



White Paper

Analysis of Conference Room Equipment:

Do certain features affect how much a room is used?

Herman Miller's Space Utilization studies prove conclusively that the elements within conference rooms have a bearing on how much people use them.

Why does one conference room get used much of the day, while another right next to it often sits empty? Would the availability of certain equipment—say, a whiteboard or projector—make a difference?

This is the sort of question that can be answered with Herman Miller's Space Utilization Service. The service is part of Herman Miller Performance Environments, a collection of related services that help clients control real estate costs, while also creating better places to work.

The Space Utilization Service tracks workplace occupancy over a three-week study period, using unobtrusive sensors that temporarily attach to the underside of all chairs within a workspace. The sensors detect the slightest movement, indicating when each chair is occupied. Herman Miller analyzes the resulting data to see if there might be a better way to allocate the space—one that reduces occupancy costs while improving productivity.

As part of the service, Herman Miller also collects data pertaining to the equipment available in each of the conference rooms in a study area. The idea is to identify patterns that might suggest ways to improve utilization simply by fine-tuning which equipment to put in which rooms.

The math behind the method

To analyze the effect of equipment on conference room utilization, Herman Miller turned to Michigan State University's

mathematics department to develop the necessary methodology.

Michigan State did so by using a statistical technique called regression analysis. In a nutshell, the technique is used to find the relationship between a dependent variable (in this case, the amount of time a conference room is used) and one or more independent variables (in this case, conference room equipment).

For each piece of equipment that a conference room could contain, a variable is assigned to indicate either the presence or absence of that item in the room. This information is then compared against actual usage data to predict how the particular features of a conference room might impact its utilization.

Sample findings

A sample output of the regression analysis is shown below. The data was compiled from multiple Space Utilization studies conducted on behalf of various Herman Miller clients, as well as studies of Herman Miller's own workspace.

In all, the table below represents 408 conference rooms with a total of 3,769 seats. It shows the cumulative findings for all of these rooms, as well as results broken down by small and large conference rooms within the entire study sample.

Impact on Percent of Time Used						
Conference Room Size	Projector	Whiteboard	Telephone	Speakerphone	Flat Panel	Screen
All Rooms (2-24 seats)	4.4%	5.9%	4.5%			
Small Rooms (2-8 seats)	7.7%			6.1%		
Large Rooms (9-24 seats)		6.1%	7.8%		-7.8%	5.8%



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Interpreting the data

For all conference rooms evaluated, the Space Utilization studies noted the presence or absence of eight pieces of equipment: a digital whiteboard, a conventional whiteboard, a telephone, a speakerphone, a projector, a screen, a flat panel, and video conferencing equipment.

Digital whiteboards and video conferencing equipment were found in relatively few conference rooms and, thus, had no statistically significant impact on usage time. Consequently, neither appears in the table above. Likewise, any blank field in the table indicates that the equipment in question had no significant impact on utilization.

The percentages signify a positive or negative impact on utilization. For instance, placing a projector in a small conference room can be expected to increase utilization by 7.7 percent. Another way to look at it: If a room without a projector is used four hours per day, it's reasonable to expect an extra 20 minutes or so of usage with a projector.

Among the key findings:

- Overall, rooms equipped with a projector, whiteboard, and telephone are used more often than they would be without these items.
- In small conference rooms, projectors and speakerphones increase utilization.
- In large conference rooms, whiteboards, telephones, and screens increase utilization.
- In large conference rooms, flat panels can be expected to decrease utilization. Probable reason: the greater the number of people who need to see a presentation, the greater the likelihood they'll gravitate to a room with a larger screen.

Herman Miller's Space Utilization studies prove conclusively that the elements within conference rooms have a bearing on how much people use them. By tracking utilization within their own conference rooms, clients can make informed decisions about which equipment investments are worthwhile—and which are worth skipping.