UC IRVINE | INTERNAL AUDIT SERVICES

Space Management

Internal Audit Report No. I2025-103

November 7, 2025

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UCI Internal Audit Services

November 7, 2025

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RE: Space Management Audit
Audit No. I2025-103

Internal Audit Services has completed the review of Space Management, and the final report is attached.

We extend our gratitude and appreciation to all personnel who assisted us during our review. If you have any questions or require additional assistance, please do not hesitate to contact me.

Sincerely,

Mike Bathke
Director

Attachment

C: Audit Committee
Sally Lam, Sr. Educational Facility Planner

I. MANAGEMENT SUMMARY

In accordance with the fiscal year (FY) 2024-25 audit plan, Internal Audit Services (IAS) conducted a comprehensive review of Space Management operations. The audit found that overall controls and processes are functioning as intended; however, several areas require enhancement to strengthen internal controls, minimize operational risks, ensure compliance with University policies, and align with industry best practices.

Space Management Policies and Procedures – The current space management framework lacks comprehensive policies and procedures. The existing policy has not been updated in over 23 years, creating potential gaps in governance and operational guidance. This observation is discussed in detail in Section V.1.

Comprehensive Data Capture in Space Reporting – Adding additional fields for completion within the Facilities Inventory System (FDX) would strengthen level of comprehensive data captured. This observation is discussed in detail in Section V.2.

Space Utilization Validation – Current space utilization assessments rely primarily on user-reported data with ad hoc spot checks. Space management does not currently have the tools available for validating or determining the utilization rates of the space, with the exception of the utilization of classrooms and teaching laboratories, for which Registrar's data is available. This observation is discussed in detail in Section V.3.

While Space Management demonstrates adequate operational controls, addressing these observations will enhance the program's effectiveness and ensure alignment with University standards and best practices.

II. BACKGROUND

Space Management, operating under the Assistant Vice Chancellor for Capital Planning at University of California, Irvine (UCI), serves as a critical resource for decision-making regarding space utilization across both on-campus and off-campus facilities. The unit oversees more than 11.7 million square feet of campus space and is responsible for managing, assigning, and maintaining building inventory in accordance with Provost directives.

The unit develops and implements campus-wide space management policies and procedures in compliance with UCI's Administrative Policies and Procedures, Section 901-10: Capital Planning, B. Space Allocations. Space Management collaborates with multiple campus partners (budget office, FM, EH&S, etc.) to take a holistic approach in making space recommendations taking into consideration the overall financial impact to campus and the unit.

Additionally, Space Management provides strategic recommendations for space allocation decisions at the request of the Provost.

Space Management delivers comprehensive services to optimize space utilization, including:

- Conducting space audits and utilization studies;
- Overseeing strategic space planning initiatives;
- Coordinating facility moves and renovations; and
- Developing adaptive strategies to meet evolving space requirements in collaboration with multiple campus partners.

The unit supports senior leadership by evaluating and prioritizing space requests, which may involve reallocating existing facilities or securing new leased spaces. Space Management takes a forward-looking approach to planning, anticipating faculty and staff growth while adapting to emerging challenges such as hybrid work models and budget constraints.

III. PURPOSE, SCOPE, AND OBJECTIVES

The audit assessed the processes used to manage and analyze space inventory and utilization across all University of California, Irvine (UCI) facilities, including campus buildings, UCI Health facilities/SOM academic facilities (UCI Health's clinical spaces are managed by Health), and off-site leased spaces.

The audit focused on four key areas.

1. Policy and Governance Framework

   Assess existing space management guidelines and policies to evaluate their effectiveness in supporting strategic institutional goals and operational efficiency.

2. Data Accuracy and System Integrity

   Review the space inventory system to evaluate the accuracy and completeness of recorded data

3. Space Utilization Monitoring

   Determine whether space usage is actively monitored and evaluate the effectiveness and consistency of current monitoring processes and methodologies.

4. Strategic Space Initiatives

   Review recent initiatives focused on reducing leased space, consolidating departmental footprints, and implementing hybrid or shared workspace strategies to assess alignment with institutional goals and operational efficiency.

IV. CONCLUSION

Overall Assessment

Space Management controls and processes are generally functioning as intended. However, the post-pandemic transition and evolving work patterns have created both challenges and opportunities for effective space management.

Current Challenges and Opportunities

The shift to hybrid and remote work arrangements has resulted in unoccupied offices across campus, yet many departments remain reluctant to relinquish space due to uncertainty about future needs. While this hesitancy complicates space reallocation efforts, it also presents strategic opportunities for Capital Planning and Space Management to optimize the University's space portfolio.

Active Space Management Strategies

Capital Planning and Space Management is implementing several initiatives to address underutilized space:

- Consolidating departmental footprints;
- Repurpose unused offices; and
- Creating shared hoteling spaces for hybrid employees.

These efforts aim to reduce the University's lease portfolio, achieve operational savings, and repurpose existing facilities while tracking emerging space needs.

Lease Portfolio Management

The University maintains 145 total leased spaces (24 UCI campus and 121 UCI Health), tracked through a centralized database that includes essential details such as address, purpose, square footage, lease terms, renewal deadlines, and costs.

Demonstrated Cost Savings

Recent lease optimization efforts have yielded significant results. This has been successfully ongoing since the pandemic.

1. FY24-25: Approximately 44,240 rentable square feet (RSF) reduction with $1,852,290 in annual savings.
2. FY25-26 (projected): Approximately 16,088 RSF reduction with $1,102,071 in annual savings.

Governance and Strategic Planning

Capital Planning and Space Management conducts monthly Space and Budget Discussion meetings with the Provost and CFO to address project-specific and ad hoc space matters, ensuring alignment with institutional priorities.

Future Initiatives

Space Management plans to implement a pilot program utilizing tools that track and assess actual space utilization, developing metrics to better evaluate space efficiency and inform strategic decisions.

Areas for Improvement

While overall operations are effective, internal controls and processes require strengthening in three key areas: space management policies, reported use of space data, and space utilization validation. Management has developed action plans to address these issues, with detailed observations and recommendations presented in the following sections.

V. OBSERVATIONS

1. Space Management Policies and Procedures

Background

Current space management policies and procedures are essential for the University for following several reasons.

Financial Stewardship

Cost Control: The University has significant investments in real estate and facilities. Proper space management ensures maximum return on these investments and prevents wasteful spending on unnecessary space.

Budget Planning: Clear policies and procedures help administrators make informed decisions about space allocation, renovation, and new construction based on actual needs rather than assumptions.

Academic Mission Support

Provides analytical and resource management expertise that supports campus decision-making associated educational and research facilities.

Operational Efficiency

Decision support for senior leadership to define and prioritize specific space needs and develop strategies to meet those needs including exploring new approaches for achieving greater efficiency in the use of space.

Strategic Planning

Develop space recommendations to address evolving academic needs and growth projections utilizing data driven approaches based on capacity and campus metrics provided from campus collaborators (i.e. Schools, Office of Institutional Research, Enrollment Management, etc.).

Observation

Based on discussions with management and review of space management policies and supporting documentation, IAS noted the following.

1. Outdated Policy:

   UCI policy 901-10 (last revised in May 2002) does not address the current complexities in space allocation, particularly regarding remote work environments and hoteling space.

2. Lack of Space Allocation Guidelines:

   There are no all-encompassing guidelines for space management, which are essential for optimizing resources and aligning space allocation with institutional goals.

   Currently, units maintain autonomy in space utilization after initial Provost allocation. Once the Provost issues an approved space allocation, each unit has latitude to utilize said space at the directive of their designated leader to meet specific space needs.

   Several units have established space committees, conducted regular space assessments, and developed internal space allocation guidelines but there are no all-encompassing guidelines that incorporate a transparent, data-driven, and equitable process to ensure that all space requests are evaluated based on clear criteria aligned with institutional priorities.

Recommendations

IAS recommends that Space Management consult with stakeholders, including the Provost, Vice Chancellors, Deans, and Human Resources to reimagine the space management policies and procedures to ensure an effective governance structure, clear and transparent criteria, and an equitable process that reflects current work environment, such as those outlined in Work Reimagined Principles and Guidelines.

Until comprehensive space allocation policies and procedures are developed and consistently implemented across the campus, IAS recommends that each unit/school create its own space allocation guidelines and establish space planning committees with decision-making authority.

Committees should:

- Determine specific objective criteria for space occupation;
- Prioritize assignments based on strategic importance and operational needs;
- Monitor emerging needs and adapt to accommodate changes;
- Communicate criteria and changes to Space Management for better accountability, transparency, and equity; and
- Regularly update space allocation information in FDX.

Management Action Plan

Considerations for Future Policy and Procedure Development

A standardized approach is underway due to increasing space scarcity and continued optimization efforts. Space Management has:

- Consulted with the Provost and CFO about policy and procedure development and a Space Optimization Committee is planned to be charged that will include campus stakeholders (Human resources, OIT, ASM, etc.) to make policy recommendations;

- Established the newly formed Classroom and Teaching Lab Optimization Committee established October 2, 2025, at request of Provost to optimize classroom/lab capacity and utilization in a post-pandemic environment, with the goal of improving student throughput and ensuring timely access to required courses;

- Created a crosswalk of publicly available space policies from other institutions (UC, CSU, private, etc.) and internal UCI units (SOM, UCI Health, etc.);

- Worked with the budget office on metrics and funding implications; and
- Scrutinized funding sources for leased space.

Any new policies and procedures would require approval from the Provost and Chancellor.

Observation 1: Completed during audit

Space Management updated UCI policy 901-10, referencing Human Resources work reimagined guidelines for remote work environments and hoteling space with approval of the Provost on September 25, 2025. The website was updated on October 8, 2025.

Observation 2: In process

A new space committee, initiated by the Provost, named the Campus Space Planning and Optimization Committee, will be formed after data collection measures are completed. The committee will be charged with developing recommendations for a comprehensive space allocation policy. The Committee will be comprised of a holistic group of interdisciplinary members (i.e., Space Management, Academic Affairs, Facilities Maintenance, EH&S, HR, OIT, Building Managers, Assistant Deans, etc.).

Prior to charter and selection of the committee Capital Planning and Space Management will conduct a study with each school/department assigned space to inform materials for committee use (i.e., one-page fact sheet for each school outlining current space, identify upcoming challenges and needs, document current allocation process). This work has begun and will continue through FY 2025-2026. Additionally, the findings from the pilot occupancy sensor project will be analyzed and prepared for committee review.

The Classroom and Teaching Lab Optimization Committee charged October 2, 2025, will assess capacity and enrollment growth goals.

Target Date: June 30, 2026

2. Data Integrity in Space Reporting

Background

Facilities Inventory System (FDX)

Capital Planning maintains FDX, a database containing building-level and room-level information for all space occupied by UCI, including campus, UCI Health and off-site leased space.

The database serves as the official record of existing space for audit and accountability purposes, and as such, is submitted to the Office of the President (UCOP) every December. The intent of FDX is to record space assignments by department, but not real time utilization of the space.

IAS accessed the FDX system and analyzed space data for 34 schools, reviewing allocations by school, room use code, department, and building.

Observation

IAS identified inconsistencies in the use of key data fields within FDX. Specifically, the "Primary Assigned" and "Additional Assignment" fields are not consistently populated for employees working onsite three or more days per week, limiting the system's ability to accurately reflect actual space assignments.

FDX also lacks functionality to currently identify hoteling workspaces. Instead, hoteling arrangements are managed through the Tririga room reservation system, which utilizes room data imported from FDX. This separation creates potential gaps in comprehensive space tracking and reporting.

While FDX serves as a well-established platform for collecting essential space inventory information, enhanced utilization of the system's capabilities could better support Space Management in identifying opportunities for more efficient and effective space utilization.

Recommendations

Enhance Data Field Consistency

In alignment with Work Reimagined Principles and Guidelines, all units should consistently complete the "Primary Assigned" field and, when applicable, the "Additional Assignment" field for each dedicated workspace assigned to employees working onsite at least three days per week.

Blank fields in these categories should indicate that the workspace is not fully occupied for the minimum three-day threshold, enabling Space Management to better identify underutilized spaces and potential hoteling opportunities.

Implement a Workspace Classification Field

Create a dedicated field in FDX that allows departments and units to classify each workspace as either "assigned" or "hoteling." This enhancement would improve the system's ability to track workspace types and support future real-time utilization assessments.

These improvements would provide Space Management with:

- More accurate occupancy data for strategic planning;
- Better identification of underutilized spaces;
- Enhanced capability to track hoteling workspace inventory; and
- Improved foundation for future real-time space utilization monitoring.

Management Action Plan

Capital Planning and Space Management will work to create a field in FDX that allows departments/units to identify whether a workspace is either an assigned or hoteling workspace and require each unit to complete the "Primary Assigned" and if applicable, "Additional Assignment" (for additional occupants) fields for each dedicated workspace assigned to employees coming onsite at least 3 days per week. We have revised room assignment options to include "hoteling" and "pending" for individuals that are in the process of being hired but not in the UCI directory for selection. The reporting period for annual updates ends in December and we will evaluate the need for a new module depending on the feedback from users of the new categories.

Target Date: January 30, 2026

3. Space Utilization Validation

Background

FDX provides space inventory based on unit-reported information. However, reported use doesn't always reflect real-time space utilization because FDX lacks capability to show actual frequency of space use.

Observation

IAS noted, through management discussions and document review, that:

1. Proactive spot checks are done periodically. Managing space is a combination of multiple modalities (stakeholder interviews, data analysis, etc.) and assessing inventory data captured in the FDX system. University units update their space inventory annually or whenever there are changes to their space usage.

2. There is no automated system to determine real-time space occupancy. Office of Information Technology (OIT) collaborated with a third-party vendor for a space utilization study leveraging the existing access point (AP) hardware infrastructure to determine real-time space occupancy and identify efficiency opportunities. The study deployed occupancy sensor technologies to monitor space utilization within eight buildings, encompassing 502,199 gross square feet (GSF), capturing data from motion detectors, Wi-Fi connections, UCInetID authentications, keycard swipes, and utility consumption metrics.

Management noted monitoring precision was limited in smaller spaces. Additionally, accurate location tracking was dependent on AP density and triangulation quality; adding additional APs will improve accuracy, but limitations will still exist. Other options (e.g. sensors, cameras) might improve accuracy but require additional cost and their own specific hardware platforms outside of existing hardware.

Data-driven metrics derived from an automated system, rather than a sole reliance on self-reported use, could inform campus-wide space policy, which could optimize future space allocations and reduce associated expenses.

A more comprehensive tool to measure space utilization metrics (i.e. combining inventory with real time occupancy trends) could provide insight into how space is used and where efficiencies can be gained. These metrics can help validate underutilized areas that could be repurposed, generate energy savings through reduced utilities, housekeeping, and maintenance costs. Automated occupancy tracking enhances this process by delivering consistent non-subjective, real-time data, enabling trend analysis—such as peak usage times and underused spaces—for data driven strategic space management recommendations.

Recommendation

IAS recommends that Space Management consider implementing a business intelligence tool that captures real-time space usage patterns, such as an occupancy sensor technology solution, that can provide a foundation for:

- Developing evidence-based recommendations for optimizing existing space utilization;
- Informing strategic future space planning decisions;
- Supporting data-driven space allocation and reallocation efforts; and
- Establishing baseline metrics for ongoing space management initiatives

Management Action Plan

Space Management acknowledges the need for enhanced understanding of actual occupancy rates beyond user-reported data to accurately assess current utilization and inform space planning decisions in the post-COVID hybrid work and learning environment.

To address this need, Space Management will implement a three-month occupancy sensor technology pilot program as a proof of concept after researching multiple solutions in collaboration with OIT. This pilot will evaluate whether real-time occupancy data can effectively support strategic decision-

making for space allocations and is scheduled to commence during Winter 2026 quarter. OIT is working with Lambent (vendor) to prepare network to collect critical data needed to report the real-time occupancy trends. The data will be trended for 3 months (January -March 2026) and reported to UCI in April 2026.

Target Date: April 2026