Space Utilization and Optimization

University of Colorado - Boulder
August 14, 2015

University of Colorado Boulder

HuronEducation

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Executive Summary

Across higher education, university leaders, boards, legislators, and – increasingly – donors are evaluating the physical assets (i.e., buildings, their design, construction, physical condition, and location) and their attendant useage to evaluate the efficacy of current governance, policies, processes, and practices regarding the best and highest use of space and the alignment of that use with strategic imperatives. While the specific motivations for increased scrutiny vary by university and constituency, common factors include a recognition of the costs of operating and maintaining physical plant (estimated to be between 10% and 33% of operating budgets), limits to state appropriatations for new buildings, changing pedagogy and desires for new types of space (e.g., "maker" space) and space for growing programs.

Improving the allocation and use of space is critical to the University's ability to continue to deliver against its missions and to meeting the University's strategic priorities set out by the Chancellor: ensuring student success, identifying new and diverse sources of revenue, and advancing the reputation of CU Boulder. Given the costs of space and the diminished expectations for significant additions of new space, identifying opportunities to utilize space more efficiently and provide students with additional student study space will help to enhance student success, generate additional revenue (or diminish future costs), and increase the reputation of CU Boulder.

The University of Colorado Boulder ("University," "CU Boulder," or "CU") engaged Huron Consulting Group ("Huron") to assess current practices, policies and procedures regarding the current allocation of space within the areas of instruction, research, administration, and auxiliaries, to identify (and insofar as possible quantify) opportunities for improvement, and to make recommendations for realizing opportuinities.

Over a 6-month period, Huron conducted 66 interviews, analyzed data from multiple stakeholders, conducted a survey of faculty, and met with representative groups to conduct our work (additional detail is available later in this document).

In assessing the current state of space utilization, several themes emerged that impact and effect the University's ability to fully optimize space use and that transcend specific functional uses.

The first, and most significant of the themes is the impact of the devolution of responsibility for space allocation, demand planning, and scheduling without a corresponding distribution of the accountability for the financial implications of decisions or accountability to campus for meeting certain utilization thresholds (e.g., classroom utilization, research density). Huron observed many instances where units (i.e., schools / colleges, departments, etc.) were diligently focused on optimizing the space that had been allocated to them; this observation is not a critique of distributed decision making. Challenges arise in four areas due to the misalignment of responsibility and accountability:

1. The lack of "price" leads to a perception that space is a free good which tends to lead to overconsumption of space (stated differently, weak incentives to optimize the use of space)
2. The lack of a useful and shared mechanism to allocate space often results in units believing that they retain use of space that they no longer need in the event that a need may arise in the future
3. The lack of a mechanism through which highest and best use is assessed and, if possible, determined on a University-level
4. A culture of ownership of "departmental" space rather than one of "departmental" stewardship of university space

The second theme observed is a disparate and disjointed environment relating to the data and metadata describing the University's space and its utilization. The most significant challenge in conducting our analysis was with assembling a data-set from the multiple databases with multiple data definitions / metadata structures. While related to the first theme in that it may be a byproduct of the distribution of decision making, the loci for decisions could remain unchanged while the data environment could be significantly improved. The university could benefit from better data collection and management tools.

The third theme observed in the current state environment is the informality through which many space decisions are made. While not unique across higher education, historical allocations and decisions made years (occasionally decades) earlier are often what govern decisions about space allocation currently. The campus is implementing modern business systems in IT and other areas and should implement best practices for space management as well.

The fourth theme observed is that the attitudes towards space from many campus constituents is changing and doing so at an increasing pace. The need for student computer labs appears to be diminishing, the impact of digitization and usage is creating unique demands on libraries, digitally enhanced pedagogy and a greater focus on distance education require technologically capable classrooms. While none of these factors apply to all space, there appeared to be, from the data we collected, significant awareness of a disconnect between the capability and the quality of current spaces and the demand for these new types of spaces.

Specific observations regarding the impact of these themes include:

Almost two-thirds of the University's classrooms are scheduled exclusively by academic departments; this distribution of authority *may* offer flexibility to individual departments but it requires the effort of no fewer than 75 employees to schedule classes and it limits the University's ability to ensure the optimization of scheduling institution-wide. To futher illustrate this point, instructional spaces that are scheduled centrally are utilized approximately twice as intensively during a typical academic week as those scheduled by departments. Due to limited availability of sufficient data, this analysis does not take into account the "informal" use of these spaces nor activities occurring that were not documented. Even when recognizing that these types of unscheduled uses are important to the fulfillment of the institutions primary mission of teaching and research, increasing the room utilization for departmentally scheduled instructional spaces to a higher level would have the effect of freeing up substantial amounts of instructional space for alternative uses.

The University has a standard "block" schedule that defines when classes should begin and end. The block schedule defines 49 unique start and stop times / days. Despite this schedule, CU Boulder had (in the last academic year for which we had data) 454 unique undergraduate, non-lab, non-recitation class start / stop times. While there is a recognition that some one-off classes are warranted, this proliferation of schedules impacts the University's ability to more effectively utilize its classrooms and – critically – may impact students' ability to graduate on-time. Data show that seat utilization (the number of seats occupied divided by the number of seats in a classroom) is lower for classes scheduled outside the block schedule. While this does not show causality, the correlation is worth further exploration.

The University does not regularly apply performance metrics to research space. Although significant challenges are presented by the range of research activities and extramural sources of research funding the university could compare current research space allocations and attendant space allocation to historical norms.

The university does not have a mechanism to track which offices are assigned to which individuals. Our analysis, utililizing data from the phone system and matching names to the HR data base identified that no fewer than 104 individuals had more than one office assigned to them. Again, there may be valid reasons for some multiple assignments, but these should be explored and validated as necessary.

CU Boulder's relatively limited availability of student space is a common complaint among students, who say that there is not enough space made available for them to study or work collaboratively. Huron determined that there are opportunities to repurpose existing communal space during non-peak times to serve as student study space. CU Boulder should continue to explore this opportunity to determine which spaces are the most appropriate for repurposing and which non-essential units can be moved out of "prime" campus areas in an effort to optimize the student experience.

CU's Auxiliary unit spaces, within themselves appear to be well utilized (e.g., housing utilization rates are high and stable), however, Auxiliary spaces, within the context of all university space have opportunities for improved utilization and greater integration. For example, dining facilities have significant underutilized capacity during off-peak hours which could be used for student study space. Additionally, Housing built and operates parking facilities in Williams Village as part of the residential structures there for which the University's Parking Operations do not control, maintain, or set prices.

Given the structural, cultural, and systemic nature of some of the identified opportunities and the apparent opportunity for short-term changes to make significant impact, Huron recommends pursuing changes through one of two primary approaches:

- structural changes; and
- quick wins.

In order to make long-lasting, substantive improvemens in its use of space, CU Boulder needs to develop new decision-making capabilities including:

- the creation of a structure dedicated to the management and execution of space allocation decisions;
- the collection and retrieval of data required to make more informed decisions regarding space allocation that include not only a clearer and more accurate view of historical space usage but also a capability for modeling future space requirements and the implications of current decisions on future capabilities; and
- the empowerment of and conferrance of decision rights to a designated entity to ensure it has the ability (appropriate to institutional norms and standards) to make decisions, and to suggest and enforce policy.

The recommendations that apply generally center around the creation of a formalized space-management function that has attributes of coordination, reporting, and decision making. Currently the University's space is managed in disconnected pieces and parts across multiple functions, resulting in inefficient/redundant processes, overlapping data sets, and lack of clarity regarding responsibility and authority. A newly created function would aggregate the disparate activities under a single entity and be responsible for streamlining and improving business processes, policies, and reporting. Such an organization would also play a role in creating an internal marketplace for space and creating a mechanism for the transfer of space; there exist many one-off agreements between departments to share or "rent" spaces to one another which are unstructured and indicative of latent capacity for space realignment. CU

Boulder has a unique opportunity to implement Huron's recommendations in "pilot" buildings that are currently under construction / renovation, including Ketchum Arts & Sciences, Carlson Gymnasium, Engineering, and the Center for Innovation & Creativity.

In addition to these structural changes, Huron recommends CU Boulder pursue a range of more immediate opportunities that are narrower in scope to create ways to free-up space to support current acute space needs. Examples of these changes include, but are not limited to:

- re-evaluate the concept of exclusive departmental control of space and consider the benefits of increased scheduling responsibility through the Registrar's Office;
- exploring opportunities to use available data regarding room use to match student need with available spaces (e.g., highlight classroom space available for student / small-group study);
- enact a consistent office assignment policy for all university employees, allowing only carfefully considered exceptions to the one person, one office approach;
- transition all "standard" classroom technology under the management of Instructional Technology Services;
- repurpose computer classrooms for other uses and meet the computing needs of students through alternative means (e.g., mandatory laptop policy, virtual software deployment, etc.)
- review and clarify space allocation components of faculty contracts; and
- relocate administrative functions with limited direct student/faculty interaction to East Campus.

Huron further recommends that CU consider using space currently under construction and space that undergoes significant renovation to establish new policies to evaluate the impact of new utilization standards, hotelling options, and incentive models on space allocation.

Through the transition to a more transparent and proactive space management regime and the implementation of a series of actionable, short-time horizon opportunities, CU Boulder has the opportunity to free-up underutilized space in order to address acute space needs and to develop a space management function that has the capacity to improve space utilization across campus. The improved optimization and prioritization of space across campus will not only free up underutilized space and avoid unwarranted capital expenditures, but will enhance the student experience, allow for a redeployment of university resources for more focused academic needs, promote new revenue-generating instructional and research activities, and support activities that are critical to the enhancement and enrichment of the University's national and international reputation.

The Need for Improving Space Management

Physical space is the largest addressable asset over which universities retain control; therefore, it is extremely important that space is efficiently utilized. The optimal use of campus space enables universities to more effectively serve student needs, realize operational savings, and avoid potentially unnecessary capital projects. In recent years, universities nationwide have paid more attention to space utilization due to a number of factors, including:

- Diminishing state appropriations
- Limited appetite for state-funding of new capital projects
- Limits in debt-financing capital projects
- Likely increase of regulatory constraints
- Lower anticipated tuition increases in the future

CU Boulder is facing changing demands for research and student spaceas well as increased competition for non-resident students, difficulty in expanding the main campus and a growing deferred maintenance backlog. The decentralized nature of CU Boulder's space management responsibilities makes it difficult for the institution to develop a cohesive strategy to address these internal and external drivers. However, if CU Boulder formalizes a structure that allows for a more coordinated and cohesive approach to space management and allocation, the University could respond proactively to these issues while maintaining its focus on its core mission. Additionally, assigning these responsibilities to a centralized structure will alleviate the administrative burden borne by faculty members, freeing up their schedules to more effectively educate students and conduct research.

Overview and Background

The impact of technology on education platforms (e.g., online and hybrid learning), increased competition for students , faculty and research funding, a changing regulatory landscape, increased momentum towards asset monetization and public private partnerships, renewed focus on outcomes, and increased demands for accountability all impact the current and future uses of, and needs for, physical space at research-intensive universities. These factors, as well as a limited ability to expand its campus footprint, led CU Boulder to seek an assessment of all processes, procedures, and policies attendant to space management and allocation.

Over the last four months, Huron Consulting Group has worked extensively with individuals across the CU Boulder campus to understand its physical space landscape. This included interviewing a wide-range of individuals in varying roles across campus to understand the funding, allocation, and utilization of space across the enterprise, including instructional, administrative, auxiliary, and research space.

The engagement was divided into four main priorities:

<u>Priority #1: Develop Function-Specific Recommendations</u>

Priority #1 focused on developing an understanding of current processes and policies attendant to space management and allocation, and making recommendations to optimize the utilization of space across campus. Huron took a function-specific approach to the analysis of space at CU Boulder:

- Instructional Space: included an analysis of all space in which instructional activity occurs throughout the year to determine how well space is being utilized and what alternate approaches to scheduling could be used to increase room and seat utilization
- Administrative Space (Offices and Support): included an analysis of faculty, staff, research faculty, admin, and student office spaces to determine if there are alternate approaches to space allocation that would increase room utilization
- Research Space: included an analysis of various research metrics and data gathering processes to determine if any opportunities for efficiency exist
- Auxiliary Space: included an analysis of auxiliary spaces to determine if there are any alternative financing and management structures that may serve to improve operations

In addition, Huron conducted an inventory of the incentives and policies (or lacktherof)related to space occupancy and ownership to evaluate how the current environment has engendered and contributed to the current state of space allocation.

<u>Priority #2: Assess Current State vs. Peers and Industry Best Practices</u>

Priority #2 took the analysis and research conducted as part of Priority #1 and compared it to peer and industry best practices. In addition, Huron performed detailed quantitative analyses and assessed feedback from interviews and the Steering Committee to identify potential inefficiencies and barriers to service delivery arising from sub-optimally located programs and units.

Priority #2 also included a deeper exploration of the utilization of instructional space conducted in Priority #1 with a focus on the impacts associated with instructional technology. Factors considered in the analysis included:

- Room utilization by room type
- Projected student enrollment growth (by school / college)
- University strategic goals
- Anticipated changes to and utilization of instructional technology

Priority #3: Explore Asset Monetization and Alternative Financing Opportunities

Priority #3 involved performing a preliminary review of auxiliary and self-funded operations to determine where there may be opportunities for public-private partnerships and / or alternative financing structures. The review included the following areas:

- Residence halls
- Food service facilities
- Power plants and energy usage across the campus footprint

Priority#4: Analyze Instructional and Student-Life Space

Priority #4 leveraged the analyses performed as part of Priority #1 and #2 to determine low-cost opportunities to increase student life-related spaces. The goal was to identify the opportunities and benefits of improving space utilization and management and providing greater transparency throughout campus to help the institution make decisions related to new space or existing space reallocation. This analysis included determining what potential spaces could be re-purposed for student study space, and evaluating how the University could direct students to underutilized communal spaces for use as study space while considering important issues of security and location.

Data Analysis and Methodology

Huron followed a data-driven approach to its analysis to ensure that our observations and recommendations were fully supported by data provided by the University. We received data from multiple offices and aggregated all data, which we used to inform our observations about the state of space at CU Boulder. To the extent possible, Huron vetted its findings with relevant campus units to confirm our understanding of the source data. The analyses were shared with the Steering Committee to confirm that the underlying data were accurate and that our observations were defensible. The data files used to perform the analyses on the different functional areas are listed in subsequent sections of this document.

Note that, as a result of the decentralization of data availability campus-wide, data gathering was challenging and further analysis will be required as CU Boulder moves forward to improve its data collection methods. The key observations and metrics, however, are not substantively changed by the data challenges.

Stakeholder Engagement

Project Leadership

Several members of CU Boulder's leadership team supported Huron's engagement by providing strategic direction, initiating conversations with relevant stakeholders, and delivering feedback on Huron's observations and recommendations. These stakeholders were Russ Moore, Provost and Executive Vice Chancellor for Academic Affairs, Kelly Fox, Senior Vice Chancellor and Chief Financial Officer, Steven Thweatt, Vice Chancellor for Administration, and Carla Ho-a, Assistant Vice Chancellor for Administration, Auxiliaries.

Steering Committee Role and Membership

The Steering Committee was formed to provide guidance and feedback during the development of the Space Utilization and Optimization report. Steering Committee members also served as representative stakeholders for the various units and departments to which they belonged. In addition, the Steering Committee is ultimately responsible for reviewing the recommendations included in this report and making decisions around which recommendations will ultimately be taken forward and implemented.

Resources from across campus units and departments were included to ensure that representative views were taken in to account in the development of recommendations. Membership included the following individuals:

Space Utilization and Optimization Steering Committee	
Name	**Position**
Steven Thweatt	Vice Chancellor of Administration
Carla Ho-a	Assistant Vice chancellor for Administration, Auxiliaries
Bill Kaempfer	Vice Provost and Associate Vice Chancellor for Budget and Planning
Kambiz Khalili	Senior Assistant Vice Chancellor for Student Affairs and Executive Director for Housing & Dining Services
William Haverly	Campus Architect and Director of Planning, Design, and Construction
David Jacobs	Space Coordinator, Capital Assets & Space Planning
Mary Kraus	Professor and Associate Dean for Natural Sciences
Steve McNally	Senior Associate Vice chancellor for Budget, Finance, and Enrollment Services
Patricia Rankin	Associate Vice Chancellor for Research
Catherine Shea	Chief of Staff
Paul Chinowsky	Mortenson Professor of Sustainable Development and Chair, Boulder Faculty Assembly

Observation and Recommendation Framework

Throughout this report, Huron has used categories to segment observations and recommendations. The table below defines each of these categories.

Observation and Recommendation Framework	
Category	**Definition**
Organization	Refers to the organizational structures and reporting lines
Culture	Refers to the ingrained beliefs/perceptions about space processes and protocols
Policy	Refers to the need for formalized documentation to support space allocation decisions
Business Process	Refers to procedures that enable more efficient space use
Infrastructure	Refers to changes to the physical layout of space
Technology	Refers to the need for improved systems and/or software solutions
Data	Refers to specific information that should better captured/utilized

General Observations and Recommendations

Executive Summary

Huron performed a detailed analysis of instructional, administrative, research, and auxiliary spaces separately, and in doing so uncovered various themes and observations which span all space types. Our observations relate to the ways in which CU Boulder is currently organized, business processes associated with allocating and reallocating space, the technology systems used to track data, and the data available to CU Boulder for analysis.

Huron discovered that, in the absence of a defined structure for managing and allocating space at the institutional level, stakeholders have developed a multi-focal, decentralized approach to space management, leading to varied standards, procedures, and scheduling responsibilities across academic and operational departments and units. In addition, there exists no documented and transparent processes through which space allocation and use decisions are made and / or reviewed.

Methodology

Huron conducted 66 interviews to develop a thorough understanding of the current state of the space enterprise at CU Boulder. This included understanding the University's existing organization, structures, and processes attendant to the funding, allocation, and management of administrative, instructional, research, and auxiliary space. In addition, Huron performed detailed data analysis to determine where opportunities may exist to increase utilization and optimization of University space.

Data Analysis

One of the main areas that Huron analyzed was how the different types of functional space could benefit from policy and/or design guidelines as a means of increasing their utilization. Anecdotal evidence suggests that there are some issues associated with the physical design of existing spaces, but there are policy hurdles in each functional area that are preventing CU Boulder from maximizing its space utilization.

Space Type	Physical Design Gap	Policy Gap
Student	Student organizations do not have enough space for meeting and storage, requiring many to have meetings off campus	Students would like to use classrooms for study or collaboration space when they are not in use, but there is no means for them to determine if they are available
Instructional	Variability in technology offerings between classrooms can lead to pedagogical difficulties, thereby lower classroom utilization [1]	Academic departments retain scheduling rights to their own classrooms, but they are not utilized as effectively as centrally-scheduled classrooms
Administrative	Adminsitrative spaces are designed in the traditional model and are not set up for hoteling spaces that can increase utilization	There is no ongoing review process to identify and rationalize the number of faculty members with multiple offices
Research		Research space is managed at the departmental level as opposed to the School/College level and is therefore not utilized as efficiently as possible
Auxiliaries		Existing Auxiliary spaces such as dining facilities are under-utilized during non-meal times and could be slightly modified to serve as student study areas

1. Huron is aware that there is a Faculty Committee that is focused on ensuring the standardization of technology platforms in each classroom

Observations

The table below lists Huron's observations related to all campus space, regardless of functional type:

Observation Number	Functional Space	Category	Observation Summary
1	General	Organization	University stakeholders have developed a multi-focal, distributed approach to space management leading to varied standards, procedures, and scheduling responsibilities across academic and administrative departments and units
2	General	Culture	A culture of ownership exists and is pervasive across campus where the occupants of space perceive that space as belonging to their unit or department irrespective of the productivity of the use of that space
3	General	Business Process	Although the Provost's office plays an important role as an arbiter and broker of academic space, much of the University's reallocation of space is administered through informal networks, channels, and processes

Observation Number	Functional Space	Category	Observation Summary
4	General	Business Process	The University lacks a documented and transparent process through which space allocation and use decisions are made and / or reviewed
5	General	Business Process	No formal process exists through which a central unit or department is able to recapture unallocated space for redistribution, this occurs on an ad-hoc basis instead
6	General	Business Process	The updating of space allocation is conducted in a 12-16 month cycle meaning that the data are always catching up with operational changes; the university lacks the business process infrastructure for real-time space usage updates.
7	General	Technology	Although many unscheduled activities represent usage (sometimes intensive usage) of University space and result in a draw on (and contribution to) institutional resources, the University lacks a single system through which non-curricular (e.g., co-curricular, external group, events) activity is collected / analyzed.
8	General	Data	The responsibilities for defining, collecting, and analyzing data and metadata are distributed across multiple units / departments; The University does not have a single, commonly understood and applied set of data and metadata definitions regarding space, the occupancy of space, the use of space, and the cost of space
9	General	Data	The University has no designated systems of record for the data that describe the University's usage of space limiting its ability to analyze and optimize space at the enterprise level

Recommendations

The list below describes Huron's recommenations that span all space types at CU Boulder.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
1	General	Organization	1, 3	CU Boulder should consolidate the responsibility for space management and allocation that exists in decentralized offices into a central structure that has responsibility and accountability for instructional, administrative, research, and auxiliary space. This structure should be organized to aggregate and maintain all space data and analyze that data to inform space management and allocation decisions.
2	General	Business Process	1, 3	CU Boulder should also establish a governance structure comprised of stakeholders from across the University to provide a mechanism through which individuals can provide input to and participate in the decision making related to the allocation of University space.
3	General	Culture	2	CU Boulder should begin to address the culture of space "ownership" and the perception that space is free by making more transparent the costs associated with space occupancy, including building depreciation, utilities, and maintenance and custodial expenses. The University can achieve this by including a discussion of these costs as part of the annual budget planning process.
4	General	Business Process	3, 4, 5, 30	CU Boulder should establish a formalized system administered by a central unit to hold an inventory of available space, and to receive and review requests for exchanges to facilitate the repurposing of space for its highest and best use. The University should define clear levels of service and establish response times to address departmental requests.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
5	General	Business Process	3, 4, 5, 30	CU Boulder should establish a process and system of incentives for units to give up unneeded space to be held in an inventory by a central unit for transfer / repurposing. In addition, CU Boulder should establish a uniform process through which a unit can request additional space, irrespective of space type, from the centrally held inventory of available space.
6	General	Data	8, 9, 31	CU Boulder should create a data infrastructure that includes all data and metadata related to the management and occupation of space, including, but not limited to, a single room inventory, department and employee locations, costs associated with space, and the information associated with deferred maintenance.
7	General	Data	8, 9, 31	CU Boulder should collaboratively establish a single, commonly understood set of data and metadata definitions regarding space, the occupancy of space, the use of space, and the cost of space.
8	General	Business Process	4, 17	CU Boulder should establish a process through which all space is reviewed and analyzed on a periodic basis to determine the optimal space allocations at the unit level, assess changes in space use and needs over time, examine adjacencies and whether alternative adjacencies could further optimize space usage and evaluate whether there are higher and better uses of existing space. This process should be administered by the central unit to inform space reallocation discussions and decisions.
9	General	Business Process	6	CU Boulder should establish a business process through which units give notice of any change in their space as a means of updating the central space database in real time. Triggering events would include, but are not limited to, changes in space usage and infrastructure, hiring and terminations, and employee office relocations.
10	General	Policy	6	Where appropriate, the university should create and maintain policies that support the recommended business processes designed to improve space allocation and utilization.
11	General	Technology and culture	8, 9, 31, 32	CU Boulder should inventory the systems used across campus to schedule co-curricular and non-curricular activities with the goal of justifying the use of space and rationalizing the number of technology systems in place, and ensuring that the data that describe the use of space can be aggregated and analyzed with other University data.

Student Life Space Observations and Recommendations

Huron conducted an analysis of the quality and availability of CU Boulder's student life space to determine if there is a need to improve existing areas or augment them with new spaces. Additionally, we explored the possibility of repurposing existing space to be used for student study/collaboration areas in periods of low or no utilization.

Executive Summary

A recurring theme in Huron's interviews was that students do not feel that there is enough space avaialble for them to study or work collaboratively, particularly in the libraries and in all areas around the time for final exams. Students also have a limited awareness of which spaces outside of the libraries are available to them to use as study space, including vacant classrooms and RAP rooms. CU Boulder has the opportunity to repurpose existing spaces and enhance communication to help students understand the true availability of study space at all times throughout the day and semester.

Methodology

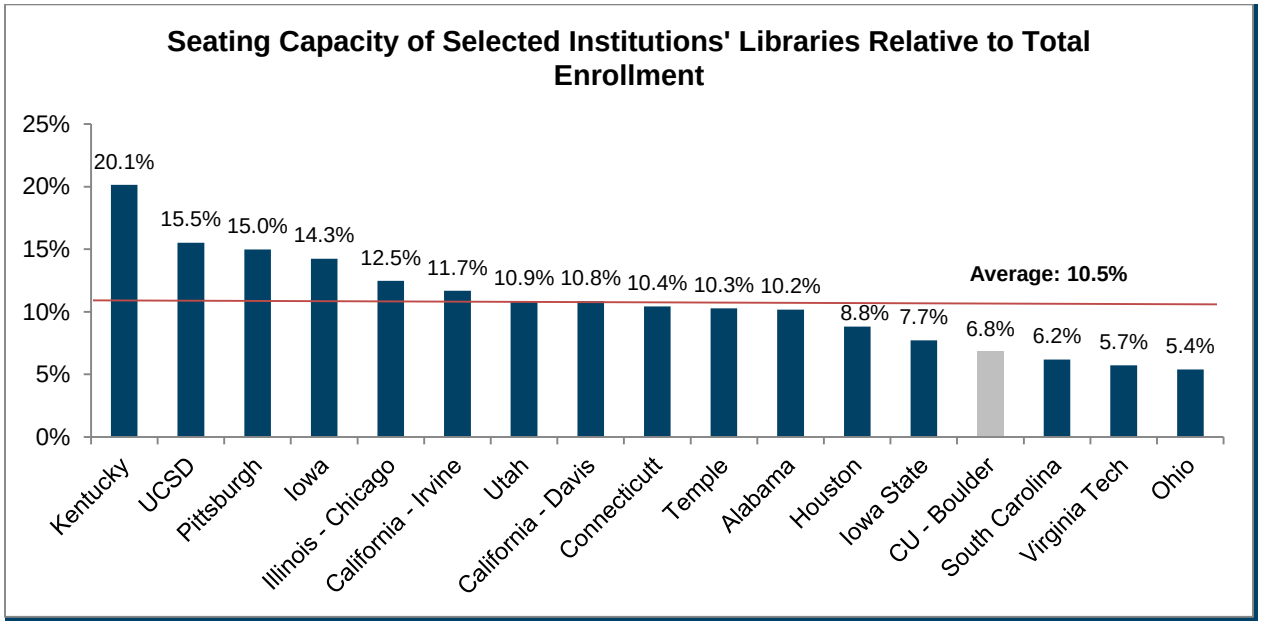
Huron utilized Association of Research Libraries ("ARL") research provided by Libraries staff to inform our observations about the lower amount of student space at CU Boulder relative to selected institutions. Additional insights came from student surveys administered by various campus units and anecdotal feedback that we received from multiple stakeholders in interview settings.

Data Challenges

Anecdotal evidence also suggests that students desire more and better spaces available for club and organizational meetings, but it is difficult to verify this feedback because the true utilization of these spaces cannot be determined until CU Boulder's data collection methods are improved. Huron is aware that the implementation of the new scheduling system for making room reservations is underway.

Data Analysis

Huron conducted a benchmarking analysis of selected ARL institutions, revealing that CU Boulder has a relatively low proportion of seating capacity at campus libraries relative to total student enrollment (6.8% vs. 10.5%). Additionally, we examined opportunities for re-purposing communal student areas in periods of low utilization to increase study space. While the results of this study were inconclusive due to difficulties in finding a suitable case study of space for re-purposing, CU Boulder should examine all communal spaces on campus to determine if they can be modified for increased student space.



All of the 28 RAP classrooms are departmentally scheduled, and were utilized at 30.7% during the 2013 – 2014 academic year, meaning they were not utilized as effectively as the average of all classrooms throughout campus. It will be important for CU Boulder to conduct an internal benchmarking assessment for each of the RAP programs to determine what each individual community's social and programming space needs are as a means of right-sizing their space allocations.

RAP Classroom Utilization - Fall 2013 & Spring 2014

Day	Daily Average	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Monday	27.6%	0.0%	28.1%	48.8%	53.0%	24.5%	30.1%	41.2%	24.5%	20.7%	5.6%
Tuesday	36.5%	3.8%	5.8%	51.2%	53.0%	53.0%	45.9%	47.6%	49.4%	39.6%	15.1%
Wednesday	28.6%	0.0%	30.1%	49.0%	53.2%	24.5%	31.9%	43.0%	28.1%	18.9%	7.4%
Thursday	36.6%	3.8%	5.8%	51.2%	55.0%	53.0%	47.6%	49.4%	51.2%	36.1%	13.1%
Friday	24.1%	0.0%	31.3%	49.1%	47.5%	25.2%	31.3%	37.0%	15.3%	3.9%	0.0%

Overall Classroom Utilization – Fall 2013 & Spring 2014

Day	Daily Average	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Monday	42.8%	10.7%	43.7%	57.6%	56.1%	53.9%	58.8%	55.7%	49.2%	37.9%	24.9%
Tuesday	47.9%	20.0%	29.9%	66.3%	63.5%	57.6%	65.9%	66.9%	57.4%	51.4%	29.6%
Wednesday	45.4%	12.4%	48.6%	61.0%	59.3%	56.1%	60.6%	59.3%	53.7%	40.7%	26.2%
Thursday	47.0%	20.3%	28.8%	64.2%	62.5%	57.3%	64.4%	64.6%	55.0%	50.5%	27.5%
Friday	30.3%	8.9%	38.0%	46.9%	45.6%	43.9%	46.1%	41.2%	23.0%	8.9%	2.3%

Variance between Overall Utilization and RAP Utilization - Fall 2013 & Spring 2014

Day	Daily Average	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Monday	15.2%	10.7%	15.6%	8.8%	3.1%	29.4%	28.7%	14.5%	24.7%	17.1%	19.3%
Tuesday	11.5%	16.2%	24.2%	15.1%	10.5%	4.6%	20.1%	19.2%	8.0%	11.8%	14.4%
Wednesday	16.8%	12.4%	18.5%	12.0%	6.1%	31.6%	28.8%	16.3%	25.6%	21.7%	18.8%
Thursday	10.4%	16.6%	23.0%	13.0%	7.5%	4.3%	16.8%	15.2%	3.8%	14.4%	14.4%
Friday	6.2%	8.9%	6.8%	-2.2%	-1.9%	18.6%	14.9%	4.2%	7.7%	4.9%	2.3%

Huron also attempted to identify offices / functions that are not optimally located and are candidates for relocation. Although data challenges (including identifying where individuals are located) led to difficulties in making wide-ranging recommendations surrounding the location of individual units, CU Boulder should establish guiding principles to make location decisions in the future:

1. Focus on the Student Experience

   Example: there are at least two cashier stations where students have to pay tuition and fees (Bursar's Office and Parking & Transportation Office). Creating a "one-stop shop" for student payments would increase service levels and improve space efficiencies.

2. Relocate Offices / Functions That Do Not Provide Student Service

   Example: the IT Storage Facility in the Stadium is desirable space near the center of campus that can be modified to be used for student-serving activities.

3. Repurpose Existing Spaces for Student Use

   Example: the C4C and UMC have significant space that is underutilized outside of meal times and could be used for student study or collaboration space.

4. Central Campus Should be Reserved for Student Instructional Use

   Example: although most administrative and research functions are on the perimeter of Main Campus or on East Campus, there are some offices that could be relocated to support more student-focused activity.

Observations

The table below describes Huron's observations related to student space.

Observation Number	Functional Space	Category	Observation Summary
10	Student	Culture	Utilization of common student spaces has peaks and troughs throughout the day and semester, meaning there are times during which spaces are not always optimally utilized
11	Student	Policy	Although RAP classrooms have multiple uses (e.g., programming space for students during evenings in the academic year and meeting rooms for conference attenees during summer), anecdotal evidence suggests that they are not highly utilized as student study space
12	Student	Data	There is insufficient data available to determine the utilization of student life spaces, primarily in the C4C and UMC due to the absence of a singular scheduling system and an open access model that allows students to use the space on demand
13	Student	Data	The data regarding which spaces on campus (e.g., empty classrooms) are available for study spaces and at what times are collected but not made available to students
14	Student	Infrastructure	A subset of selected ARL institutions are able to accommodate on average 10.5% of total student headcount in their campus libraries, while CU Boulder is only able to accommodate 6.8%

Recommendations

The table below describes Huron's recommendations related to student space at CU Boulder.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
12	Student	Infrastructure	10, 12, 14	CU Boulder should identify opportunities for the repurposing of communal areas to be used for student life space in periods of low or no utilization.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
13	Student	Policy	10, 11	CU Boulder should evaluate methods to alleviate the difficulties of scheduling space for final exams by utilizing common areas and/or non-classroom space as testing locations
14	Student	Data	13	CU Boulder should make available and transparent to students all data associated with classroom use and availability, and allow them to utilize unused space for student study and collaboration.

Instructional Space Observations and Recommendations

Huron conducted an analysis of CU Boulder's instructional space by evaluating utilization metrics and scheduling policies to determine if there are opportunities for more efficient or effective uses of classroom space on campus. Our observations and recommendations are based on feedback received from interviews with representatives from the Schools and Colleges, Registrar's Office, and our independent data analysis.

Executive Summary

Instructional space, broadly defined as classrooms and teaching laboratories, accounts for approximately 7% of the total space on CU Boulder's campus. According to the Academic Technology Services ("ATS") classroom inventory, there are 690 rooms that are either defined as "classrooms" or that hosted instructional activity during the 2013 – 2014 academic year. Almost two-thirds of these classrooms are controlled by academic departments, meaning the Registrar's office and other central campus units have little to no control over their scheduling. Room and seat utilization in these departmentally-scheduled rooms is significantly lower than those scheduled centrally or on a departmental-prioirty basis. It is noted that many of these spaces are used in an informal manner for non-credit generating activities, and therefore do not show up in any scheduling data. The proliferation of departmentally-scheduled rooms also leads to a higher number of courses that are held outside of the standard block times since departments are not penalized for holding courses on non-standard blocks. In addition to lower classroom utilization, this places an administrative burden on local staff members responsible for scheduling courses for their departments.

In addition to assessing the utilization of classrooms, Huron examined the policies attendant to classroom scheduling and benchmarked them against other institutions. Ultimately, Huron determined that CU Boulder has a lower average classroom size, a lower proportion of centrally-scheduled classrooms than peers, and more departmental control over classroom scheduling responsibilities. These factors make it difficult for CU Boulder to utilize all of its available classroom space in the most efficient manner possible.

There are also numerous disagreements between data sources and a lack of common data definitions at the instructional level. Three different administrative units at have built independent classroom inventories with no coordination, each defining capacity, room type and scheduling responsibilities differently. This leads to an incomplete picture of the true availability of instructional space on campus.

Methodology

Huron used the data files in the table shown below to build a master data file to analyze CU Boulder's instructional space. Huron eliminated all courses from the 2013 – 2014 academic courses listing that did not have a traditional meeting location (e.g., online or self-study courses) and aggregated combined sections based on a process that was vetted and confirmed with the Registrar's Office. Once all of the data was compiled and modified, Huron built a framework to determine how effectively classrooms were utilized on an hourly basis, as well as how many seats were utilized in courses that occupied each classroom.

Space Type	Data File	Source	Description
Instructional	2013 – 2014 Academic Courses	Registrar's Office	All courses offered on Boulder campus

Space Type	Data File	Source	Description
	Standard Block Schedules	Registrar's Office	Block meeting schedules for all classes held on Main and East Campus
	Inventory of All Classrooms	ATS	Rooms hosting instructional activity
	Courses Scheduled Departmentally	Academic Departments	Courses listed as "SEE DEPT" in 2013 – 2014 academic courses file
	2013 – 2014 Academic Courses	Registrar's Office	All courses offered on Boulder campus

Data Challenges

1. Multiple Classroom Inventories

   There are three separate classroom inventories that are maintained by distinct campus units (Institutional Research, Academic Technology Services and Facilities Management). Each of these inventories has differing definitions for what constitutes a classroom and how each space is classified (e.g., research lab vs. computer lab). Huron determined that the ATS inventory offered the most complete and accurate picture of CU Boulder's instructional space due to its inclusion of most of the departmentally-scheduled and RAP classrooms. However, there were still a number of rooms that hosted instructional activity during 2013 – 2014 that were not captured in the ATS inventory which needed to be manually added. Huron used the services of a CU Boulder student worker to "walk" these classrooms and provide a count of the number of seats to develop a seat utilization calculation.

2. "SEE DEPT" Courses

   Once Huron removed courses without traditional meeting patterns, ~8% of the remaining courses had their location listed as "SEE DEPT." These courses were scheduled by the academic department and their location was never reported back to the Registrar's Office. Huron reached out to each department that had a course location listed as "SEE DEPT" to manually add the building and room numbers of these courses to ensure that all information was included in the master data file.

Data Analysis

The scheduling responsibility for CU Boulder's classrooms is managed in three separate ways: centrally by the Registrar's Office (21.9% of total classrooms), by individual academic departments (65.8%), or on a departmental-priority basis (11.6%), in which academic departments schedule their instructional activity before the room is released to the Registrar's Office who then schedules the remainder of the unutilized time. The utilization rates vary widely between these different scheduling protocols, with departmentally-scheduled rooms showing significantly lower room and seat utilization than all others. Additionally, classrooms scheduled by departments have the highest rates of courses on non-standard block schedule meeting patterns, which creates student through-put and course access concerns. For a breakdown of utilization by individual classrooms, please see the Appendix.

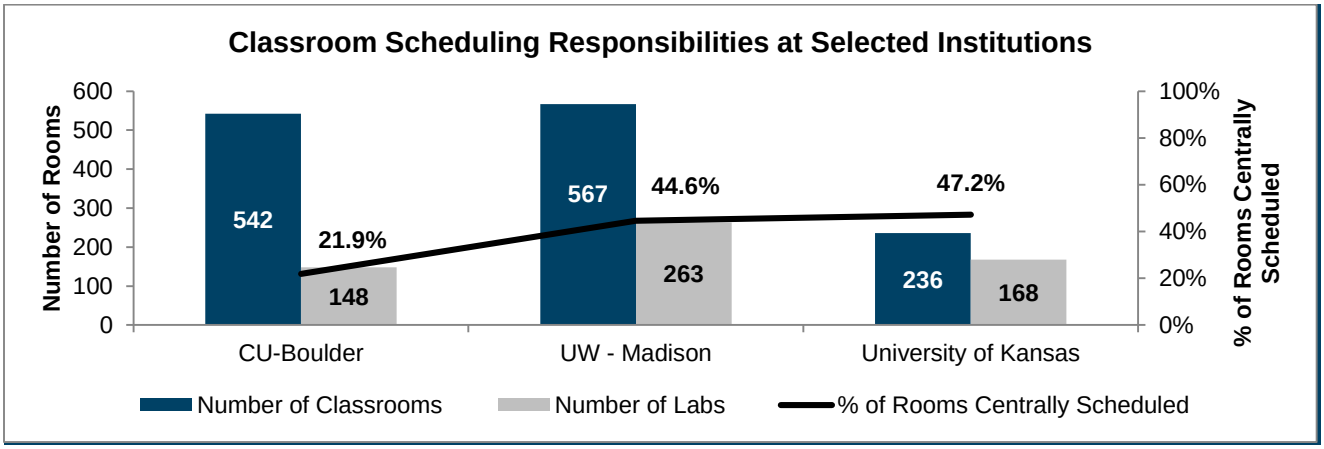
Classroom Utilization Utilization Statistics by Booking Type Fall 2013 & Spring 2014				
Scheduling Protocol	**Rooms**	**Seats**	**Classroom Utilization [1]**	**Seat Utilization**
Centrally Scheduled	151	9,669	70.6%	68.3%
Departmentally Scheduled	454	14,035	31.3%	51.9%
Departmental – Priority	80	2,975	61.4%	61.4%
Total / Average	**685**	**27,046**	**42.7%**	**61.8%**

Note: Classrooms do not sum to 690 due to 5 "Special Rules" classrooms, which were excluded from our analysis

1. *Courses starting between 8 a.m. and 5 p.m.*
2. *This does not account for the use of instructional spaces that are not scheduled activities. While there is a need for some availability of unscheduled activities, there should be a way to manage and track those uses.*

Huron also conducted a high-level benchmarking analysis of CU Boulder's instructional space inventory and scheduling policies relative to selected institutions. Huron determined that CU Boulder's average classroom capacity is smaller than its peer institutions, providing an opportunity to more effectively match course enrollments with room sizes to offer fewer course sections and improve seat utilization. Additionally, CU Boulder had a significantly lower ratio of centrally-scheduled classrooms than at similarly sized and research intensive institutions (21.9% vs. 45.9% at peers).

Classroom Size Distribution at Peers									
Institution	Small (< 10)	Medium 11 – 25)	Large (26 – 75)	Auditorium (> 76)	Average Classroom Capacity	Seats / Undergraduate FTE	Seats / Total Student FTE	Undergraduate FTE / Room	Total Student FTE / Room
CU Boulder	**71**	**244**	**312**	**63**	**39.5**	**1.09**	**0.95**	**36.3**	**41.8**
UW-Madison	28	308	390	104	48.3	1.42	1.06	34.1	45.4
University of Kansas	0	125	248	31	46.9	1.03	0.76	45.4	61.9



Observations

The table below describes Huron's observations related to instructional space. Huron encourages all of its findings to be shared with the faculty committee that is currently focused on standardizing the classroom technology packages across CU Boulder to provide consensus and guidance.

Observation Number	Functional Space	Category	Observation Summary
15	Instructional	Policy	65.8% of all classrooms are scheduled at the departmental level and have lower room and seat utilization rates than those scheduled by the Registrar's office in the most recent academic year
16	Instructional	Policy	27.2% of undergraduate lecture and seminar courses occupy more than one standard block time slot as outlined by the Registrar's office, leading to lower room and seat utilization, as well as throughput and time to degree concerns when students cannot take necessary courses
17	Instructional	Policy	The process for the scheduling of instructional space is subject to multiple "deals," "rules," and other constraints, few of which are documented, and most of which were agreed to years ago
18	Instructional	Business Process	The decentralized instructional scheduling model requires at least 93 individuals across academic departments to be responsible for scheduling non-centrally controlled classrooms
19	Instructional	Business Process	Classroom and course scheduling policies do not necessarily take the projected student demand into account
20	Instructional	Technology	Academic departments that manage or control their own academic scheduling are generally responsible for technological upgrades to their classrooms which leads to a sense of ownership and the inconsistent use of technology

Observation Number	Functional Space	Category	Observation Summary
21	Instructional	Data	The university has no fewer than three classroom inventories, each maintained by different organizations, with different definitions of what comprises instructional space, leading to an incomplete picture of what space is actually available for instructional activity on campus
22	Instructional	Data	The Registrar's office does not have location data for 8% of classes listed as "SEE DEPT" that were scheduled by academic departments during the 2013-2014 academic year, leading to space planning and utilization challenges
23	Instructional	Data	There are no data which describe the impact of the attributes of instructional space quality on faculty and student expectations or experiences

Recommendations

The table below describes Huron's recommendations related to instructional space at CU Boulder.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
15	Instructional	Organization	15, 17 18	CU Boulder should transition departmentally scheduled classrooms to departmental-priority rooms, with few agreed upon exceptions
16	Instructional	Policy	16	CU Boulder should implement a policy that requires any lecture or seminar course scheduled in departmental-priority classrooms off of the standard block schedule to include a signed approval from the Dean of the School / College.
17	Instructional	Policy	15, 16	CU Boulder should create and implement incentives for departments who schedule a certain percentage of their courses at off peak times, such as financial incentives, priority-scheduling rights, funds for strategic initiatives, and / or faculty rewards.
18	Instructional	Policy	22	CU Boulder should establish a policy which requires departments to report the location information for all of their instructional activity to the Registrar's office by the add / drop date.
19	Instructional	Policy	18, 22	CU Boulder should implement a policy that provides the Registrar's office with a substantive role in the scheduling of instructional space, including computer and research lab spaces.
20	Instructional	Policy		CU Boulder should implement a policy that requires all instructional space to be used for credit-generating activities before being released for non-curricular and co-curricular uses, not just centrally controlled instructional spaces.
21	Instructional	Policy	15	CU Boulder should define minimum utilization standards that departments must meet or exceed in order to retain scheduling priority within their classrooms.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
22	Instructional	Technology	25	CU Boulder should establish a single academic technology package to be used across all classrooms, and require departments that decide to retain control of their spaces to pay for maintenance and upgrades of academic technology in their own classrooms.
23	Instructional	Technology	19	CU Boulder should invest in a demand-based and predictive course scheduling system to improve student access and throughput, as well as room and seat utilization.
24	Instructional	Data	10, 11, 13, 15	CU Boulder should provide students with data related to scheduled instructional use to inform them of times when the classrooms may be used as study space.
25	Instructional	Data	21	CU Boulder should work collaboratively to establish a single classroom inventory with common data definitions for classroom types, scheduling responsibilities, seating capacity and configuration, and technological capabilities.
26	Instructional	Data	23	CU Boulder should add a field to FCQ forms that addresses what effect the state of instructional space has on student course ratings.
27	Instructional	Data	19	CU Boulder should conduct an internal assessment of the upper limits of course enrollments to determine how many students could be taught in each section if space was not an issue

Administrative Space Observations and Recommendations

The administrative space analysis conducted by Huron included evaluating faculty, research faculty, student, admin, and staff offices to determine what alternative allocation models may be used to improve space utilization. In addition, the administrative space analysis included evaluating the ways in which conference room and collaborative spaces are scheduled and utilized.

Executive Summary

Administrative space accounts for approximately 17% of the total assignable space at CU Boulder. However, understanding how well this space is utilized is extremely difficult because much of the data needed to perform detailed analysis is not tracked. In the absence of readily available data, Huron pursued alternative means of obtaining administrative space data. Once the data was obtained, Huron realized that many employees at CU Boulder had duplicate offices, and many larger office spaces had no more than one occupant assigned. Furthermore, Huron was able to identify variances in what was classified as office space and assigned to departments in CU Boulder's room inventory, and what departments reported as the office space they currently occupied.

In addition to assessing office spaces to determine where there may be space available, Huron evaluated office space allocation methods used at CU Boulder relative to allocation methods used in industry and at other institutions. Huron discovered that the assignment of administrative office spaces occurs at the department level and that office occupation information is not tracked at the enterprise level. Huron also discovered that there exists many one-off agreements between departments to share or "rent" spaces to one another for a nominal fee. These agreements tended to become historically permanent, and were neither standardized nor tracked in any single location.

Because the administrative space at CU Boulder is not easily reconfigurable, Huron needed to evaluate alternative means for increasing the utilization of administrative spaces. Hoteling systems are commonly used to increase the

utilization of administrative space outside of the Higher Education sector, and some institutions are beginning to implement hoteling systems for office spaces on their campuses. Huron evaluated the potential for implementing a hoteling system at CU Boulder, and how it may be used to increase the utilization of office spaces across campus as well as free up space for alternate allocation.

Methodology

Huron obtained data from multiple individuals across campus and conducted interviews with various stakeholders to develop an understanding of the current processes and allocation methods used to assign employee office spaces. In order to perform a detailed analysis, Huron had to combine data from sources that were not always compatible, and come up with creative ways to obtain and gather data in areas where no data was available. Some challenges associated with the data gathering are documented in subsequent sections.

Space Type	Data File	Source	Description
Administrative	Inventory of All Rooms	Facilities Management	All rooms on campus
	2012 and 2014 Master Building List	Facilities Management	Listing of all buildings owned by CU Boulder in the given year
	Famis-Peoplesoft Crosswalk	Facilities Management	Departmental Crosswalk between Famis and PeopleSoft
	FY12-FY14 Utilities Spend Data	Facilities Management	Utilities spend data by building
	FY11-FY13 Maintenance Logs	Facilities Management	Breakdown of building maintenance cost information
	Cisco Phone Extension List	Office of Information Technology (OIT)	List of all phones installed across the CU Boulder campus with associated employee names and rooms
	HR Current Employee Listing; HR Terminated Employee Listing	OVC for Administration	Listing of all current CU Boulder employees with associated departments
	CRIS Building Depreciation	Cost Accounting	Breakdown of carrying value and yearly depreciation amounts of buildings

Data Challenges

1. Administrative Occupation Information

   Because office occupation data is not tracked at the enterprise level, Huron needed to develop an alternative approach to gathering the data. Huron first attempted to use Cisco phone implementation records to identify office occupants. However, because naming conventions were different within the phone implementation records than they were within the HR Current Employee list, Huron needed to invest a significant amount of time manually matching employee names. Huron found that many of the occupants identified were no longer employed by the University. This required Huron to then administer an occupation check workbook to over 100 department contacts and/or building proctors across campus to either confirm current occupants based on the phone implementation records or document the correct occupants.

2. Building Cost Information

   Building cost information, including utility, depreciation, and maintenance data, was held in multiple locations across campus and was difficult to aggregate because not all costs are applied in the same way. As a result, Huron needed to develop building complexes to account for all utility information, and needed to modify building codes to ensure all building costs were applied correctly. An example complex is included in the next section, and all created complexes are listed in the appendix.

Data Analysis

Building Cost Model:

In order to develop a building cost model, Huron had to aggregate information that was held in various offices across campus. In addition, Huron had to work with accounting to ensure all building utility costs were accounted for accurately. The Total Building Costs column below includes the average of the last three years of utility, building depreciation, and maintenance costs, all of which needed to be gathered from separate individuals at the University.

Building Cost Model		
CU Boulder Building	**Cost per Assignable Square Foot**	**Total Building Costs**
ADMIN & RSCH CTR EAST CAMPUS	6.48	$1,080,999
BENSON EARTH SCIENCES BLDG	14.74	$1,146,000
CENTER FOR COMMUNITY	6.08	$1,806,295
CLARE SMALL ARTS & SCIENCES	8.16	$308,892
CRISTOL CHEMISTRY & BIOCHEM BLDG	13.95	$1,810,644
DUANE PHYSICS	7.33	$1,223,229
EATON HUMANITIES BLDG	12.52	$807,582
EKELEY SCIENCES BLDG	13.35	$1,559,789
ENGINEERING COMPLEX	13.46	$4,431,710
HELLEMS ARTS & SCIENCES BLDG	7.21	$574,685
KOELBEL BUILDING - LEEDS	16.58	$2,385,490
NORLIN LIBRARY	6.20	$1,774,734
WOLF LAW BUILDING	11.32	$1,828,252

A full listing of buildings with associated costs is listed in the appendix

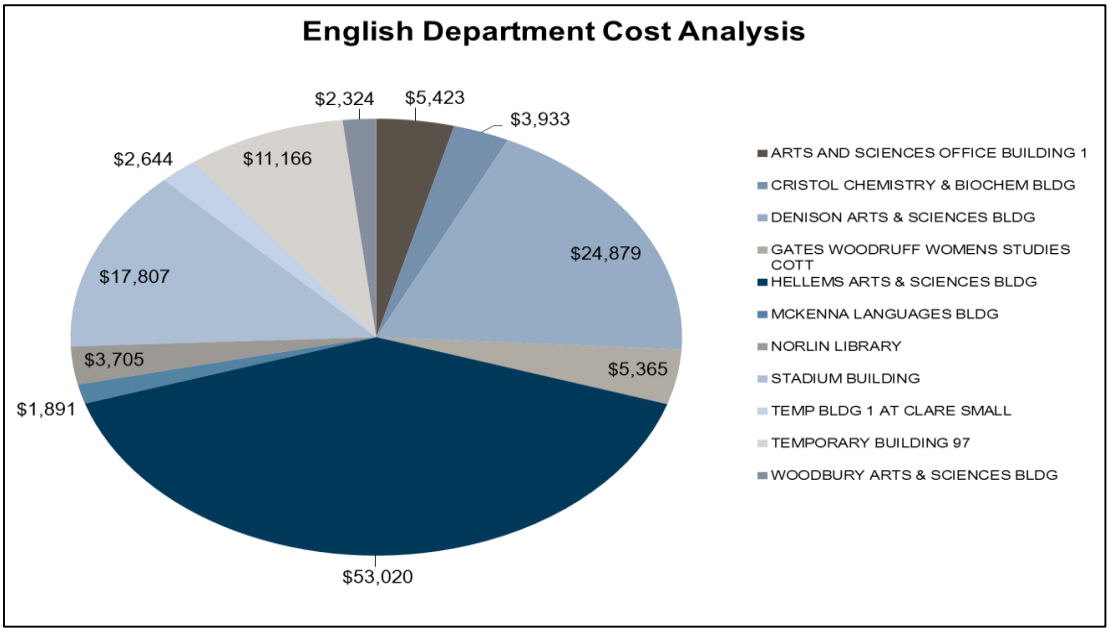
As the table shows above, some buildings needed to be combined to ensure all costs were accounted for. For example, Huron needed to create the Engineering Complex in order to apply utility costs to all buildings. Because utility costs needed to be combined, Huron proceeded to aggregate both depreciation and maintenance costs to ensure all costs were applied in the same way. The table below shows all engineering buildings included within the Engineering Complex.

Engineering Complex		
CU Boulder Building	**Building Code**	**Building Number**
ENGINEERING ADMINISTRATION WING	ECAD	438
ENGINEERING AEROSPACE WING	ECAE	442
ENGINEERING CIVIL & ENVIRO WING	ECCE	436
ENGINEERING CLASSROOM WING	ECCR	432
ENGINEERING COMP SCIENCE DEPT WING	ECCS	432S
ENGINEERING ELECTRICAL WING	ECEE	444
ENGINEERING ENVIRONMENTAL SUSTAINABILITY WING	ECES	434
ENGINEERING MECHANICAL WING	ECME	440
ENGINEERING NORTH TOWER	ECNT	441
ENGINEERING OFFICE TOWER	ECOT	439
ENGINEERING SOUTH TOWER	ECST	433
ENGINEERING STORES & LABS	ECSL	435

A full listing of all created complexes with associated buildings is listed in the appendix

The analysis used to calculate building costs can be used to calculate department costs as well. Many departments at CU Boulder are split across multiple buildings; by applying 'Cost per Assignable Square Foot' calculations to the assignable square footage assigned to different departments, Huron can determine the costs associated with the spaces occupied by all administrative and academic units and departments on campus. The English department is shown as an example below.

The English department occupies space in 11 diferent buildings on campus. The costs the English department incurs within each building are shown in the chart below.



Office Size Analysis:

Approximately 2/3 of the rooms listed in the occupant check workbooks sent out to department contacts and/or building proctors were sent back to Huron with updated room information. Once this information was received, Huron was able to perform an analysis that counted the number of offices greater than 200 square feet that currently had no more than one occupant. This includes admin offices, faculty offices, research faculty offices, staff offices, and student offices. The tables below show a small portion of this information broken out by both building and unit.

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Building	**Number of Offices**
ADMIN & RSCH CTR EAST CAMPUS	47
BENSON EARTH SCIENCES BLDG	17
CENTER FOR COMMUNITY	10
CLARE SMALL ARTS & SCIENCES	4
CRISTOL CHEMISTRY & BIOCHEM BLDG	7
DUANE PHYSICS	10
EATON HUMANITIES BLDG	2
EDUCATION BLDG	12
EKELEY SCIENCES BLDG	18
HELLEMS ARTS & SCIENCES BLDG	24
KOELBEL BUILDING - LEEDS	14
NORLIN LIBRARY	18
WOLF LAW BUILDING	9

A full listing of buildings with associated room counts is listed in the appendix

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Department/Unit	**Number of Offices**
ADMISSIONS	12
CHEMISTRY & BIOCHEMISTRY	19
ECOLOGY AND EVOLUTIONARY BIOLOGY	19
ECONOMICS	13
ENGLISH	10
FINANCIAL AID	7
GEOGRAPHY	9
HUMAN RESOURCES	6

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Department/Unit	**Number of Offices**
POLICE OPERATIONS	11
SCHOOL OF EDUCATION	13
SCHOOL OF LAW	9
SOCIOLOGY	21
UMC	23

A full listing of departments/units with associated room counts is listed in the appendix

Observations

The table below describes Huron's observations related to administrative space.

Observation Number	Functional Space	Category	Observation Summary
24	Administrative	Organization	The University lacks a hoteling system to coordinate the use of collaborative and shared work spaces
25	Administrative	Policy	There appears to be a proliferation of employees having more than one "assigned" office space leading to consistently unoccupied offices which could be reallocated for alternate uses
26	Administrative	Policy	There appears to be a proliferation of departments charging one another for the use of conference room spaces even when they are unoccupied by the "owning" department
27	Administrative	Culture	Few units understand the costs of space occupancy; the utility of and demand for space is not checked by the economic reality of space consumption
28	Administrative	Culture	The university has insufficient data to fully analyze the utilization of conference rooms and other shared spaces because employees often use unoccupied space without formally booking the space
29	Administrative	Business Process	No process exists to review / rationalize the location of administrative units with their functions and attendant need to be geographically proximal to other campus functions or student activity
30	Administrative	Business Process	No formal process exists to regularly review space allocation decisions and to make modifications as demand changes
31	Administrative	Technology	There exists no System of Record, on a campus-wide basis, that documents which employees are assigned to which offices or into which occupancy data is recorded leading to the potential for inefficient space usage and risk management issues
32	Administrative	Data	The costs of operating and maintaining university space are not collected in a single database or in a coordinated fashion, limiting the ability to attribute costs to the activities that incur them

Recommendations

The table below describes Huron's recommendations related to administrative space at CU Boulder.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
28	Administrative	Organization	26, 28	CU Boulder should facilitate the more effective utilization of conference rooms by eliminating the need for recharging for these spaces and making their usage and scheduling more transparent.
29	Administrative	Organization	29, 30	CU Boulder should consolidate cashiering functions within the Bursar's office to take advantage of economies of scale and free up prime Main Campus space for reallocation.
30	Administrative	Policy	25	CU Boulder should implement a policy that restricts staff and faculty members from having duplicate office locations unless employees can demonstrate a compelling need, and receive approval from the provost and / or CFO. Such a need may include, but is not limited to, having instructional / research responsibilities on both campuses.
31	Administrative	Business Process	2, 24	CU Boulder should establish incentives to reward faculty / staff members who participate in hoteling arrangements by making available their office spaces and / or using shared spaces. Incentives may include, but are not limited to, alternate IT refresh cycles, additional storage space, and financial stipends.
32	Administrative	Infrastructure	29, 30	CU Boulder should relocate the Testing Center out of Norlin Library, and Transportation Services and the Police deaprtment out of the Public Safety Building, to make available prime Main Campus space for reallocation of higher and better uses.
33	Administrative	Technology	24	CU Boulder should implement a hoteling system to allow for the renting and use of shared office and collaborative spaces.
34	Administrative	Data	28, 32	In the planning and development of new construction, CU Boulder should migrate to card-entry systems for access to spaces to more effectively gather data related to the use and utilization of administrative spaces, such as offices and conference rooms.

Research Space Observations and Recommendations

Huron's research space analysis focused on assessing standardized metrics to determine the productivity of research space and evaluating the structures through which research space is allocated and managed.

Executive Summary

Research space analysis conducted by Huron focused on understanding the locale at which research space is managed and allocated, and the processes through which research space data is gathered and analyzed. In addition, Huron compared CU Boulder to various other research institutions on a variety of metrics, including research dollars per square foot, and research square feet per FTE, to understand where there may be opportunities for improvement. Huron found that research space management is highly decentralized across departments, and is rarely reviewed to ensure research activity is occurring in the highest-cost spaces available. Furthermore, Huron found that the process through which cost accounting gathers data for the Indirect Cost Recovery report is highly manual and could be prone to to human error.

Methodology

Huron utilized the 2012 Indirect Cost Recovery report as the basis for evaluating the productivity of research space at the department and enterprise level. The analysis focused on both the extramurally funded research included within the 2012 Indirect Cost Recovery report, and the need to track additional data related to University-subsidized research. In addition, Huron utilized proprietary information to compare CU Boulder's research productivity to AAU and Pac-12 selected institutions without medical schools.

Space Type	Data File	Source	Description
Research	2012 Indirect Cost Recovery Report	Cost Accounting	Report submitted to federal regulators
	R45A Report	Cost Accounting	Cost pool and departmental ownership information for all space on campus
	2012 Space Survey Sent to Physics	Cost Accounting	Listing of rooms used by Physics for research purposes
	2012 Space Submission from Physics	Cost Accounting	Physics update of space survey based on current research space usage
	CRIS Building Depreciation	Cost Accounting	Breakdown of carrying value and yearly depreciation amounts of buildings

Data Challenges

1. Space variances between the Indirect Cost Recovery Report and the Facilities Room Inventory

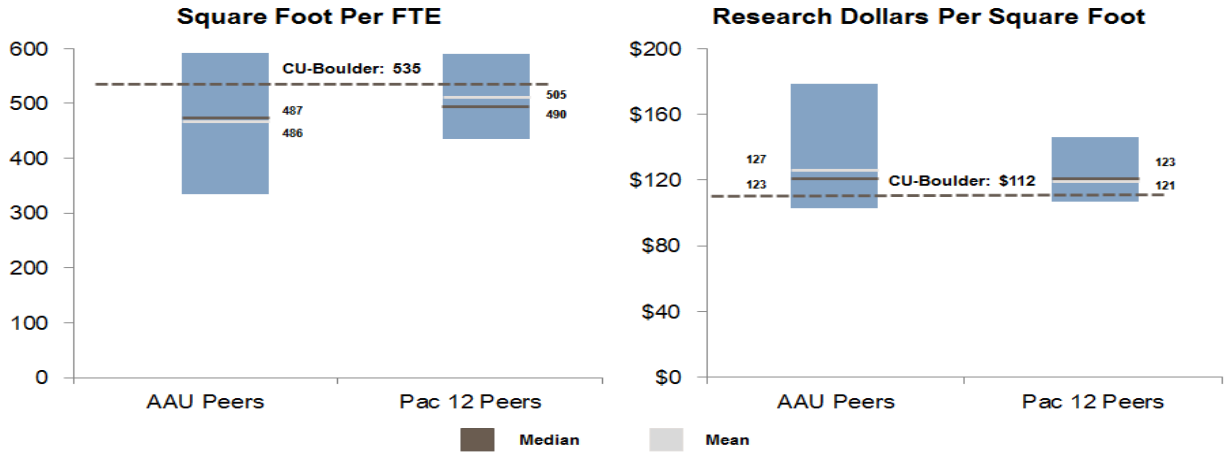
   In attempting to evaluate current research space at CU Boulder, Huron found that there were significant variances between what was included as part of the Indirect Cost Recovery Report and what is currently listed as research space within the Room Inventory obtained from Facilities Management. Huron needed to engage individuals within academic departments and central administration to understand what drove the variance, and what space was currently allocated for extramurally funded and University-subsidized research. Huron used Physics as an example, and spoke with the Physics department chair to understand how their space landscape had changed since data was gathered for the 2012 Indirect Cost Recovery report.

2. No ongoing tracking of research space data

   CU Boulder performs a detailed research space analysis when need for Indirect Cost Recovery reporting. However, data is not continually updated meaning that the current research space data may not be accurate. In addition, the University does not have distinct cost pool categories to distinguish between extramurally funded research and unfunded research.

Data Analysis

Huron used proprietary data acquired from other institutions to compare CU Boulder against four selected universities in the Pac-12 and eight in the AAU. It was determined that CU Boulder's research square foot per FTE and research dollars per square foot metrics were within range of its peers, suggesting that the institution utilizes its research space in a relatively effective manner. Since CU Boulder does not track the space used for unfunded research, this analysis focused specifically on extramurally funded research.



Observations

The table below describes Huron's observations related to research space.

Observation Number	Functional Space	Category	Observation Summary
33	Research	Policy	Contracts written for incoming PI's do not have any time or productivity stipulations written into the contract, which can lead to a sense of perpetual "ownership" by the researcher
34	Research	Business Process	Research space is managed at the unit level, making it difficult for the University to create a central strategy to govern research space allocation and utilization decisions
35	Research	Business Process	There is currently no process by which CU Boulder periodically evaluates the utilization of its research space on an ongoing basis via standardized metrics (e.g., "research dollar density," ratio of space allocated to research and space in which extramurally funded research is occurring) between units or at the aggregate level
36	Research	Data	Few data are used to inform decisions regarding the allocation of research space, as the data that are collected and available through FACMAN are limited, leading to difficulties in understanding the optimal placement of research personnel
37	Research	Data	The decentralized alignment of research responsibilities makes it difficult for units to share their best practices relating to space, particularly those related to their policies that govern space used for unfunded research
38	Research	Data	There are no policies in place to ensure that departments are aligning their research activities in the most high-cost spaces
39	Research	Data	There is no institutional awareness of how much space is being used for non-extramurally funded research
40	Research	Data	The current process for building the Indirect Cost Recovery report is highly-manual and prone to errors in tabulating units' funded research space footprints

Recommendations

The table below describes Huron's recommendations related to research space at CU Boulder.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
35	Research	Organization	35, 38	CU Boulder should include research space metrics as part of its annual budget review process to provide the Deans of Schools / Colleges with the necessary information to work with the central unit to manage their space effectively, review their performance to determine their true space needs, to align research into the highest-cost spaces, and ensure that research space in start-up and recruitment packages is appropriately allocated. Any stipulation should exceptions for PI start-up and faculty recruitment.
36	Research	Business Process	35, 36, 38	CU Boulder should periodically review standard research productivity metrics including, but not limited to, research dollar density by department, ratio of unfunded research to total research space, and square footage per research FTE, to inform its allocation and distribution of research space.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
37	Research	Technology	39, 40	CU Boulder should transition to a more standardized and automated process for gathering Indirect Cost Recovery information, such as cost pool allocations associated with extramurally funded research, from its current labor-intensive Excel-based process.
38	Research	Data	39	CU Boulder should create an additional cost pool category within its room inventory for application to research space that contains unfunded research, and use its current research cost pool category for strictly extramurally funded research.
39	Research	Data	39	CU Boulder should utilize the data gathered through the Indirect Cost Recovery data gathering process to update cost pool information maintained within its room inventory.

Auxiliary Space Observations and Recommendations

Huron examined the utilization of CU Boulder's auxiliaires spaces, including Parking & Transportation Services, Housing, Dining, Bookstore and Athletics, to determine if there were opportunities for a more efficient use of space. Additionally, Huron evaluated the potential for alternate financing and/or management structures for CU Boulder's auxiliary operations as a means of increasing revenue, decreasing costs, or enhancing service levels.

Executive Summary

Auxiliary units have a decentralized model of support functions, with many employing their own Faciilities, Finance and/or IT personnel. This results in a duplication of services and increased costs, since Auxiliary units that in-source these functions are still required to pay a General Administrative Recharge ("GAR") fee to support these services centrally.

Additionally, CU Boulder's Student Government maintains sole responsibility for the management and upkeep of common student areas throughout campus, particularly in the University Memorial Center. Due to the yearly turnover in Student Government personnel and competing demands from students, central administration has very limited ability to begin necessary upgrades to the infrastructure of the UMC.

Methodology

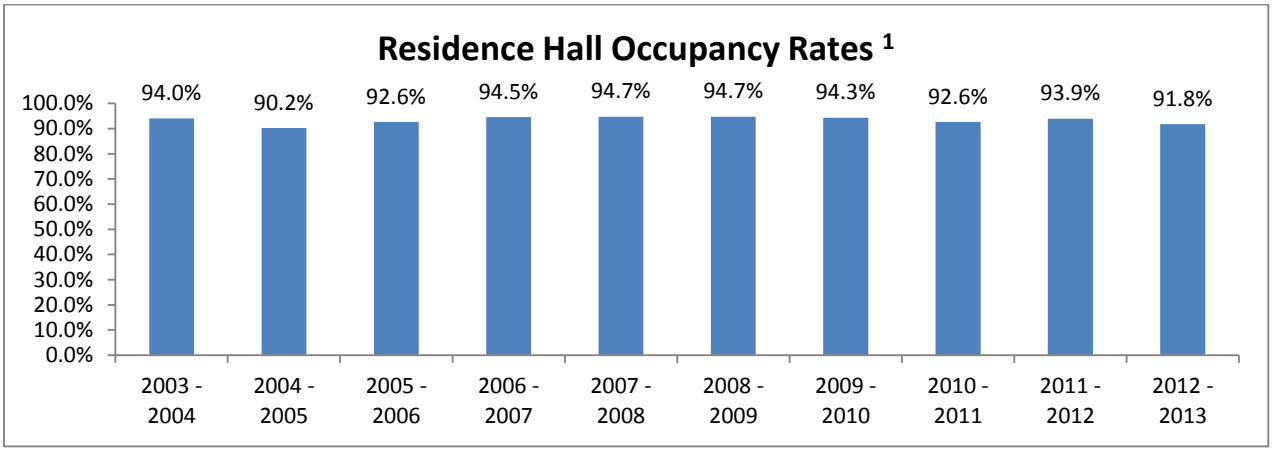
Huron conducted interviews with Auxiliaries personnel and received data from stakeholders in each unit.Additionally, Huron built a second report that will be sumitted separately that offers more granularity into CU Boulder's opportunities for asset monetization and / or alternative financing structures.

Data Challenges

None

Data Analysis

CU Boulder's housing utilization has been fairly stable for the last ten years for which data was readily available. Occupancy rates in the low to mid-nineties are indicative of a successful Housing operation and appropriate price levels, suggesting the CU Boulder's Housing space is being effectively utilized.



Observations

The table below describes Huron's observations related to auxiliaries space.

Observation Number	Functional Space	Category	Observation Summary
41	Auxiliaries	Organization	The University has many duplicated functions across its administrative and auxiliary operations, including Human Resources, facility operations, and parking operations; an opportunity exists to improve coordination of space planning and utilization across and between auxiliaries and other functions
42	Auxiliaries	Organization	Student Government oversight of major auxiliary spaces creates challenges for long-term decision making and planning

Recommendations

The table below describes Huron's recommendations related to research space at CU Boulder. Additionally, Huron's recommendations related to public-private partnerships and asset monetization opportunities are included as a separate report.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
40	Auxiliaries	Organization	41, 42	Housing & Dining Services should assume responsibility for the management of the operations of all cafes and coffee shops on campus that are currently managed by Schools / Colleges to improve efficiencies and more effectively utilize space.

CU Boulder Data Systems and Availability

Throughout the engagement, Huron was forced to gather and aggregate space data from multiple sources due to the fact that CU Boulder does not store all space data in a single location. These data sets have led to insights that informed Huron's observations and recommendations, but it would be a difficult and time-consuming process for CU Boulder to replicate these analyses without upgrading its existing data systems. As such, there is an opportunity for CU Boulder to improve its decision-making capabilities by collecting space-related data from units in a single system of record.

The table below shows current data and data gaps identified by Huron at CU Boulder for all space types:

Space Type	Data Item	Data Gap / Issue Description
General	Non-academic scheduling information	Non-academic scheduling data is maintained in multiple locations and is not combinable for analysis
Instructional	Class schedule information	Course schedule information is documented and maintained in various locations across campus making it difficult to perform detailed, enterprise-wide room utilization analysis
	Classroom inventory	At least 3 differing classroom inventories exist across campus
Administrative	Building cost information (utility, depreciation, and maintenance costs)	Building cost information is maintained in multiple locations and is difficult to aggregate
	Employee office occupation information	Employee occupation information is not gathered by the University, making it difficult to conduct administrative space analysis
	Conference room scheduling information	Conference room utilization data, when gathered, is gathered in multiple locations in differing systems
Research	Research space inventory	Departments are instructed to classify space not being used for research as “Instructional” space
	Unfunded research space	Spaces that host non-extramurally funded research are not tracked
Student	Open classrooms / common areas at periods of low or no utilization	No tracking of which areas are available to be used for student study space

Next Steps

Upon delivery of this report, Huron will have fulfilled its obligations outlined under the Engagement Letter. CU Boulder will begin evaluating the feasibility of implementing these recommendations via the Steering Committee. When the Steering Committee determines the most high-impact opportunities, it will begin communicating with campus stakeholders to formulate an implementation plan.

Appendices

Appendix 1: Recommendation Table

Rec. number	Functional Space	Category	Associated Observations	Recommendation
1	General	Organization	1, 3	CU Boulder should consolidate the responsibility for space management and allocation that exists in decentralized offices into a central structure that has responsibility and accountability for instructional, administrative, research, and auxiliary space. This structure should be organized to aggregate and maintain all space data and analyze that data to inform space management and allocation decisions.
2	General	Business Process	1, 3	CU Boulder should also establish a governance structure comprised of stakeholders from across the University to provide a mechanism through which individuals can provide input to and participate in the decision making related to the allocation of University space.
3	General	Culture	2	CU Boulder should begin to address the culture of space "ownership" and the perception that space is free by making more transparent the costs associated with space occupancy, including building depreciation, utilities, and maintenance and custodial expenses. The University can achieve this by including a discussion of these costs as part of the annual budget planning process.
4	General	Business Process	3, 4, 5, 30	CU Boulder should establish a formalized system administered by a central unit to hold an inventory of available space, and to receive and review requests for exchanges to facilitate the repurposing of space for its highest and best use. The University should define clear levels of service and establish response times to address departmental requests.
5	General	Business Process	3, 4, 5, 30	CU Boulder should establish a process and system of incentives for units to give up unneeded space to be held in an inventory by a central unit for transfer / repurposing. In addition, CU Boulder should establish a uniform process through which a unit can request additional space, irrespective of space type, from the centrally held inventory of available space.
6	General	Data	8, 9, 31	CU Boulder should create a data infrastructure that includes all data and metadata related to the management and occupation of space, including, but not limited to, a single room inventory, department and employee locations, costs associated with space, and the information associated with deferred maintenance.
7	General	Data	8, 9, 31	CU Boulder should collaboratively establish a single, commonly understood set of data and metadata definitions regarding space, the occupancy of space, the use of space, and the cost of space.
8	General	Business Process	4, 17	CU Boulder should establish a process through which all space is reviewed and analyzed on a periodic basis to determine the optimal space allocations at the unit level, assess changes in space use and needs over time, examine adjacencies and whether alternative adjacencies could further optimize space usage and evaluate whether there are higher and better uses of existing space. This process should be administered by the central unit to inform space reallocation discussions and decisions.
9	General	Business Process	6	CU Boulder should establish a business process through which units give notice of any change in their space as a means of updating the central space database in real time. Triggering events would include, but are not limited to, changes in space usage and infrastructure, hiring and terminations, and employee office relocations.
10	General	Policy	6	Where appropriate, the university should create and maintain policies that support the recommended business processes designed to improve space allocation and utilization.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
11	General	Technology	8, 9, 31, 32	CU Boulder should inventory the systems used across campus to schedule co-curricular and non-curricular activities with the goal of justifying the use of space and rationalizing the number of technology systems in place, and ensuring that the data that describe the use of space can be aggregated and analyzed with other University data.
12	Student	Infrastructure	10, 12, 14	CU Boulder should identify opportunities for the repurposing of communal areas to be used for student life space in periods of low or no utilization.
13	Student	Policy	10, 11	CU Boulder should evaluate methods to alleviate the difficulties of scheduling space for final exams by utilizing common areas and/or non-classroom space as testing locations
14	Student	Data	13	CU Boulder should make available and transparent to students all data associated with classroom use and availability, and allow them to utilize unused space for student study and collaboration.
15	Instructional	Organization	15, 17 18	CU Boulder should transition departmentally scheduled classrooms to departmental-priority rooms, with few agreed upon exceptions
16	Instructional	Policy	16	CU Boulder should implement a policy that requires any lecture or seminar course scheduled in departmental-priority classrooms off of the standard block schedule to include a signed approval from the Dean of the School / College.
17	Instructional	Policy	15, 16	CU Boulder should create and implement incentives for departments who schedule a certain percentage of their courses at off peak times, such as financial incentives, priority-scheduling rights, funds for strategic initiatives, and / or faculty rewards.
18	Instructional	Policy	22	CU Boulder should establish a policy which requires departments to report the location information for all of their instructional activity to the Registrar's office by the add / drop date.
19	Instructional	Policy	18, 22	CU Boulder should implement a policy that provides the Registrar's office with a substantive role in the scheduling of instructional space, including computer and research lab spaces.
20	Instructional	Policy		CU Boulder should implement a policy that requires all instructional space to be used for credit-generating activities before being released for non-curricular and co-curricular uses, not just centrally controlled instructional spaces.
21	Instructional	Policy	15	CU Boulder should define minimum utilization standards that departments must meet or exceed in order to retain scheduling priority within their classrooms.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
22	Instructional	Technology	25	CU Boulder should establish a single academic technology package to be used across all classrooms, and require departments that decide to retain control of their spaces to pay for maintenance and upgrades of academic technology in their own classrooms.
23	Instructional	Technology	19	CU Boulder should invest in a demand-based and predictive course scheduling system to improve student access and throughput, as well as room and seat utilization.
24	Instructional	Data	10, 11, 13, 15	CU Boulder should provide students with data related to scheduled instructional use to inform them of times when the classrooms may be used as study space.
25	Instructional	Data	21	CU Boulder should work collaboratively to establish a single classroom inventory with common data definitions for classroom types, scheduling responsibilities, seating capacity and configuration, and technological capabilities.
26	Instructional	Data	23	CU Boulder should add a field to FCQ forms that addresses what effect the state of instructional space has on student course ratings.
27	Instructional	Data	19	CU Boulder should conduct an internal assessment of the upper limits of course enrollments to determine how many students could be taught in each section if space was not an issue
28	Administrative	Organization	26, 28	CU Boulder should facilitate the more effective utilization of conference rooms by eliminating the need for recharging for these spaces and making their usage and scheduling more transparent.
29	Administrative	Organization	29, 30	CU Boulder should consolidate cashiering functions within the Bursar's office to take advantage of economies of scale and free up prime Main Campus space for reallocation.
30	Administrative	Policy	25	CU Boulder should implement a policy that restricts staff and faculty members from having duplicate office locations unless employees can demonstrate a compelling need, and receive approval from the provost and / or CFO. Such a need may include, but is not limited to, having instructional / research responsibilities on both campuses.
31	Administrative	Business Process	2, 24	CU Boulder should establish incentives to reward faculty / staff members who participate in hoteling arrangements by making available their office spaces and / or using shared spaces. Incentives may include, but are not limited to, alternate IT refresh cycles, additional storage space, and financial stipends.
32	Administrative	Infrastructure	29, 30	CU Boulder should relocate the Testing Center out of Norlin Library, and Transportation Services and the Police deaprtment out of the Public Safety Building, to make available prime Main Campus space for reallocation of higher and better uses.

Rec. number	Functional Space	Category	Associated Observations	Recommendation
33	Administrative	Technology	24	CU Boulder should implement a hoteling system to allow for the renting and use of shared office and collaborative spaces.
34	Administrative	Data	28, 32	In the planning and development of new construction, CU Boulder should migrate to card-entry systems for access to spaces to more effectively gather data related to the use and utilization of administrative spaces, such as offices and conference rooms.
35	Research	Organization	35, 38	CU Boulder should include research space metrics as part of its annual budget review process to provide the Deans of Schools / Colleges with the necessary information to work with the central unit to manage their space effectively, review their performance to determine their true space needs, to align research into the highest-cost spaces, and ensure that research space in start-up and recruitment packages is appropriately allocated.
36	Research	Business Process	35, 36, 38	CU Boulder should periodically review standard research productivity metrics including, but not limited to, research dollar density by department, ratio of unfunded research to total research space, and square footage per research FTE, to inform its allocation and distribution of research space.
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39	Research	Data	39	CU Boulder should utilize the data gathered through the Indirect Cost Recovery data gathering process to update cost pool information maintained within its room inventory.
40	Auxiliaries	Organization	41	Housing & Dining Services should assume responsibility for the management of the operations of all cafes and coffee shops on campus that are currently managed by Schools / Colleges to improve efficiencies and more effectively utilize space.

Appendix 2: Interviewee List

Interviewee List	
Interviewee	**Title**
Kelly Fox	Senior Vice Chancellor and Chief Financial Officer
Steven Thweatt	Vice Chancellor of Administration
Russell Moore	Provost and Executive Vice Chancellor for Academic Affairs
Bill Kaempfer	Vice Provost and Associate Vice Chancellor for Budget and Planning
Carla Ho-a	Assistant Vice Chancellor for Administration, Auxiliaries
Laura Ragin	Executive Director of Accounting and Business Services & Controller
Jeffrey Lipton	Executive Director of Real Estate Acquisitions
Rebecca Fell	Director of Research Property Management
Catherine Shea	Chancellor's Chief of Staff
Stein Sure	Vice Chancellor of Research
Cynthia Husek	Assistant Vice Chancellor for Research Operations

Interviewee List	
Interviewee	**Title**
David Hamrick	Director of Information Technology Operations
Ron Ried	Director of Business Services
Bryan Birosak	Director of Utility Services
Rob Stubbs	Director of Institutional Research
Deb Coffin	Vice Chancellor of Student Affairs
Christina Gonzales	Associate Vice Chancellor and Dean of Students
Kambiz Khalili	Senior Assistant Vice Chancellor for Student Affairs and Executive Director for Housing & Dining Services
David Jacobs	Capital Assets and Space Planning Coordinator
Larry Levine	Associate Vice Chancellor for Information Technology and Chief Information Officer
Thomas Hauser	Director of Research Computing
Marin Stanek	Director, Communications and Support
Dave Danielson	Assistant Vice Chancellor of Facilities Management
Bill Haverly	Campus Architect and Director, Planning, Design and Construction
Tom Goodhew	Assistant Director of Facilities Planning
Guido Ceyssens	Manager of ATS Classroom Services
Jeff Greene	Manager ATS Lab Services
Julian H Kinsman	Associate Director of Academic Technology
Chris Evans	IT Manager
Susan Simpson	Accountant for Facilities Business Services
Jane Kenney	Associate Director, Voice Services and Physical Infrastructure
Phil Weiser	Dean of the Law School
Rob Davis	Dean of the College of Engineering and Applied Science
JoAnn Zelasko	Assistant Dean of Administration, College of Engineering and Applied Science
Anne Heinz	Dean of Continuing Education
Deb Otterstrom	Assistant Registrar for Academic Scheduling
Trina Hicks	Course Inventory Manager
Steve Leigh	Dean of the College of Arts & Sciences
Patricia Rankin	Associate Vice Chancellor for Research
Roxanne Ruggles	Event Coordinator, University Memorial Center
James Lei	Sponsored Projects Accounting Manager
Lorrie Shepard	Dean of the School of Education
AABAC Committee	Academic Affairs Budget Advisory Committee
Mandy Taylor	EMS Coordinator
David Ikenberry	Dean of the Leeds School of Business
Juedon Kebede	Student Body President
Rob Shay	Dean of the College of Music
Jim Austen	Associate Dean for Undergraduate Studies, College of Music
John Davis	Associate Dean for Administration, College of Music
Laura Ragin	Campus Controller and Director of ABS
Stefanie Furman	Assistant Director Cost Accounting and Central Operations
John Lurquin & Laura Michaelson	United Government of Graduate Students
Lee Silbert	Assistant Director of Operations and Financial Management, BioFrontiers Institute
Caroline Himes	Director of the Office of Industry Collaboration
Jim Williams	Dean of Libraries
Rick George	Director of Athletics
Debbie Cook	Director of Housing
Brian Groves & Chris Gotski	CU Bookstore Management
Brian Chamberlain	Interim Director of PTS
Tom McGann	PTS Consultant
Amy Beckstrom & Juergen Friese	Dining Services Management
Gary Chadwick	Director of Recreation Services
Don Misch	Sr AVC of Health & Wellness Center
Paul Beale	Chair of the Physics Department
Jean Balch	Manager of Operations and Finance
Darna Dufour	Associate Dean for Faculty and Administrative Affairs

Appendix 3: Classroom Utilization

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
ANDSE100	49	Departmental	n/a	10%
ANDSN102	20	Departmental	Computer Lab	0%
ANDSN103	28	Departmental	n/a	15%
ARMR1B01	22	Departmental	Seminar Room	40%
ARMR201	27	Departmental	Computer Lab	22%
ARMR206A	26	Departmental	Classroom	44%
ARMR209	26	Departmental	Computer Lab	55%
ARMR211	25	Departmental	Computer Lab	22%
ARMR218	39	Departmental	Classroom	42%
ARNTN200	20	Departmental	Classroom	59%
ARNTN207	16	Departmental	Classroom	31%
ATLS100	150	Priority	Classroom	72%
ATLS102	77	Priority	Classroom	38%
ATLS104	36	Priority	Computer Lab	73%
ATLS105	26	Priority	Computer Lab	2%
ATLS113	31	Priority	Computer Lab	65%
ATLS1B25	25	Priority	Classroom	74%
ATLS1B29	40	Priority	Classroom	62%
ATLS1B31	40	Priority	Classroom	75%
ATLS202	20	Priority	Seminar Room	2%
ATLS207	18	Priority	n/a	34%
ATLS229	38	Priority	n/a	9%
ATLS2B10	171	Priority	Black Box Theater	7%
ATLS2B31	50	Priority	studio	45%
ATLS310	20	Priority	Computer Lab	23%
ATLS342	25	Priority	Classroom	69%
BESC145	24	Departmental	Classroom	50%
BESC155	26	Departmental	Science Lab	50%
BESC180	169	Central	Classroom	83%
BESC185	75	Central	Classroom	83%
BESC1B75	49	Departmental	Classroom	31%
BESC1B81	38	Special	Classroom	26%
BESC265	26	Departmental	Classroom	38%
BESC340E	10	Departmental	n/a	3%
BESC355	20	Departmental	Classroom	38%
BESC385	25	Departmental	Computer Lab	6%
BESC455	26	Departmental	Science Lab	30%
BIOTA115	200	Special	n/a	64%
BIOTB115	49	Special	n/a	7%
BIOTB231	40	Special	n/a	28%
BIOTB331	40	Special	n/a	26%
BUCKN101	20	Departmental	Classroom	30%
BUCKS106	25	Departmental	Classroom	67%
CARL304	20	Departmental	Multipurpose room	22%
CARLE012	50	Departmental	n/a	59%
CEDU140	30	Departmental	Seminar Room	28%
CEDU1B40	20	Departmental	Classroom	25%
CHEM131	22	Central	Classroom	79%
CHEM133	20	Central	Classroom	81%
CHEM140	479	Central	Classroom	74%
CHEM142	194	Central	Classroom	66%
CHEM145	28	Central	Classroom	77%
CHEM146	10	Central	Classroom	1%
CHEY240	36	Departmental	n/a	42%
CHEY252A	30	Departmental	n/a	64%
CHEYCHESS	38	Departmental	n/a	61%
CINC152	75	Departmental	Comp Lab/ Architecture Studio	39%
CINC152 H	15	Departmental	Classroom	3%
CINC152F	25	Departmental	Classroom	18%
CIRE340	12	Departmental	Seminar Room	2%
CIRES274	30	Departmental	n/a	2%
CKRL102	49	Departmental	n/a	17%
CLRE104	35	Central	Classroom	73%
CLRE111	36	Departmental	Computer Lab	45%
CLRE207	80	Central	Classroom	78%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
CLRE208	36	Central	Classroom	66%
CLRE209	35	Central	Classroom	74%
CLRE211	30	Central	Classroom	83%
CLRE212	24	Central	Classroom	79%
CLRE301	32	Central	Classroom	82%
CLRE302	35	Central	Classroom	77%
CLUB10	15	Priority	Classroom	79%
CLUB13	42	Central	Classroom	67%
CLUB4	50	Priority	Classroom	65%
CLUB6	27	Departmental	Seminar Room	46%
COTT110	20	Departmental	Classroom	7%
CSTP111	25	Departmental	n/a	14%
DLC170	21	Departmental	n/a	3%
DLYC101	40	Departmental	Classroom	6%
DLYC103	40	Departmental	Classroom	5%
DLYT106	20	Departmental	Classroom	19%
DUAND142	30	Departmental	n/a	4%
DUAND318	20	Departmental	n/a	16%
DUANE126	40	Departmental	Classroom	64%
DUANG125	74	Central	Classroom	73%
DUANG131	48	Central	Classroom	73%
DUANG140	140	Departmental	CHANGING	10%
DUANG1B20	216	Central	Classroom	79%
DUANG1B25	23	Central	Classroom	77%
DUANG1B27	23	Central	Classroom	72%
DUANG1B30	342	Central	Classroom	84%
DUANG1B35	23	Central	Classroom	75%
DUANG1B39	23	Central	Classroom	76%
DUANG214	10	Departmental	COMMON AREA	11%
DUANG230	25	Departmental	Science Lab	23%
DUANG2B21	36	Central	Classroom	72%
DUANG2B41	36	Priority	Classroom	66%
DUANG2B47	49	Central	Classroom	73%
DUANG2B60	43	Priority	Classroom	63%
DUANG2B66	35	Departmental	DUAL USE	100%
DUANG2B70	20	Departmental	Computer Lab	18%
DUANG2B75	32	Departmental	Classroom	46%
DUANG2B77	25	Departmental	Classroom	47%
DUANG2B83	30	Departmental	Science Lab	55%
DUANG2B86	18	Departmental	Classroom	5%
DUANG2B88	40	Departmental	Classroom	39%
DUANG328	30	Departmental	n/a	4%
ECAE104	15	Departmental	Seminar Room	41%
ECAE1B16	30	Departmental	Seminar Room	32%
ECAE1B44	19	Departmental	n/a	3%
ECAE1B73	25	Departmental	Computer Lab	2%
ECCE141	59	Departmental	Computer Lab	47%
ECCE1B41	50	Departmental	Classroom	36%
ECCE1B47	25	Departmental	n/a	46%
ECCE1B52	50	Departmental	Storage Room/Private Lab	20%
ECCE1B53	25	Departmental	n/a	20%
ECCH1B70	25	Departmental	Science Lab	9%
ECCR105	60	Central	Classroom	83%
ECCR108	28	Central	Classroom	88%
ECCR110	27	Central	Classroom	78%
ECCR116	27	Central	Classroom	81%
ECCR118	27	Central	Classroom	84%
ECCR131	28	Central	Classroom	84%
ECCR133	27	Central	Classroom	37%
ECCR135	54	Central	Classroom	11%
ECCR137	27	Central	Classroom	40%
ECCR139	27	Central	Classroom	71%
ECCR143	26	Departmental	Computer Lab	23%
ECCR150	56	Central	Classroom	76%
ECCR151	48	Central	Classroom	90%
ECCR155	48	Central	Classroom	90%
ECCR1B06	15	Central	n/a	34%
ECCR1B08	20	Central	Classroom	74%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
ECCR1B40	128	Central	Classroom	76%
ECCR1B51	48	Central	Classroom	79%
ECCR1B55	48	Central	Classroom	95%
ECCR200	93	Central	Classroom	91%
ECCR235	26	Departmental	Computer Lab	38%
ECCR245	96	Central	Classroom	89%
ECCR257	21	Departmental	0	1%
ECCR265	142	Central	Classroom	74%
ECCS112	58	Departmental	n/a	4%
ECCS112C	20	Departmental	n/a	71%
ECCS123	15	Departmental	n/a	0%
ECCS1B12	94	Departmental	Classroom	62%
ECCS1B14	40	Departmental	Classroom	50%
ECCS1B28	75	Departmental	Classroom	72%
ECEE105	3	Departmental	Science Lab	11%
ECEE1B32	60	Departmental	Classroom	51%
ECEE1B65	4	Departmental	n/a	13%
ECEE254	20	Departmental	Science Lab	9%
ECEE265	17	Departmental	Classroom	57%
ECEE275A	35	Departmental	Science Lab	0%
ECEE281	50	Departmental	Science Lab	35%
ECEE282	30	Departmental	Science Lab	28%
ECEE283	40	Departmental	Classroom	52%
ECEE287	25	Departmental	Science Lab	5%
ECME1B66	15	Departmental	Science Lab	15%
ECON117	47	Central	Classroom	89%
ECON119	47	Priority	Classroom	83%
ECON13	43	Central	Classroom	86%
ECON16	20	Central	Classroom	81%
ECON2	38	Central	Classroom	88%
ECON205	40	Central	Classroom	90%
ECON5	32	Departmental	Seminar Room	42%
ECOT226	20	Departmental	n/a	4%
ECOT314	26	Departmental	n/a	0%
ECST1B21	20	Central	Classroom	70%
EDUC132	24	Central	Classroom	93%
EDUC134	28	Central	Classroom	84%
EDUC136	28	Central	Classroom	85%
EDUC138	28	Central	Classroom	78%
EDUC143	32	Priority	Classroom	81%
EDUC155	53	Priority	Classroom	65%
EDUC220	103	Central	Classroom	76%
EDUC231	50	Departmental	Classroom	32%
EDUC237	25	Departmental	n/a	2%
EDUC251	27	Departmental	Classroom	16%
EDUC330	29	Departmental	Classroom	27%
EDUC334	17	Departmental	n/a	2%
EDUC338	15	Departmental	Classroom	23%
EDUC341	28	Departmental	Classroom	49%
EDUC346	30	Departmental	n/a	21%
EKLC2B26	24	Departmental	n/a	17%
EKLC2B30	20	Departmental	n/a	28%
EKLC2B36	20	Departmental	n/a	22%
EKLC2B40	20	Departmental	n/a	22%
EKLC2B56	24	Departmental	n/a	16%
EKLCE1B20	109	Central	Classroom	72%
EKLCE1B50	46	Central	Classroom	68%
EKLCE1B75	32	Central	Classroom	77%
EKLCM124	20	Departmental	Science Lab	61%
EKLCM125	25	Departmental	Science Lab	64%
EKLCM126	20	Departmental	Science Lab	64%
EKLCM127	25	Departmental	Science Lab	66%
EKLCM172	21	Departmental	Science Lab	61%
EKLCM173	20	Departmental	Science Lab	64%
EKLCM174	21	Departmental	Science Lab	37%
EKLCM175	20	Departmental	Science Lab	61%
EKLCM1B25	21	Departmental	Science Lab	24%
EKLCM1B27	21	Departmental	Science Lab	24%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
EKLCM1B72	21	Departmental	Science Lab	24%
EKLCM1B73	21	Departmental	Science Lab	24%
EKLCM1B74	21	Departmental	Science Lab	24%
EKLCM1B75	21	Departmental	Science Lab	24%
EKLCM203	30	Central	Classroom	82%
EKLCM224	30	Departmental	Science Lab	27%
EKLCM225	25	Departmental	Science Lab	37%
EKLCM272	50	Departmental	Science Lab	55%
EKLCM273	30	Departmental	Science Lab	59%
EKLCM275	20	Departmental	Science Lab	61%
EKLCW165	30	Departmental	n/a	17%
EKLCW166	25	Departmental	Seminar Room	12%
EKLCW240	24	Departmental	Computer Lab	3%
ENVD102	24	Departmental	n/a	10%
ENVD120	65	Priority	Classroom	75%
ENVD122	30	Priority	Classroom	77%
ENVD201	100	Departmental	WORKSHOP	39%
ENVD211	25	Departmental	Classroom	36%
ENVD214	40	Departmental	Computer Lab	9%
ENVD215	25	Departmental	Classroom	25%
ENVD301	15	Departmental	n/a	9%
ENVD310	48	Departmental	n/a	35%
ENVD355	75	Departmental	WORKSHOP	16%
ENVD360	63	Departmental	WORKSHOP	25%
ENVD391	14	Departmental	WORKSHOP	7%
FLMG102	46	Central	Classroom	71%
FLMG103	46	Central	Classroom	52%
FLMG104	77	Central	Classroom	60%
FLMG150	30	Departmental	n/a	20%
FLMG154	84	Central	Classroom	49%
FLMG155	200	Priority	Classroom	66%
FLMG156	86	Central	Classroom	68%
FLMG157	86	Departmental	Classroom	51%
FLMG170	15	Departmental	Classroom	6%
FLMG241	25	Departmental	Classroom	40%
FLMG244	20	Departmental	Classroom	17%
FLMG265	60	Departmental	n/a	26%
FLMG271B	6	Departmental	n/a	7%
FLMG279	21	Departmental	n/a	1%
FLMG303	10	Departmental	n/a	2%
FRNDBAUR	30	Departmental	n/a	27%
FRNDCRAV	30	Departmental	n/a	44%
FRNDMCCA	30	Departmental	n/a	55%
FRNDREYN	30	Departmental	n/a	40%
GOLDA120	130	Departmental	Classroom	38%
GOLDA150	28	Departmental	Seminar Room	11%
GOLDA1B16	26	Departmental	Science Lab	33%
GOLDA1B18	20	Departmental	Science Lab	9%
GOLDA1B20	28	Departmental	Classroom	23%
GOLDA1B60	40	Departmental	n/a	17%
GOLDA250	26	Departmental	Seminar Room	19%
GOLDA2B70	246	Central	n/a	62%
GOLDA350	28	Departmental	Seminar Room	0%
GUGG2	36	Central	Classroom	66%
GUGG201E	27	Departmental	Seminar Room	28%
GUGG205	49	Central	Classroom	69%
GUGG206	37	Central	Classroom	80%
GUGG3	37	Priority	Classroom	82%
GUGG6	30	Departmental	Computer Lab	57%
HALE230	88	Central	Classroom	71%
HALE235	15	Central	Classroom	33%
HALE236	27	Central	Classroom	90%
HALE240	40	Central	Classroom	85%
HALE246	20	Departmental	Science Lab	63%
HALE256	20	Departmental	Science Lab	5%
HALE260	40	Central	Classroom	76%
HALE270	188	Central	Classroom	79%
HALE450	23	Departmental	n/a	21%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
HALE455	18	Departmental	Seminar Room	39%
HEND212	25	Departmental	n/a	3%
HLMS104	21	Central	Classroom	70%
HLMS137	39	Priority	Classroom	88%
HLMS141	51	Central	Classroom	85%
HLMS152	35	Departmental	COMPUTER LAB/ CLASSROOM	0%
HLMS177	26	Priority	Classroom	85%
HLMS181	26	Central	Classroom	82%
HLMS185	26	Central	Classroom	86%
HLMS191	26	Central	Classroom	89%
HLMS193	29	Central	Classroom	91%
HLMS196	20	Priority	Classroom	71%
HLMS199	95	Central	Classroom	73%
HLMS201	98	Central	Classroom	83%
HLMS211	56	Central	Classroom	80%
HLMS220	16	Priority	Seminar Room	10%
HLMS229	39	Central	Classroom	88%
HLMS237	39	Central	Classroom	90%
HLMS241	52	Central	Classroom	71%
HLMS245	33	Central	Classroom	88%
HLMS247	33	Central	Classroom	90%
HLMS251	33	Central	Classroom	84%
HLMS252	137	Central	Classroom	74%
HLMS255	33	Central	Classroom	81%
HLMS259	26	Priority	Seminar Room	85%
HLMS263	33	Central	Classroom	88%
HLMS267	52	Central	Classroom	76%
HLMS285	18	Central	n/a	2%
HLMS77	30	Departmental	Classroom	44%
HUMN125	45	Central	Classroom	90%
HUMN135	74	Central	Classroom	78%
HUMN145	22	Central	Classroom	82%
HUMN150	155	Central	Classroom	72%
HUMN160	20	Priority	Classroom	89%
HUMN180	24	Central	Classroom	88%
HUMN186	26	Central	Classroom	90%
HUMN190	27	Central	Classroom	80%
HUMN1B35	28	Central	Computer Lab	13%
HUMN1B45	34	Central	Computer Lab	42%
HUMN1B50	284	Central	Classroom	65%
HUMN1B70	26	Central	Classroom	87%
HUMN1B80	74	Central	Classroom	89%
HUMN1B90	52	Central	Classroom	74%
HUMN245	20	Priority	Classroom	89%
HUMN250	94	Central	Classroom	78%
HUMN270	20	Priority	Classroom	87%
HUMN335	16	Priority	Classroom	43%
HUMN370	20	Priority	Classroom	80%
IBG210	30	Departmental	n/a	2%
IBG261	18	Departmental	n/a	4%
IBS1B46	17	Departmental	n/a	3%
IEC103	15	Departmental	n/a	87%
IEC104B	14	Departmental	n/a	50%
IEC105A	17	Departmental	n/a	26%
IEC105B	14	Departmental	n/a	82%
IEC106	16	Departmental	n/a	98%
IEC201	17	Departmental	n/a	93%
IEC202	15	Departmental	n/a	110%
IEC203	16	Departmental	n/a	87%
IEC204	17	Departmental	n/a	86%
IEC205	15	Departmental	n/a	86%
IEC207	16	Departmental	n/a	57%
IEC301A	15	Departmental	n/a	71%
IEC301B	17	Departmental	n/a	63%
IEC305	20	Departmental	n/a	46%
ITLL150	60	Departmental	Classroom	74%
ITLL160	60	Departmental	Classroom	69%
ITLL1B10	60	Departmental	Science Lab	64%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
ITLL1B50	65	Departmental	Classroom	71%
ITLL2B10	60	Departmental	hands-on learning plaza	64%
KCENN100	29	Departmental	n/a	37%
KCENN101	36	Departmental	n/a	19%
KCENS161	25	Departmental	n/a	13%
KCENS163	23	Departmental	n/a	25%
KITWN132	29	Departmental	n/a	26%
KITWN133	32	Departmental	n/a	53%
KOBL102	44	Priority	Classroom	69%
KOBL203	20	Priority	Seminar Room	3%
KOBL210	100	Priority	Classroom	81%
KOBL220	50	Priority	Classroom	74%
KOBL230	42	Priority	Classroom	81%
KOBL235	42	Priority	Classroom	75%
KOBL255	50	Priority	Classroom	75%
KOBL300	53	Priority	Classroom	56%
KOBL302	22	Priority	Classroom	77%
KOBL308	42	Priority	Classroom	75%
KOBL320	53	Priority	Computer Lab	80%
KOBL325	10	Priority	Seminar Room	4%
KOBL330	77	Priority	Classroom	78%
KOBL340	77	Priority	Classroom	78%
KOBL350	29	Priority	Seminar Room	17%
KOBL355	20	Priority	Seminar Room	6%
KOBL375	39	Priority	Classroom	83%
KOBLS110	67	Priority	Classroom	51%
KOBLS125	83	Priority	Classroom	74%
KOBLS127	82	Priority	Classroom	70%
KOBLS129	20	Priority	Seminar Room	7%
KOBLS130	26	Priority	Seminar Room	4%
KOBLS233	20	Priority	Seminar Room	3%
KTCH116	44	Departmental	Seminar Room	51%
KTCH118	27	Central	Classroom	76%
KTCH119	27	Central	Classroom	84%
KTCH120	27	Central	Classroom	78%
KTCH231	16	Departmental	Seminar Room	15%
KTCH234	45	Central	Classroom	76%
KTCH235	42	Central	Classroom	77%
KTCH24	20	Departmental	n/a	3%
KTCH301	36	Central	Classroom	88%
KTCH303	36	Central	Classroom	84%
KTCH304	20	Departmental	Science Lab	34%
KTCH307	24	Departmental	Classroom	43%
KTCH308	26	Departmental	Classroom	34%
KTCH33	20	Departmental	n/a	20%
LESS1B01	14	Departmental	Seminar Room	60%
LIBR260A	22	Departmental	n/a	2%
LIBR424B	28	Departmental	Classroom	3%
LIBRM300D	25	Departmental	Seminar Room	51%
LIBRM498	16	Central	Classroom	41%
LIBRM549	75	Departmental	Seminar Room	24%
LIBRN424A	20	Departmental	Classroom	80%
LIBRN424B	28	Departmental	n/a	37%
LIBRS421	16	Departmental	Classroom	13%
LIBY05E	37	Departmental	n/a	12%
LIBY05W	36	Departmental	n/a	35%
LIBY103	30	Departmental	Classroom	66%
LIBY140	30	Departmental	Classroom	47%
MATH100	425	Central	Classroom	80%
MATH170	40	Departmental	Classroom	65%
MATH350	30	Departmental	Seminar Room	8%
MCKY102	65	Departmental	Classroom	39%
MCKY117	20	Departmental	Classroom	21%
MCKY1B03D	30	Departmental	Classroom	14%
MCKY202	20	Departmental	n/a	6%
MCKY213	30	Departmental	Classroom	19%
MCOLE155	40	Central	Classroom	82%
MCOLE158	32	Central	Classroom	81%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
MCOLE186	31	Central	Classroom	83%
MCOLE280	24	Departmental	Science Lab	26%
MCOLW100	161	Central	Classroom	67%
MESACOLO				
MESA	40	Departmental	n/a	68%
MKNA103	26	Departmental	Seminar Room	38%
MKNA112	20	Departmental	CLASSROOM/ SEMINAR ROOM	33%
MKNA204	18	Central	Classroom	69%
MUEND144	32	Central	Classroom	84%
MUEND318	12	Departmental	n/a	17%
MUEND346	22	Departmental	Computer Lab	62%
MUEND418	16	Departmental	n/a	7%
MUEND424	14	Departmental	n/a	2%
MUEND430	50	Departmental	n/a	13%
MUEND439	27	Central	Classroom	82%
MUENE0014	24	Departmental	Computer Lab	64%
MUENE0022	25	Departmental	Science Lab	13%
MUENE0040	24	Departmental	n/a	33%
MUENE0046	116	Central	Classroom	88%
MUENE050	405	Central	Classroom	72%
MUENE064	40	Central	Classroom	76%
MUENE113	49	Central	Classroom	76%
MUENE114	20	Central	Classroom	63%
MUENE118	34	Central	Classroom	91%
MUENE123	34	Central	Classroom	75%
MUENE126	34	Central	Classroom	90%
MUENE130	28	Central	Classroom	80%
MUENE131	49	Central	Classroom	72%
MUENE214	50	Departmental	n/a	28%
MUENE311	21	Departmental	Computer Lab	50%
MUENE317	15	Departmental	n/a	4%
MUENE417	47	Central	Classroom	72%
MUENE431	47	Central	Classroom	77%
MUENE432	48	Central	Classroom	75%
MUSC112	500	Departmental	THEATER	6%
MUSC121	14	Departmental	n/a	37%
MUSC125	30	Departmental	Classroom	54%
MUSC185	15	Departmental	Classroom	3%
MUSC190	15	Departmental	n/a	6%
MUSC191	50	Departmental	Classroom	63%
MUSC199	117	Departmental	MINI THEATER	45%
MUSE160	200	Departmental	BAND ROOM	65%
MUSN180C	13	Departmental	Classroom	58%
MUSN180D	20	Departmental	Classroom	45%
MUSN1B08	25	Departmental	n/a	8%
MUSN1B46	15	Departmental	Computer Lab	51%
MUSN1B59	28	Departmental	Classroom	39%
MUSN1B85	25	Departmental	Classroom	39%
MUSN1B95D	269	Departmental	THEATER	38%
MUSN285	24	Departmental	Seminar Room	37%
OBSVS125	30	Departmental	Computer Lab	17%
OBSVS175	25	Departmental	Classroom	61%
PORT436	16	Departmental	n/a	4%
PORTB0026	26	Departmental	Science Lab	54%
PORTB118	28	Departmental	Classroom	11%
PORTB121	53	Departmental	Classroom	35%
RAMYC147	72	Departmental	Science Lab	65%
RAMYC148	16	Departmental	Science Lab	65%
RAMYC151	16	Departmental	Science Lab	65%
RAMYC159	14	Departmental	Science Lab	65%
RAMYC209	15	Departmental	Science Lab	61%
RAMYC231	25	Departmental	Science Lab	20%
RAMYC250	204	Central	Classroom	88%
RAMYN168	20	Departmental	Science Lab	56%
RAMYN176	20	Departmental	Science Lab	58%
RAMYN183	40	Departmental	Classroom	37%
RAMYN191	12	Departmental	n/a	2%
RAMYN1B23	61	Central	Classroom	78%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
RAMYN1B24	24	Departmental	Science Lab	54%
RAMYN1B31	41	Central	Classroom	69%
RAMYN1B36	30	Departmental	Science Lab	27%
RAMYN1B75	30	Priority	Classroom	55%
RAMYN1B76	22	Departmental	Science Lab	24%
RAMYN240	38	Departmental	n/a	2%
RAMYN268	20	Departmental	Science Lab	76%
RAMYN276	20	Departmental	Science Lab	68%
SLHS230	72	Departmental	Classroom	99%
SLHS393	25	Departmental	Classroom	28%
SMTHS200C	21	Departmental	n/a	61%
SMTHS205	25	Departmental	n/a	68%
STAD112	42	Central	Classroom	74%
STAD135	32	Central	Classroom	62%
STAD136	30	Departmental	Science Lab	56%
STAD136C	25	Departmental	Classroom	6%
STAD140	49	Central	Classroom	74%
STAD241	5	Departmental	n/a	0%
STAD255-33	5	Departmental	n/a	1%
SWLL02	20	Departmental	Classroom	49%
SWLL102A	18	Departmental	Classroom	47%
SWLL131	30	Departmental	n/a	2%
SWLL42C	21	Departmental	Classroom	40%
THTRC190	412	Departmental	n/a	18%
THTRC1B30	17	Departmental	COSTUME SHOP	43%
THTRC1B40	55	Departmental	DANCE ROOM	43%
THTRC240	44	Departmental	ACTING STUDIO	42%
THTRC340	36	Departmental	Classroom	33%
THTRC342	26	Departmental	Classroom	38%
THTRC370	100	Departmental	THEATER	21%
THTRW150	150	Departmental	DANCE ROOM	86%
THTRW325	49	Departmental	DANCE ROOM	25%
THTRW350	131	Departmental	DANCE ROOM	84%
VAC155	31	Departmental	Studio	14%
VAC171	31	Departmental	Studio	14%
VAC172	31	Departmental	Studio	34%
VAC175	31	Departmental	Studio	27%
VAC182	15	Departmental	Classroom	18%
VAC184	31	Departmental	Studio	28%
VAC1B03	27	Departmental	Classroom	48%
VAC1B17	25	Departmental	Video Editing Lab	26%
VAC1B20	208	Central	Classroom	64%
VAC1B23	31	Departmental	Computer Lab	39%
VAC1B88	43	Central	Classroom	72%
VAC1B90	43	Central	Classroom	72%
VAC1B97	20	Departmental	Classroom	17%
VAC208	20	Departmental	Classroom	3%
VAC271	28	Departmental	Workshop	11%
VAC276	29	Departmental	Studio	11%
VAC277	35	Departmental	Studio	17%
VAC287	30	Departmental	Seminar Room	11%
VAC290	28	Departmental	Studio	6%
VAC303	25	Departmental	Seminar Room	11%
VAC308	30	Departmental	n/a	32%
VAC371	22	Departmental	Classroom	18%
VAC390	43	Departmental	Studio	34%
VAC395	47	Departmental	Studio	22%
VAC455	28	Departmental	Seminar Room	30%
VAC471	33	Departmental	Studio	38%
VAC474	39	Departmental	Studio	45%
VAC475	32	Departmental	Studio	51%
VAC485	25	Departmental	Classroom	37%
WLAW102	32	Departmental	n/a	6%
WLAW1B12	20	Departmental	Classroom	6%
WLAW202	15	Departmental	Seminar Room	8%
WLAW204	100	Departmental	Classroom	28%
WLAW205	80	Departmental	Classroom	42%
WLAW206	76	Departmental	Classroom	26%

Classroom Utilization during 2013 – 2014 Academic Year				
Classroom	Capacity	Scheduling Protocol	Classroom Type (ATS Inventory)	Room Utilization (8 am - 5 pm, M - F)
WLAW207	90	Departmental	Classroom	41%
WLAW300	60	Departmental	Classroom	17%
WLAW301	81	Departmental	Classroom	80%
WLAW303	25	Departmental	Seminar Room	31%
WLAW304	51	Departmental	Classroom	54%
WLAW305	51	Departmental	Classroom	67%
WLAW306	51	Departmental	Classroom	51%
WLAW307	51	Departmental	Classroom	46%
WLAW330	25	Departmental	Seminar Room	23%
WLAW411	20	Departmental	Seminar Room	28%
WLAW421	20	Departmental	Seminar Room	31%
WVN166A	15	Departmental	Classroom	10%
WVN166B	15	Departmental	Classroom	7%
WVN181A	30	Departmental	Classroom	27%
WVN181B	30	Departmental	Classroom	10%

Appendix 4: Building Cost Model

Building Cost Model		
CU Boulder Building	Cost per Assignable Square Foot	Total Building Costs
ADMIN & RSCH CTR EAST CAMPUS	6.48	$1,080,999
A&S FINANCE AND PAYROLL ADMIN	11.16	$49,232
ACADEMIC ADVISING CENTER: STUDENTS IN TRASITION	18.88	$16,087
ADMIN & RSCH CTR EAST CAMPUS	9.52	$1,080,999
ALUMNI CTR GARAGE ANNEX	11.64	$8,757
ANDREWS HALL	4.11	$144,492
ARMORY	9.91	$155,467
ARMORY TRAILER	2.47	$1,861
ARNETT HALL	3.96	$126,455
ARTS AND SCIENCES OFFICE BUILDING 1	7.87	$39,500
ATHENS CT A1	59.39	$323,568
ATHENS CT A2	0.05	$246
ATHENS CT A3	0.48	$1,232
ATHENS CT A4	0.11	$600
ATHENS CT B1	0.05	$160
ATHENS CT B2	0.02	$135
ATHENS CT B3	0.09	$273
ATHENS CT C1	0.08	$594
ATHENS CT C2	0.07	$529
ATHENS NORTH CT	1.24	$45,682
BAKER HALL	1.73	$125,470
BALCH FIELDHOUSE COMPLEX	4.26	$217,057
BALCH FIELDHOUSE PRESSBOX	5.95	$87,891
BEAR CREEK COMMONS	5.74	$48,699
BENSON EARTH SCIENCES BLDG	21.71	$1,146,001
BRACKETT HALL	26.28	$450,147
BRUCE CURTIS BLDG	21.77	$569,485
BRYAN BENJAMIN SAX SKI TEAM BLDG	10.30	$29,548
BUCKINGHAM HALL	2.11	$71,284
CARLSON GYMNASIUM	18.13	$626,470
CASA -CTR FOR ASTRO & SPACE ASTRNMY	13.26	$305,479
CENTER FOR ASIAN STUDIES	6.25	$24,381
CENTER FOR COMMUNITY	17.34	$1,806,296
CENTER FOR INNOVATION & CREATIVITY	13.93	$859,188
CHEYENNE ARAPAHO HALL	4.06	$293,992

Building Cost Model		
CU Boulder Building	**Cost per Assignable Square Foot**	**Total Building Costs**
CHILDRENS CENTER (DACR)	6.00	$16,908
CHILDRENS CENTER (DACRA)	0.03	$53
CIRES COOP INST FOR RSCH IN ENV SCI	20.10	$291,858
CLARE SMALL ARTS & SCIENCES	12.47	$308,892
COCKERELL HALL	18.58	$331,805
COMMUNICATION DISORDERS	7.96	$111,001
COMPUTING CENTER	16.83	$296,838
CONTINUING EDUCATION CENTER	19.35	$189,903
COORS EVENTS/CONFERENCE CENTER	8.75	$1,043,404
CRISTOL CHEMISTRY & BIOCHEM BLDG	24.03	$1,810,645
CROSMAN HALL	18.02	$324,822
DAL WARD ATHLETIC CENTER	13.70	$704,793
DARLEY TOWERS	43.85	$3,334,722
DENISON ARTS & SCIENCES BLDG	12.25	$36,608
DISCOVERY LEARNING CNTR	44.22	$924,741
DRESCHER UNDERGRADUATE ENGINEERING	25.78	$560,945
DUANE D-WING	27.38	$415,746
DUANE PHYSICS	10.65	$1,223,229
ECONOMICS BLDG	15.82	$243,588
EDUCATION BLDG	10.15	$292,867
EKELEY SCIENCES BLDG	19.05	$1,559,789
ELECTRIC SUPPLY BLDG	0.97	$1,156
ENGINEERING COMPLEX (CREATED)	13.46	$4,431,711
ENVIRONMENTAL DESIGN BLDG	9.23	$396,963
ENVIRONMENTAL HEALTH & SAFETY CNTR	18.69	$255,916
FACT Complex (CREATED)	0.90	$21,445
FAM HOUSING COMMUNITY CENTER	3.77	$5,710
FAMILY HOUSING EXPANSION	0.96	$979
FARRAND HALL	37.54	$3,016,260
FISKE PLANETARIUM & SCI CENTER	8.91	$114,984
FLEMING BUILDING	7.02	$488,832
GATEHOUSE/INFO BOOTH	4.18	$109
GATES WOODRUFF WOMENS STUDIES COTT	17.64	$54,870
GOLD BIOSCIENCES BUILDING	44.71	$2,878,409
GREENHOUSE NO 1 AT MACKY	7.00	$20,789
GUGGENHEIM GEOGRAPHY BLDG	8.80	$121,580
HALE SCIENCE BLDG	16.29	$367,358
HALLETT HALL	4.01	$255,093
HELLEMS ARTS & SCIENCES BLDG	11.01	$574,685
HENDERSON BLDG (MUSEUM)	8.83	$184,858
HIGH PERFORMANCE COMPUTING FACILITY	320.81	$527,418
Housing & Dining Services Facilities Operations Center	4.72	$145,548
HOUSING SYS SERVICE CENTER	0.77	$28,092
IMIG MUSIC BLDG	13.70	$806,550
INST FOR BEHAVIORAL GENETICS	32.64	$474,562
INST OF BEHAV SCI NO 2	2.84	$6,749
INSTITUTE OF BEHAVIORAL SCIENCE	24.24	$695,963
Jennie Smoly Caruthers Biotechnology Bldg.	18.01	$2,892,848
JILA (JOINT INST FOR LAB ASTROPHYSICS)	18.68	$1,653,943

Building Cost Model		
CU Boulder Building	**Cost per Assignable Square Foot**	**Total Building Costs**
KETCHUM ARTS & SCIENCES BLDG	6.88	$244,829
KITTREDGE CENTRAL	1.35	$76,901
KITTREDGE WEST HALL	42.94	$1,954,878
KOELBEL BUILDING - LEEDS SCH OF BUS	24.46	$2,385,491
KOENIG ALUMNI CENTER	15.88	$82,016
LASP SPACE TECHNOLOGY RSCH CTR	21.23	$1,436,909
LESSER HOUSE	9.47	$19,779
LIBBY HALL	6.58	$472,351
LIFE SCI RESEARCH LAB (RL-4)	18.20	$156,599
LITMAN RESEARCH LAB (RL-1)	10.77	$383,224
MACKY AUDITORIUM	7.71	$370,715
MARINE COURT COMPLEX (CREATED)	3.39	$289,585
MARINE ST SCIENCE CTR (RL-6)	12.86	$428,678
MARR ALPINE LABORATORY	21.09	$92,013
MATHEMATICS BUILDING	14.68	$554,192
MCKENNA LANGUAGES BLDG	10.69	$136,679
MUENZINGER PSYCH & BIOPSYCH	12.07	$1,058,904
NEWTON COURT COMPLEX (Created)	0.95	$194,769
NORLIN LIBRARY	7.76	$1,774,735
OLD MAIN	13.66	$197,137
PAGE FOUNDATION CENTER	3.32	$23,406
POLICE & PARKING SERVICES CTR	10.36	$191,751
PORTER BIOSCIENCES	31.86	$1,932,367
POTTS FIELD TRACK STORAGE	1.45	$1,774
POWER HOUSE	750.06	$6,684,549
RAMALEY BIOLOGY BLDG	14.27	$964,349
REGENT ADMINISTRATIVE CENTER	14.24	$691,021
REGENT DR AUTOPARK	55.12	$83,776
RESEARCH LAB NO 2	8.49	$415,733
RESEARCH PARK GREENHOUSE	20.16	$196,285
ROSER ATLAS CENTER	26.98	$1,037,161
SCIENCE LEARNING LABORATORY	18.94	$313,833
SEWALL HALL	8.59	$538,098
SMILEY COURT COMPLEX (Created)	1.30	$241,673
SMITH HALL	3.03	$161,034
SOMMERS-BAUSCH OBSERVATORY	6.81	$40,498
SPACE SCIENCE BUILDING (formerly 3665 Disc. Dr.)	20.33	$802,798
STADIUM BUILDING	27.78	$2,831,328
STADIUM SKY BOX	7.71	$417,126
STADIUM TICKET BUILDING	1.44	$556
STUDENT RECREATION CENTER	4.48	$1,126,970
TECHNOLOGY LEARNING CENTER	26.66	$238,450
TEMP BLDG 1 AT CLARE SMALL	6.09	$29,856
TEMPORARY BLDG 78	5.19	$4,750
TEMPORARY BLDG 65	7.83	$12,181
TEMPORARY BLDG 70	4.62	$13,762
TEMPORARY BLDG 72	0.85	$12,029
TEMPORARY BLDG 82 (Formerly IEC)	8.48	$17,524
TEMPORARY BLDG 88	7.39	$14,881
TEMPORARY BLDG 90	1.76	$3,235
TEMPORARY BLDG 93	11.09	$20,633
TEMPORARY BLDG 95	4.97	$7,112
TEMPORARY BUILDING 97	13.75	$31,760
TEMPORARY BLDG 98	3.17	$6,869

Building Cost Model		
CU Boulder Building	**Cost per Assignable Square Foot**	**Total Building Costs**
TEMPORARY BLDG 99	2.92	$3,135
TEMPORARY BUILDING 03 (IEC)	0.01	$118
TRANSPORTATION CENTER AND ANNEX	3.52	$29,882
UNIV ADMIN CTR ANNEX	11.66	$16,523
UNIVERSITY ADMIN CTR	6.86	$53,776
UNIVERSITY CLUB	9.67	$149,971
UNIVERSITY MEMORIAL CENTER	12.06	$1,804,723
UNIVERSITY RESIDENCE	4.24	$24,379
UNIVERSITY THEATRE	11.33	$443,606
VISUAL ARTS COMPLEX	22.00	$2,379,379
WALNUT DISTRIBUTION CENTER	0.34	$21,736
WARDENBURG STUDENT HEALTH CTR	17.79	$430,691
WAREHOUSE NO 1	0.19	$359
WAREHOUSE NO 2	0.24	$454
WAREHOUSE NO 3	0.04	$70
WAREHOUSE NO 4	40.11	$77,415
WEBER HALL AND BEAR CREEK APT B (Created)	4.41	$2,339,461
WILLARD HALL	3.10	$183,810
WILLIAMS VILL HEATING PLANT	2096.12	$892,947
WILLIAMS VILLAGE NORTH	15.33	$1,133,081
WOLF LAW BUILDING	16.56	$1,828,253
WOODBURY ARTS & SCIENCES BLDG (Combined with Eaton Humanities)	$45.10	$807,583

Huron's attempt to assess building costs per ASF may yield unexpected or strange looking results, we anticipate that these results are a function of the limited data and context we had in conducting this analysis. Altough we attempted to address unusual circumstnaces, there are likely to be inscances where buildings are going off-line, coming on-line, have significant capital construction, or specific nuances regarding use or metering which would impact the total cost estimated per building.

Appendix 5: Building Complexes

Engineering Complex		
CU Boulder Building	**Building Code**	**Building Number**
ENGINEERING ADMINISTRATION WING	ECAD	438
ENGINEERING AEROSPACE WING	ECAE	442
ENGINEERING CIVIL & ENVIRO WING	ECCE	436
ENGINEERING CLASSROOM WING	ECCR	432
ENGINEERING COMP SCIENCE DEPT WING	ECCS	432S
ENGINEERING ELECTRICAL WING	ECEE	444
ENGINEERING ENVIRONMENTAL SUSTAINABILITY WING	ECES	434
ENGINEERING MECHANICAL WING	ECME	440
ENGINEERING NORTH TOWER	ECNT	441
ENGINEERING OFFICE TOWER	ECOT	439
ENGINEERING SOUTH TOWER	ECST	433
ENGINEERING STORES & LABS	ECSL	435

Marine Court Complex		
CU Boulder Building	**Building Code**	**Building Number**
MARINE COURT A	MRCTA	150A
MARINE COURT B	MRCTB	150B

MARINE COURT C	MRCTC	150C
MARINE COURT D	MRCTD	150D
MARINE COURT E	MRCTE	150E
MARINE COURT F	MRCTF	150F
MARINE COURT G	MRCTG	150G
MARINE COURT H	MRCTH	150H
MARINE COURT J	MRCTJ	150J
MARINE COURT K	MRCTK	150K
MARINE COURT MAIL	MRCTM	150M

Newton Court Complex		
CU Boulder Building	**Building Code**	**Building Number**
NEWTON CT 1A	NTCT1A	1701A
NEWTON CT 1B	NTCT1B	1701B
NEWTON CT 2A	NTCT2A	1702A
NEWTON CT 2B	NTCT2B	1702B
NEWTON CT 2C	NTCT2C	1702C
NEWTON CT 2D	NTCT2D	1702D
NEWTON CT 2E	NTCT2E	1702E
NEWTON CT 2F	NTCT2F	1702F
NEWTON CT 2G	NTCT2G	1702G
NEWTON CT 2H	NTCT2H	1702H
NEWTON CT 2J	NTCT2J	1702J
NEWTON CT 2K	NTCT2K	1702K
NEWTON CT 2L	NTCT2L	1702L
NEWTON CT 2M	NTCT2M	1702M
NEWTON CT 2N	NTCT2N	1702N
NEWTON CT 2P	NTCT2P	1702P
NEWTON CT 2R	NTCT2R	1702R
NEWTON CT 2S	NTCT2S	1702S
NEWTON CT 2T	NTCT2T	1702T
NEWTON CT 2U	NTCT2U	1702U
NEWTON CT 2V	NTCT2V	1702V
NEWTON CT 2W	NTCT2W	1702W
NEWTON CT 2X	NTCT2X	1702X
NEWTON CT 2Y	NTCT2Y	1702Y
NEWTON CT BOILERA	NTCTA	170A
NEWTON CT BOILERAB	NTCTAB	170AB
NEWTON CT BOILERB	NTCTB	170B
NEWTON CT BOILERCD	NTCTCD	170CD
NEWTON CT BOILEREF	NTCTEF	170EF
NEWTON CT BOILERGH	NTCTGH	170GH
NEWTON CT BOILERJK	NTCTJK	170JK
NEWTON CT BOILERLM	NTCTLM	170LM
NEWTON CT BOILERNP	NTCTNP	170NP
NEWTON CT BOILERRS	NTCTRS	170RS
NEWTON CT BOILERTU	NTCTTU	170TU
NEWTON CT BOILERVW	NTCTVW	170VW
NEWTON CT BOILERXY	NTCTXY	170XY
NEWTON CT L2	NTCTL2	170L2
NEWTON CT L3	NTCTL3	170L3
NEWTON CT PUMPHOUSE1	NTCTPH	170PH

Smiley Court Complex		
CU Boulder Building	**Building Code**	**Building Number**

Smiley Court Complex		
CU Boulder Building	**Building Code**	**Building Number**
SMILEY CT A1	SMCTA1	502A1
SMILEY CT A2	SMCTA2	502A2
SMILEY CT A3	SMCTA3	502A3
SMILEY CT B1	SMCTB1	502B1
SMILEY CT B2	SMCTB2	502B2
SMILEY CT B3	SMCTB3	502B3
SMILEY CT B4	SMCTB4	502B4
SMILEY CT D1	SMCTD1	502D1
SMILEY CT D10	SMCTD10	502D10
SMILEY CT D2	SMCTD2	502D2
SMILEY CT D3	SMCTD3	502D3
SMILEY CT D4	SMCTD4	502D4
SMILEY CT D5	SMCTD5	502D5
SMILEY CT D6	SMCTD6	502D6
SMILEY CT D7	SMCTD7	502D7
SMILEY CT D8	SMCTD8	502D8
SMILEY CT D9	SMCTD9	502D9
SMILEY CT E1	SMCTE1	502E1
SMILEY CT E2	SMCTE2	502E2
SMILEY CT E3	SMCTE3	502E3
SMILEY CT E4	SMCTE4	502E4
SMILEY CT L1	SMCTL1	502L1
SMILEY CT L2	SMCTL2	502L2
SMILEY CT L3	SMCTL3	502L3
SMILEY CT MAIL1	SMCTM1	502M1
SMILEY CT MAIL2	SMCTM2	502M2
SMILEY CT MAIL3	SMCTM3	502M3
SMILEY CT STORAGE1	SMCTS1	502S1
SMILEY CT STORAGE2	SMCTS2	502S2
SMILEY CT STORAGE3	SMCTS3	502S3
SMILEY CT STORAGE4	SMCTS4	502S4
SMILEY CT STORAGE5	SMCTS5	502S5

FACT Complex		
CU Boulder Building	**Building Code**	**Building Number**
FACULTY-STAFF CT 1	FACT1	136A
FACULTY-STAFF CT 2	FACT2	136B
FACULTY-STAFF CT 3	FACT3	136C
FACULTY-STAFF CT 4	FACT4	136D
FACULTY-STAFF CT 5	FACT5	136E
FACULTY-STAFF CT 6	FACT6	136F
FACULTY-STAFF CT 7	FACT7	136G
FACULTY-STAFF CT 8	FACT8	136H
FACULTY-STAFF CT 9	FACT9	136J
FACULTY-STAFF CT SHED	TB57	138

Weber Hall and Bear Creek Apt B		
CU Boulder Building	**Building Code**	**Building Number**
WEBER HALL	WEB	630A
BEAR CREEK APT B	BCAPB	630B

Appendix 6: Number of Offices Greater than 200 ft² by Building

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Building	**Number of Offices**
A&S FINANCE AND PAYROLL ADMIN	3
ACADEMIC ADVISING CENTER	2
ADEN HALL	1
ADMIN & RSCH CTR EAST CAMPUS	47
ARMORY	5
ARMORY TRAILER	1
ARNETT HALL	2
ARTS AND SCIENCES OFFICE BUILDING 1	2
BEAR CREEK COMMONS	1
BENSON EARTH SCIENCES BLDG	17
BRUCE CURTIS BLDG	4
BUCKINGHAM HALL	2
CARLSON GYMNASIUM	8
CASA -CTR FOR ASTRO & SPACE ASTRNMY	4
CENTER FOR ASIAN STUDIES	1
CENTER FOR COMMUNITY	10
CENTER FOR INNOVATION & CREATIVITY	18
CHEYENNE ARAPAHO HALL	2
CHILDRENS CENTER (DACR)	1
CIRES COOP INST FOR RSCH IN ENV SCI	9
CLARE SMALL ARTS & SCIENCES	4
COMPUTING CENTER	7
CONTINUING EDUCATION CENTER	8
COORS EVENTS/CONFERENCE CENTER	5
CRISTOL CHEMISTRY & BIOCHEM BLDG	7
DAL WARD ATHLETIC CENTER	8
DARLEY COMMONS	1
DARLEY TOWERS	2
DENISON ARTS & SCIENCES BLDG	1
DISCOVERY LEARNING CNTR	1
DISTRIBUTION CENTER	1
DUANE D-WING	3
DUANE PHYSICS	10
EATON HUMANITIES BLDG	2
ECONOMICS BLDG	13
EDUCATION BLDG	12
EKELEY SCIENCES BLDG	18
ENGINEERING AEROSPACE WING	4
ENGINEERING CIVIL & ENVIRO WING	8
ENGINEERING CLASSROOM WING	2
ENGINEERING ELECTRICAL WING	15
ENGINEERING MECHANICAL WING	6
ENGINEERING NORTH TOWER	2
ENGINEERING OFFICE TOWER	4
ENVIRONMENTAL DESIGN BLDG	16
ENVIRONMENTAL HEALTH & SAFETY CNTR	1
ENVIRONMENTAL SUSTAINABILITY WING	15
FARRAND HALL	4
FLEMING BUILDING	19
GUGGENHEIM GEOGRAPHY BLDG	7
HALE SCIENCE BLDG	16
HALLETT HALL	1
HELLEMS ARTS & SCIENCES BLDG	24

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Building	**Number of Offices**
HENDERSON BLDG (MUSEUM)	1
HOUSING & DINING SERV FAC OPS CNTR	2
HOUSING SYS SERVICE CENTER	3
IMIG MUSIC BLDG	24
JENNIE SMOLY CARUTHERS BIOTECH BLDG	29
JILA	45
KETCHUM ARTS & SCIENCES BLDG	47
KITTREDGE CENTRAL	2
KITTREDGE WEST HALL	1
KOELBEL BUILDING - LEEDS SCH OF BUS	14
KOENIG ALUMNI CENTER	5
LASP SPACE TECHNOLOGY RSCH CTR	7
LESSER HOUSE	1
LIBBY HALL	4
LITMAN RESEARCH LAB (RL-1)	16
MACKY AUDITORIUM	11
MARINE COURT A	2
MARINE ST SCIENCE CTR (RL-6)	26
MARR ALPINE LABORATORY	1
MATHEMATICS BUILDING	4
MCKENNA LANGUAGES BLDG	4
MUENZINGER PSYCH & BIOPSYCH	9
NORLIN LIBRARY	18
OLD MAIN	8
PAGE FOUNDATION CENTER	7
POLICE & PARKING SERVICES CTR	10
PORTER BIOSCIENCES	2
RAMALEY BIOLOGY BLDG	17
REGENT ADMINISTRATIVE CENTER	30
RESEARCH LAB NO 2	33
ROSER ATLAS CENTER	11
SCIENCE LEARNING LABORATORY	4
SEWALL HALL	2
SPACE SCIENCE BUILDING	6
STADIUM BUILDING	36
STADIUM SKY BOX	1
STEARNS TOWERS	1
STUDENT RECREATION CENTER	5
TECHNOLOGY LEARNING CENTER	6
TEMP BLDG 1 AT CLARE SMALL	3
TEMPORARY BUILDING 03 (IEC)	1
TEMPORARY BUILDING 93	2
TEMPORARY BUILDING 95	1
TEMPORARY BUILDING 97	5
TRANSPORTATION CENTER AND ANNEX	2
UNIV ADMIN CTR ANNEX	2
UNIVERSITY ADMIN CTR	7
UNIVERSITY CLUB	5
UNIVERSITY MEMORIAL CENTER	29
UNIVERSITY THEATRE	8
VISUAL ARTS COMPLEX	66
WARDENBURG STUDENT HEALTH CTR	15
WEBER HALL	1
WILLIAMS VILLAGE NORTH	2
WOLF LAW BUILDING	9

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Building	**Number of Offices**
WOODBURY ARTS & SCIENCES BLDG	1
Total	**1001**

Appendix 7: Number of Offices Greater than 200 ft² by Department

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Department	**Number of Offices**
A&S AH-PROGRAMS & CENTERS	14
A&S SS-POLITICAL SCIENCE	15
ACADEMIC ADVISING CTR	5
ACCOUNTING & BUSINESS SUPPORT	3
ADMINISTRATION	29
ADMISSIONS	12
ALUMNI ASSOCIATION	1
ANTHROPOLOGY	16
APPLIED MATHEMATICS	7
ART & ART HISTORY	64
ASTROPHYSICAL & PLANETARY SCI (APS)	3
ATLAS	13
ATMOSPHERIC AND OCEANIC SCI (ATOC)	3
BIOFRONTIERS INSTITUTE	9
BIOLOGY (MCDB)	2
BOOK STORE	5
BURSAR	5
CA PAYROLL & BENEFITS SERVICE CTR	1
CA PRES LEADERSHIP CLASS	2
CA UNIV COUNSEL	2
CARTSS	1
CASA	8
CENTER FOR ASIAN STUDIES	1
CHANCELLOR	3
CHEMISTRY & BIOCHEMISTRY	19
CIRES	28
CLASSICS	1
COLL OF ARTS & SCIENCES	11
COLLEGE OF MUSIC	29
COMMUNICATION	6
COMPARATIVE LITERATURE PROGRAM	2
CONFERENCE ON WORLD AFFAIRS	2
CONTINUING EDUCATION	11
CONTRACTS & GRANTS (OCG)	8
COUNSELING SERVICES	1
CTR FOR MULTICULTURAL AFFAIRS	1
CU ART MUSEUM	2
CU FOUND/CU-B DEVELOPMENT	15
ECOLOGY AND EVOLUTIONARY BIOLOGY	19
ECONOMICS	13
ENG ADMIN	3
ENG ADMIN HERBST	1
ENG AERO BIOSERVE SPACE TECHNOLOGY	3
ENG AERO RECUV	1
ENG AEROSPACE	2
ENG CADSWES	5
ENG CAETE	2
ENG CHEMICAL & BIOLOGICAL	20

Offices Greater Than 200 ft² With No More Than 1 Office Occupant	
CU Boulder Department	**Number of Offices**
ENG CIVIL ENVIRN & ARCH	11
ENG COLO CTR ASTRODYNAMIC RESEARCH	4
ENG COMPUTER SCIENCE DEPT	1
ENG ELEC COMP & ENERGY ENGINEERING	15
ENG MECHANICAL	19
ENGLISH	10
ENVIRONMENTAL STUDIES	2
ENVRN HEALTH & SAFETY	1
ETHNIC STUDIES	2
FILM STUDIES PROGRAM	1
FINANCIAL AID	7
GEOGRAPHY	9
GEOLOGICAL SCIENCES	17
GERMANIC STUDIES	1
GRAD CENTER FOR HUMAN & ARTS	3
HISTORY	7
HOUSING	35
HUMAN RESOURCES	6
HUMANITIES	4
INST FOR BEHAV GEN (IBG)	2
INST OF COGNITV SCI (ICS)	13
INSTAAR	19
INTEGRATIVE PHYSIOLOGY	13
INTERCOLLEGIATE ATHLETICS	18
INTL AFFAIRS PROGRAM	3
JILA	46
JOURNALISM & MASS COMMUNICATION	6
LASP	12
LEASED TO EUREST	1
LEASED TO GRAD SCHOOL OF BANKING	1
LEASED TO GUARANTEE ELECTRICAL	1
LEASED TO HERON	1
LEASED TO STURGEON ELECTRICAL	2
LEASED TO USGS	19
LEEDS SCHOOL OF BUSINESS	11
LIBRARIES	19
MACKY AUDITORIUM	2
MATHEMATICS	3
MODERN LANGUAGE LAB (ALTEC)	3
NONASSIGNABLE	1
OFFICE OF INFORMATION TECHNOLOGY	29
OMBUDSMAN	1
ORIENTATION	1
PARENT RELATIONS	1
PHILOSOPHY	5
PHYSICS	7
PLANNING, BUDGET & ANALYSIS	2
POLICE OPERATIONS	11
PROGRAM ENVIRONMENTAL DESIGN	7
PROPERTY SERVICES	1
PROVOST	3
PSYCHOLOGY & NEUROSCIENCE	8
RASEI	3
REAL ESTATE	1
RECREATION CENTER	5

Offices Greater Than 200 ft^2 With No More Than 1 Office Occupant	
CU Boulder Department	**Number of Offices**
REGISTRAR	5
RESEARCH PROPERTY SERV	3
RISK MANAGEMENT	3
ROTC AIR FORCE	1
ROTC ARMY	1
ROTC NAVY	1
SCHOOL OF EDUCATION	13
SCHOOL OF LAW	9
SENIOR VICE CHANCELLOR	4
SOCIOLOGY	21
SPANISH & PORTUGUESE	3
SPONSORED PROGRAM ACCTG (SPA)	4
STUDENT ACAD SER CTR	6
THEATRE & DANCE	8
TRANSPORTATION TRANSIT FLEET OPTION	2
UMC	23
UNASSIGNED OR VACANT	1
UNIVERSITY COMMUNICATIONS	3
UNIVERSITY MUSEUM	4
VC DIVER EQ & COMM ENGAGE	2
VC FOR ADMINISTRATION	2
VC FOR STUDENT AFFAIRS	1
VC RESEARCH / GRAD SCH	2
WARDENBURG HEALTH CENTER	14
Total	**1,001**