



Facility Planning, Design & Construction (FPDC) Project Process Overview



FPDC Mission Statement

- Our mission is to provide services to Duke Health for facility space management, planning, design and construction.
 - Our architects, engineers and project managers are dedicated to providing efficient facilities which best support and promote the overall mission of patient care, education and research.
 - We strive to provide a safe and enjoyable environment for staff and visitors.
 - We work with the departments and leadership to define short and long term facility needs, evaluate options, and to develop and execute implementation of those cost effective plans.



FPDC Roles & Responsibilities

- Provide daily project management for all Duke Health capital projects from concept design through construction and financial closeout.
- Maintain safe projects sites at all times.
- Represent Duke's financial and operational interest.
- Minimize disruptions to ongoing clinical, education and research operations.
- Enforce Duke standards and ensure compliance with local building laws, codes and regulations, as well as NC CON regulatory requirements and other authorities having jurisdiction.
- Design for the long term, achieve clinical requirements and minimize maintenance, with a focus on sustainability.
- Provide input on CON filing and quarterly updates.
- Provide programming, planning and estimating services for capital project delivery
- Provide interior design services
- Provide transition planning and management services



Duties of the Project Manager

- The Project Manager will be the key person responsible throughout the duration of the design and construction process and will be the client's principal contact for current status. Your Project Manager will have the following primary responsibilities related to your project:
 - Establish cost effective design criteria and project scope.
 - Preparation of project cost estimates and budget monitoring throughout.
 - Preparation of project schedules and updates.
 - Obtaining reviews and approvals from all relevant Duke departments and public agencies.
 - Monitoring work during construction and keeping client informed.
 - Coordinating construction logistics around ongoing operations.
 - Coordinating communications and activities between designers, constructors, clients and end users.
 - Equipment, furniture and technology planning and coordination.
 - Transition planning.
 - Providing follow-up service as may be required after occupancy.



The Client's Role in the Process

A committed and engaged client contact will work with the Project Manager to enable FPDC to deliver a project that meets the client/unit's needs, with minimal disruption of day to day activities.

- **Client Responsibilities:**

- Provide program requirements and functional design criteria so project scope and budget are firmly established.
- At various times throughout the design process, the client will be given the project plans and specifications for approval. It is absolutely essential that the documents be completely reviewed at these times and feedback provided by due date.
- Prepare the business plan and obtaining financial approval based on the estimate provided by FPDC.
- Provide pertinent project information and updates to his or her unit throughout design and construction, and for alerting the FPDC PM to the concerns of the unit, including logistics plans and shutdown schedules.
- Complete Owner Change Request forms when needed.
- Coordinate transition to occupied space with users.

- **Why is user input important?**

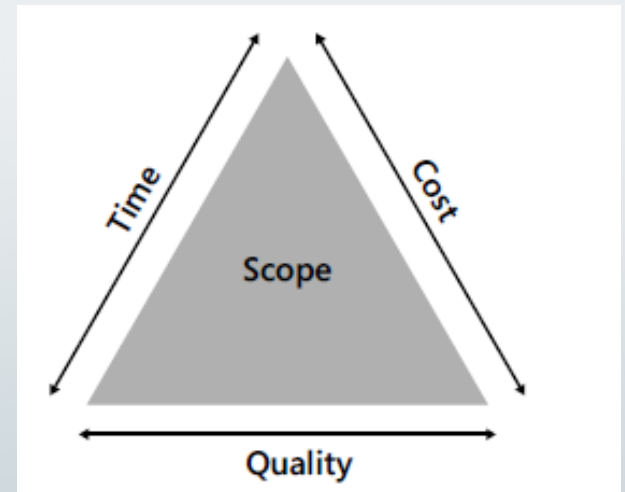
- Changes are less expensive in the beginning of design and get progressively more expensive during construction.



Project Management Challenges

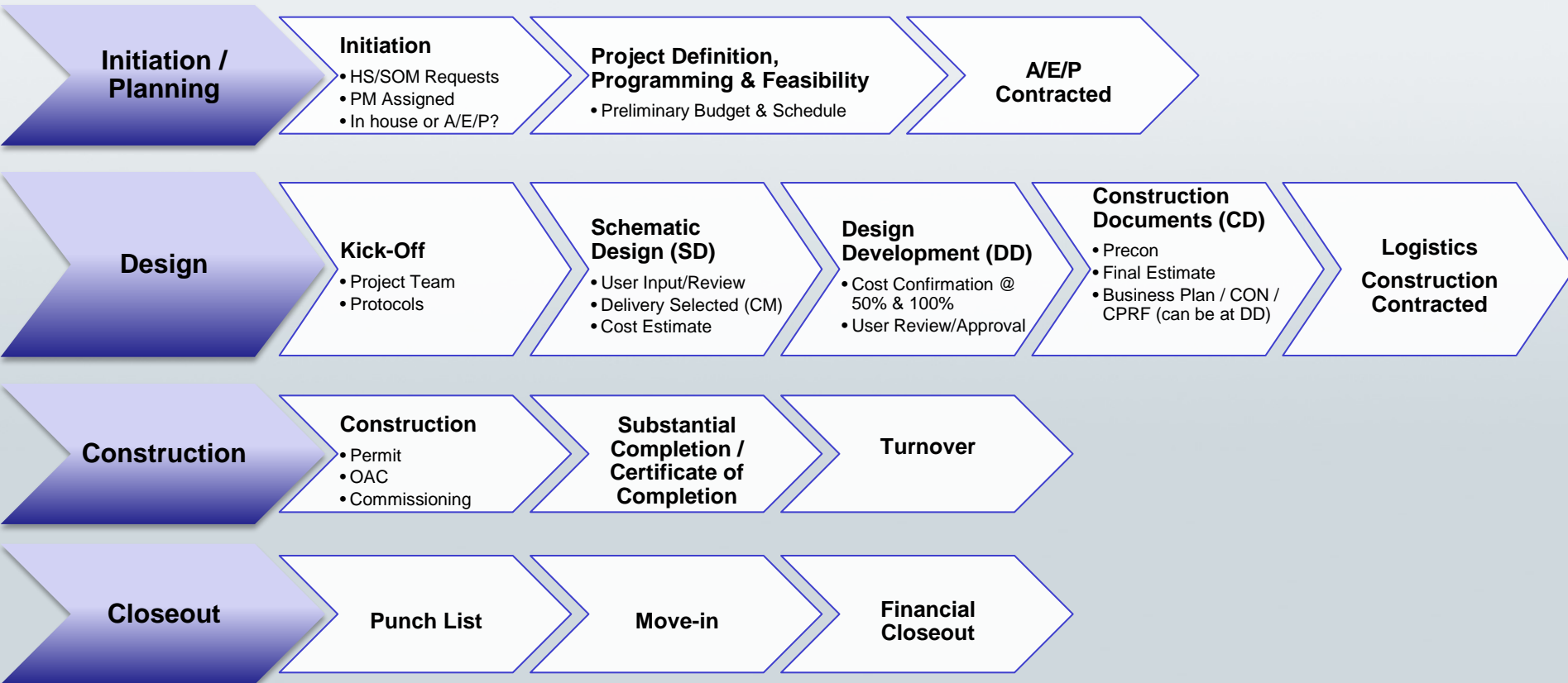
Most projects have a specific time limit, budget, and scope.

- If you adjust any one side of the triangle, the other areas are affected.
- **For example:**
 - If you decide to shorten the project duration but maintain the scope and quality, then the cost is going to increase.
 - If you need to reduce the budget, then the scope and/or desired quality would need to be reduced.





Design / Construction Project Process





Project Initiation



Project Requests:

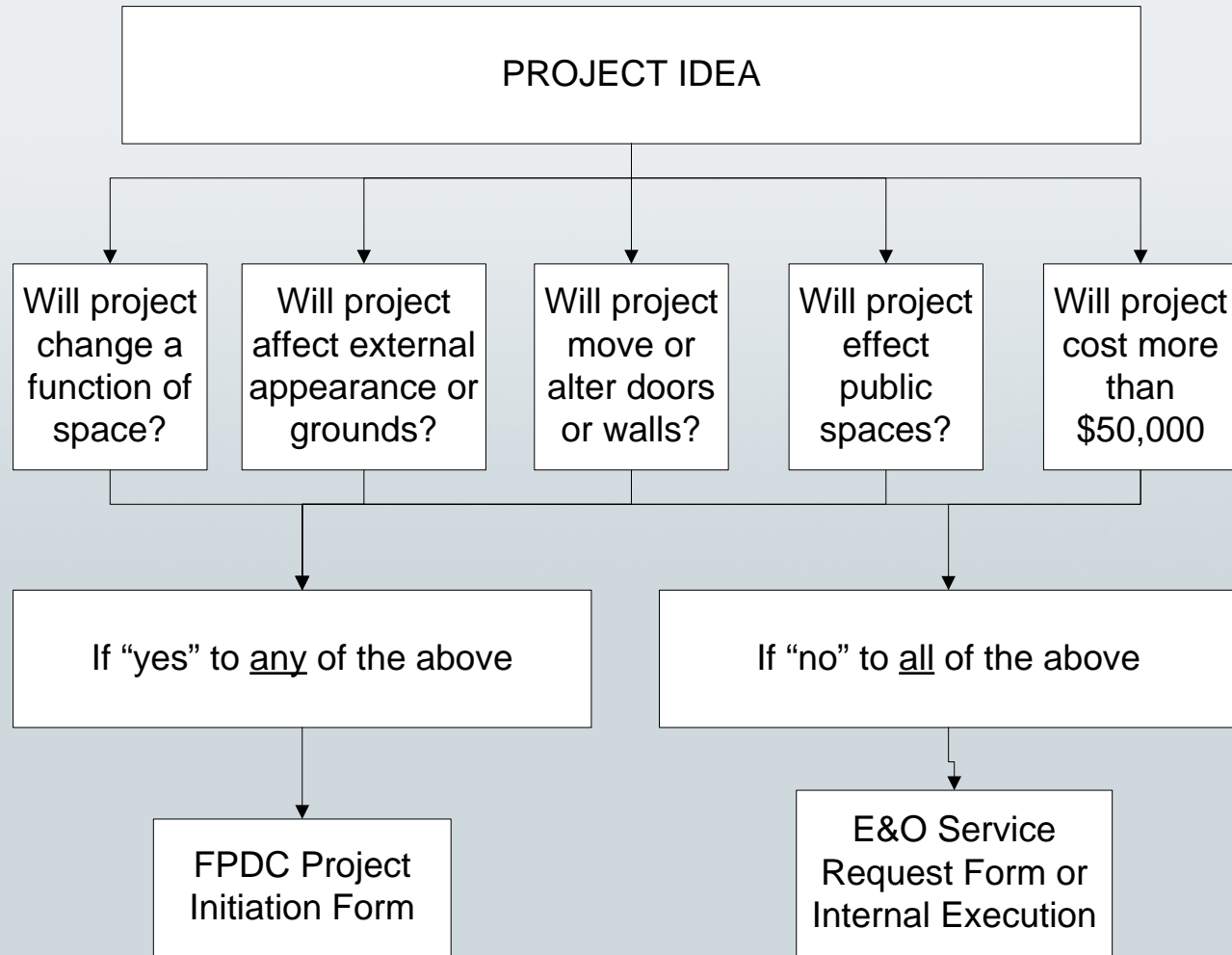
- The requesting department recognizes the initial need for expansion, alterations, additions or new facilities as a solution, or part of a solution, to a problem.
- A Project Request Form (PIF) must be turned into the FPDC office with the appropriate signatures before we can begin work on the project.

Next Steps:

- FPDC assigns a PM who then holds a kickoff meeting with the Project Champion to review expectations, roles, and responsibilities.
- PM will bring rough order of magnitude (ROM) costs based on similar projects and discuss budget and schedule goals of the project.
- PM will provide initial feedback on whether the budget/schedule desired by the Client is in line with the scope.

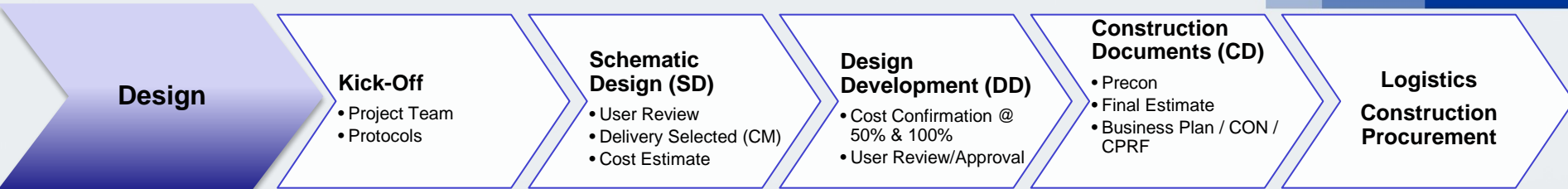


Project Initiation Phase Flowchart





Design Phase

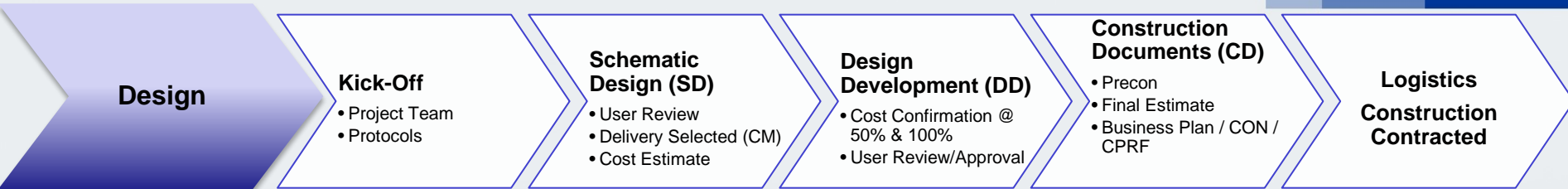


- Concept / Program – Design Team validates space needs
- Schematic Design – Determines location, set wall layout footprint.
- Design Development – Refine wall layout, design engineering systems, determine equipment needs, review Infection Control needs, and review with on-going hospital operations.
- Construction Documents – Finalize details for construction.

NOTE: Duration of the design phase is dependent on many factors, including the scope/size of the project. The overall process can vary from 2 months for small renovations, to 9-12 months for major renovations or new buildings.



Design Phase



Upon completion of DD drawings and determination of a project cost, the project is reviewed for approval.

- Administration/Authorizing Personnel
- The Requesting Department
- Engineering and Operations

FPDC provides project cost, schedule, cashflow and presentation materials. **NOTE:** Depending on the size of the project, it takes 8-12 weeks from Project Initiation to provide this information.


For Health System, the Department completes business plan and facilitates Corporate Finance review and approval.

For School of Medicine, FPDC creates Capital Project Request; the Department reviews and facilitates approvals.



Change Management

- Once the project is approved (DD or CD design phase), all User/Duke requested scope changes require an Owner Change Request (ORC) Form
- The Client and all Duke departments are required to use this process in order to maintain the approved budget and schedule.
- Also prevents field changes directed by individuals that are not approved by administration.
- Must be signed by Project Champion.
- FPDC Project Manager and Department Team oversee review.

 **DukeMedicine** **Capital Project
OWNER REQUESTED CHANGE (ORC) FORM**

Name _____ Date _____
 Telephone # _____ Dept _____ Project Name _____

Describe Requested Change

In Original Business Plan Required by Code Revenue Producing Other
 If selected other, please specify _____

Attach additional sheets as needed to fully explain request (provide floor plans, cut sheets or other supporting information)

List Attachments
 Reason or Justification for Requested Change (ROI, Operational Improvement, etc.) _____

Approval of Dept Director _____ PRINT _____ SIGNATURE _____ Date _____
 Approval of VP _____ PRINT _____ SIGNATURE _____ Date _____

Send completed form and attachments to the FPDC Project Manager

Refer to back of form for change process description

This section to be filled in by FPDC PM

Add'l Services Cost : _____ ORC #:

ROM Construction Cost : _____

Critical Dates or other information:

This section to be filled in by Duke Executive Team

Select one of the following:

Proceed with design then price and advise on firm construction cost
 Proceed with work and price
 Proceed with work on a T+M basis
 Disapproved

Duke Executive Team Member _____ PRINT _____ SIGNATURE _____ Date _____

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A Few Examples of when an ORC Form is Needed

- Construction has just begun and the Client decides to change vendors on a major piece of fixed equipment, which will require some redesign and field changes.
- E&O and/or DHTS releases new standards after construction documents are complete and approved, and want the project to comply.
- Client wants to change the function or design of an already approved area, which will cause a cost and schedule impact.



Construction Phase



During Construction, FPDC:

- Conducts Pre-Construction Meeting.
- Facilitates Construction Risk Assessment & Oversees Audits
- Manages overall process with regular Owner/Architect/Contractor (OAC) meetings.
- Conducts User update meetings as needed.
- Provides Project Champion monthly status reports, which includes budget, schedule and critical issues.
- Transition planning, as needed.

FPDC cannot issue construction contracts or begin construction without official project approval. DUHS Finance approval is required for projects over \$100,000 (Capital Projects).

Closeout



During Closeout, FPDC:

- Monitors punch-list completion with Architect, E&O, Department Team or Client Contact.
- Manages City-County approvals with Contractor.
- Manages State/DHSR inspection and acceptance for patient use.
- Collects and distributes manuals and as-builts from Contractor and Architect.
- Notifies Project Champion and Administration the project is complete and ready for close out, reports financials.
- Requests project WBS be closed and archives project files.
- Review lessons learned on the project with the Client.