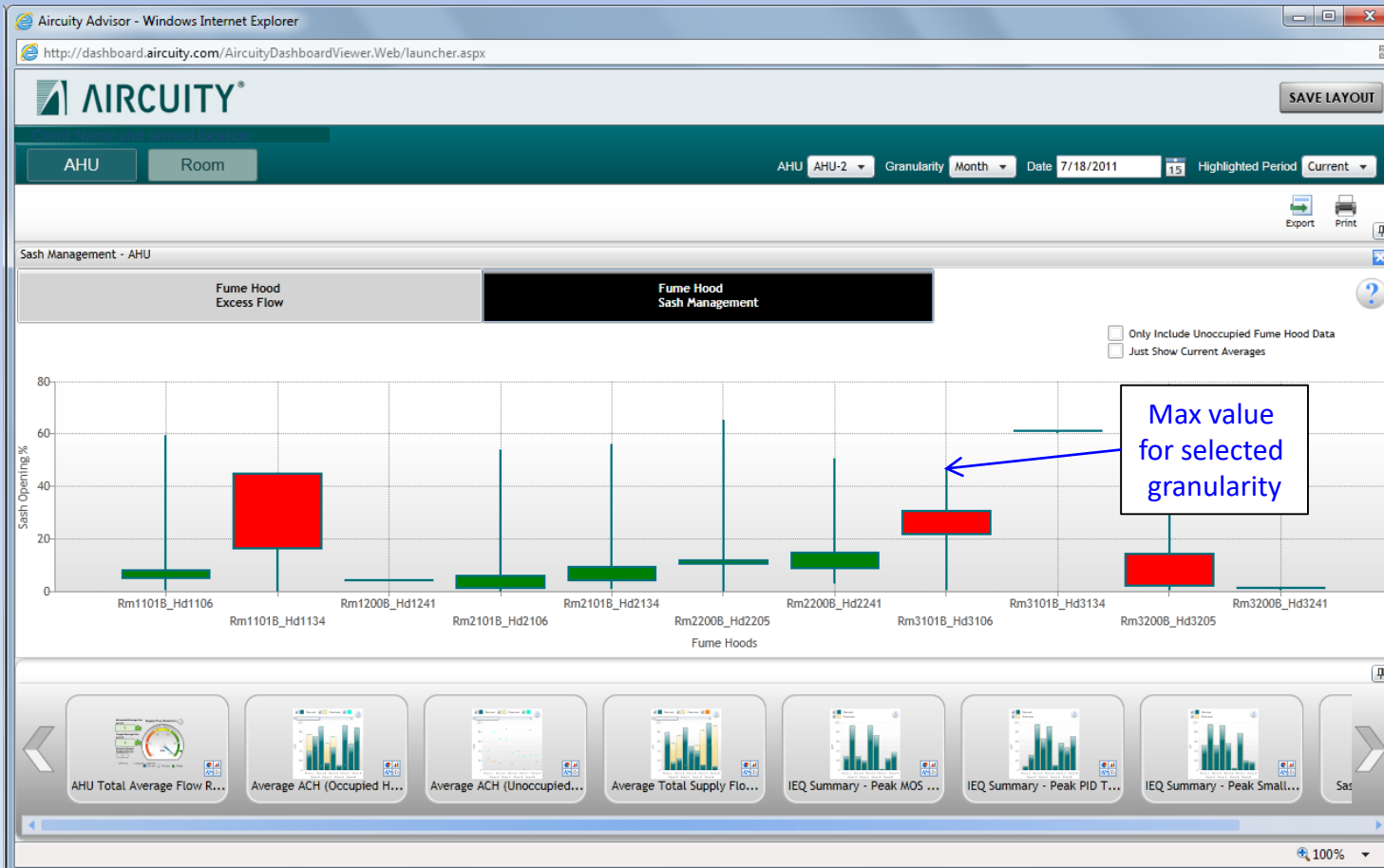
Candlestick chart shows Min, Max and average for time period

Compares current period to previous period



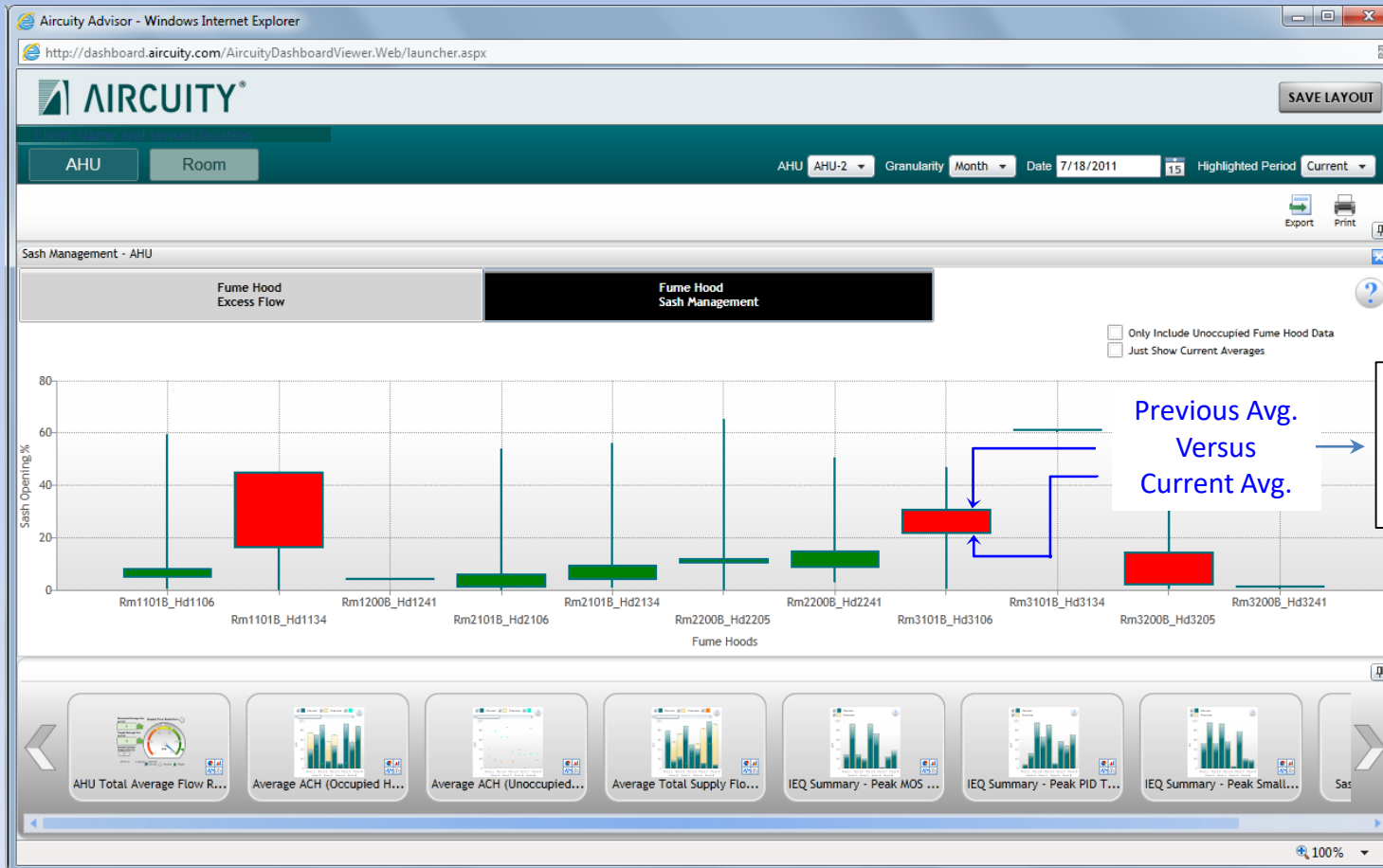
Candlestick chart shows Min, Max and average for time period

Compares current period to previous period



Candlestick chart shows Min, Max and average for time period

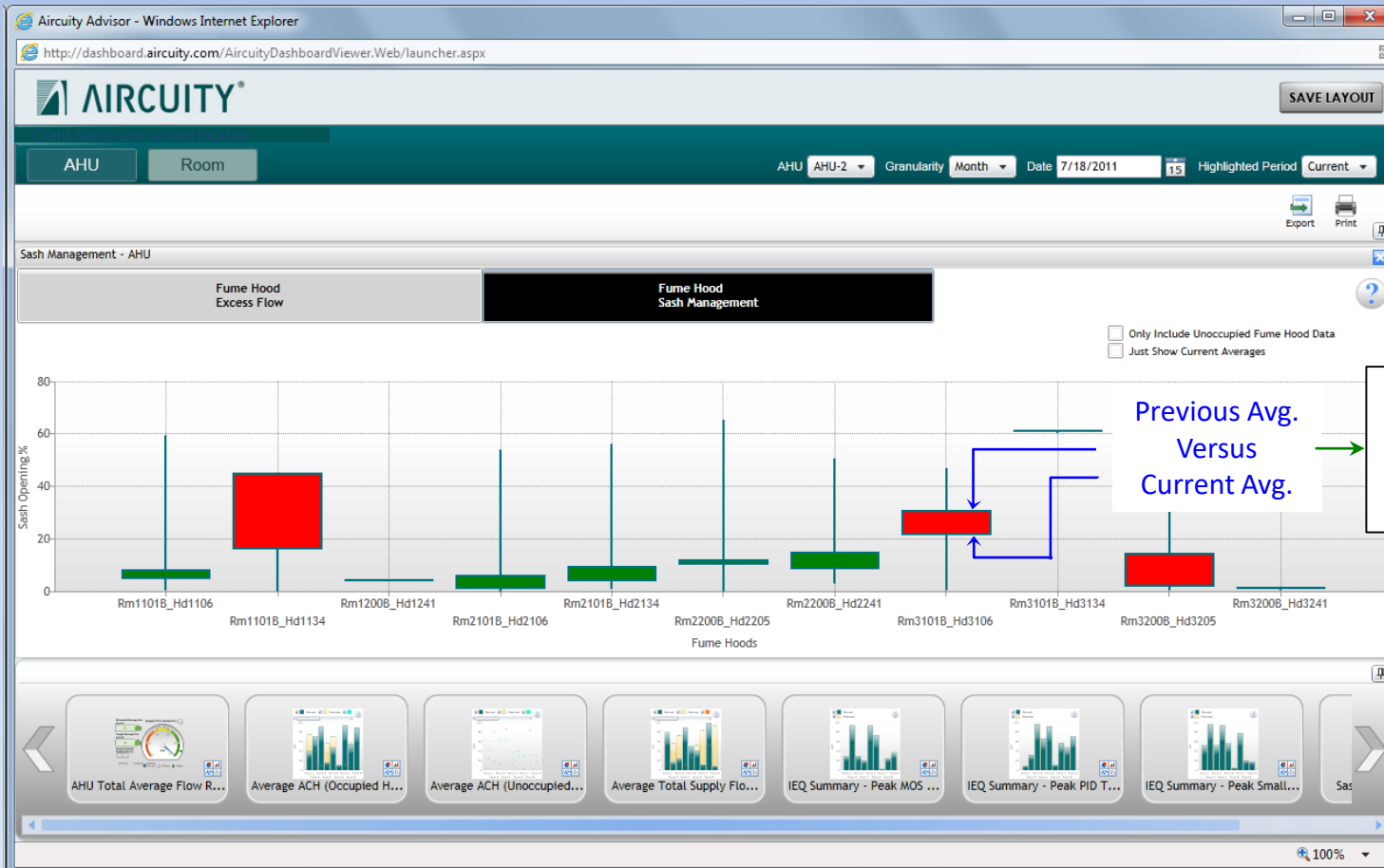
Compares current period to previous period



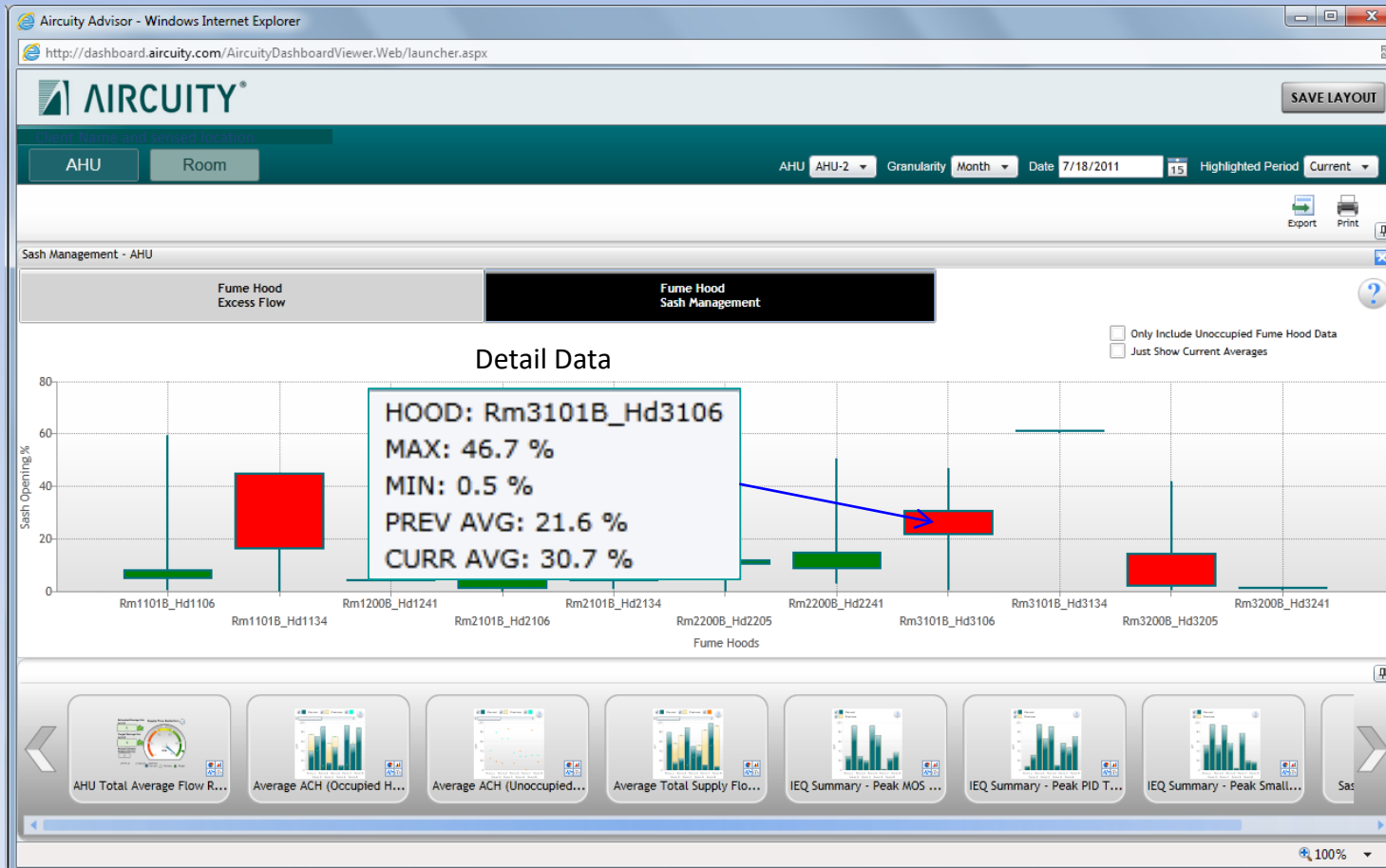
Red – indicates:
Current Average
is GREATER THAN
Previous Average

Candlestick chart shows Min, Max and average for time period

Compares current period to previous period

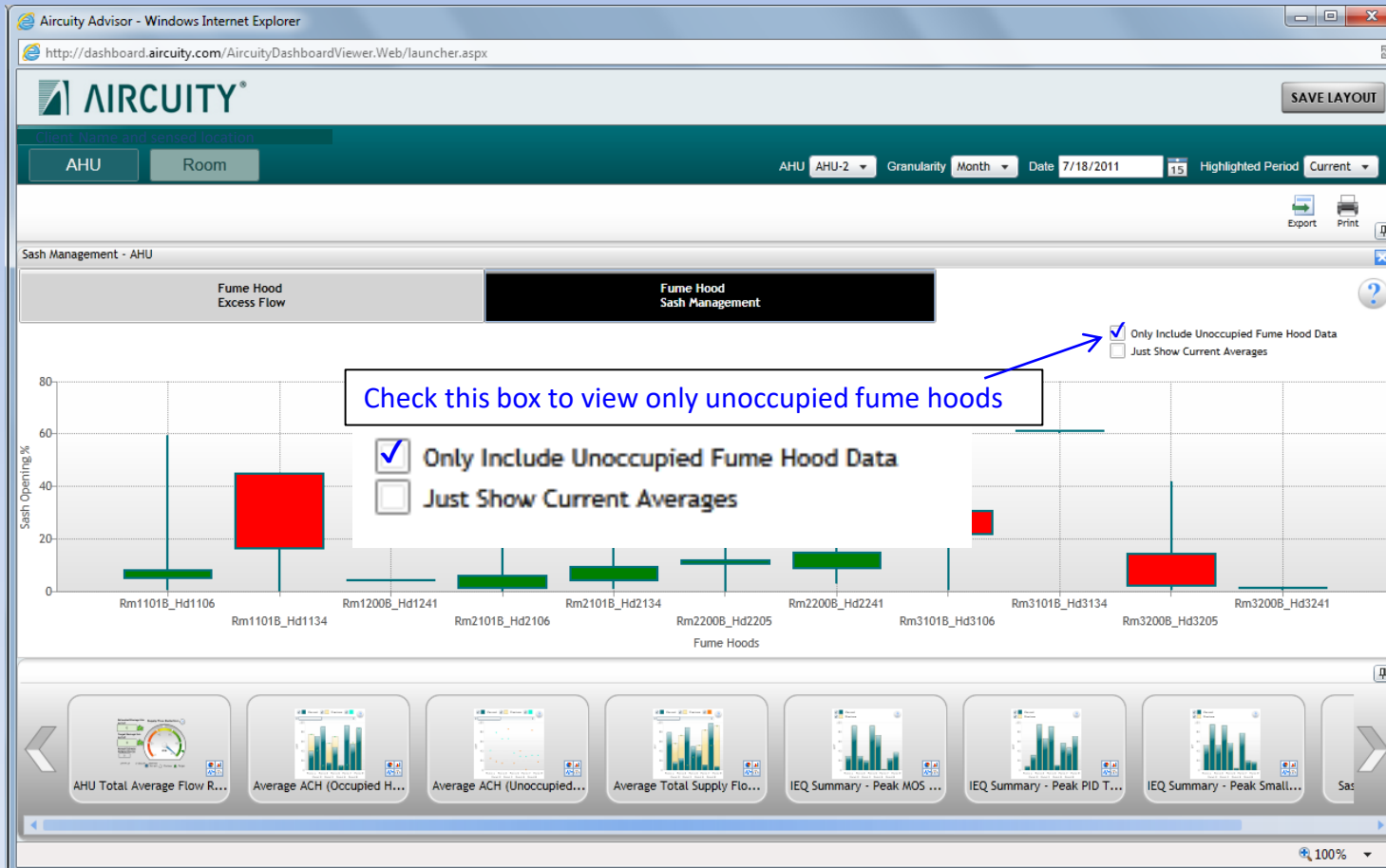


Hover over the bar to display details

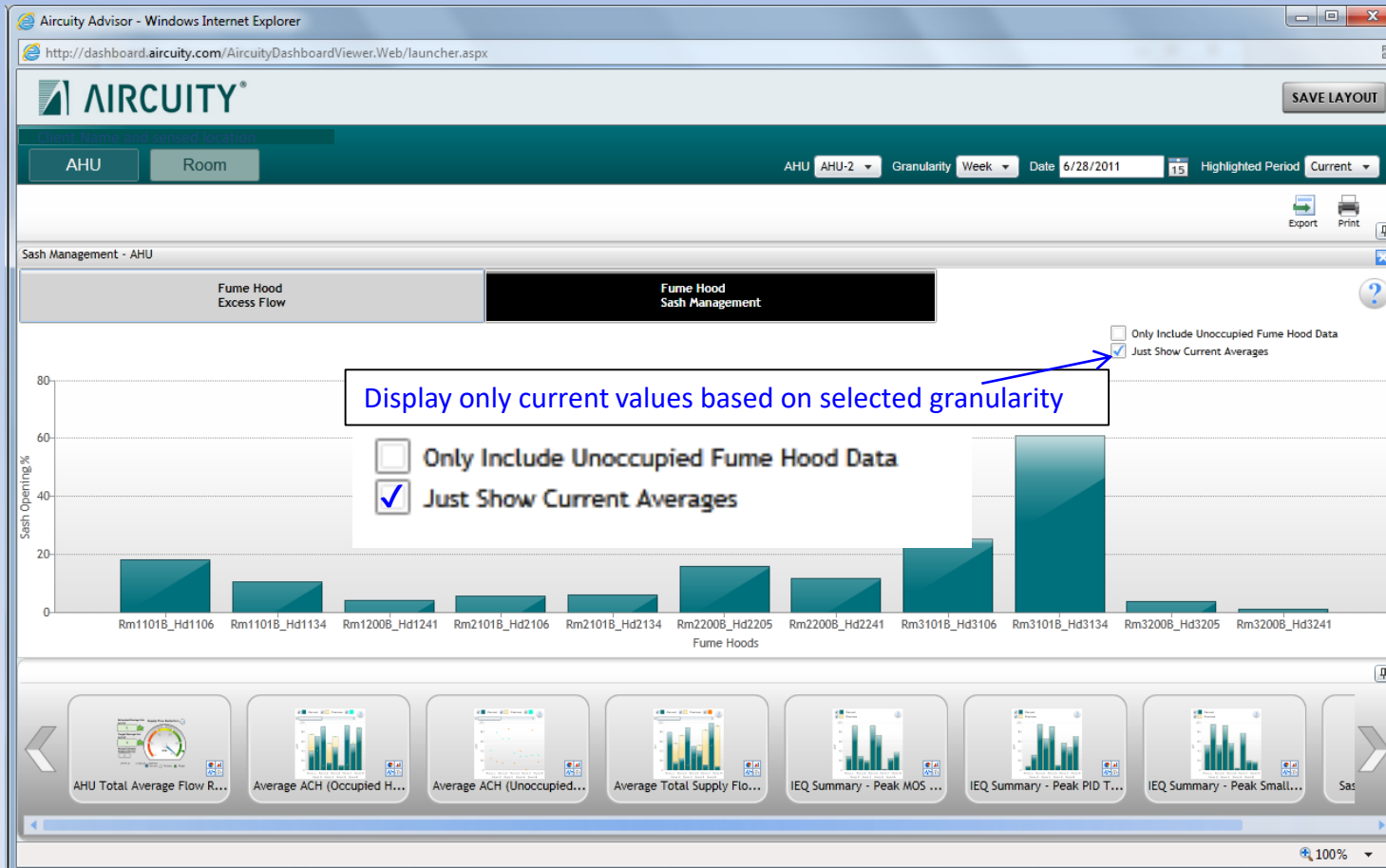


View hoods where sash management should be questioned

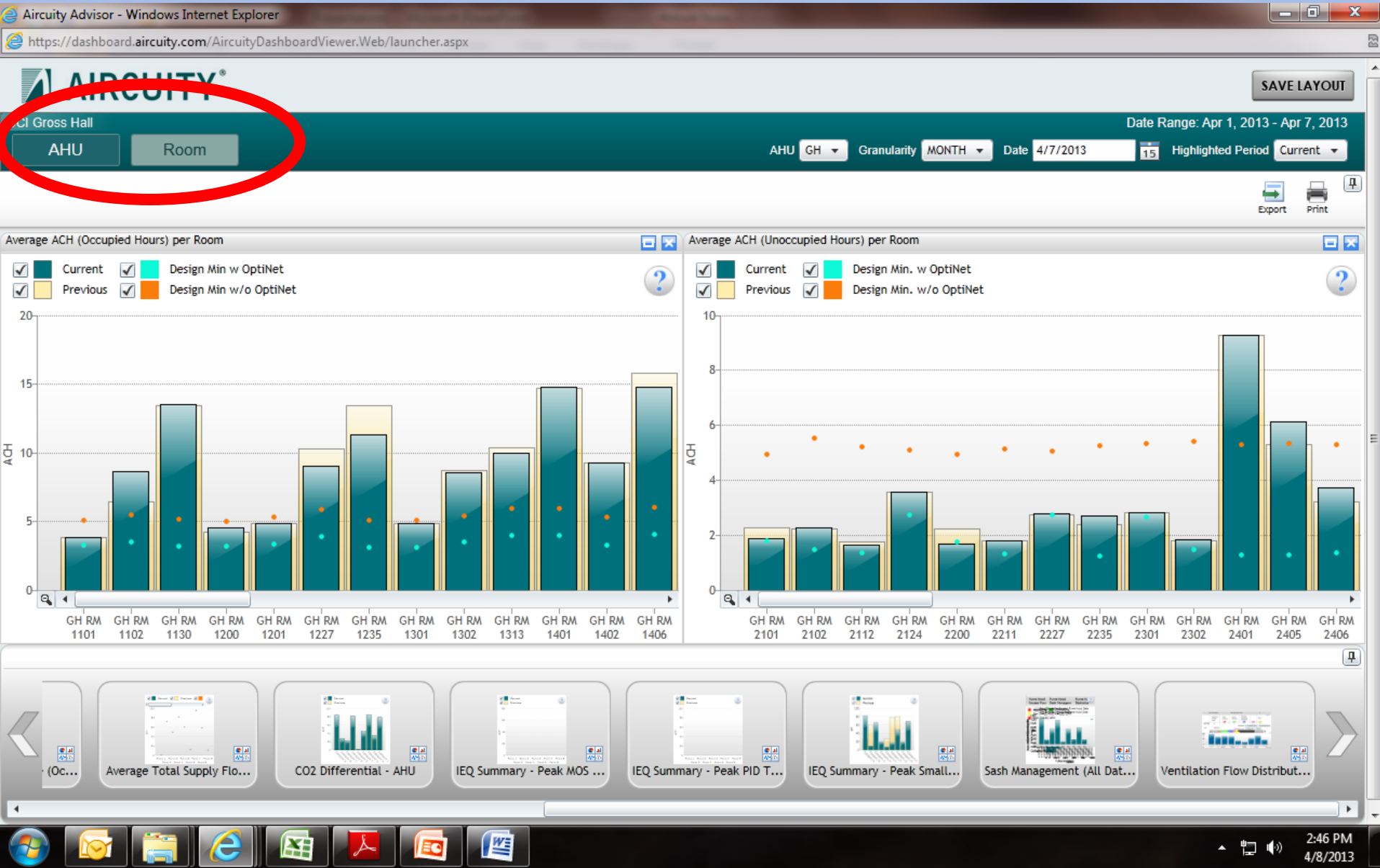
- Hood or Lab is unoccupied but sash(es) are open



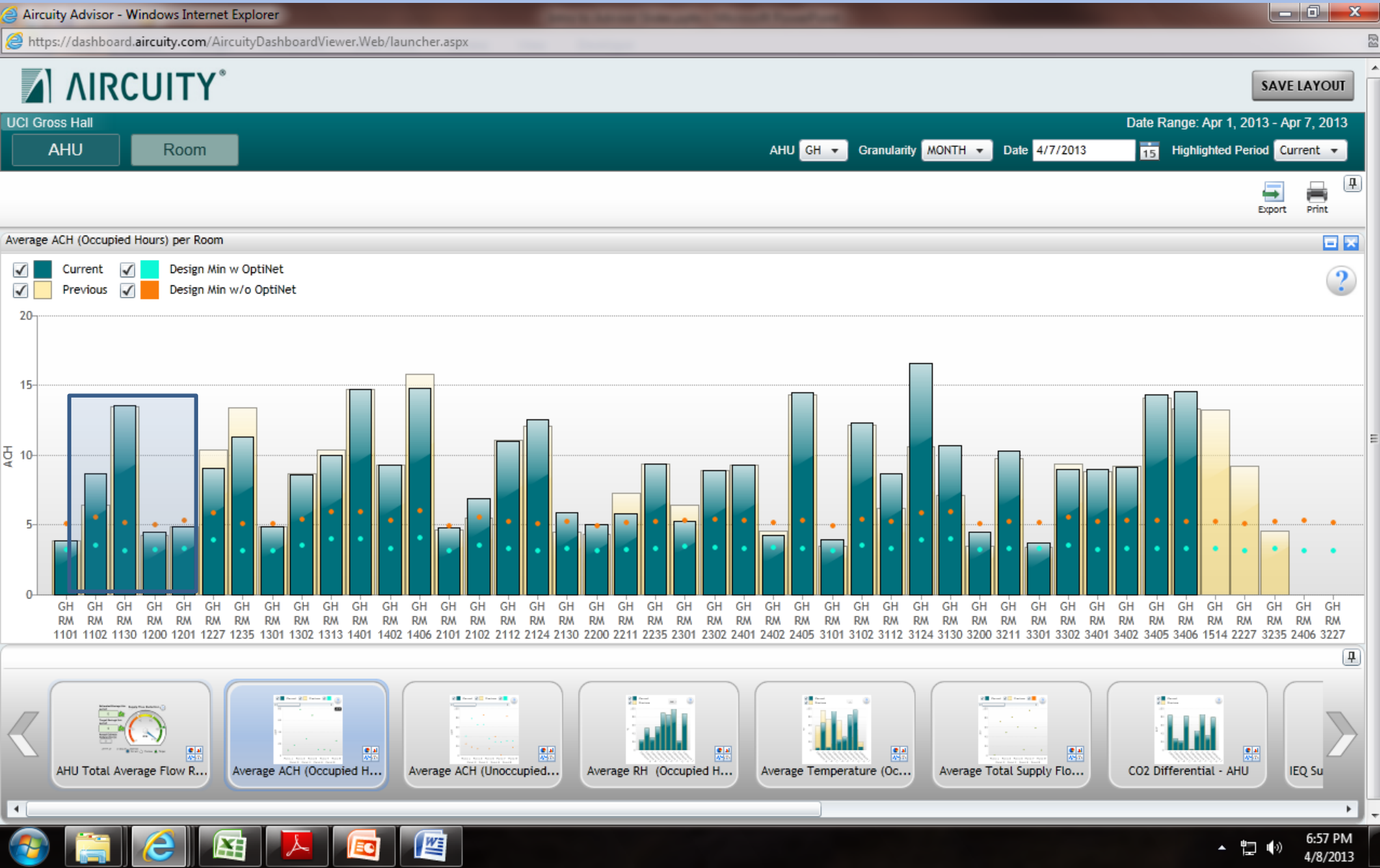
Display just the current average sash position



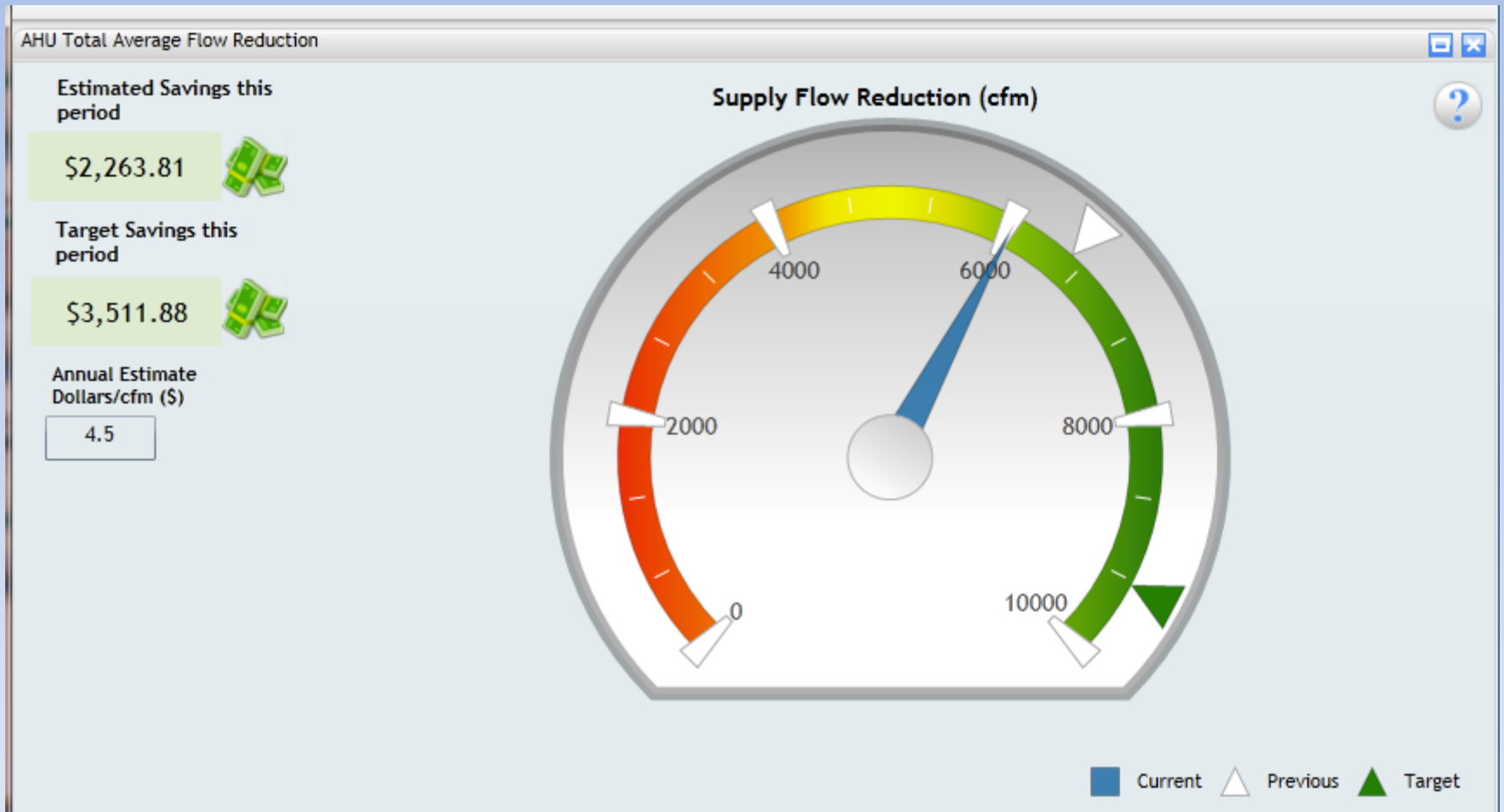
AHU gives data from the high level overview
Room breaks the data down



You can pan and zoom as needed.



Advisor Services is still in the deployment phase some blocks show savings that don't make sense, show flows that may be very high, etc. Please bring this to our attention.



Questions?

<https://webfiles.uci.edu/mgudorf/Intro%20to%20Advisor%20Slides.pptx>