The delivery system is the process selected to execute a construction project for the purpose of assigning responsibilities and risks to the project team. Common delivery systems include:

- Design/Bid/Build
- Design-Build
- Construction Management-Agency
- Construction Management-At-Risk

Since each construction project is different, the project delivery system should be tailored to the individual requirements of that unique project. Typically the owner chooses the project delivery system that will be employed, but may rely on the professional input of design and construction consultants to determine which project delivery system will best fit the project. With public funded projects, the method of construction delivery may be specified by the local or state jurisdiction.

Selection of a delivery method is typically based upon how your organization operates, internal resources available and their level of expertise or knowledge, funding requirements, and overall schedule for delivery.

*Source: Construction Management Association of America (www.cmaanet.org)
In Design/Bid/Build, also known as the general contracting project delivery method, the project is a linear process in which one phase is completed before another phase begins. Under the design/build example, the architect is selected under a separate contract that is based on a negotiated professional fee. The construction firm is most often selected based on the lowest bid, and there may be many subcontractors under his contract/direction.

**Advantages**
- Architect serves as owner's advocate with extensive owner interaction
- One bid package for construction
- Traditional method understood by all parties - owners, architect, contractor
- Often easier to manage the linear process

**Disadvantages**
- Contractor in potential adversarial role with architect and engineer
- Restricted owner control due to separation of roles and responsibilities
- Accurate cost estimating during design phase from architect requires knowledge of latest construction techniques and market
- No opportunity for contractor input prior to construction
- Low bid method increases probability of costly change orders
- Requires owner resources to manage
- Owner may have to act as "referee" to resolve disagreements

The hallmark of a Design-Build project is that one organization, either the architect or the construction firm, is solely responsible to the owner for both design and construction of the facility. In the design/build project delivery method, a single point of contact has been proven to foster better communication, reduce adversarial roles between design and construction, and accelerate project delivery.

Perhaps the biggest advantage of the design/build process is speed of delivery. Because construction is occurring concurrently with design phases, the delivery of the project can be sped up by 25% or more compared to the design/bid/build method. In addition to providing the owner with one source of accountability for the entire project development process and speed of delivery, using design/build fosters a team effort to achieve cost and schedule savings and to enhance overall value to the owner.

The two most essential considerations in selecting a design/build team to construct your facility are their depth of experience in working together and their proven record of performance in similar projects.

**Advantages**
- Early and continued architect-contractor collaboration leads to reduced litigation
- Active owner participation contributes to a better end product
- Single point of accountability, one-stop shopping for both design and construction services
- Accuracy of estimates enhanced through early involvement of construction arm
- Less detail required to begin construction
- Fewer change orders saves time and expense
- Speeds up entire design and construction process - saving months on schedule
- Owner can select team based on qualifications or through bid process

**Disadvantages**
- Less owner control over final design and possibly less design influence by architect
- Possibly reduced architect-end user interaction
- Fewer checks and balances
- Requires owner's expertise
- Care must be taken to balance quality with profit

![Design/Bid/Build vs. Design-Build](chart.png)
Under a CM method of delivery, the owner selects the construction manager based on qualifications and then the construction manager selects the general contractor. This includes the owner having open book access to all contractor based on qualifications and then the contractor's performance and stability.

Many owners select CM knowing that the lowest initial price is not always ultimately turned out to be the lowest price nor project costs. This includes participation in the bidding and the negotiated professional fee (typically a percentage of the cost derived through the design/bid/build bidding process). The CM holds the subcontractor and vendor contracts, taking on the financial risk of the project by selection of subcontractors and vendors, which represents those qualifications include project-specific expertise, history of performance and stability.

Under a CM method of delivery, the owner selects the construction manager as an extension of the owner's staff. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project. The construction manager oversees these tasks in the role as a consultant. The construction manager competitively bids the different elements of construction to trade contractors (or subcontractors), such as electrical, mechanical, plumbing, framing, etc.

In the CM-Agency (CMa) project delivery method, also known as “Pure CM,” the construction manager acts as an extension of the owner's staff. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project. The construction manager oversees these tasks in the role as a consultant. The construction manager competitively bids the different elements of construction to trade contractors, such as electrical, mechanical, plumbing, framing, etc.

The Project Delivery Method illustrated in the process chart also includes the general contractor, owner, architect/engineer, and construction manager. The general contractor, owner, architect/engineer, and construction manager are integral to the process; however, the CMa method involves an extension of the owner's staff. The construction manager is the owner's representative and provides the owner with a guaranteed maximum price (GMP) on the project. The CMa method allows the owner to control the project and make decisions during the construction process.

The advantages of CMa include a non-adversarial effort, reduced risks for the owner, architect-designer, and construction manager, savings in both time and money, and quicker facility usage. The disadvantages of CMa include the potential for less competition because of lack of adversarial effort, a non-adversarial effort, non-compliance with local codes, and lack of competition in the compatible bidding. The construction manager always has the owner's best interests in mind. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification reviews, and quality control.

The construction management (CM) process includes the following steps:

1. CM – Agency
2. CM – At Risk
3. CM – General

The CM – Agency method involves an extension of the owner's staff. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project.

The CM – At Risk method involves a general contractor or construction manager-at-risk, holding all subcontracts. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project.

The CM – General method involves the owner selecting the architect/engineer and the construction manager. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project.

The owner, architect/design, and construction manager are integral to the process; however, the CM method involves an extension of the owner's staff. The construction manager is the owner's representative and provides the owner with a guaranteed maximum price (GMP) on the project. The CM method allows the owner to control the project and make decisions during the construction process.

The advantages of CM include:

- Non-adversarial effort
- Reduced risks for the owner, architect/design, and construction manager
- Savings in both time and money
- Quicker facility usage

The disadvantages of CM include:

- Potential for less competition because of lack of adversarial effort
- Non-compliance with local codes
- Lack of competition in the compatible bidding

Contacts with the subcontractors at all levels are tied with the CM firm, who assumes responsibility for their performance.
Under a CM method of delivery, the owner selects the construction management (CM) firm based on qualifications and then the contractor is selected through the design/build/bid bidding process. The CM holds the subcontractor and vendor contracts, taking on the financial risk of the project by providing the owner with a guaranteed maximum price (GMP). If the project is delivered below the GMP, cost savings are typically shared between the owner and CM. Providing peace of mind to the owner, since any budget overruns on the contracted scope of work in excess of the GMP is the CM’s responsibility. If the CM performs at-risk, has earned the owner’s sole right to settle claims, and a previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review, that save the owner both time and money.

CM-At Risk

The CM-At Risk (CM a) method of project delivery is increasingly being utilized by private and public sector clients. The owner is responsible for the construction management (CM) firm, which holds all subcontracts. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project. The construction manager competitively bids the different elements of construction to trade contractors (or subcontractors), such as electrical, mechanical, plumbing, framing, etc. The CM always has the owner’s best interests in mind. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review. CM a is truly on the owner’s side since it blends assessment of pricing, scheduling and qualifications while limiting the owner’s risk. This method features a guaranteed maximum price (GMP) assures owner that project will be completed within a set duration in the contract. The CM always has the owner’s best interests in mind. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review. CM a is truly on the owner’s side since it blends assessment of pricing, scheduling and qualifications while limiting the owner’s risk. This method features a guaranteed maximum price (GMP) assures owner that project will be completed within a set duration in the contract.

CM-Agency

The CM-Agency (CM a) method of project delivery is not being offered by private and public sector clients, since CM formulations of owner, architect-designer and construction manager are classified as “quasi-feasible” based on the limited marketability of a CM a approach. Under separate contracts, both the architect-designer and construction manager are classified as “quasi-feasible” based on the limited marketability of a CM a approach.

CM is extension of owner’s staff, to a point, since it blends assessment of pricing, scheduling and qualifications while limiting the owner’s risk. This method features a guaranteed maximum price (GMP) assures owner that project will be completed within a set duration in the contract. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review. The owner is responsible for the construction management (CM) firm, which holds all subcontracts. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project. The construction manager competitively bids the different elements of construction to trade contractors (or subcontractors), such as electrical, mechanical, plumbing, framing, etc. The CM always has the owner’s best interests in mind. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review. The owner is responsible for the construction management (CM) firm, which holds all subcontracts. Essentially, each subcontractor becomes a prime contractor and is responsible for cost, schedule, quality, and safety on the project. The construction manager competitively bids the different elements of construction to trade contractors (or subcontractors), such as electrical, mechanical, plumbing, framing, etc. The CM always has the owner’s best interests in mind. A previously established scope of work designates pre-construction services, such as estimating, scheduling, constructability reviews, value analysis, specification review, and quality control review.