NIHD | Nursing Institute for Healthcare Design

TERMINOLOGY ASSOCIATED WITH POST OCCUPANCY EVALUATION (POE)

DESIGN PHASES

PREDESIGN

The initial phase of the project process that that establishes the parameters for the project and fully defines the project's scope through the collection of data and information from stakeholders. This phase will inform subsequent phases and the eventual design. The functional program is completed in this phase.

CONCEPT DESIGN

Sometimes just considered part of "predesign" or "schematic design" but if distinguished as a separate phase, comes after all the information from predesign is taken into consideration. It is the "initial design idea" or concept that eventually gets further developed in the schematic design phase.

SCHEMATIC DESIGN

This phase shapes the conceptual ideas (including operational concepts) from earlier phases into real building forms as it refines the design intent of the project. Generally, the focus is on stacking, blocking and massing of the building with attention to external relationships between departments (i.e. Medical Imaging has immediate adjacency to Emergency Department) and room relationships within departments (medication rooms have an immediate adjacency to care team station). Studies are prepared (drawings and other documents) to illustrate the project requirements, scale and components representing these relationships. The conclusion of schematic design is a point in the project where the owner needs to give approval to proceed to a more detailed phase of design.

DESIGN DEVELOPMENT

Based on an approved schematic design, this phase includes completing detailed drawings and final design plans with correct sizes and layouts. Assuming that relationships between rooms and departments has been confirmed during schematic design, the design development focuses on the specifics of each room (i.e. headwall layouts, equipment details, plugs, switches and technical requirements).

CONSTRUCTION DOCUMENTS

The production of drawings, specifications and other bid documents that detail the requirements for the construction of the project.

CONSTRUCTION PHASE OR CONSTRUCTION ADMINISTRATION

Includes contractor bid, negotiation and award process. Continues with monitoring construction and planning for post-construction phase.

OCCUPANCY or POST CONSTRUCTION

May include commissioning, transitioning, activating, occupying, and evaluating the newly constructed project.

PLANS AND PROGRAMS

BENCHMARK DATA

Data collected from industry sources for the purpose of comparing performance with similar types of facilities, e.g., discreet room sizes and functions, health care outcomes, energy consumption.

CLINICAL SERVICE DELIVERY PLAN

A current as well as future oriented plan that describes how a clinical service line or cluster of services is envisioned to operate to meet the patient care needs of those they serve. It includes population served and utilization, the model of care, performance indicators, and the "how and where work is carried out" including staff class mix, staffing patterns, hours of operation, etc. It is analogous to the JCAHO's requirement for a hospital plan for the provision of patient care.

EQUIPMENT PLAN OR PROGRAM

Equipment requirements associated for each room and location identified in the space plan.

FACILITY PLAN OR PROGRAM

Usually refers to the entire project and all phases from beginning to end. Strategic facilities planning refers to a top-down approach concerned with the mission, vision, and long-term goals for the organization.

FUNCTIONAL PLAN OR PROGRAM OR NARRATIVE

A record of the key environment of care considerations and facility functional and operational parameters that drive the space program for a project (FGI). The functional program is the foundation of the building design and often is the reference point for subsequent planning processes. It is not a design process. The functional program shall describe in detail:

- the purpose of the project
- the proposed demand or utilization
- operational concepts and descriptions
- staffing patterns and head counts of employees, volunteers, students and others
- supply and material flow
- component or departmental relationships
- space requirements
- functional requirements

The functional program may be referred to as an "operational plan" and erroneously used interchangeably with Space Plan.

MASTER PLAN OR PROGRAM

A master plan shall specify how the functional objectives and space requirements can be achieved on an existing or new site based on the process of identifying current facility deficiencies and future requirements and space projections. This plan will articulate a very high-level vision of how to best allocate and develop space rationally and in response to the clinical needs over a short, medium and long term and may articulate high level development options, capital costs, and building strategy in schematic design form.

PROGRAMMING

The phrase programming, used by itself, may refer to functional, space, or other plans or activities that help determine the number, size, and configuration of rooms to support the described operation of the activities that will take place within that space. (paraphrased from AIA)

SCHEDULE OF ACCOMODATIONS

Itemized list of facilities and spaces, including operational, spatial and locational requirements, that are required by the end-user. Sometimes referred to as a space plan.

SPACE PLAN OR PROGRAM

A translation of the owner's operational needs into architectural and engineering requirements (FGI). Quantifies space requirements needed to support the future operational model, service volumes, staffing and physical adjacencies (NIHD). May use benchmarks, rules of thumb, best practices, standards or regulatory requirements to determine size and capacity. It includes room name, size, type, location, number of occupants, groupings or relationships, FFE requirements and environmental conditions. It also includes estimates of total area and required circulation space. In certain regions a space plan is synonymous with the term Schedule of Accommodations.

TRANSITION PLAN

Phase that includes preparatory work associated a successful organizational move; operationally, physically, and emotionally, from its present state to future state.

OTHER DEFINITIONS

ACTIVATION

Sometimes referred to as "Go-Live" or first patient seen. This is the terminology associated with the public opening and/or delivering new patient care in the new environment of care.

CAPITAL PROJECT

Often used interchangeably for the term BUILDING PROJECT.

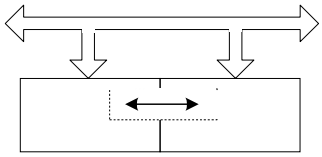
CIRCULATION

A functional program will describe the "type" of circulation that links departments that will inform the schematic design:

CIRCULATION (continued)

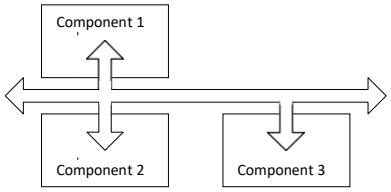
Direct Access by Internal Circulation

"Direct access by internal circulation" refers to components which are essentially horizontally contiguous or very close and linked internally. This form of access avoids movement through the public or general circulation system of the facility. An acceptable alternative to horizontal contiguity would be vertical contiguity by means of a dedicated elevator.



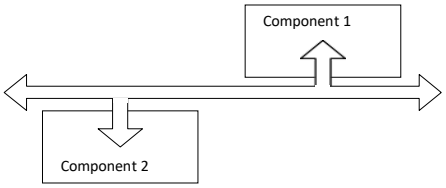
Direct Access by General Circulation

"Direct access by general circulation" refers to components linked by an important but minimal or moderate amount of horizontal and/or vertical general circulation. This is a direct travel route that would be accessible to the general public.



Convenient by General Circulation

"Convenient access by general circulation" refers to components which are linked by extended horizontal and/or vertical general circulation.



Direct by Virtual or Dedicated Mechanical Circulation

"Direct access by virtual or dedicated mechanical circulation" refers to components linked by direct supply/service systems including IT systems and/or mechanical systems (e.g., dedicated elevator from medical device reprocessing department to surgical sterile core; pneumatic tube).

COMMISSIONING

A quality assurance (QA) process that verifies and documents that the new building is performing according to objectives, specifications and criteria.

COMPONENT and/or DEPARTMENT
An organizational unit with a defined role within the health care facility. (i.e. Neonatal Intensive Care Unit – NICU)

END USER ACCEPTANCE, TESTING OR VALIDATION
A process in the quality assurance or validation of the new space in which the clinical and/or operational staff of the new space physically validate, confirm, walk through the design and functional operation of the new space with all the intended furniture, technology, IT, medical equipment all in their place as if they were going to see patients or deliver patient care. This is done ideally several weeks, if not months, before true live patient care takes place.

ENVIRONMENT OF CARE
The reference to "Environment of care" and "environment of care standards" have a multiple of sources from both the healthcare field and the design industry including The Joint Commission, ASHE, FGI, APIC, the American Nurses Association, among many others. In general, the concept includes: design, construction and renovation; equipment and environmental services' needs; utility maintenance and use; emergency management; fire prevention, security and safety requirements; waste management; and, infection prevention and control. It is often abbreviated as "EOC." FGI states that EOC is "those physical environment features in a healthcare facility that are created, constructed, and maintained to support and enhance the delivery of healthcare." EOC components include:

- Delivery of care model (concepts)
- Facility and service users (people)
- Systems design
- Layout and operational planning
- Physical environment
- Design process and implementation

EVIDENCE-BASED DESIGN
Evidence-based design or EBD is the field of study emphasizing credible evidence to influence design that in turn will improve patient and staff well-being, patient healing, stress reduction and safety. EDAC, the evidence-based design accreditation and certification program, states "it is the process of basing decision about the built environment on credible research to achieve the best possible outcomes."

FIT-TEST
A floor plan used to confirm that the stated needs and requirements can be accommodated with a specific space.

GOVERNING BODY or BOARD OF TRUSTEES or HEALTH AUTHORITY
Ultimate decision making and approval body. Governing body is responsible for having a functional program developed, documented, and updated.

GROSSING FACTORS BUILDING AND DEPARTMENT/COMPONENT

Generally, a multiplier is added to both the department/component and building totals to accommodate additional space for circulation (hallways and elevators), walls (interior and exterior), building structure and mechanical/electrical components. The more technically complex the space is the higher the grossing factor will be (i.e. a surgical floor will have a higher grossing factor than administrative space).

INTEGRATION TESTING

This is a process in the quality assurance testing of systems/technology/EMR/medical equipment reliant or required to interact with each other. For example, if nurse call/call system events go directly to the assigned caregivers' mobile phone all the systems/technologies must be setup and configured correctly for the workflow to be successful. This would require the EMR to have the correct admission of the patient to the room, the caregiver is correctly assigned to that patient in the call system and subsequently the caregiver is also assigned to the correct mobile phone and that mobile phone is assigned to that patient/room. Multiple systems/technologies need to be setup correctly by either IT/Facilities/Clinical Engineering and validated to ensure successful clinical workflow. They are all integrated rather than a single technology.

INTERDISCIPLINARY TEAM OR APPROACH

Composed of various disciplines and stakeholders as a strategy to get diverse expertise involved that will benefit the project outcome.

LEAN

A method to design and build facilities that identifies, locates and removes operational process waste.

LOCATION RELATIONSHIPS

The word "location" and associated terminology takes on important meaning in the field of design, engineering and architect. How near or far various departments or functions should be in relation to each other within a space or building is articulated within the functional program. FGI clarifies these spatial relationships by defining a variety of terms in their glossary with this table:

TERM	DEFINITION
In	Located within the identified area or room
Directly accessible	Connected to the identified area or room through a doorway, pass-through, or other opening without going through an intervening room or public space
Adjacent	Located next to but not necessarily connected to the identified area or room
Immediately accessible	Available either in or adjacent to the identified area or room
Readily accessible	Available on the same floor or in the same clinic as the identified area or room
In the same building	Available in the same building or an adjoining building as the identified area or room, but not necessarily on the same floor

LIFE-CYCLE
The project from beginning to end.

PHYSICAL ENVIRONMENT
External tangible surroundings.

POST OCCUPANCY EVALUATION (POE)
A systematic evaluation of an agreed upon scope of subjects done to determine if the project facility or space is fulfilling the design goals and objectives after the facility is fully operational for a period of time (generally one year).

RETURN ON INVESTMENT (ROI)
An analysis that calculates the "payback" time and cost of a project or investment to inform financial decisions in terms of revenue and expenses. Also stated as the return ratio that compares the net benefit of a project versus its total cost.

SAFETY RISK ASSESSMENT (SRA)
An assessment of the potential risks to a patient inherent in each space and building component of the healthcare project being planned. Every functional plan should include a SRA.

STAKEHOLDERS / USERS / OWNERS
Often used interchangeable but not quite synonymous. Owners may or may not be users and vice versa. Stakeholders means those who have a vested interest (i.e., something to gain or lose) in the project.

UGM
User group meeting.

VALUE ENGINEERING (VE)
A process by which project value can be increased by either improving the function or reducing the cost. The process assumes basic functions are preserved and vital project requirements are not compromised as a consequence of value improvements. If not executed properly it could be merely "cutting the program to meet the budget." Good functional programing guards against value engineering.

VISIONING
The process of developing, identifying and documenting the values of an organization or project.

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MASS CASUALTY and SURGE

DISASTER RECOVERY/BUSINESS CONTINUANCE/FAIL-OVER/SHUTDOWN TESTING
This is a process in the quality assurance for testing the new Technology/IT/Medical Equipment Testing in their new space in the event of either planned or unplanned downtime. The goal is to go through the sequence of procedures in the event of downtime and validate the systems are still functional or available to the extent of their design as outlined by the Technology/IT/Clinical Engineering departments.

EMERGENCY OPERATIONS CENTER (EOC)
The EOC is a central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level during an emergency, and ensuring the continuity of operation of a company, political subdivision or other organization. The common functions of EOCs is to collect, gather and analyze data; make decisions that protect life and property, maintain continuity of the organization, within the scope of applicable laws; and disseminate those decisions to all concerned agencies and individuals.

HAZARD VULNERABILITY ASSESSMENT (HVA) Per NFPA 99 Section12.5.3.1 Hazard
Vulnerability Analysis and Risk Assessment are systematic approaches to identifying hazards or risks that are most likely to have an impact on a healthcare facility and the surrounding community. These are terms used to describe the overall process or method where one identifies hazards and risk factors that have the potential to cause harm (hazard identification). Also to determine appropriate ways to eliminate the hazard, or then control the risk when the hazard cannot be eliminated (risk control).

INCIDENT MANAGEMENT SYSTEM (IMS)
An Incident Management System (IMS) is an internationally recognized model for responding to emergencies. Having an IMS in place reduces harm and saves lives. IMS is a temporary, formal organization structure that is activated to support a response, adjusted to meet rapidly changing demands of that response, and is then disbanded at the end of the response.

MASS CASUALTY INCIDENT (MCI)
Any situation where the number of injured needing care exceeds the resources available to perform care.

SURGE POPULATION
A surge is a sudden large increase in something that has previously been steady or has only increased or developed slowly. Surge populations in the context of healthcare indicates a sudden unexpected rise in patients which may be caused by any number of natural or man-made events.

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