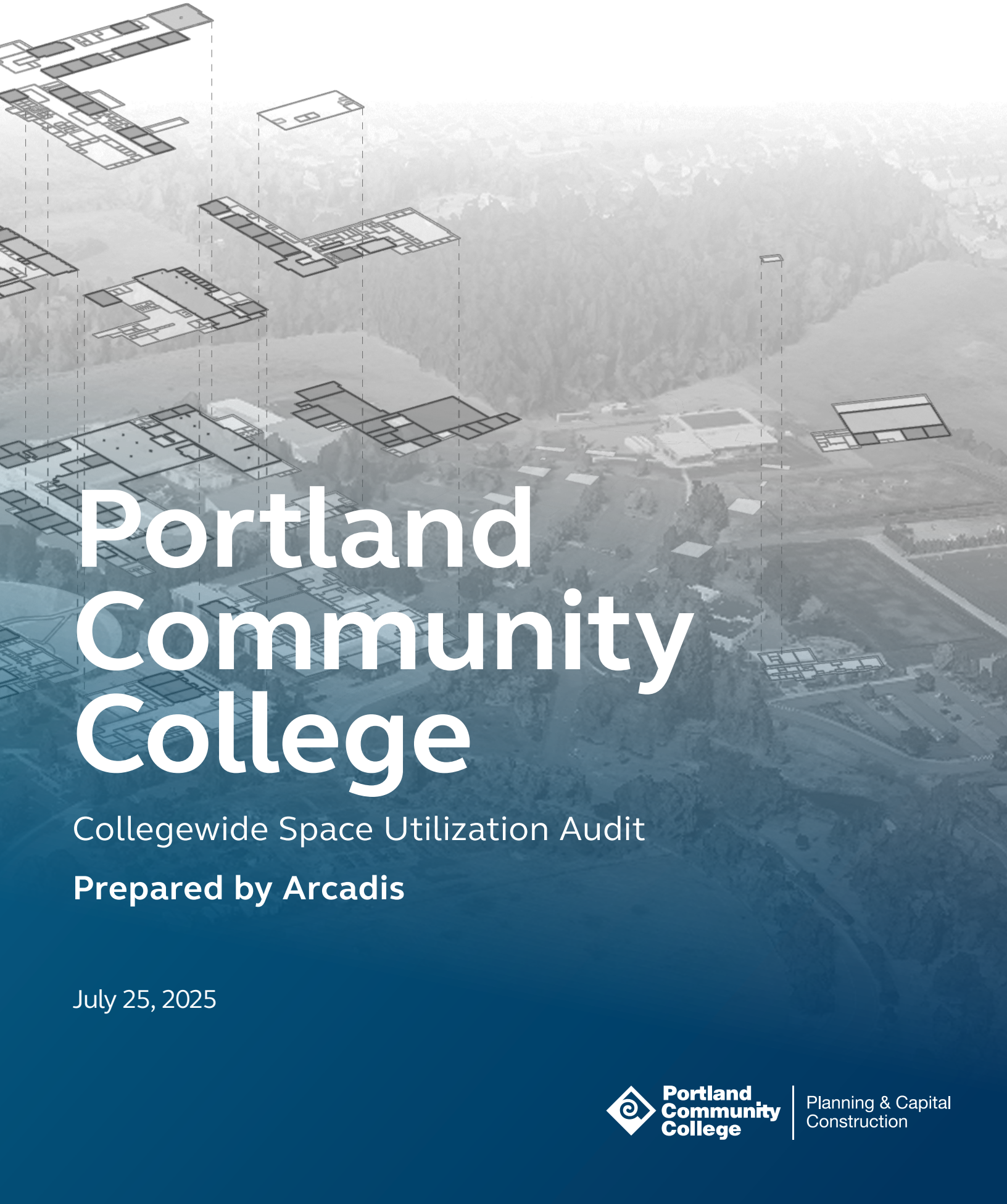


Portland Community College

Collegewide Space Utilization Audit

Prepared by Arcadis

July 25, 2025

Portland Community College | Planning & Capital Construction

Executive Summary

Portland Community College (PCC), Oregon's largest post-secondary institution, serves over 50,000 students across four campuses, multiple centers, and online platforms. Historically, PCC's approach to space management was decentralized, with each campus managing its own scheduling needs. However, under the new one-College model, PCC aims to adopt a unified strategy for space management.

To understand space utilization, PCC conducted space audits in 2017 and 2022, with this report marking the third audit. The College spans nearly 2.2 million gross square feet, with 37% dedicated to educational spaces such as classrooms, labs, study rooms, PE spaces, clinics, assembly spaces, and shops. The analysis indicates that at peak times, the utilization of educational spaces only reaches 50% at one campus. During core hours, Monday through Friday from 9:00 AM to 3:00 PM, the average utilization of educational spaces is 13.8%. These low rates of utilization reflect a broader nationwide trend of underutilized educational space.

The COVID-19 pandemic instigated a paradigm shift in learning modalities, resulting in 40% of courses transitioning to hybrid formats. Alongside this evolution, there was increased demand for Career Technical Education (CTE), reflecting the changing priorities of learners and the workforce. Meanwhile, office spaces, comprising over 330,000 square feet at PCC, are unscheduled and managed in a decentralized manner, leading to inefficiencies.

The analysis highlights significant availability of hours for space use, underscoring the need for strategic management of bookings and space utilization. To address these challenges and achieve meaningful improvements, PCC can undertake several key actions.

1. Centralized Scheduling

Combined with the College's efforts toward strategic course scheduling, this initiative will streamline operations, minimize scheduling conflicts, and enhance the overall coordination of space usage.

2. Integration of Academic and Facility Planning

Strengthen the connection between academic planning and facility management to ensure that space allocation aligns with the College's educational objectives and strategic priorities.

3. Investment in Space Management Infrastructure

Appoint a dedicated Space Manager to oversee Collegewide space use, ensuring consistent and effective management practices.

4. Proactive Space Management

Shift from scheduling spaces to actively managing all College spaces to optimize space utilization and operational efficiencies.

5. Formation of a Space Committee

Establish a Space Committee to develop a comprehensive space management policy and make informed decisions regarding space use across the College.

These actions aim to reduce operational costs through space consolidation, optimize program expansion by utilizing underutilized areas, and ensure informed decision-making through rapid data analysis. The commitment to a transparent, equitable process for space allocation will improve functionality and lower costs associated with underutilized spaces while better aligning facilities with educational priorities.

Contents

Please note that the appendices originally included in this report have been removed from this version to provide a more concise document.

While the main content remains accurate, the absence of the appendices may impact the reader's ability to fully understand certain details or supporting information. Readers are advised to exercise caution when relying exclusively on this version and should consult the full report or relevant external resources for a comprehensive understanding.

For the complete report, including all appendices, please refer to **pcc.edu/space-audit**

1 Introduction

Portland Community College (PCC), Oregon's largest post-secondary institution, serves over 50,000 students. PCC focuses on workforce education, transfer preparation, lifelong learning, sustainability, and responsible financial stewardship. With four campuses, multiple centers, and extensive online learning options, PCC delivers education across the community.

Historically, space management was decentralized, with each location assigning space based on scheduling needs. Under the new one-College model, PCC seeks a unified approach to space management.

1.1 Project Description

In September 2023, PCC issued a Request for Proposals (RFP) for a Collegewide Space Utilization Audit. The audit aimed to provide a comprehensive understanding of PCC's physical spaces, their usage, and opportunities for improvement.

As part of the **Audit and Assessment Phase**, a physical space survey was conducted to verify current spaces. This audit assessed the quality and quantity of College spaces, including classrooms, instructional support areas, staff and faculty offices, workstations, and meeting and conference rooms. Key factors such as size, type, and condition were documented to provide a clear picture of PCC's existing facilities.

The **Utilization Study** analyzed how spaces are currently used. It gathered data on space reservations to better understand efficiency, with a focus on academic learning areas and event facilities. Administrative spaces will be evaluated independently, with data from Occuspace sensors providing valuable insights into the utilization of open office areas.

Finally, PCC sought **Recommendations** to establish best practices and governance strategies for space management. PCC aimed to comprehend the evolving enrollment and space utilization needs in the post-COVID era, recognizing that shifts in modalities have transformed the way space is used. Furthermore, the College aspires to achieve greater operational efficiencies in response to these evolving dynamics. These recommendations are designed to help College staff effectively manage space, improve accessibility, support sustainability and carbon reduction goals, and inform future capital planning initiatives.

1.2 Steering Committee

To guide and inform the project, PCC assembled a Steering Committee. The Steering Committee acted as a recommending body to ensure alignment between the project goals and PCC's overall strategy. The Steering Committee comprised of the following members:

- **Colette Tipper,** Government Relations Manager
- **Dana Bonifacio-Sample,** Dean of Student Wellbeing, Engagement, and Belonging
- **Heidi VanBrocklin,** Operations Program Manager
- **Jaime English,** Facilities Planning Manager - Planning & Capital Construction
- **Jennifer Gossett,** ADA/504 Compliance Manager
- **Jody Giffin,** Interiors Manager - Planning & Capital Construction
- **Josh Peters McBride,** Associate Vice President - College Operations
- **Karen Sanders,** Assistant Associate Vice President - Academic & Career Pathways
- **Kelly Novak,** Lead Facilities Scheduling Coordinator
- **Kurt Simonds,** Vice President - Strategy, Policy & Integrated Planning
- **Michelle Bagley,** Library Dean
- **Mike Mathews,** Interim Associate Vice President - Finance & Compliance
- **Naomi Butler,** Facilities Business Services Manager
- **Rebecca Ocken,** Director - Planning & Capital Construction
- **Steven Morse,** CAD\BIM System Administrator
- **Terry Jolly,** Director - Client Services

1.3 Report

This report offers a snapshot of current space utilization across the College and outlines the process undertaken to address the project objectives. It highlights the data collected, the methodologies employed for analysis, and the steps taken to define existing challenges and opportunities related to space management. Furthermore, it serves as a foundation for the development of long-term, strategic solutions aimed at optimizing space usage Collegewide. The report culminates in the Space Management Matrix. Developed in collaboration with the Steering Committee, the Space Management Matrix outlines strategies to optimize space use, while supporting the College's goals for academic programming, sustainability, and operational efficiency.

▲ *Southeast Campus Plan from the updated "Complete Book"*

2 Gathering the Information

This stage involved the receipt and compilation of information provided by PCC. CAD, Revit, and PDF files for most buildings, along with Astra scheduling data for classes and events, and a spreadsheet detailing revenue-generating events, were collected, reviewed, and compiled. These resources were harnessed to assess space utilization.

2.1 Review and Audit

Drawing files

CAD, Revit, and PDF files of the buildings provided by PCC were systematically organized and reviewed. Each file was verified to ensure completeness, and a thorough review was conducted to identify any errors or omissions. CAD and Revit files were audited and purged to address inconsistencies, such as duplicate room schedules where spaces were classified under multiple FICM codes (e.g., FICM 100 and FICM 110). These duplicates were carefully elevaluated and removed to ensure accuracy.

Campus plans were created by linking individual building and site files into a centralized campus Revit model. The accuracy of the campus plans was verified using Google Earth imagery to align spatial data with real-world conditions. Additionally, FICM classifications for all spaces were reviewed and confirmed in collaboration with PCC, ensuring consistent and accurate categorization.

To improve the usability of FICM data, a clearer and more intuitive color scheme was developed and implemented across the plans. This new scheme made it easier to interpret space classifications visually. Finally, the plans were compiled into an updated “Campus and Building Plans Complete Book,” providing a comprehensive and organized resource for future use. Enclosed within Appendix 7.4 of this report, is the “Campus and Building Plans Complete Book.”

Astra Schedule Classes

Astra Schedule class data was received from PCC for Fall 2023, Winter 2024, Spring 2024, Summer 2024, Fall 2024, and Winter 2025. Each class at PCC is identified by a “Course Reference Number” (CRN), ensuring that every class is distinctly defined within the system.

All PCC classes are scheduled using Astra Schedule, providing a clean and complete data set for analysis. PCC exported each dataset from Astra Schedule to a Microsoft Excel file, enabling easier processing and review.

For the purpose of the study, data sets from Spring 2024, Summer 2024, Fall 2024, and Winter 2025 were used to represent a full academic year, offering a comprehensive understanding of space utilization across all academic terms.

Astra Schedule Events

Events recorded in Astra Schedule are not categorized or distinguished by type, leading to a singular, undifferentiated dataset. To address this, manual data enhancement was undertaken in partnership with PCC to refine the classification of events into two overarching categories: internal events and external events.

The events encompass a wide variety of activities, including construction projects, maintenance, upgrades, and repairs, as well as clubs, social gatherings, prayer sessions, and drop-in activities in open labs, gyms, and shops. Other entries include meetings, office hours, training, tutoring, testing, remote instruction, and class preparation. Rehearsals, performances, recitals, screenings, sports, tabling events, job and trade fairs, advising sessions, community group activities, childcare facilities, and events hosted by educational organizations spanning K-12 and higher education are also included.

▲ *Willow Creek Center, Mechatronics Lab*

Google Calendar Events

PCC does not schedule all non-class activities in Astra Schedule, which results in significant gaps in recorded space usage. Many departments rely on Google calendars instead of Astra Schedule, and this leads to the exclusion of several types of spaces from the centralized record. Spaces that are utilized but not booked and recorded in Astra Schedule include libraries, resource centers, tutoring centers, dining facilities, and outdoor amenities. Furthermore, there are longstanding space agreements with various external partners concerning the use of space, which are not formally documented in Astra Schedule.

Revenue Generating Events spreadsheet

Last year, the management of events was centralized under PCC’s scheduling team, which now oversees events through Astra Schedule. Previously, event management was handled individually by each campus. This transition reflects PCC’s commitment to the one-College model. Additionally, the scheduling team is responsible for tracking fees and revenue for scheduled events through processes outside of Astra Schedule.

The Revenue Generating Events spreadsheet provided by PCC revealed significant inconsistencies and gaps in the data. Of the 207 events listed, 120 did not have corresponding entries in Astra Schedule, requiring substantial manual cross-referencing, clarification and clean-up. Additionally, day and time information for events was entered inconsistently, making it difficult to accurately assess event schedules. Arcadis reviewed the inconsistencies and missing data with PCC to fill in the gaps, and where additional information was not available develop reasonable assumptions.

Several multi-day events, especially those hosted at the Performing Arts Center (PAC), were not fully captured in the data. Key details, such as rehearsal schedules and setup times for performances, were frequently omitted. Furthermore, associated rooms for events were not consistently recorded, meaning spaces that play a supporting role—such as lobbies, green rooms, and changing rooms for a performance—were excluded from the dataset. These omissions and inconsistencies resulted in an incomplete data set, limiting the ability to comprehensively analyze revenue-generating event space usage. Arcadis advanced with the analysis, recognizing the opportunity to uncover valuable insights, such as identifying the highest revenue-generating events and determining which spaces contribute significantly to the College’s revenue.

Previous Space Audits

PCC has conducted multiple space audits to evaluate and improve its facilities and space utilization. Previous audits include the 2017 Space Utilization study by SRG Partnership and Biddison Hier LTD, as well as the 2022 Space Needs Assessment by Perkins & Will. PCC enlisted Arcadis to conduct a comparative analysis of the findings from 2025 with those presented in the 2017 report. Within Appendix 7.3 of this document, is a table that encapsulates and contrasts the key insights from each report.

This marks PCC's third space audit, aiming to build on the insights from previous studies. However, many of the issues noted and recommendations made in the earlier audits appear to have not been implemented, underscoring the need for a more actionable approach to space management and planning.

▲ *Previous Space Audits*

2.2 Space Survey

To prepare for the space survey, a list of PCC buildings was reviewed with PCC to confirm which buildings would be included, and FICM codes were reviewed to determine what spaces should be surveyed. A space survey form was developed with input from the Steering Committee, emphasizing elements materially important for space use, such as program specific room fit outs, while excluding less critical details like floor finishes. A web-based survey tool was created to allow multiple users to survey spaces simultaneously and provide real-time feedback as surveys were completed. The space survey was conducted over Winter Break 2024 and Spring Break 2025. The final survey document is organized by building and campus for clarity and ease of use. Enclosed within Appendix 7.5 of this report, is the Space Survey.

▲ *Surveying the Barn at Rock Creek Campus*

CLASS LABORATORY - MUSIC ROOM

ARCADIS

Portland Community College
Cascade Campus
MAHB - MORIARTY ARTS AND HUMANITIES BUILDING

Level: 2
Room No: 214

Classification & Usage			
FICM Classification	**CLASS LABORATORY (210)**	Usage Description	**INSTRUCTION (01.0)**
Organization Description	**ARTS & PROFESSIONS DIVISION (C40301)**		
Size			
Net Assignable Area	**1116**		
Occupancy			
FLS Max Occupancy	**57**	PCC Capacity	**40**
Exterior Windows			
Window-to-Wall % - North Wall	**0%**	Window-to-Wall % - South Wall	**0%**
Window-to-Wall % - East Wall	**75-100%**	Window-to-Wall % - West Wall	**0%**
Ceiling			
SkyLight	**-**	Ceiling Height	**One Story**
Electrical			
Overhead Power	**-**	Floor Boxes	**X**
Plumbing			
Sink	**-**	Shower	**-**
Emergency Eyewash	**-**	Gas	**-**
Technology			
Podium	**X**	Teaching Wall with a Markerboard & Projector	**X**
Casework			
Casework Walls	**-**	Islands	**-**
FF&E			
Workstations	**-**	Program Specific Fit out	**X (2 raised platform levels of flooring with electrical boxes)**
Art	**-**		
Notes			
Notes	**Chalkboard instead of markerbaord at teaching wall, 1 additional chalkboard,**	Survey Status	**Completed**

▲ *Example of Space Survey Form*

2.3 Office Space

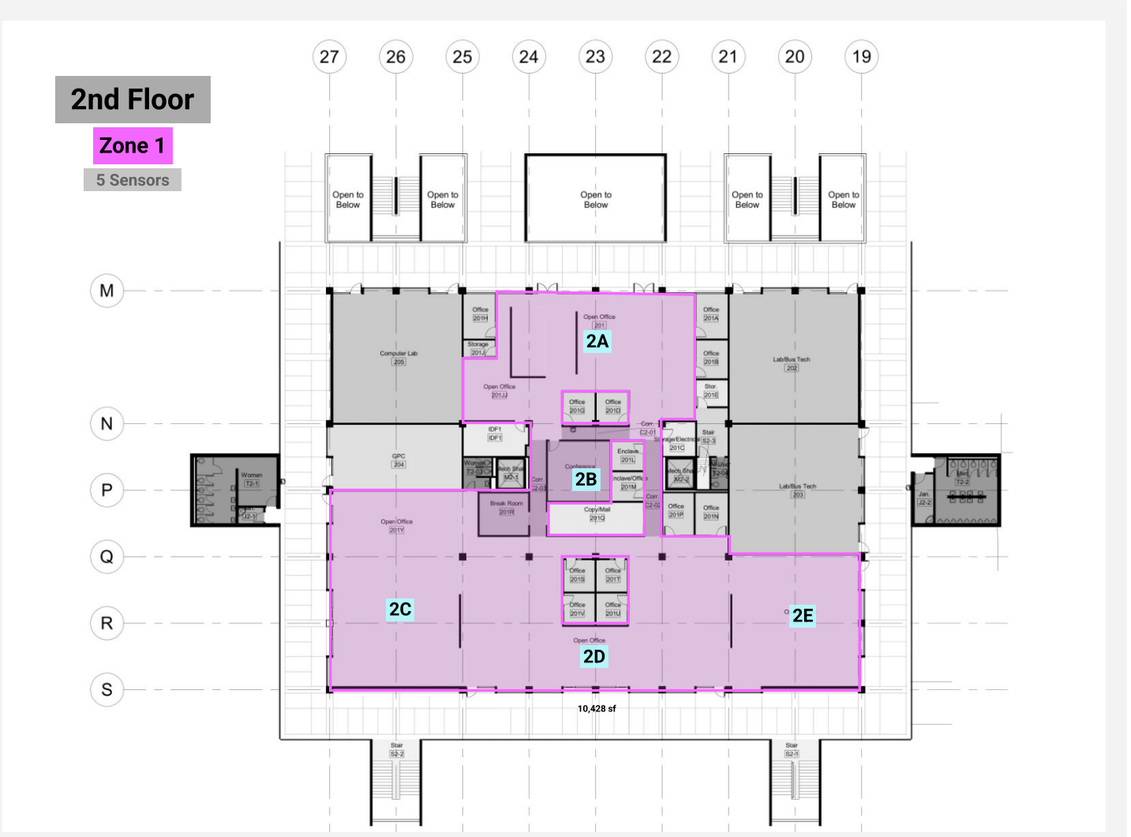
Office space comprises 21% of the assignable square footage and 15% of the total gross square footage across the College. The substantial amount of space dedicated to offices necessitates additional evaluation and review.

Occuspace was introduced by Arcadis as an anonymous tool to collect utilization data for office spaces at PCC. Using sensors that scan for Bluetooth and WiFi signals, Occuspace determines occupancy levels by measuring how many users are in a designated area of the building. The data is collected at a neighborhood level, meaning it does not track individual desk or office usage.

Occuspace provides insights into three key metrics:

- Occupancy (how many people are in a space every minute of the day).
- Daily visitors (how many people visit a space daily).
- Dwell time (how long people spend in a space).

PCC initially requested occupancy data collection in select private offices (single occupant) and open office work areas (multiple occupants). The College opted not to include an audit of private office spaces at this time, recognizing staff concerns regarding perceived administrative oversight. While this is not the case, additional time is required to effectively communicate this to staff.



▲ *Occuspace Zone Plan indicating sensor locations at the Social Science Building, Sylvania Campus*

Proposed Occuspace Scope	
Private Office Space	22,278 SF
Open Work Area	48,645 SF
Total	**71,373 SF**
Approved Scope	
Private Office Space	0 SF
Open Work Area	70,963 SF
Total	**70,963 SF**

The revised and approved scope includes 70,963 square feet of open office space, representing 21% of the total 336,488 square feet of office space at PCC.

Occuspace sensor testing and installation took place in April 2025, and data collection began in May 2025. The sensors will remain operational for 12 months, continuously collecting occupancy data. PCC has real-time access to occupancy and utilization information through the Occuspace dashboard.

To address the topic of office space, it is essential to examine the existing issues and questions that PCC raised in this study. The implementation of the one-College model altered how space is managed, yet many private offices continue to be occupied and “owned” under the previous organizational structure, limiting flexibility and efficiency. This issue is further compounded by frequent requests for office moves or additional space, which highlight the need to reevaluate current practices. Key questions that must be addressed include:

- What is the current utilization of private offices?
- When is a private office truly needed, and when could a desk in an open office area suffice?

Answering these questions requires a thorough analysis of space allocation, identification of inefficiencies, and development of solutions that align with the College’s evolving needs and priorities.

2.4 Outdoor Space

Outdoor spaces at the College, including courtyards, tracks, fields, and gardens, play a vital role in supporting both internal activities and external partnerships. These spaces are generally scheduled through Astra Schedule, which allows them to be reserved for a variety of purposes. However, the scheduling process is linked to an adjacent building, complicating the task of accurately tracking and managing these outdoor areas. While these spaces are frequently utilized, the actual volume of use is not monitored or recorded, leaving gaps in data that could inform decision-making. Additionally, there is little understanding of the costs associated with maintaining these outdoor spaces or the potential return on investment from external use.

▲ *Cascade Hall Plaza, Cascade Campus, by Hacker*

3 Approach and Methodology

This report evaluates PCC's current use of space to determine if spaces are being utilized efficiently and effectively to meet the diverse needs of students, faculty, and staff. It also considers the need for revisions to existing space allocation standards or the establishment of new ones to better align with institutional goals and long-term planning, while informing the College's operational efficiencies.

3.1 Steering Committee Engagement

The Steering Committee participated in 15 scheduled meetings, over the course of 11 months, actively reviewing and providing input on all aspects of the project and final report to ensure its success and alignment with College goals.

1. August 1, 2024
- Project and Scope Overview
- Reflect on Previous Space Audits and Studies

2. September 5, 2024
- Perspective of the PCC User
- Develop Character Profiles

3. September 9, 2024
- Verify Buildings to be Surveyed
- Confirm FICM space types to be Surveyed
- Consider Space Survey Inputs

4. October 1, 2024
- Finalize Space Survey Form

5. October 31, 2024
- Review of Campus Plans
- Review of the proposed new FICM color scheme

6. November 7, 2024
- Determine Depth of Inquiry
- Confirm definition of Utilization

7. December 2, 2024
- Understand Computational Design
- Demonstration of Computational Design model

8. January 30, 2025
- Review of Office Space types, location, and quantity
- Determine utilization of Office Space with Occuspace sensors

9. February 20, 2025
- Compare Bookable vs Non-Bookable space
- Initial review of utilization with Ad Astra Class and Event data

10. March 11, 2025
- Verify direction with PCC Planning & Capital Construction team
- Refocus analysis efforts

11. April 8, 2025
- Define Space, Time, and Utilization terminology
- Focus on Astra Schedule Class data to provide a deeper dive into Bookable Learning Spaces

12. May 1, 2025
- Incorporate Astra Schedule Event data to refine Bookable Learning Space analysis and present a more complete utilization picture
- Initial review of Revenue Generating Events

13. May 19, 2025
- Initial review of the Space Management Matrix

14. June 5, 2025
- Recap of Space, Time, and Utilization terminology
- Update on Astra Schedule Class data and Revenue Generating Events
- Confirm Space Management Matrix Recommendations

15. June 20, 2025
- Review Draft Report

3.2 Terminology

To enhance clarity and ensure consistency, key terms were created for the analysis, which were utilized in meetings with the Steering Committee and will be applied throughout this report.

A definition of time-space hours in provided on the following page.

Classes
A time-based curriculum delivery unit. Classes are defined by a unique "Course Reference Number" (CRN), occupy time-space hours, and are recorded in the Astra Schedule 'Classes' dataset.

Events
A time-based unit. Events occupy time-space hours and are recorded in the Astra Schedule 'Events' dataset. Astra Schedule events include internal, external, and operational activities like tabling fairs, conferences, and IT upgrades.

Revenue Generating Event
Includes external users only and with an associated invoice.

Facilities Inventory and Classification Manual (FICM) room classification system
A standardized classification system as defined by the National Centre for Education Statistic (NCES).

Bookable Learning Spaces
A collection of spaces, defined by specific FICM codes.

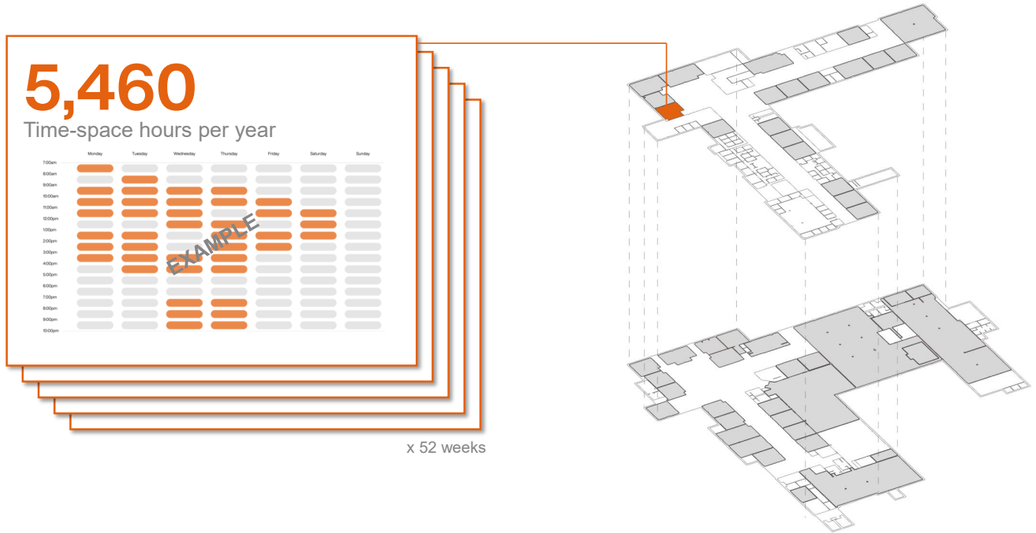
- 110 – Classroom
- 210 – Class Laboratory
- 410 – Study Room
- 520 – Athletic or Physical Education
- 540 – Clinic
- 610 – Assembly
- 720 – Shop

Program Specific Fit out
A Bookable Learning Space with equipment and built-in features for a particular course or subject, defined by specific FICM codes.

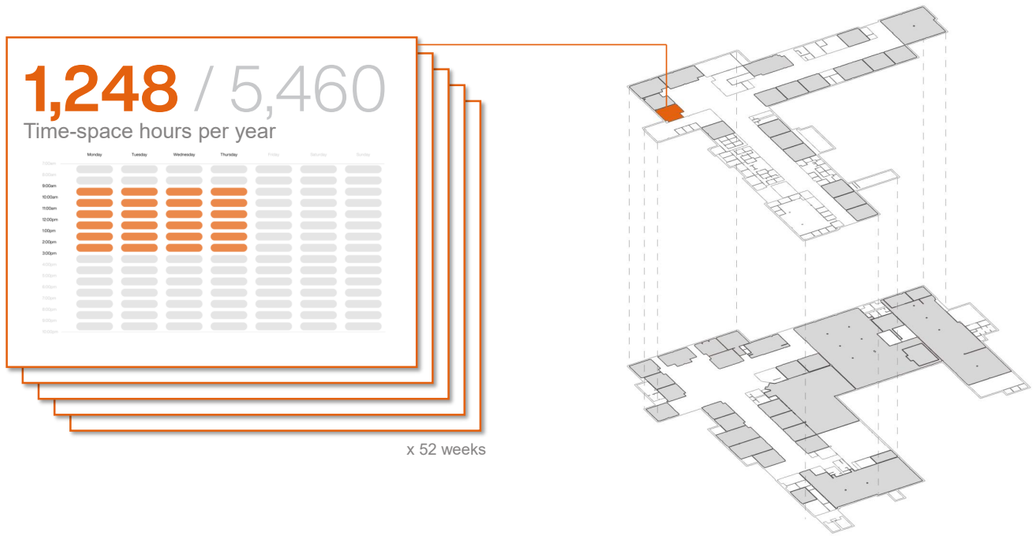
- 210 – Class Laboratory
- 520 – Athletic or Physical Education
- 540 – Clinic
- 610 – Assembly
- 720 – Shop

Classrooms
A FICM definition of a space (110 – Classroom) in which learning can occur.

Time-space Hour
A unit that represents an hour of time that is allocated to a Bookable Learning Space. Monday through Sunday 7:00AM through 10:00PM there are 5,460 time-space hours per room per year.

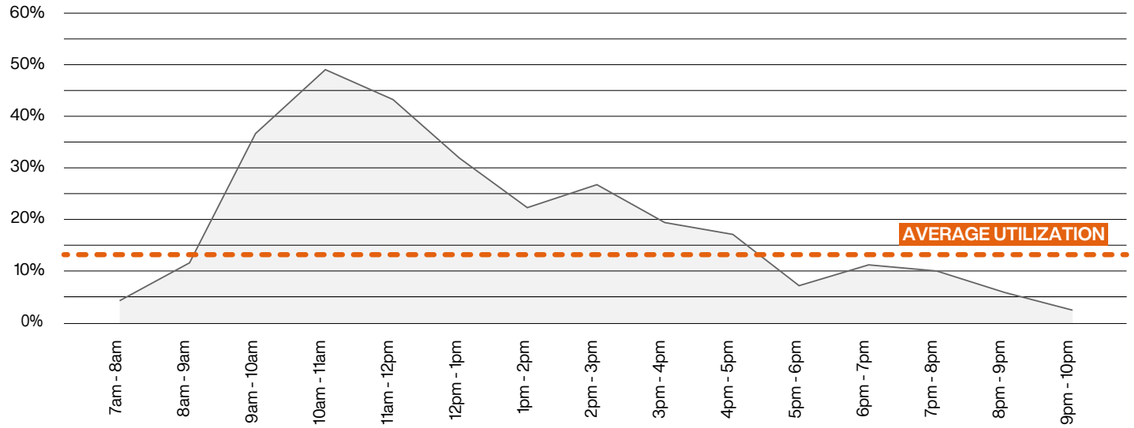


Core Hours
PCC 'peak' hours (Monday through Thursday 9:00AM through 3:00PM) will be referred to as Core Hours to avoid ambiguity with peak utilization. Monday through Thursday 9:00AM through 3:00PM there are 1,248 time-space hours per room per year.

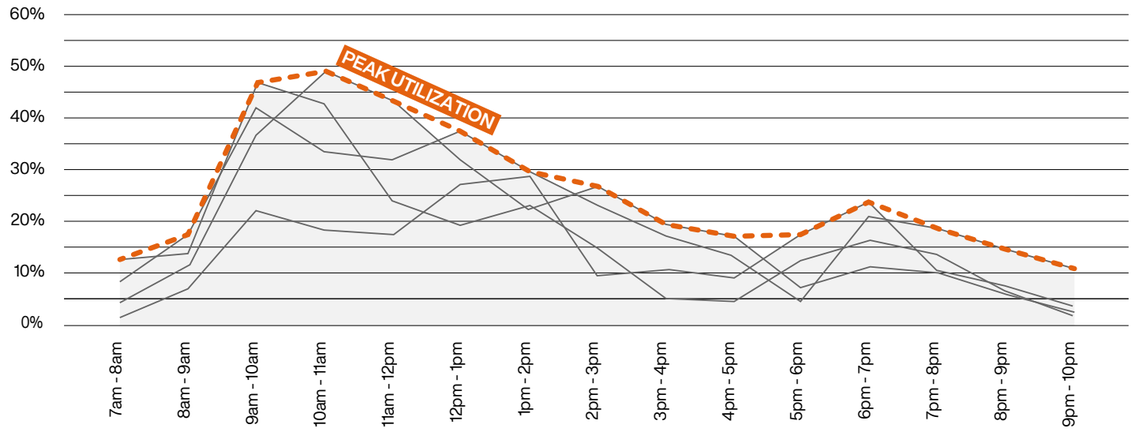


Analysis Timeframe
A single year (4 terms, including: spring 2024, summer 2024, fall 2024 and winter 2025) and all holidays from April 1, 2024, to March 31, 2025.

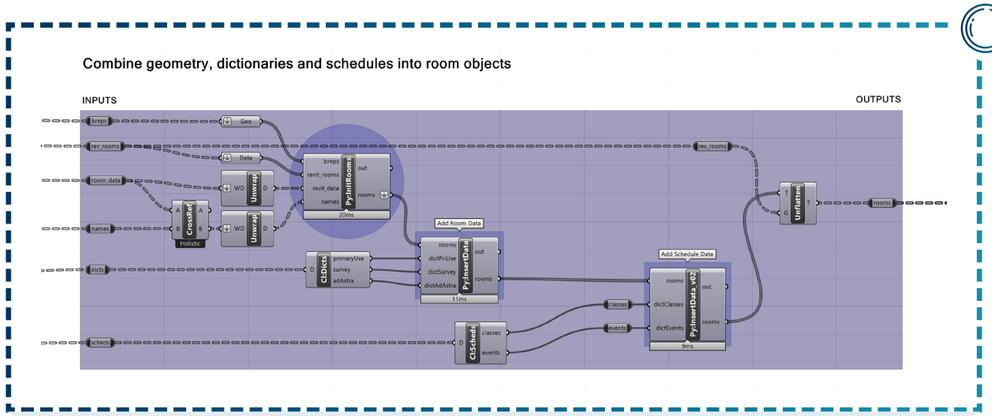
Average Utilization
A percentage measure of utilization calculated as the sum of all allocated time-space hours, divided by the total available time-space hours in a specified period.



Campus Peak Utilization
Calculated on an hour-by-hour basis and represents the highest utilization at a given timeslot within a specified period.



Peak Utilization (Room)
Calculated daily and represents the highest daily utilization for a room within a specified period.



▲ *Parametric Model Working View of Grasshopper, which runs within Rhinoceros 3D*

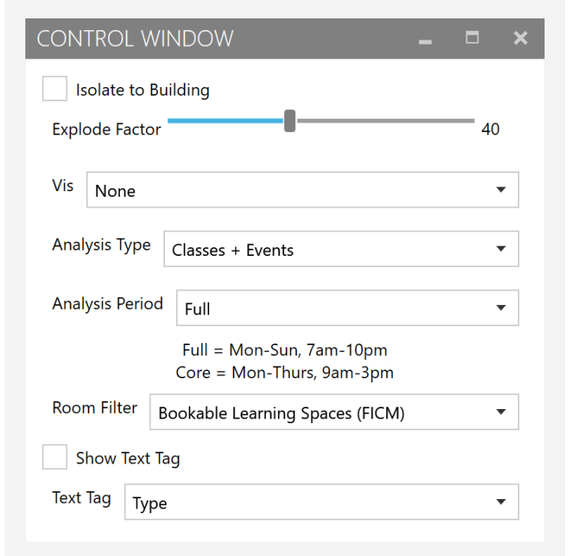
3.3 Computational Analysis

Computational Design

Computational design describes an approach to architectural design and analysis that is predicated on customized algorithmic processes. It enables the efficient and effective processing of complex information, using multiple parameters as design drivers for evidenced-based decision making. By utilizing various data sources, the process can be leveraged to work across scales from campus down to room scale.

Implementation

For this project, the parametric model linked Revit BIM models of the entire College with numerous datasets (including Astra Schedule data and survey information) to examine how spaces are being used across the College. The model was created in a visual programming environment called Grasshopper, which runs within Rhinoceros 3D, a computer aided design application with direct interoperability with Revit.



▲ *Parametric Model Control Window*

Parametric Model Working View

The image on the previous page is an overview of the parametric model. The logic is understood by reading left to right. The 'wires' show the flow of data between groups and each colored group can be understood as a discrete function that performs a specific task. For example: perform data parsing operations, calculate room utilizations, or visualize specific attributes.

The parametric model script can generally be understood in the following steps:

1. Red – Parameter Inputs (e.g. Analysis periods, FICM codes to include, etc.)
2. Grey and Blue – General Data Processing
3. Yellow – Data Imports (e.g. Astra Schedule information and Revit BIM data)
4. Purple – Performance Analysis (e.g. calculating peak and average utilization per room)
5. Orange – Graphic Outputs (e.g. axonometric diagrams, graphs, etc.)
6. Green – Data Analysis Queries (such as FICM 110 Classroom usage per campus)

Phases of Analysis

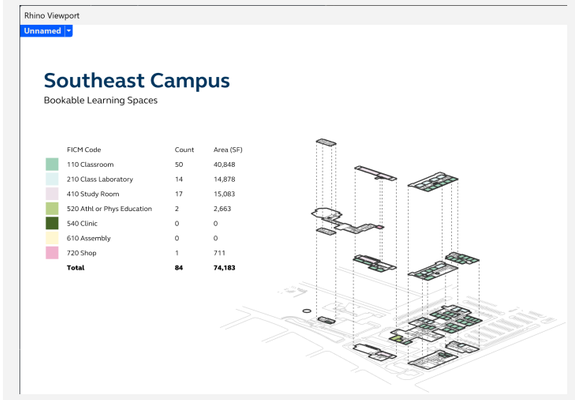
A computational model was developed to analyze spatial data—comprising digital building models of campuses and centers created and validated during the space survey—as well as scheduling data from Astra Schedule. The analysis was conducted through a series of iterative passes, with the findings from each iteration presented to PCC during Steering Committee meetings. These sessions fostered discussions which guided the refinement of the model and the adjustment of parameters for subsequent analyses.

Initial

The initial pass focused on identifying the distribution and quantity of different types of spaces—Bookable Learning Spaces, office spaces, and event spaces—and calculating their respective total square footage. This foundational analysis provided PCC with a clearer understanding of the spatial composition across its campuses and centers.

Refined

The second pass delved into the utilization of Bookable Learning Spaces, examining both average and peak usage, and the distribution of time-space hours across buildings in the College. Average utilization data was visualized through heat maps in axonometric views, while peak utilization was represented via line graphs, complemented by bar charts illustrating total booked time-space hours. Distribution was illustrated through composite bar charts documenting total potential time-space hours and total time-space hours used. By presenting the data through multiple analytical perspectives, PCC was able to gain deeper insights into space usage patterns across its facilities.



▲ *Parametric Model Viewport*

Final

The third pass involved a more granular analysis of Bookable Learning Spaces and Revenue Generating Events. For the former, PCC sought to identify rooms without any bookings in Astra Schedule, as well as those with the highest frequency of use. For Revenue Generating Events, the focus was on understanding which spaces were utilized for this purpose and quantifying the annual revenue derived from these activities.

Outcome

The overarching goal of this computational analysis was to distill the Astra Schedule data into an accessible and actionable format, empowering PCC to make informed decisions moving forward. A comprehensive compilation of this analysis can be found in Appendix 7.6 of this report.

4 Analyzing the Data

The Steering Committee identified three key areas for the computational design analysis: space location, scale, and utilization; event space distribution and scale; and office space use, assignment, and layout style (private versus open). These focus areas were tied to three specific data sets. Space location, scale, and utilization were connected to Bookable Learning Spaces; event space location and scale were linked to revenue-generating opportunities; and office space assignment, style, and utilization was aligned with the Occuspace analysis.

4.1 Bookable Learning Spaces

Collegewide	
2,199,167	Total Gross SF
1,573,618	Total Assignable SF
820,943	Total Bookable Learning Spaces SF
374,687	Total Classroom SF
Bookable Learning Spaces	
52%	Total Assignable SF
37%	Total Gross SF
Classrooms (FICM 110)	
24%	Total Assignable SF
17%	Total Gross SF

The core mission of PCC is to provide access to quality education, which is fundamentally accessed and delivered through Bookable Learning Spaces. Understanding the utilization of these spaces is essential to ensuring that PCC can effectively fulfill its mission and meet the educational needs of its students.

"Portland Community College supports student success by delivering access to quality education while advancing economic development and promoting sustainability in a collaborative culture of diversity, equity, and inclusion."

Table 4.1.1 Bookable Learning Spaces (BLS) Collegewide

Campus / Center	BLS Total Area (SF)	Assignable Area (SF)	Non-assignable Area (SF)	Unclassified Area (SF)	Total Gross Area (SF)	Assignable Area (%)	Gross Area (%
Cascade Campus	134,169	250,916	106,464	3,508	360,889	53.5%	37.2%
Rock Creek Campus	255,476	441,422	146,528	3,379	591,329	57.9%	43.2%
Southeast Campus	74,184	151,814	63,183	7,870	222,867	48.9%	33.3%
Sylvania Campus	251,100	518,739	202,199		720,938	48.4%	34.8%
CLIMB Center	11,871	18,084	14,082		32,166	65.6%	36.9%
OMIC Training Center	18,157	23,694	6,790		30,484	76.6%	59.6%
Downtown Center	-	26,565	14,105		40,670	0.0%	0.0%
Hillsboro Education Center	5,116	6,323	2,742		9,065	80.9%	56.4%
Newberg Center	4,850	7,619	5,194		12,813	63.7%	37.9%
Opportunity Center	6,242	25,981	11,494		37,475	24.0%	16.7%
Swan Island Trades Center	11,366	15,118	6,111		21,229	75.2%	53.5%
Vanport Building	13,352	21,297	8,203		29,500	62.7%	45.3%
Willow Creek Center	35,060	66,045	23,697		89,742	53.1%	39.1%
Totals	**820,943**	**1,573,618**	**610,792**	**14,757**	**2,199,167**	**52.2%**	**37.3%**

Table 4.1.2 Classroom (FICM 110) Spaces Collegewide

Campus / Center	Classroom Total Area (SF)	Assignable Area (SF)	Non-assignable Area (SF)	Unclassified Area (SF)	Total Gross Area (SF)	Assignable Area (%)	Gross Area (%)
Cascade Campus	83,668	250,916	106,464	3,508	360,889	33.4%	23.2%
Rock Creek Campus	90,383	441,422	146,528	3,379	591,329	20.5%	15.3%
Southeast Campus	40,848	151,814	63,183	7,870	222,867	26.9%	18.3%
Sylvania Campus	90,878	518,739	202,199		720,938	17.5%	12.6%
CLIMB Center	11,871	18,084	14,082		32,166	65.6%	36.9%
OMIC Training Center	8,861	23,694	6,790		30,484	37.4%	29.1%
Downtown Center	-	26,565	14,105		40,670	0.0%	0.0%
Hillsboro Education Center	4,076	6,323	2,742		9,065	64.5%	45.0%
Newberg Center	4,617	7,619	5,194		12,813	60.6%	36.0%
Opportunity Center	6,086	25,981	11,494		37,475	23.4%	16.2%
Swan Island Trades Center	4,730	15,118	6,111		21,229	31.3%	22.3%
Vanport Building	6,317	21,297	8,203		29,500	29.7%	21.4%
Willow Creek Center	22,352	66,045	23,697		89,742	33.8%	24.9%
Totals	**374,687**	**1,573,618**	**610,792**	**14,757**	**2,199,167**	**23.8%**	**17.0%**

Half of the assignable building area Collegewide is dedicated to Bookable Learning Spaces, and a quarter of the assignable building area is allocated to classrooms.

FICM Codes 110, 210, 410, 520, 540, 610, and 720 represent Bookable Learning Spaces, and account for a total of 820,943 square feet at PCC. This represents 52% of the assignable square footage, as defined by FICM codes, and 37% of the gross square footage Collegewide.

FICM Code 110, designated for Classroom spaces, accounts for a total of 374,687 square feet at PCC. This represents 24% of the assignable square footage, as defined by FICM codes, and 17% of the gross square footage Collegewide. FICM Code 110 Classrooms, PCC commonly refers to as "general purpose classrooms".

Non-assignable Area, as defined by FICM, is the total area on all floors of a building that cannot be assigned to occupants or specific uses but is essential for the building's general operation.

Unclassified facilities are assignable areas that are inactive, unassigned, undergoing alterations, renovations, or conversions, or remain unfinished.

Program Specific Fit outs

Bookable Learning Spaces encompass spaces designed with program specific fit outs, which are tailored environments featuring built-in or permanent casework, specialized equipment, and unique features that support the needs of a particular program or discipline. These purpose-driven spaces are designed to enhance the functionality and effectiveness of specific educational activities, making them indispensable to their designated programs. However, their highly specialized nature often limits their adaptability for other uses and renders them costly to repurpose.

Subjects taught in Bookable Learning Spaces with program specific fit outs often necessitate in-person instruction due to the specialized nature of the environment and resources required. For instance, trades like welding rely on the unique tools, equipment, and infrastructure provided by dedicated welding shops, making remote or alternative teaching methods impractical.

Classrooms

PCC refers to FICM Code 110 Classrooms as "general purpose classrooms." Classrooms are versatile environments that can be reserved for a variety of educational and collaborative activities and are designed to accommodate diverse learning styles and needs, providing flexibility for both instructors and students. Subjects taught in classrooms are generally adaptable, allowing for instruction to take place either in-person within the physical classroom environment or remotely through virtual platforms, providing flexibility in delivery methods.

▲ *Rock Creek Campus, Building 7 Classroom by Opsis*

Bookable Learning Space Usage

Bookable Learning Spaces were analyzed using Astra Schedule data for both classes and events, covering the period from April 1, 2024, to March 31, 2025. The analysis included data from Monday through Sunday, spanning the hours of 7:00 AM to 10:00 PM, providing a comprehensive view of space utilization across an entire academic year. Classrooms are the most reserved Bookable Learning Space in Astra Schedule with 83.4% of classrooms having at least one booking in Astra Schedule, followed by:

- 65.2% of Class Laboratories
- 52.2% of Athletic or Physical Education spaces
- 18.8% of Clinics
- 5% of Shops
- 3.6% of Study Rooms

These figures demonstrate significant variations in the utilization of different types of learning spaces across campus.

Table 4.1.3 Bookable Learning Spaces (BLS) Collegewide with Astra Schedule bookings

Campus / Center	BLS Total Area (SF)	Assignable Area (SF)	Non-assignable Area (SF)	Unclassified Area (SF)	Total Gross Area (SF)	Assignable Area (%)
Cascade Campus	134,169	250,916	106,464	3,508	360,889	53.5%
Rock Creek Campus	255,476	441,422	146,528	3,379	591,329	57.9%
Southeast Campus	74,184	151,814	63,183	7,870	222,867	48.9%
Sylvania Campus	251,100	518,739	202,199		720,938	48.4%
CLIMB Center	11,871	18,084	14,082		32,166	65.6%
OMIC Training Center	18,157	23,694	6,790		30,484	76.6%
Downtown Center	-	26,565	14,105		40,670	0.0%
Hillsboro Education Center	5,116	6,323	2,742		9,065	80.9%
Newberg Center	4,850	7,619	5,194		12,813	63.7%
Opportunity Center	6,242	25,981	11,494		37,475	24.0%
Swan Island Trades Center	11,366	15,118	6,111		21,229	75.2%
Vanport Building	13,352	21,297	8,203		29,500	62.7%
Willow Creek Center	35,060	66,045	23,697		89,742	53.1%
Totals	**820,943**	**1,573,618**	**610,792**	**14,757**	**2,199,167**	**52.2%**

Unused Classrooms

Several FICM Code 110 Classrooms at PCC were found to have zero bookings in Astra Schedule. Specifically, 107 classrooms and of those, 70 had no bookings for either Astra Schedule Classes or Events.

These classrooms may be managed independently outside of Astra Schedule, such as library classrooms and study rooms, which could lead to their accidental omission from the centralized scheduling system. This lack of integration can create challenges in maintaining accurate records of space utilization and availability. Alternatively, these spaces might be designated as swing spaces, temporarily repurposed for use during construction, renovations, or maintenance activities. Such temporary assignments can make them harder to track within traditional scheduling systems. Another possibility is that the FICM codes assigned to these spaces are incorrect, resulting in their classification as Bookable Learning Spaces. This misclassification can further complicate efforts to ensure accurate space tracking, efficient utilization, and alignment with institutional scheduling needs. Identifying and addressing these gaps is essential to optimize space management and ensure all classrooms are properly accounted for within the scheduling system.

The low booking figures in Astra Schedule may stem from several factors. Pathway Deans are responsible for developing the course schedule, which they then hand over to a single scheduler per campus tasked with allocating rooms for each class. Centers have their own schedule coordinators who, due to distinct reporting structures, operate independently from campus schedule coordinators. Some spaces are managed by specialized programs, which can limit the capacity for College schedulers to optimize their usage. Furthermore, classrooms and study rooms linked to libraries are scheduled via Google Calendar, bypassing Astra Schedule. Libraries also serve both the public and College community, adding another layer of complexity to the scheduling process.

Table 4.1.4 Classroom Spaces Collegewide with Zero Astra Schedule bookings

Campus / Center	Number of Classrooms with Zero Astra Schedule Class bookings	Number of Classrooms with Zero Astra Schedule Class and/or Event bookings	Total Quantity of Classrooms at each location
Cascade Campus	25	19	91
Rock Creek Campus	13	8	95
Southeast Campus	11	8	50
Sylvania Campus	27	19	103
CLIMB Center	7	2	18
OMIC Training Center	3	2	10
Downtown Center	0	0	0
Hillsboro Education Center	4	4	4
Newberg Center	0	0	5
Opportunity Center	3	1	8
Swan Island Trades Center	0	0	5
Vanport Center	4	4	7
Willow Creek Center	10	3	26
Totals	**107**	**70**	**422**

One Room Two Different Views of Use

The Welding Shop in Room 132, located in Building 2 at Rock Creek Campus, highlights the complexities involved in scheduling and managing instructional spaces.

On Monday, April 29, 2024, Astra Schedule data exported by PCC shows 360 classes assigned to Room 132 without any defined start or stop times. However, the Astra Schedule interface for PCC users displays only one course scheduled from 7:00 AM to 7:50 AM. This discrepancy highlights the difficulty in accurately representing the usage of the Welding Shop within the scheduling system.

The Welding program operates as a drop-in model, where student attendance is self-directed. Students choose which courses they want to complete and decide the days and times they will use the Welding Shop. To accommodate this flexible approach, the Welding Shop must remain available throughout all operating hours, Monday through Thursday. This open-access model is essential to allow students the flexibility they need to complete their coursework, but it complicates traditional scheduling practices.

When analyzing utilization and space availability, PCC needs to consider scheduling and space management as interconnected processes. Evaluating them separately risks providing an incomplete or inaccurate understanding of how spaces like the Welding Shop are actually used. A holistic approach is essential to capture the unique scheduling dynamics of drop-in programs while ensuring effective space tracking and utilization across the institution.

▲ *Welding Shop in Rock Creek Campus, Building 2*

Bookable Learning Spaces Peak Utilization

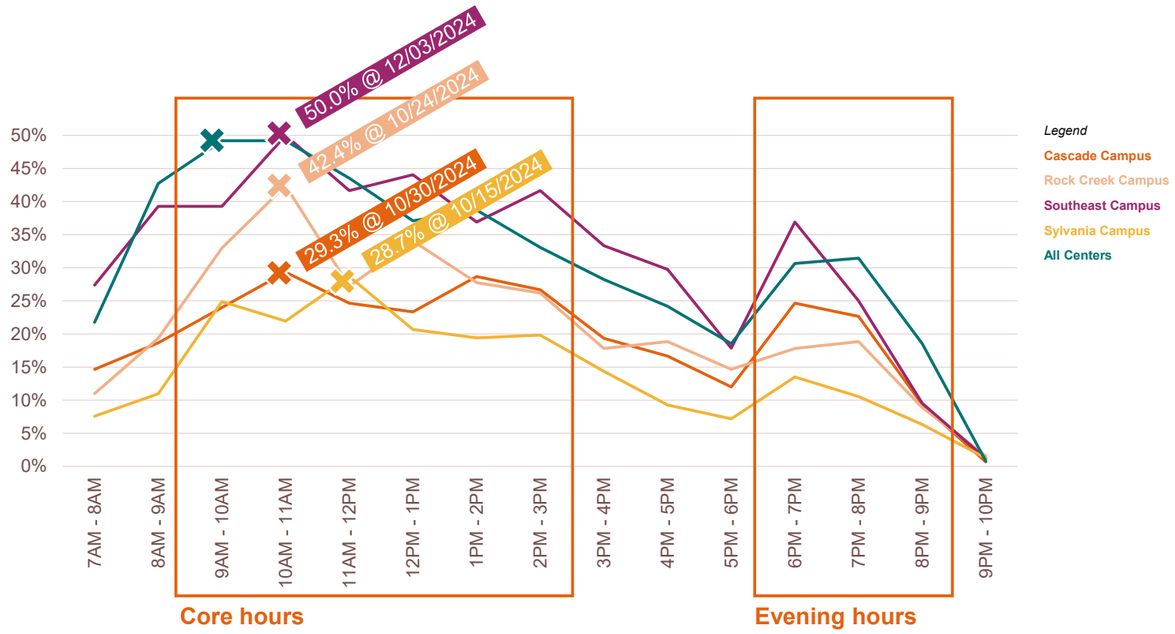
Collegewide	
50%	Highest Peak Utilization
9AM-12PM	Most Utilized Timeframe
Southeast	Most Utilized Campus

Graph 4.1.5 provides a detailed visualization of the peak utilization per hour from Monday through Sunday, spanning the hours of 7:00 AM to 10:00 PM, for the entire College. This graph is designed to provide insight into when College facilities experience the highest demand. Each data point within the graph signifies a particular hour on a specific day, with the “X” marking the instances when the campus reached its peak utilization throughout the period from April 1, 2024, to March 31, 2025.

It is crucial to understand that the graph does not depict utilization for a single, real day. Instead, it is an aggregation of utilization data collected across the year for each campus and all centers. This approach allows for a comprehensive view of peak utilization trends for the year.

Notably, peak utilizations are clustered in the morning hours, specifically between 9:00 AM and 12:00 PM, highlighting this timeframe as the busiest period. Each campus is represented by a specific color on the graph, indicating its peak utilization level. The Southeast Campus, marked in purple, records the highest peak utilization at 50.0%. Following this, Rock Creek Campus, depicted in light orange, reaches a peak of 42.4%. The Sylvania Campus, shown in yellow, has a peak utilization of 28.7%, while the Cascade Campus, represented in orange, records a peak utilization of 29.3%. The centers collectively reach a joint

Graph 4.1.5 Peak Utilization of Bookable Learning Spaces by Campus



peak utilization of just under 50%. These figures illustrate the varying levels of demand across different campuses within the College. Despite this peak demand, the utilization rate does not exceed 50% at any given timeslot.

The Astra Schedule room bookings were not assessed based on the number of occupants, as the Steering Committee determined this data was not significant for utilization analysis. Whether a room designed for 40 people holds 2 or 38 occupants was deemed irrelevant. If a room is booked in Astra Schedule, it is automatically considered utilized, regardless of the number of occupants or actual use.

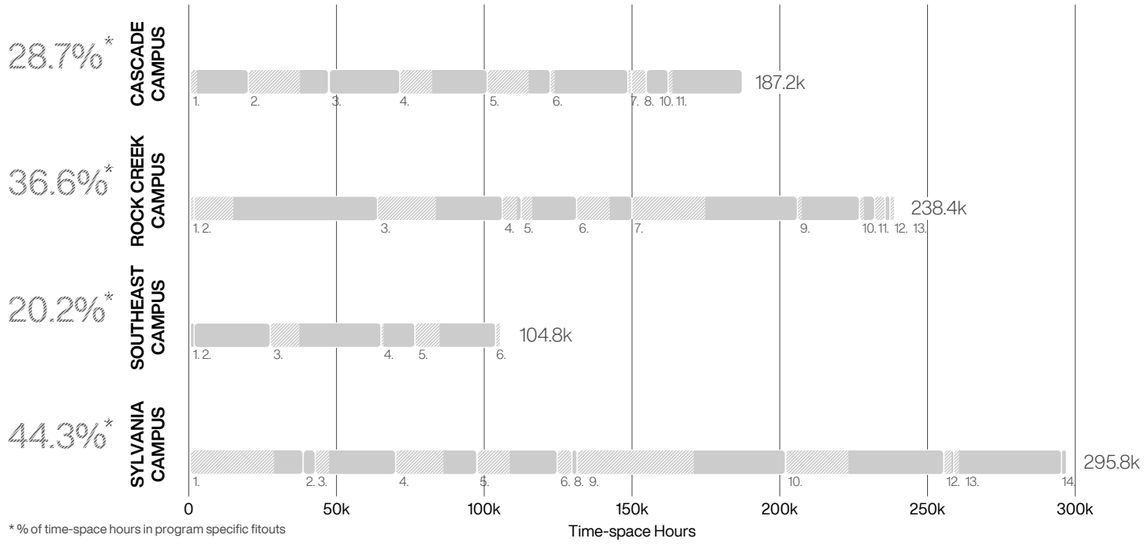
The utilization of drop-in rooms, such as computer labs, which are not booked through Astra Schedule but remain open for use, is not recorded. To accurately capture their usage, manual counting or the implementation of occupancy sensors would be necessary.

Bookable Learning Spaces Annual Capacity

Focusing on the Core Hours, which are identified as the busiest period from 9:00 AM to 3:00 PM Monday through Thursday, provides insight into the College's capacity to meet peak demand. If the College can adequately accommodate demand during these Core Hours, it can be inferred that there is sufficient capacity to handle the rest of the day and week, when utilization drops significantly.

Analyzing the Bookable Learning Space capacity during these Core Hours involves examining how much of this space is reserved in Astra Schedule relative to the total Bookable Learning Space hours available. This comparison offers a clear picture of the College's ability to manage peak utilization effectively and indicates whether there is room for growth.

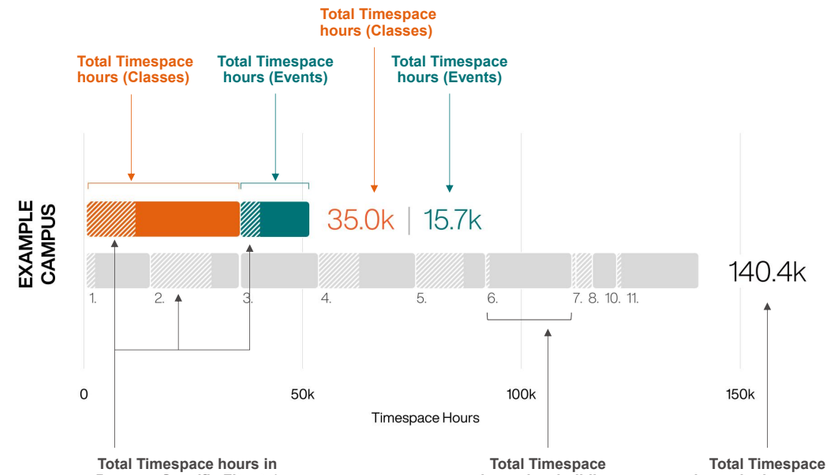
Graph 4.1.6 Bookable Learning Spaces Annual Capacity during Core Hours



Bookable Learning Spaces Utilization

Graphs 4.1.7 through 4.1.10 on the subsequent pages provide a visual representation of the utilization of Bookable Learning Spaces, comparing the hours booked to the total available time-space hours.

- Program specific fit out time space hours are distinguished by a diagonal hatch pattern.
- Classes are depicted in orange.
- Events are illustrated in teal.
- Available time-space hours are shown in gray.



*Program Specific Fitouts are defined as any room with the FICM code of 210, 520, 610 or 720.

Graphs 4.1.7 and 4.1.8 focus on Core Hours, Monday through Thursday, 9:00 AM through 3:00 PM.

- Graph 4.1.7 shows where the booked time space hours occur.
- Graph 4.1.8 shows an aggregation of the bookings.

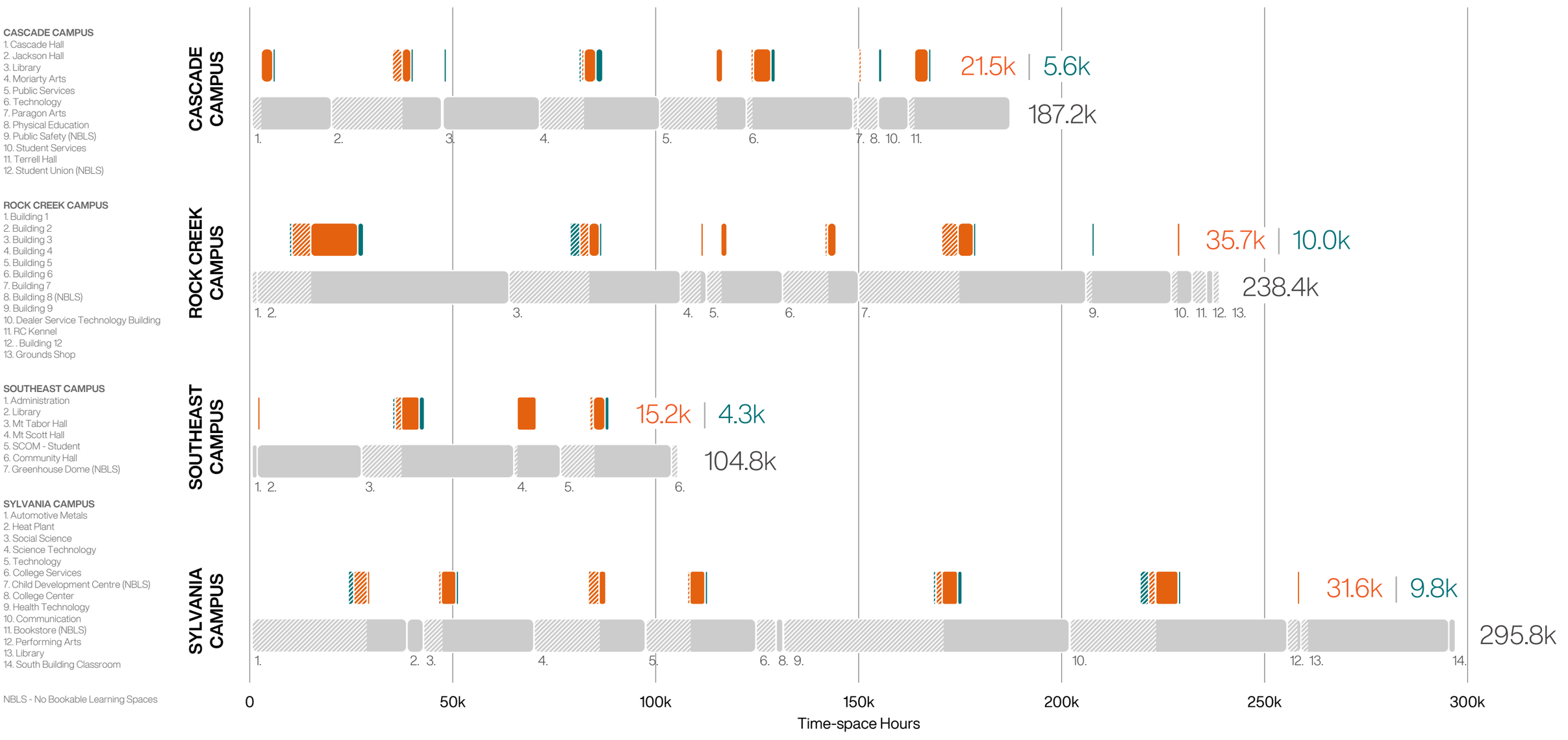
Viewing the data through a simplified lens, without accounting for program specific room fit outs, acoustics, technology, or other specialized factors, PCC could consolidate all currently scheduled Core Hours Classes and Events into the largest building on each campus. While Graph 4.1.8 does not present a practical solution, it serves to illustrate the capacity that is available.

Graphs 4.1.9 and 4.1.10 show All Hours, Monday through Sunday, 7:00 AM through 10:00 PM.

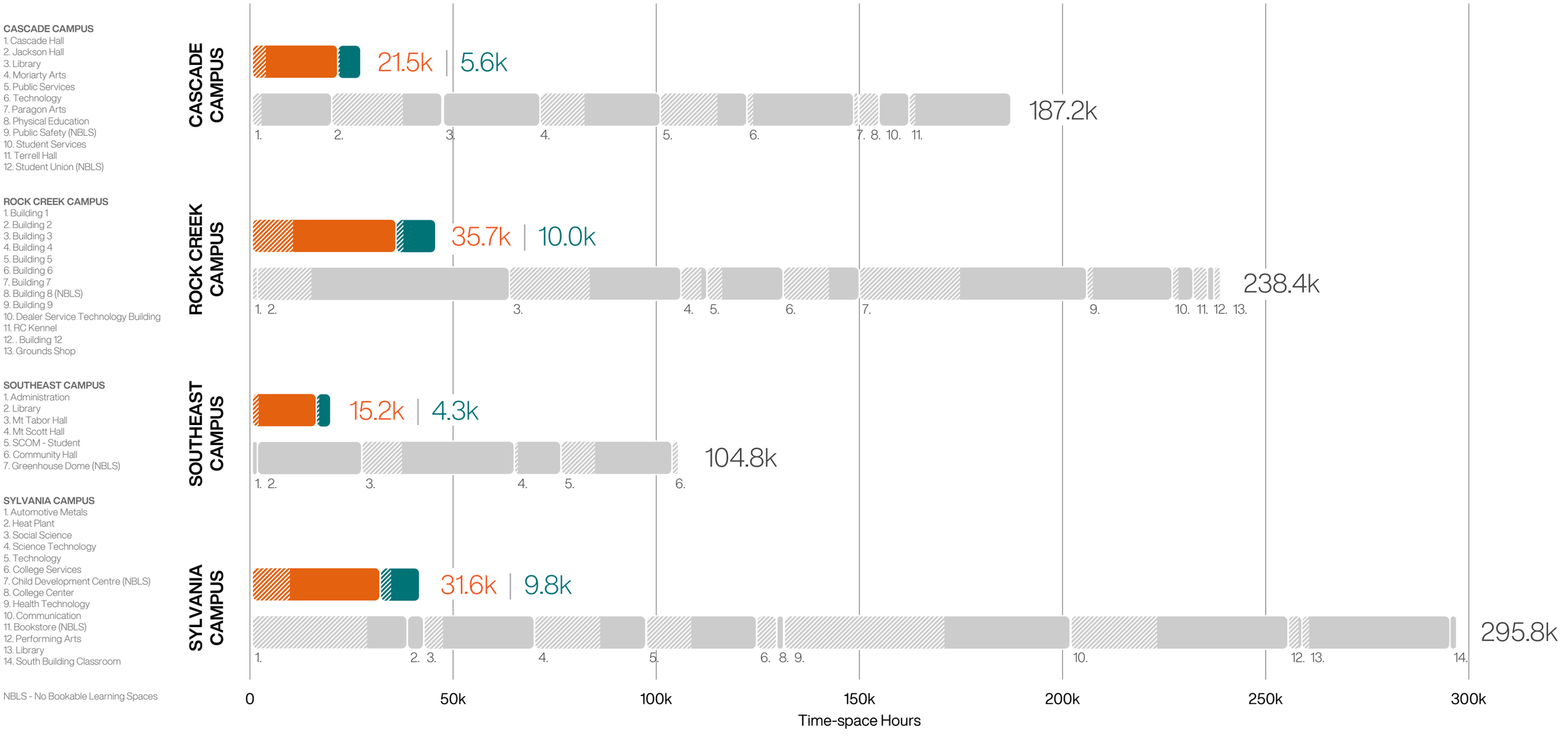
- Graph 4.1.9 shows where the booked time-space hours occur.
- Graph 4.1.10 shows an aggregation of the bookings.

Analyzing the data from a broad perspective, without considering program specific room configurations, acoustics, technology, or other specialized elements, PCC could consolidate all currently scheduled Classes and Events into the largest two buildings on each campus during Core Hours, further showcasing its ample capacity. Alternatively, PCC could consolidate all currently scheduled Classes and Events into two days during Core Hours. These approaches do not offer realistic solutions but rather they provide an illustration of the available capacity.

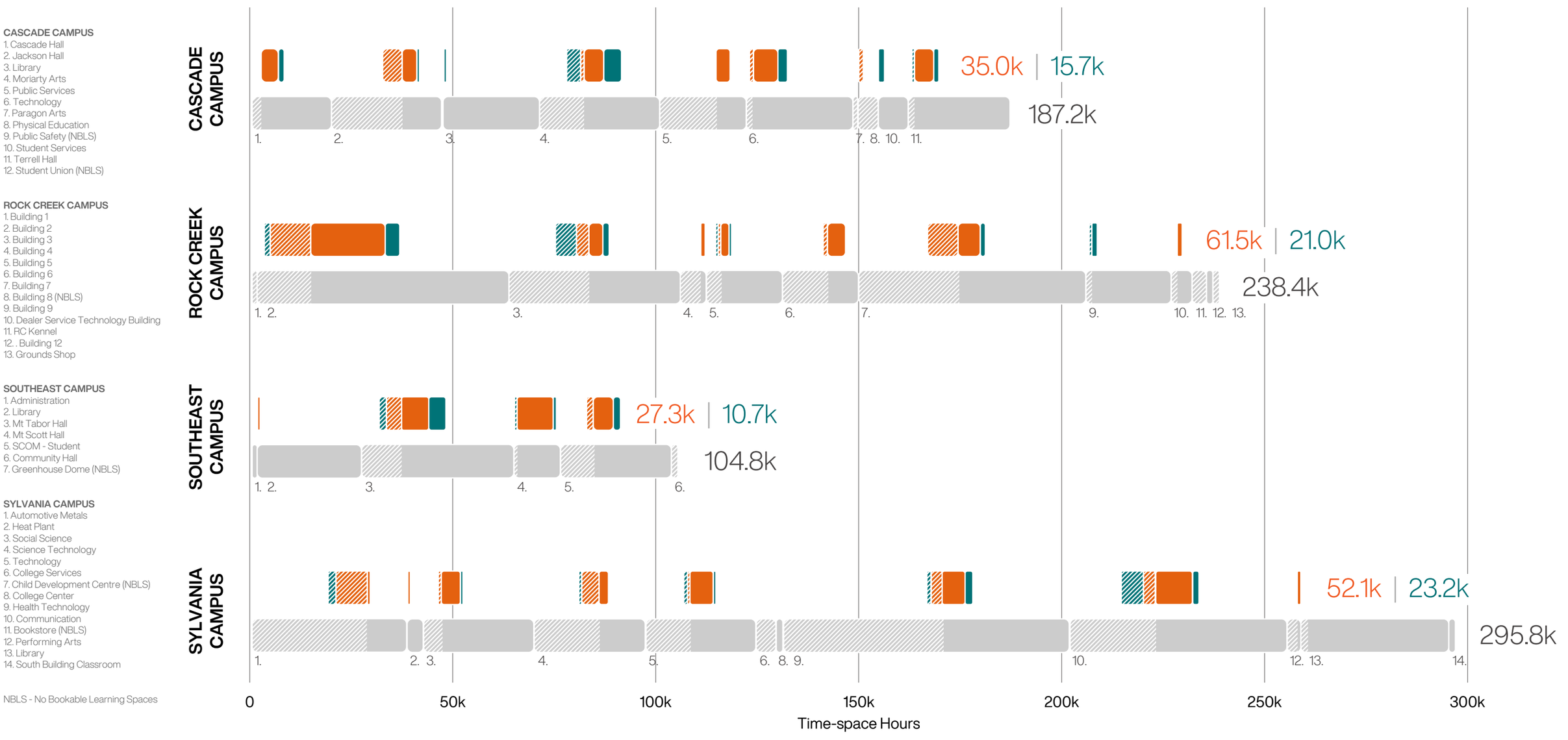
Graph 4.1.7 Bookable Learning Space Use during Core Hours by Building



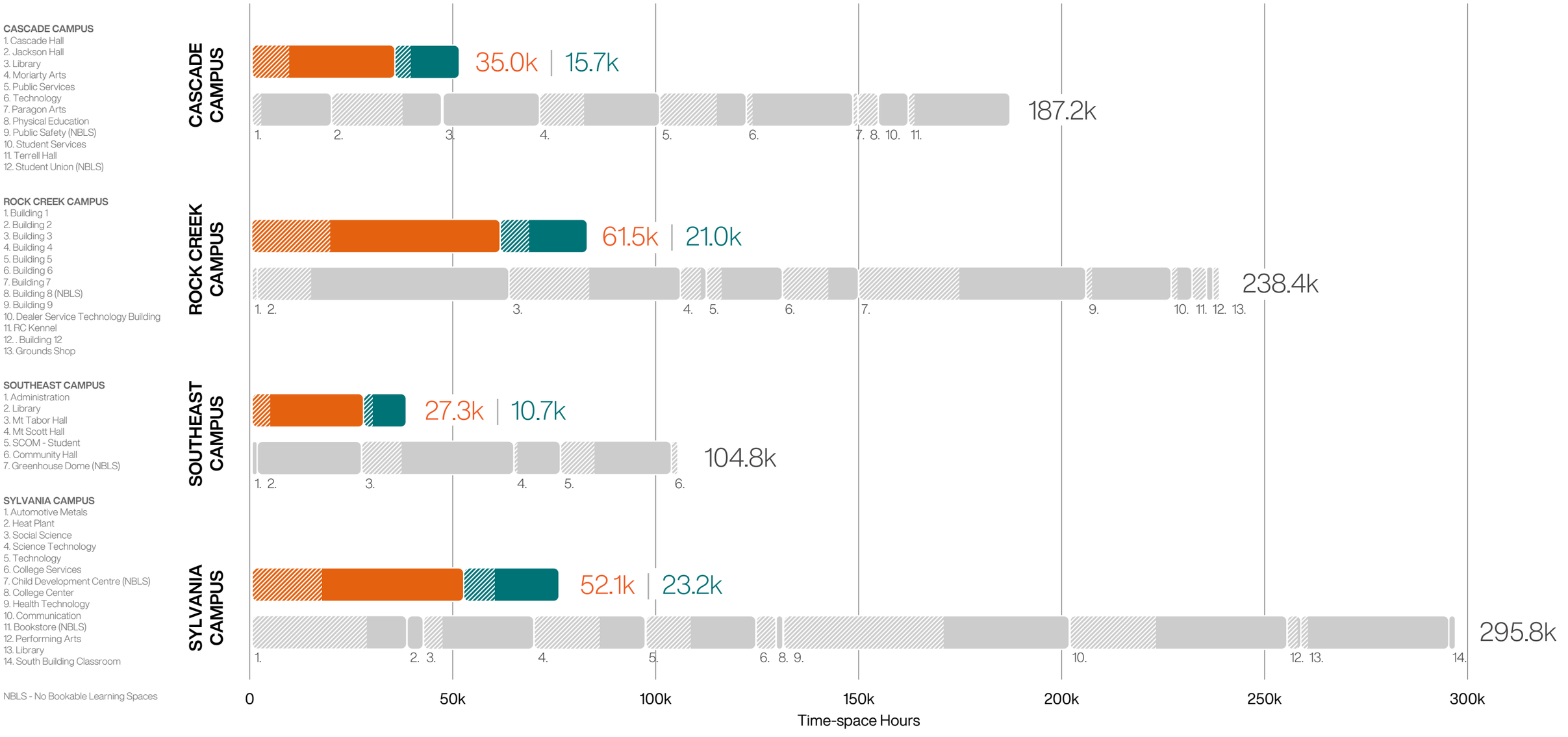
Graph 4.1.8 Bookable Learning Space Use during Core Hours consolidated by Campus



Graph 4.1.9 Bookable Learning Space Use during All Hours by Building



Graph 4.1.10 Bookable Learning Space Use during All Hours Consolidated by Campus



4.2 Events

Events Collegewide	
Southeast	Most Reserved Event Hours by Campus
Tabor	Most Reserved Event Hours by Building
Sylvania	Highest Event Revenue by Campus
Performing Arts Center	Highest Event Revenue by Building

Events at PCC are categorized into Internal PCC events and External Partner events. Internal PCC events encompass a wide range of activities, including:

- Career and Resource Fairs.
- Clubs, social gatherings, and prayer sessions.
- Drop-in activities in open labs, gyms, and shops.
- Meetings, office hours, training sessions, tutoring, testing, remote instruction, and class preparation.
- Rehearsals, performances, recitals, screenings, and sports events.
- Temporary space use during construction, building repairs, or cleanup.
- Maintenance activities, IT upgrades, and furniture replacement.

Graph 4.2.1 Event Types

Note: Percentages are based on proportion of time-space hours in each category

Excluded from the analysis are event bookings related to temporary space usage during construction, building repairs, or cleanup efforts, as well as those reserved for maintenance activities, IT upgrades, and furniture replacement. Additionally, any event bookings made outside of Astra Schedule are not captured within the scope of this review.

Swing spaces are essential for PCC, as they enable programs and staff to relocate temporarily during construction and maintenance activities. These spaces accounted for 19.8% of event bookings during the analysis period, demostraiting their role in facilitating ongoing operations.

Last year, PCC centralized the management of events under its scheduling team, which now oversees all events using Astra Schedule. This team is also tasked with tracking fees and revenue for these events through processes that operate independently of Astra Schedule.

Revenue Generating Events

Event details were compiled by matching reservation numbers between Astra Schedule and the Revenue Generating Event data. Of the Revenue Generating Events, 12.2% were identified as Internal PCC Events and 87.8% were categorized as External Partner Events. PCC does not impose charges on itself for using event spaces; instead, it tracks certain events for associated staffing costs.

The Performing Arts Center (PAC) at Sylvania Campus and the Tabor and Scott general education classrooms at Southeast Campus are the most frequently utilized buildings and spaces.

▲ *A Nutcracker Tea, the Highest Revenue Event at PCC*

Graph 4.2.2 Revenue Generating Events by Campus

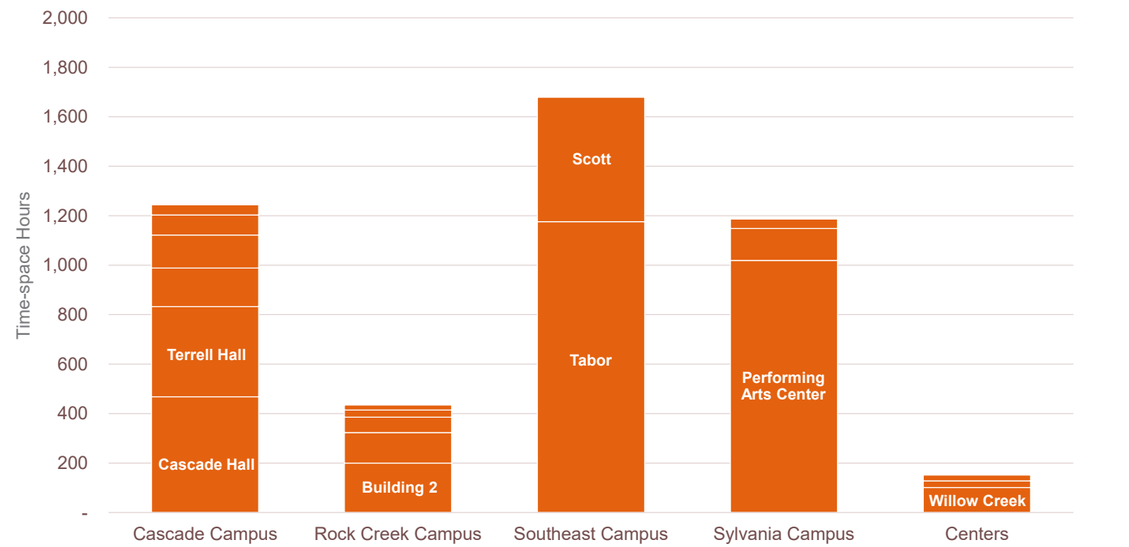


Table 4.2.3 Revenue Summary by Campus

Campus / Center	Total Charges ($)	Total Waived ($)	Total Revenue ($)
Cascade Campus	46,713	7,388	39,325
Rock Creek Campus	27,551	2,940	24,611
Southeast Campus	58,838	4,449	54,389
Sylvania Campus	158,833	8,683	150,150
Performing Arts Center	149,395	5,943	143,452
Gym	3,750	-	3,750
Remaining Buildings	5,688	2,740	2,948
CLIMB Center	1,880	-	1,880
OMIC Training Center	-	-	-
Downtown Center	-	-	-
Hillsboro Education Center	-	-	-
Newberg Center	-	-	-
Opportunity Center	2,918	-	2,918
Swan Island Trades Center	1,600	-	1,600
Vanport Building	-	-	-
Willow Creek Center	3,590	-	3,590
Totals	**301,922**	**23,459**	**278,463**

4 events > $10,000 revenue

All in Sylvania
All external dance events.

Highest Revenue Generating Event:

$19,903.00

A Nutcracker Tea,
Northwest Dance Theatre.

Sylvania Campus.
External Event.

The PAC at Sylvania Campus is the top Revenue Generating space with over $150,000 in revenue during the Analysis Timeframe from April 1, 2024, to March 30, 2025.

FICM Code 610 Assembly is the top Revenue Generating space type, followed by FICM Code 110 Classrooms. This data aligns with the PAC at Sylvania Campus and the Tabor and Scott general education classrooms at Southeast Campus being the most frequently utilized building and spaces.

Table 4.2.4 Revenue Summary by FICM Code

FICM Code	# in College	# Booked	% of Total	Total Charges ($)	Total Waived ($)	Total Revenue ($)
110 – Classroom	422	99	23.5%	$95,734	$12,050	$83,684
115 – Classroom Service	99	1	1.0%	$0	$0	$0
210 – Class Laboratory	204	6	2.9%	$140	$140	$0
310 – Office	1032	1	0.1%	$450	$0	$450
350 – Conference Rooms	145	5	3.4%	$2,540	$0	$2,540
520 – Athletic or Physical Education	23	6	26.1%	$22,513	$87	$22,426
525 – Athletic or Physical Education Service	55	1	1.8%	$8,525	$0	$8,525
610 – Assembly	8	4	50.0%	$130,775	$5,128	$125,647
615 – Assembly Service	10	5	50.0%	$21,778	$685	$21,093
630 – Food Facility	11	3	27.3%	$10,388	$3,520	$6,868
635 – Food Facility Service	60	1	1.7%	$700	$0	$700
W05 – Lobby	57	4	7.0%	$280	$0	$280
W06 – Public Corridor	423	6	1.4%	$500	$250	$250
N/A – Parking / Outdoor	-	5	-	$7,600	$1,600	$6,000
No data	-	2	-	$0	$0	$0
Totals	**2549**	**149**	**5.8%**	**$301,922**	**$23,459**	**$278,463**

Event Data Issues

Astra Schedule Events are currently managed as an undifferentiated dataset, lacking categorization by event type. This dataset encompasses a wide array of activities, including construction, maintenance, repairs, clubs, gatherings, drop-in activities, meetings, training sessions, classes, performances, sports events, fairs, advising, community activities, childcare, and educational programs spanning K-12 and higher education. Implementing a system of tagging or categorizing events with predetermined categories would greatly enhance the value of future data analysis. Within Appendix 7.2 of this report, is a detailed table that outlines the comprehensive dataset essential for the precise tracking and management of space bookings across all areas at PCC.

Event Revenue and Costs

Event revenue is tracked manually outside of Astra Schedule. Event details were compiled by matching reservation numbers between Astra Schedule and Revenue Generating Event records. In instances where data was incomplete or imprecise, reasonable assumptions were made to estimate the days and hours associated with events, helping to create a more comprehensive view of the data. The dataset for Revenue Generating Events includes 207 discrete events; however, due to the limited quantity of data, assumptions and extrapolations based on this information may not lead to appropriately accurate conclusions.

PCC does not currently track the overhead costs associated with Revenue Generating Events, highlighting the need for a more robust system to manage event data and ensure financial accountability. It is crucial to note that event revenue is exclusively allocated to supporting campus event rental spaces. By improving the tracking of event-related revenue and expenses, the College can more effectively leverage these funds to sustain and enhance some of its most vital community-serving facilities.

Event Opportunities

Events provide a valuable opportunity to bring people onto campus, offering important exposure to PCC's facilities, programs, and educational opportunities. These events not only showcase the College's resources but also play a strategic role in supporting enrollment efforts by engaging the community and highlighting the benefits of a PCC education. The desire to bring more people on campus will need to be balanced against the cost to use PCC facilities.

▲ *Groundswell 2024 Conference at Cascade Campus*

4.3 Office Spaces

Collegewide	
2,199,167	Total Gross SF
1,573,618	Total Assignable SF
336,488	Total Office SF
Offices	
21%	Total Assignable SF
15%	Total Gross SF

FICM Code 310, designated for office spaces, accounts for a Collegewide total of 336,488 square feet at PCC. This represents 21% of the assignable square footage, as defined by FICM codes, and 15% of the gross square footage Collegewide. Office space accounts for a significant area of use within the College. Managing utilization is a common industry practice, and by gaining a better understanding, PCC can more effectively meet user needs and improve operational efficiencies.

▲ *Open Office Room 214, Student Commons, Southeast Campus*

Table 4.3.1 Office Spaces Collegewide

Campus / Center	BLS Total Area (SF)	Assignable Area (SF)	Non-assignable Area (SF)	Unclassified Area (SF)	Total Gross Area (SF)	Assignable Area (%)	Gross Area (%
Cascade Campus	51,600	250,916	106,464	3,508	360,889	20.6%	14.3%
Rock Creek Campus	64,578	441,422	146,528	3,379	591,329	14.6%	10.9%
Southeast Campus	40,245	151,814	63,183	7,870	222,867	26.5%	18.1%
Sylvania Campus	112,835	518,739	202,199		720,938	21.8%	15.7%
CLIMB Center	4,273	18,084	14,082		32,166	23.6%	13.3%
OMIC Training Center	1,206	23,694	6,790		30,484	5.1%	4.0%
Downtown Center	17,853	26,565	14,105		40,670	67.2%	43.9%
Hillsboro Education Center	518	6,323	2,742		9,065	8.2%	5.7%
Newberg Center	1,562	7,619	5,194		12,813	20.5%	12.2%
Opportunity Center	16,867	25,981	11,494		37,475	64.9%	45.0%
Swan Island Trades Center	672	15,118	6,111		21,229	4.5%	3.2%
Vanport Building	4,128	21,297	8,203		29,500	19.4%	14.0%
Willow Creek Center	20,151	66,045	23,697		89,742	30.5%	22.5%
Totals	**336,488**	**1,573,618**	610,792	14,757	**2,199,167**	**21.4%**	**15.3%**

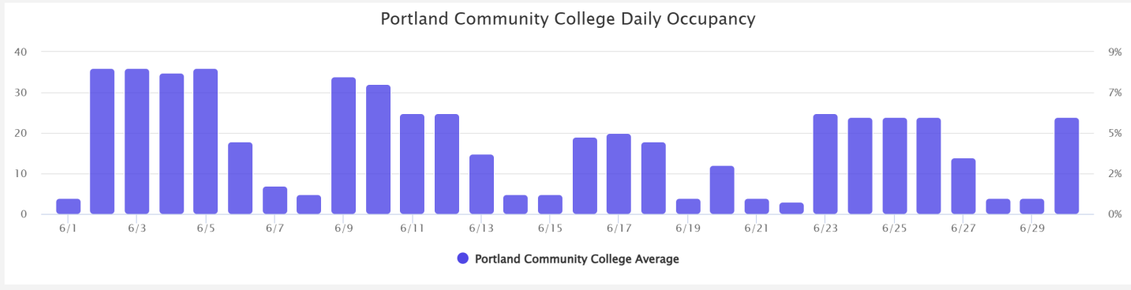
Office Space Data

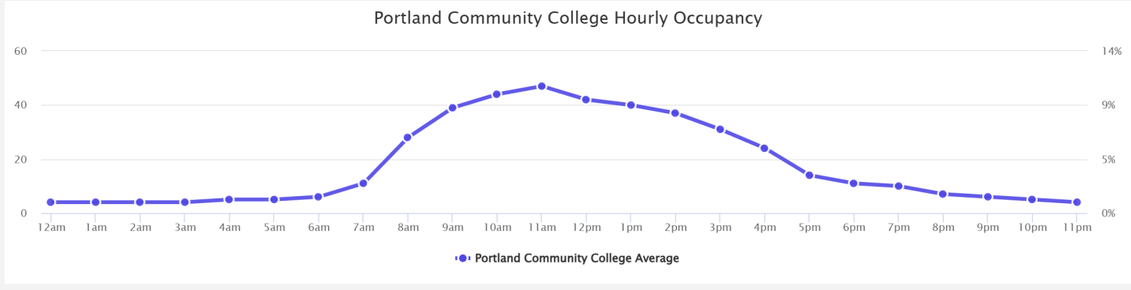
Office space is neither scheduled nor managed through Astra Schedule or any other scheduling software, leading to decentralized tracking of private office assignments. This absence of tracking results in a perceived “ownership” of space by individuals or departments.

PCC initially planned to collect occupancy data for select private offices (single occupant) and open office areas (multiple occupants). However, the decision was made to postpone auditing private office spaces to address staff concerns regarding potential administrative oversight. Additional time will be needed to clarify the purpose of the audit and provide further communication to staff.

The usage of 70,963 square feet of open work area (multiple occupants) is pending Occuspace data. For context, this accounts for 21% of the total office space across the College. Data collection began in May 2025 and will run for 12 months. No data will be available for private offices (single occupant).

▲ *Example of an Occuspace Sensor*





▲ *Example of the data available on the Occuspace Portal for PCC*

5 Identifying Challenges and Issues

5.1 Software

PCC relies on multiple software platforms to support various operational functions across the institution.

- Astra Schedule is used for course scheduling, serving as the primary tool for managing academic calendars and room allocations.
- AiM is an Integrated Workplace Management System (IWMS) that leverages data from Revit.
- Revit is utilized for building floor plans and FICM classification, offering detailed visualizations and architectural data for space planning and management.
- Google Calendar is used by some departments for scheduling and coordinating events due to its user-friendly interface.

However, these software platforms operate independently and do not integrate with one another, leading to data silos, gaps, and overlaps. This lack of connectivity creates inefficiencies in data sharing and limits the ability to form a cohesive view of operations, making processes like scheduling, asset tracking, and space management more complex and fragmented.

Astra Schedule offers significant capabilities, but limited staffing resources have made fully implementing its features challenging. The newer version of Astra Schedule is more user-friendly, which is expected to ease the transition for users to adopt it for scheduling spaces, replacing tools like Google or other products.

5.2 Operational Costs

The analysis reveals an abundance of available time-space hours, highlighting the need for strategic management of bookings and space utilization. To address the surplus of unused space, several solutions could be considered, including reducing the College's physical footprint, shortening operating hours, or increasing the use of existing facilities. These approaches offer opportunities to optimize resources while addressing operational inefficiencies.

Explore Cost Reduction

Reducing operational costs is a key consideration for space management, and one approach is to explore the redistribution of time-space hours within a campus.

There are two potential methods to achieve these goals. First, by reducing operating hours, the College can lower utility expenses during times of low demand. Second, by reducing the building footprint, the College can concentrate activities in fewer spaces, thus minimizing maintenance and operational expenses. Both strategies can be effectively analyzed and implemented within the framework of the time-space hour, allowing for a comprehensive approach to optimizing resource use and cutting costs.

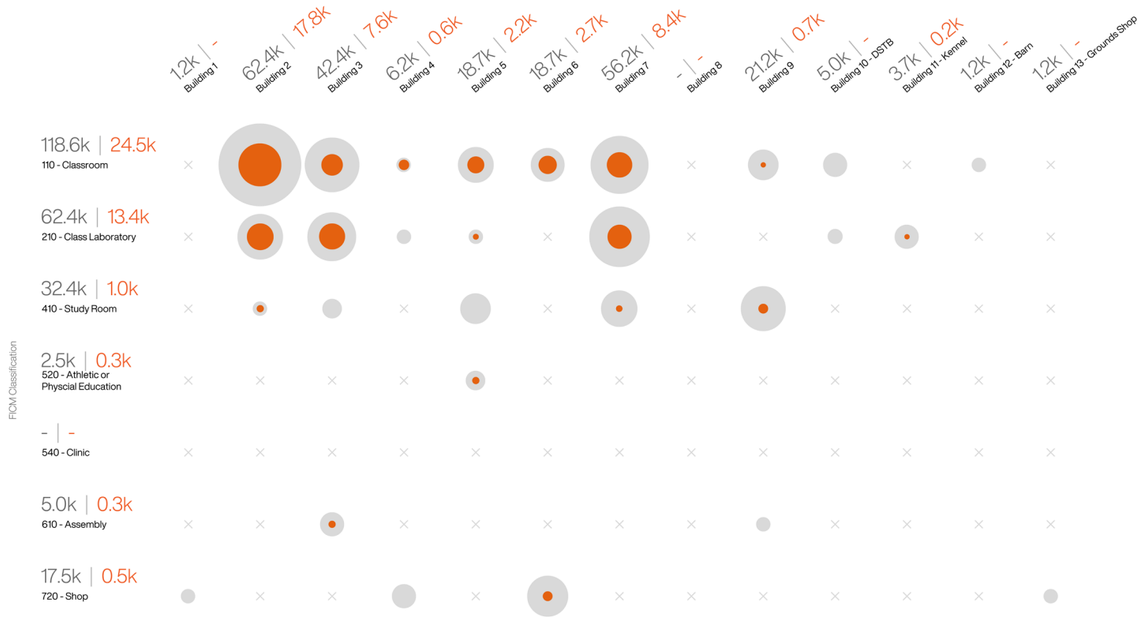
Pursue Growth Opportunities

On the other hand, opportunities for growth could also be explored. Expanding course offerings, particularly in areas of high demand, could capitalize on underutilized spaces while addressing the skill gaps of future workforces. Moreover, developing new programs or forging partnerships with external organizations may further maximize the use of existing facilities. By striking a balance between cost reduction and growth initiatives, PCC has the potential to enhance efficiency, increase utilization, and support evolving educational needs.

Data Informed Decisionmaking

Computational analysis serves as a valuable tool for guiding future capital projects by providing data-driven insights into space utilization and efficiency. As part of the planned renovation of Building 2 at Rock Creek Campus under the 2022 bond projects, PCC engaged Arcadis to conduct a detailed review of Bookable Learning Spaces. This analysis focused not only on how the spaces are utilized but also on key characteristics of the rooms themselves, including their quantity, size, and the primary programs or users occupying them. By identifying patterns in usage and understanding the needs of various stakeholders, the findings aim to inform decisions about optimizing space allocation and potentially repurposing or modifying facilities to better serve campus needs. The full analysis is included in Appendix 7.1 of this report.

Graph 5.2.1 Rock Creek Campus, Building Utilization



6 Finding Solutions

Given the complex interconnectedness of the issues previously discussed, there is no single solution for optimizing space utilization across all PCC buildings. Instead, a series of overlapping and interrelated themes require ongoing attention and continued support. To address this complexity, a Space Management Matrix was developed to organize these issues systematically and provide a structured approach for improving space management and utilization over time.

6.1 Space Management Matrix

The table shown overleaf is intended to support PCC in a number of ways including:

1) A condensed summary of the findings and recommendations of this process.

2) A checklist to track progress.

3) A reference point for outward communication.

4) A guide to help maintain clarity of purpose and direction of travel.

5) A list of objectives to achieve when navigating challenging decisions and discussions.

6) A prompt to help retain focus on the benefits of change where appropriate.

The matrix arranges the major 'recommended areas of focus' horizontally, with the 'phases of improvement' running vertically across each. The intent is to provide opportunities for change to occur both sequentially and opportunistically. In some cases, successful outcomes are heavily dependent upon a causative chain of activities, while in others, more associative relationships allow for flexible deployment.

6.2 Recommended Areas of Focus

Through investigation and numerous discussions with key stakeholders, the project team identified themes that capture the primary areas of focus for PCC in its efforts to enhance space management and utilization. Two of these themes pertain to logistical, nuts-and-bolts issues that will establish a successful platform-level environment. In contrast, the other two relate to administrative aspects that will drive the necessary change.

Scheduling:

The logistical backbone of any learning institution is scheduling. Who will be in what space during which time-period? What should the operational hours of buildings and campuses be to balance accessibility with fiscal responsibility? What is the operational cost of the "sweet spot" that validates the hosting of external revenue-generating events as a financially justifiable endeavor? The only way to effectively answer these and other questions on an on-going basis for an institution such as PCC, is with a robust, comprehensive, and intuitive tool that is universally adopted.

Data Collection:

Given that Astra Schedule has not been implemented across the full spectrum of PCC facilities, and the stated reasons for this being related to its perceived lack of capability and concerns over its user interface, it is important to establish objectively whether these perceptions are legitimate or can be overcome with minor tweaks to the platform or adoption strategies. Conversely, if the outcome of this review points to long term and intractable obstacles to full adoption, other platforms should be evaluated that can truly address each of the needs PCC has from a scheduling software perspective.

Decision Making:

Following the implementation of the one-College model, the pendulum has swung from independently operating but with clear hierarchies, to combined but fuzzy lines of accountability relative to space. Key to making the one-College approach effective is establishing clear lines of jurisdiction and empowering decision makers to implement agreed policy in a universal way. Various organizational structures could be used, but developing an approach that is right for PCC and achieves majority buy-in from stakeholders is what will be most effective.

Implementation:

Through addressing the above, an environment will emerge in which data-driven decision-making can drive a clear understanding of what needs to change. However, translating knowledge into reality requires robust and clear mechanisms of implementation. How will different groups be better supported in making moves between spaces, buildings, or campuses? How will data-driven decision making be messaged effectively to staff and students? How will feedback and requests be managed? These and other questions will require meaningful tools and resources be made available to support the overall space management process.

6.3 Phases of Improvement

Existing:

This column seeks to capture the current reality of each theme. Effort has been placed in creating statements that neutrally present facts. As always, there are elements of the current approach that work reasonably well, while there are others that create challenges. The goal with this column is to identify both, and in doing so set the context for subsequent columns.

Recommendations:

This column outlines strategic-level recommendations derived from the observations in the Existing column. These recommendations are intentionally kept at a high, conceptual level to maintain focus on overarching goals and avoid overloading the issues with tactical details. While many items in this column are foundational, others suggest more targeted improvements that could support a more comprehensive approach to space management.

Action Items:

The intent is to outline the specific tasks to achieve the recommendations. There will obviously be a need for a further breakdown of each item into sub-tasks, but this column captures the chosen approach and seeks to provide clear direction.

Benefits:

The purpose of carrying out the recommendations through actions is obviously to achieve a better end state. Some outcomes are easy to predict, while others require a more nuanced understanding of the interplay between various factors. The intent with this column is to provide PCC with anticipated outcomes that help drive continuous improvement, such that positive change can be experienced by all students, faculty, and staff.

	Existing	Recommendations	Action Items	Benefits
Scheduling	**Decentralized scheduling** uses tools like Astra Schedule and Google Calendar based on space type. **Specialized programs** limit College schedulers from fully utilizing space capacity. **Space agreements** are not always formally recorded. **Siloed scheduling** leads to missed opportunities for optimizing space use Collegewide. **Bottlenecks occur** in scheduling general education classrooms and computer labs. **Outdoor spaces** are categorized under existing buildings. **Office spaces, meeting rooms, library spaces** are not included in Astra Schedule.	**Proactively manage** all College space, not just scheduling. **Develop a consistent approach** to scheduling all spaces across the College. **Enhance collaboration** between program specific spaces and the scheduling team. **Include accessibility features** in room characteristics (e.g., sinks, projectors). **Track outdoor spaces** more effectively in AiM and Astra Schedule.	**Hire a Space Manager** to oversee Collegewide space use. **Develop a simple and consistent process** for requesting space Collegewide. **Eliminate space ownership** by clarifying: "Space is assigned, not owned." **Unify scheduling teams** from centers, PAC, and athletics with campus schedulers. **Provide broad training** on scheduling approaches and software.	**Reduce operational costs** by consolidating College space and open hours. **Expand programs** by identifying and utilizing underutilized spaces. **Track space accessibility** to help support services understand the impact on students during maintenance.
Data Collection	**Fragmented scheduling** leads to inefficient space use and data inconsistency. **Academic courses** scheduled in Astra Schedule. **Events** scheduled using Astra Schedule and Google Calendar. **One Event category** groups all events together. **Revenue Generating Events** tracked in multiple systems, making it difficult to assess space, time, fees, and overhead. **AiM space data** lacks a reliable system for regular updates and internal surveys.	**Centralize scheduling** for academic and support spaces. **Activate or identify software** to enable consistent and comprehensive scheduling. **Strategic course scheduling** initiative highlights the need to better utilize software capabilities. **Audit spaces annually** with support from a space manager. **Utilize AiM software** survey tools to aid in space audits. **Improve data collected** at time of reservation for later analyses.	**Identify spaces** to be scheduled in Astra Schedule; Google Calendar will only be used if it integrates with Astra Schedule. **Create a labeling system** to categorize and sort event types. **Collect data** on events that cannot be accommodated and the reasons behind it to better understand unmet demand. **Utilize Astra Schedule improvements** after implementing Workday. **Flexible spaces** need adaptable technology, like cloud-based software or powerful computers for diverse class needs.	**Run thorough reports** on Collegewide space use with all scheduling in Astra Schedule. **Quickly gather and analyze data** to support informed decision-making. **Increase rental opportunities** to generate true revenue income. **Include all reservations** in Astra Schedule for a holistic view of space use. **Reduce double bookings** and avoid misconceptions about space availability.
Decision Making	**Multiple approaches** to request changes in space use, moves, or other space needs. **Space use decisions** lack awareness of overall utilization and operational costs. **Value and cost** of College assets are not fully understood. **Backlog** of office space change requests due to an unclear decision-making process.	**Implement a unified process** for space allocation decisions that align with College goals. **Use space utilization data** to guide future capital projects.	**Assemble a Space Committee** to develop a space management policy for the College. **Empower the Space Committee** to make decisions on space use Collegewide. **Set minimum space utilization targets** to optimize usage. **Coordinate regularly** with Academic and Student Affairs to address space needs. **Evaluate** popular reserved spaces and general classrooms to guide future design and renovation decisions.	**Defined transparent process** to ensure fair and equitable space allocation. **Faster response** to providing improved workspace functions for staff and program needs.
Implementation	**Burden of moving** is delayed or falls on staff, with only one coordinator Collegewide. **Rented space overhead costs** for external partners are not tracked, and overhead costs are not factored into revenue generating events. **Office space assignment** is untracked, causing "ownership" issues and decentralized management. **Storage spaces** are not managed or tracked.	**Strengthen the connection** between academic planning and facility management. **Understand the full cost** (room + overhead) of renting space to external partners. **Record and analyze** declined event rental requests to identify hidden demand for space. **Maintain current staffing** and hire additional support for moves and space assignments. **Revise office space policy** with insights from the office space study and committee input. **Engage staff** to understand modern workspace needs. **Evaluate cost benefits** of long-term leases versus short-term rentals.	**Invest in space management** to optimize usage and efficiency. **Develop space policies** with clear guidelines for space use. **Set breakeven thresholds and profit targets** for revenue generating events and align with College mission. **Create guidelines** for when and how much rental fees can be waived. **Outline procedures** for collecting, dispersing, and using short-term event rental revenue. **Promote events** that bring people to campus to support strategic enrollment.	**Reduced wait times** for updated spaces and moves. **Staff feel heard** and their workspace needs are addressed. **Less space wasted** on temporary "make do" assignments. **Improved space functionality** across the College, making navigation easier for students and staff. **Lower operational costs** for underutilized spaces, saving overhead in general funds when operational hours are reduced.

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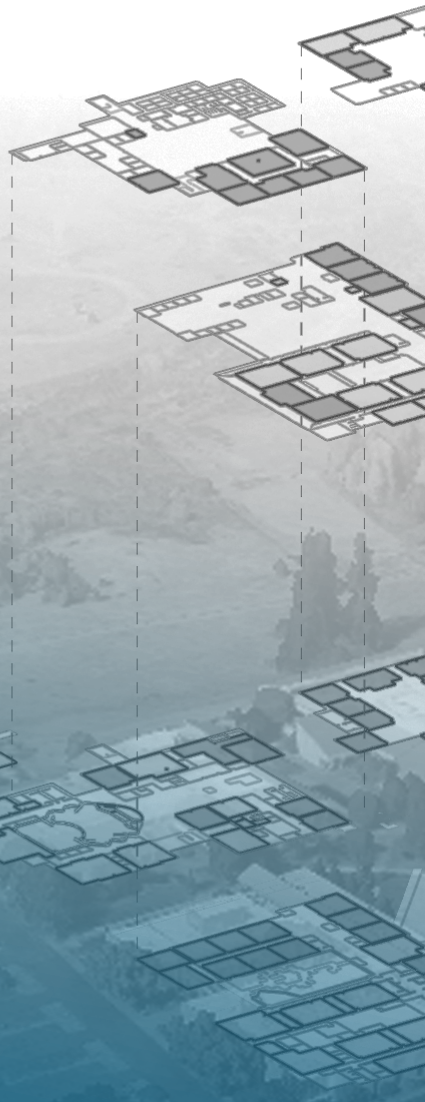

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