

Introduction

Along with its human resources, financial assets, and intellectual cache, space is a primary resource of an educational institution. Indeed, the dollar value (initial cost, replacement cost, or market value) of a postsecondary education institution's buildings sometimes exceeds its annual operating budget and endowment. Without information on how much and what type of resources it has, an institution cannot assess whether sufficient resources are available to fulfill its mission. Answering some basic questions about space, including how much space is available, what kind of space it is, to whom is the space assigned, and how efficiently is the space is being used, requires gathering facilities' inventory data and developing and maintaining a facilities' inventory database.

This manual describes standard practices for initiating, conducting, reporting, and maintaining an institutional facilities inventory. Once completed, a facilities inventory will enable an institution to measure the ability of its space to meet its current programs, assess the current operation costs of its facilities (maintenance, utilities, cleaning, etc.), and then begin to plan for future space needs.

A facilities inventory database can serve an additional number of important specific functions:

- **Directory.** The database can serve as a directory that identifies and inventories the location of space by building, room, and space number, by which department occupies the space, and by the size and type of each space. From these data, patterns in the overall occupancy of space can be tracked.
- **Space Utilization.** The database can assist in the measurement and analysis of the use of space. This function allows an institution to minimize space operating costs by maximizing the use of existing space. For example, sophisticated research space is costly to construct and operate. Accordingly, use of such space for more mundane uses is not cost-effective. If laboratory space is being used for storage, and more instructional or research laboratories are needed, clearly it would be less costly to construct storage space and use the expensive laboratory space for its original purpose as long as other factors—such as proximity, access, and control of space—make it practical. Similarly, most other space could be evaluated for suitability of use and fit.
- **Future Planning.** The database provides the capability for planning for future needs. Planning occurs on many levels. For example, developing facilities to support a specific educational program often entails long lead times and far-reaching effects beyond the scope of that program. Without the right information, planning may be flawed and the program may not be launched or supported appropriately. On another level, data on

existing space use and cost can provide an accurate basis for long-term projections and capital funding requests.

- **Decisionmaking.** The database can provide vital support to decisionmaking. Effective action requires knowledge; knowledge requires information; and information requires data. Neither program nor facilities decisions are made in isolation. Facilities data are almost always used in conjunction with financial, academic, human resource, and program data. As a result, the linking of facilities data to other databases is increasing. Linkages might occur, for example, to operations and maintenance systems, a land/property inventory, an equipment inventory, financial systems, human resource systems, or a research accounting and indirect cost recovery system.
- **Reporting.** The database can help an institution meet its reporting requirements. Many institutions receive substantial reimbursement for support costs (including those of facilities) incurred in the performance of programs and projects sponsored by federal or state agencies. Many of these agencies have made the *Facilities Inventory and Classification Manual* (FICM) the standard reference for reporting costs allocated on the basis of area measurement. Particularly when public funding is involved, extensive reporting is required to ensure accountability for the use of funds. A common task in this regard is providing documentation to support the recovery of indirect costs that would enable an institution to negotiate overhead rates.
- **Institutional Comparisons.** A facilities inventory database based on the FICM can provide a set of standard terms and measurements that facilitate appropriate comparisons among postsecondary education institutions. Increased pressure on all resources, especially financial, has contributed to the need for extensive comparisons among similar institutions to identify best-in-class performers, best practices, and possible improvements and efficiencies.

National projections call for significant growth in postsecondary enrollment over the next 10 to 20 years. However, great variations in growth among states and even regions within a single state might be expected. Planning requirements also differ depending upon the perspective of the individual who is doing the planning and the organization or situation being studied. These differences are magnified when the focus is on a single institution or a building on a campus. This manual is designed to assist planners and analysts at both the state and institution levels.

The perspective of planners and analysts at the state level may be especially helpful in understanding the importance of information about postsecondary institutional facilities and the availability of comparable information. State agencies, with both governing and coordinating functions, have the responsibility to recommend the most efficient and effective use of scarce state and institutional resources, as well as to minimize the cost burden on students and their parents. These seemingly conflicting roles can only be balanced with adequate information and appropriate analytic tools.

Student enrollment and institutional mission changes as well as technological advances bring new challenges and requirements to the design and use of facilities. The availability of standardized and commonly accepted data elements describing space usage and characteristics is critical to governing boards (both public and private), state-level postsecondary education administrators, and campus administrators. Understanding facilities needs, both for new construction and for renovation, through comparative analysis of internal institutional data and external data from peer institutions across the country helps establish baseline requirements for future capital funding. With standardized data, it becomes possible for the state-level postsecondary education administrator to know how institutions compare on a host of indicators and to set priorities for limited resources. It is also helpful to understand fully how a local situation differs from statewide, regional, or national conditions.

Changes Since the Last Revision

Following is a summary of significant changes made for this 2006 edition of the FICM since the last revision in 1994.

Organization

- The entire document has been designed for greater use as a reference tool. Material concerning database design and organization, data collection, and reporting and analysis has been reorganized to make the manual easier for a first-time reader to understand.
- The question-and-answer chapter has been broken into separate sets of questions placed with the chapter to which the questions pertain. While that has led to some redundancy in the questions, it does enable a reader to see how a standard is applied in practice without additional searching.
- Some of the appendix material has been incorporated into the body of chapter text. For example, floor plans illustrating different area classifications are now included on the same pages as the textual definitions.

Area Measurement

- Area definitions have been clarified. The minimum floor to ceiling height required to include any covered floor area in an institution's space inventory was lowered from 6'6" to 3'0". This change was precipitated by the appearance of new building designs with vertically curved exterior walls and maximizing the use of sloped roof attic spaces as assignable areas through the use of 3'0" knee walls. Also, a detailed breakdown of the nonassignable major use category has been created. It contains three space use subcategories and their definitions: mechanical, building service, and circulation area.

- A crosswalk table showing the relationships between the National Association for College and University Business Officers (NACUBO) and U.S. Office of Management and Budget (OMB) Circular A-21 functional categories has been added in appendix B.

Data Elements

- Data elements have been grouped into *required* and *optional* categories; descriptions for the data elements have been updated.
- Some new categories, such as *room condition*, have been added. Existing categories, such as building condition, room suitability, ownership status, and architectural features, have been clarified and updated to reflect new market conditions, financing arrangements, and additional services now provided in many buildings.
- The term *space* has been used to define the smallest discrete spatial unit (data element). The use of this term allows breaking a room with multiple functions into individual areas that can be classified separately for more accurate tracking and reporting.

Room/Space Use Codes

- Room use codes are now described in chapter 4. The existing coding structure has been kept almost entirely intact. The only significant additions are for unit storage, hazardous materials storage, and hazardous waste storage.
- Definitions for classroom, laboratory, study areas, clinics, animal facilities, and health care facilities have been refined and cross-referenced more closely with area definitions, especially nonassignable space.
- References to computer hardware, software, and other technology in various room use codes have been updated to reflect current terminology.

Emerging Issues

- A chapter on emerging issues (chapter 6) has been added to address significant changes in practice facing institutional planners, such as expanded reporting requirements and increased emphasis on maintenance.
- Suggested categories for physical infrastructure assets have been added to provide guidance for tracking and managing physical assets, such as roads, storm and sanitary sewers, utility lines, and site features, which represent substantial capital investment but do not fall within a *building* and thus are not tracked in a space database.