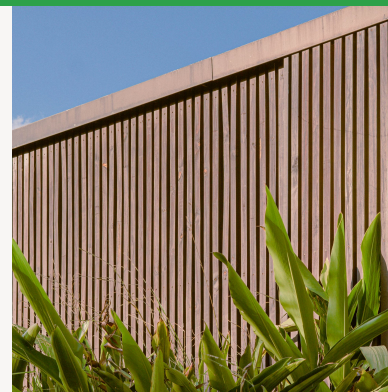


Essential space analytics for education spaces

Whitepaper 3 of 6



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Introduction

In the previous paper, we explained how measurement works and the choices you need to make. The next step is reporting on the space use of your education spaces.

We believe there are three essential components that every report should include. What are they? This paper will guide you through them!



Key takeaways

1

Report the annual frequency and occupancy rates against the target for the first global overview of space use.

2

Compare the annual figures with previous years to illustrate the development of space use at your institution.

3

Analyze frequency and occupancy rates per week, and possibly per day and per hour, to identify opportunities for optimization.

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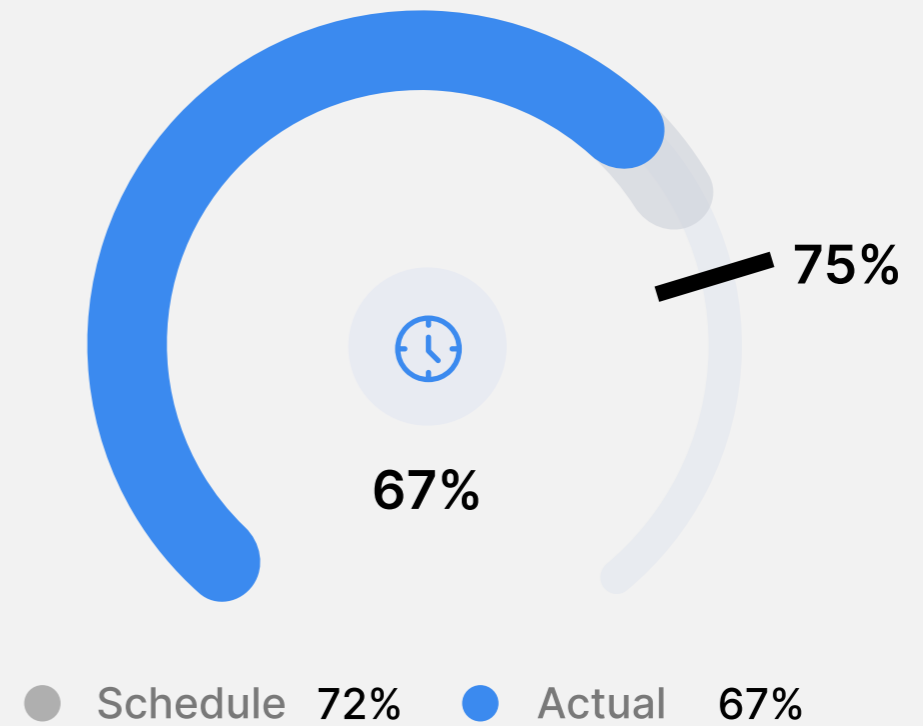


Use annual space usage statistics for strategic insights

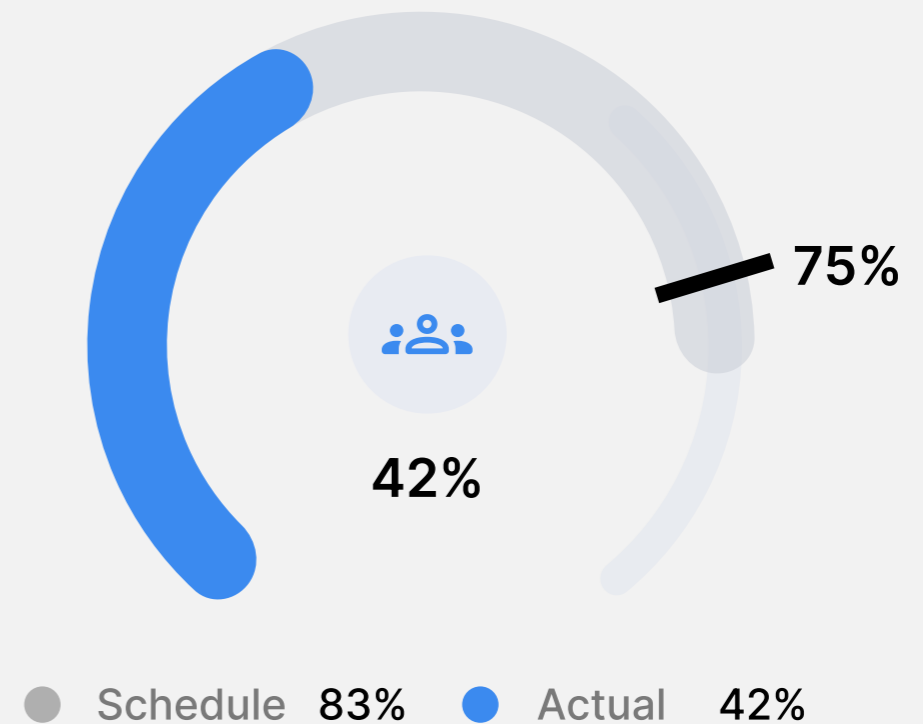
We'll start with the annual statistics for frequency and occupancy rates. You can report this by simply comparing the scheduled frequency and occupancy rates with the results of the measurements. Compare all teaching weeks here (so exclude exam weeks and vacation weeks).

Figure 1 provides an example of what this looks like, based on average data from all our partners [1]. The statistics based on the timetable are shown in gray, and the figures based on the measurement data are shown in blue. The graph shows that the scheduled frequency is 72%, while the actual frequency averages 67%. Therefore, 5 percentage points of the scheduled frequency are no-shows. The scheduled occupancy is 83%, compared to an actual occupancy of 42% on average. The difference between the schedule and the measurement data means that, on average, only 50% of students show up.

Frequency rate



Occupancy rate



[1] This graph is based on usage data for the month september 2025. We chose for this month because we can compare as many partners as possible.



Show the development compared to previous years

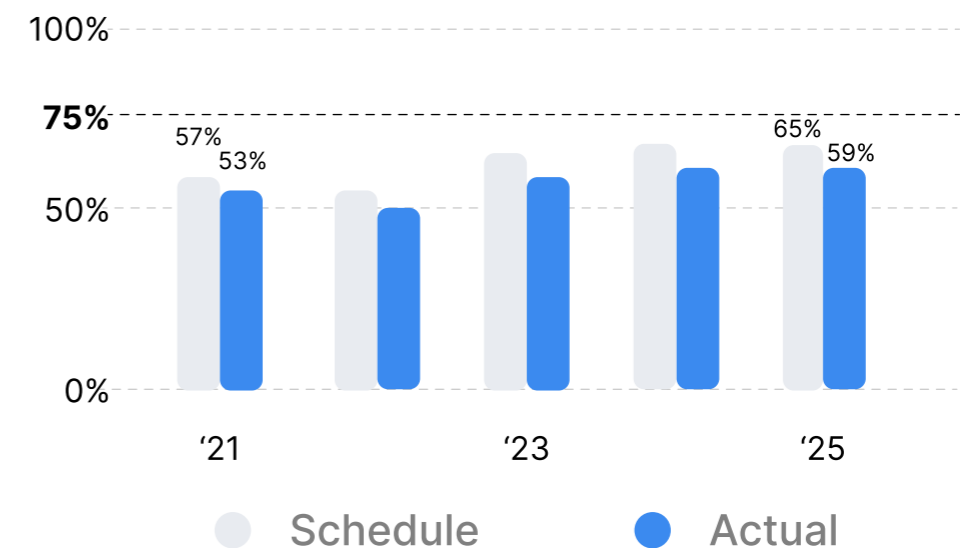
The next step is to compare the data from the previous graphs with those of previous years and determine whether the space use has improved as a result of interventions. Here's an idea of what that might look like (based on Valks et al. 2021) [2][3].

The data of our partners show that both the frequency and occupancy rates can be increased further. Compared to the objective, an improvement of 8 and 33 percentage points is possible.

What you also see in these graphs is a target line at 75%, for both the frequency rate and the occupancy rate. In the next whitepaper, we will elaborate further on why the target line is at 75%. In any case, it's important to show the objective here, so you can immediately see the difference between the current situation and the ambition.

What the comparison between the current space use and the target line reveals is where the potential lies. The frequency rate is slightly below this target line, both for the schedule and the actual use: there is certainly room for improvement here. The utilization rate is above the target line for the schedule, but far below it for the actual use. So, here too, there is still room for improvement.

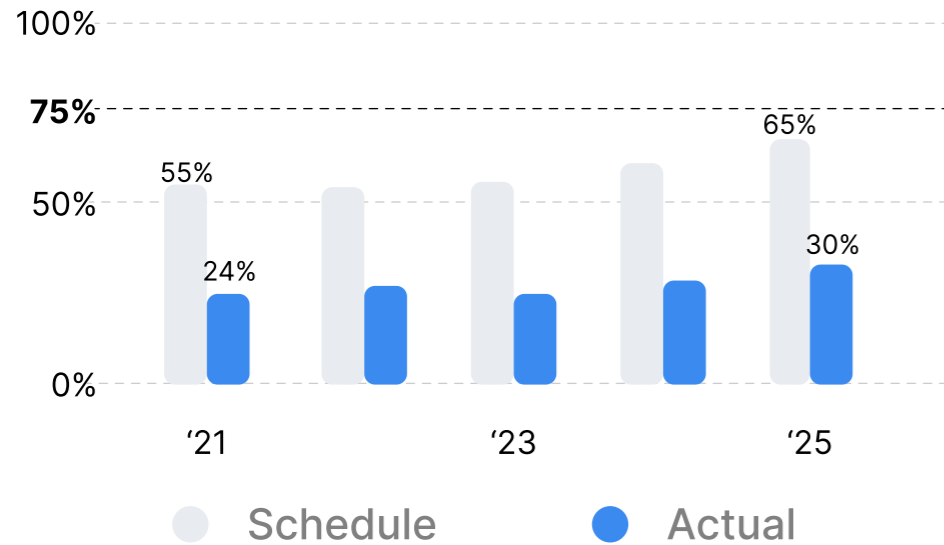
Frequency rate (2021-25)



[2] These graphs contain space use data for 2025, complemented with fictitious data. Historical space usage statistics or total capacity is not available.

[3] Valks B, Blokland E, Elissen C, van Loon I, Roozmond D, Uiterdijk P, Arkesteijn M, Koutamanis A, Den Heijer A (2021), "Supporting strategic decision-making on the future campus with space utilisation studies: a case study". Property Management, Vol. 39 No. 4 pp. 441-465, doi: <https://doi.org/10.1108/PM-09-2020-0054>

Occupancy rate (2021-25)

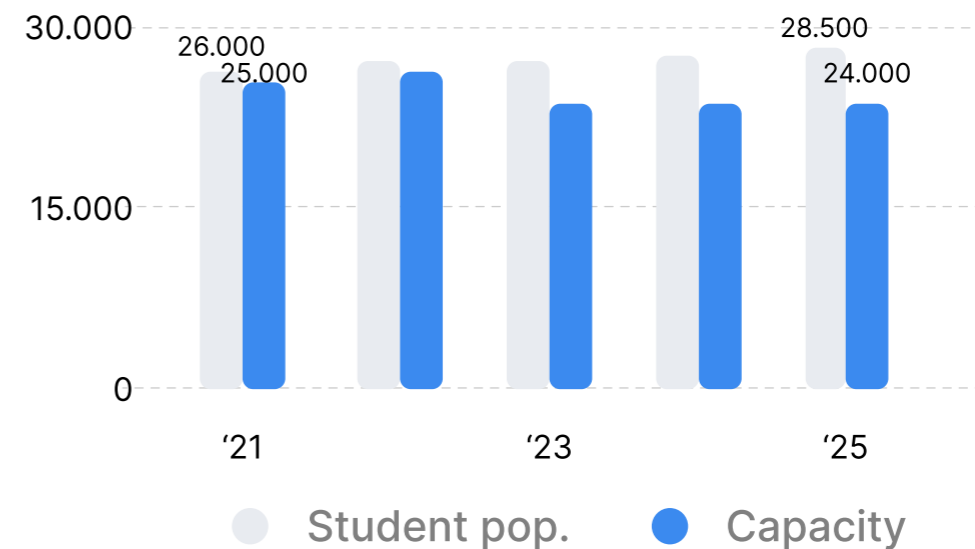


From these examples, you can see that the frequency and occupancy rates have increased slightly over time. There could be several reasons for this. Therefore, it's very useful to display a graph showing the development of student numbers and classroom capacity. This allows you to see whether capacity has increased or decreased, and whether this has been reflected in the space use.

The development of the capacity can also be shown in a graph: see the example below [4]. The graph shows that the student population has increased, while the total capacity has decreased. As a result, the capacity in seats per student has decreased from 0,96 to 0,84 seats per student: a 12 percent reduction in capacity.

When comparing this graph to the previous ones, these developments help to explain the higher frequency and occupancy rates. One would expect a decreasing capacity per student to result in higher frequency and occupancy rates, while an increasing capacity per student results in lower frequency and occupancy rates.

Development of student population and total capacity



[4] These graphs contain space use data for 2025, complemented with fictitious data. Historical space usage statistics or total capacity is not available.

Contextual information is crucial for these graphs. What developments have played a role in this changing ratio and the increase in space usage? Changes in the inventory of room types, changes in group sizes for courses, and the introduction of new educational programs are all factors that can influence space usage. Perhaps you need to delve deeper into these aspects to demonstrate the effects. Graphs that show the composition of the teaching space portfolio and the needs of educational programs can be helpful.

Finally, if you've worked with manual measurements or a limited sample of rooms in the past, be sure to make this comparison fairly (based on the same measurement period and room types)!

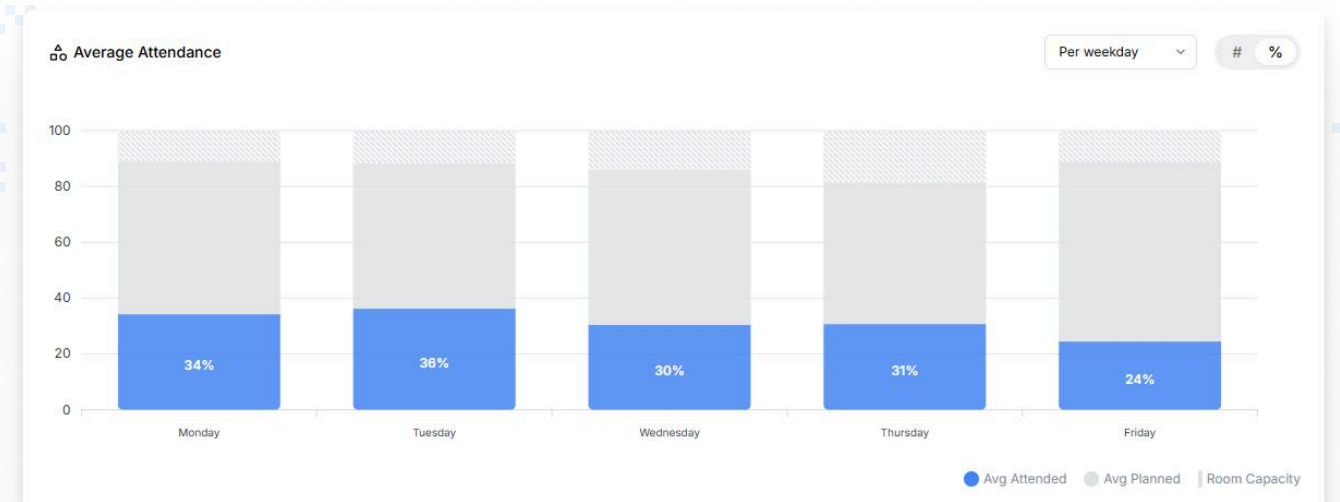


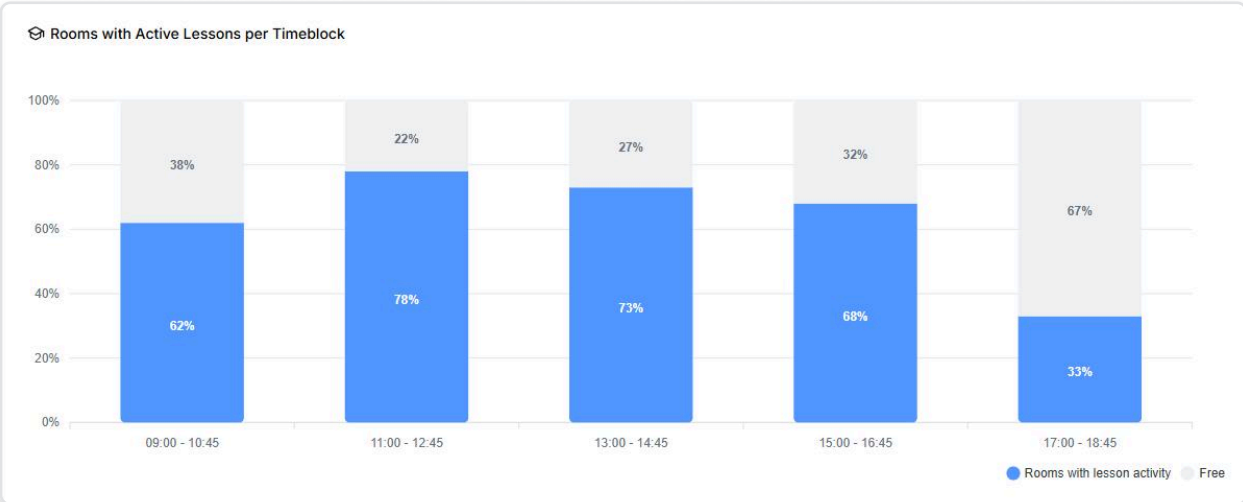
Discover opportunities with insights per week, day and hour

Another important insight you can gain using real-time data is the development of frequency and occupancy rates throughout the academic year. The Attendance feature of the Pleq platform also provides these kinds of insights.

The graph below shows occupancy by day of the week. The graph reveals variations in planned occupancy from day to day: on Mondays, a better match is made between class size and room size than on Thursdays.

Furthermore, it's clearly visible that attendance varies. Tuesdays are the best-attended days, while Fridays are the quietest.





This information can be very useful for scheduling. Perhaps you can move around classes to create a more even distribution of bookings, or find opportunities to schedule conferences and maintenance. Another option is to rebook classes to other rooms when attendance drops too much. This way a good match between group size and room size can be maintained, and larger rooms can be freed up for other classes.

The graph above shows the occupancy per scheduling hour. A clear pattern is also visible here: significantly fewer classes are booked during the first hours of the morning and the last hours of the afternoon than during the middle of the day.

Graphs showing frequency and occupancy rates per week, day and hour show where there are opportunities to spread activities, schedule conferences and rebook classes to more suitable rooms if their occupancy drops too far.



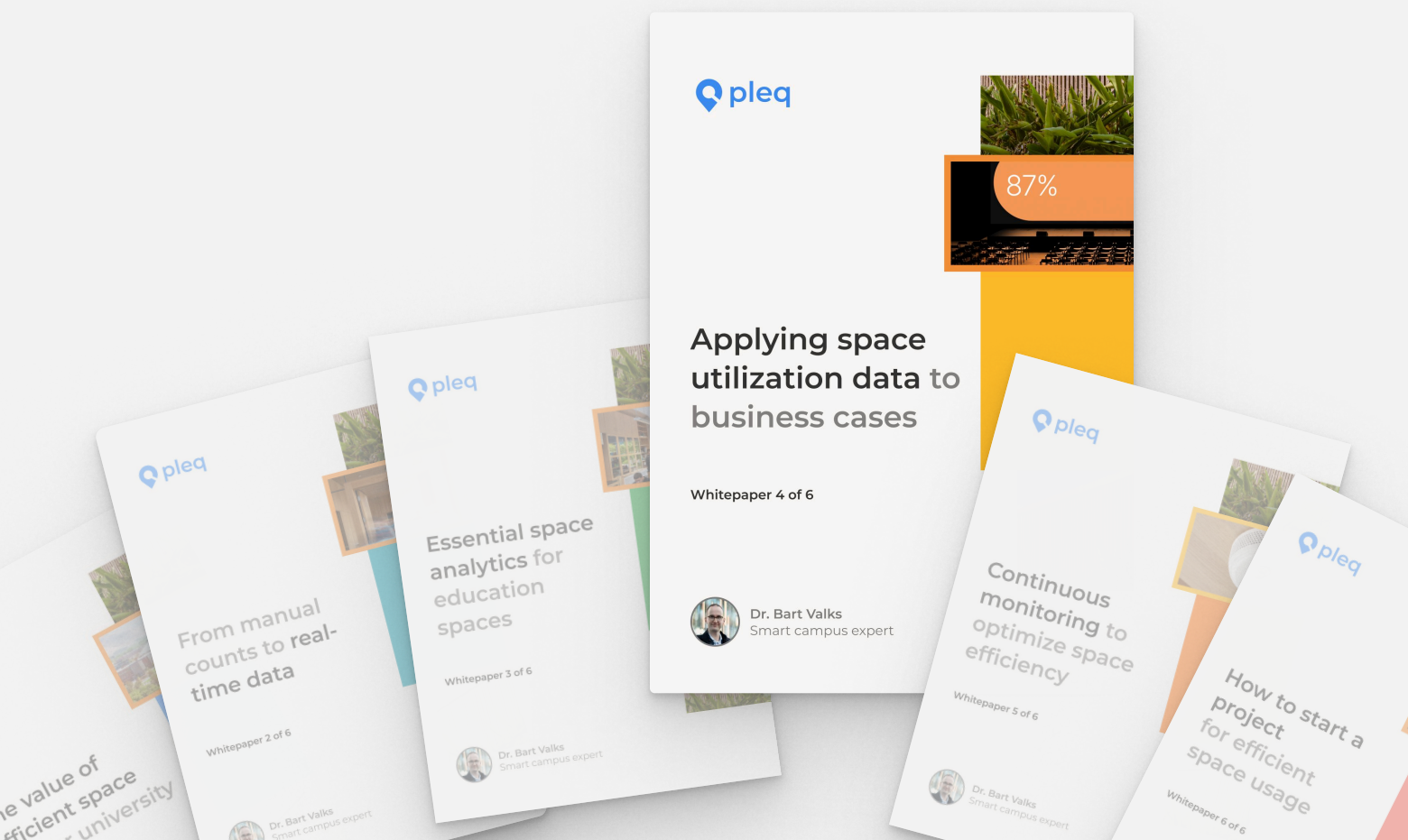
Next **whitepaper**

Applying space utilization data to business cases

The three most important insights in a space usage report are:

- (1) frequency rates across the entire portfolio, including a comparison with the schedule;
- (2) a comparison with previous years; and
- (3) a time cross-section of the data, zooming in on weeks, days and hours.

The next question is: what decision(s) do you make with this information? That's the subject of our next whitepaper.



Do you also want insight into your space usage? Contact us!

Schedule an appointment



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