



مدیران حرفه‌ای صنعت ساخت (بر اساس سندی از انجمن مدیریت ساخت آمریکا (CMAA))

فصل اول: راهنمای رفتار حرفه‌ای برای مدیران ساخت

بخش سوم: رهبری حرفه‌ای تیم

ارائه دهنده:

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What we will learn?

- ☐ Introduction
- ☐ Managing versus leading
- ☐ General leadership techniques
- ☐ Developing a team culture
- ☐ Building team efficiency and effectiveness: best practice of divergent and convergent thinking skills
- ☐ Communication
- ☐ Project/program documents
- ☐ Safety
- ☐ The seven success secrets of extraordinary leaders
- ☐ LEADERSHIP and ethic

Excellence in leadership

- ☐ This is messy, real-world stuff that construction project managers encounter all too frequently.
- ☐ What feasible alternatives can you come up with for John's dilemma?
- ☐ Is there an ethically correct decision to be made?
- ☐ What might the right decision cost John?

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Is ethical behavior good for business?

Ethical behavior is good business

Consider the business world, for example.

❑ We **maintain that ethical behavior** is good business!

But, with the anonymity of the **Internet**,

we live in a time when cheating others is commonplace.

❖ As a result, **more people in our culture** may think that it is
OK to cheat in business.

❖ They may argue,

“That’s the **way you make money and get ahead.**”

Ethical behavior is good business

- ❑ However, there is an **alternative point of view**, which argues that **ethical behavior** is good business and that it actually **offers a competitive advantage**.
- ❑ In their **bestselling book**, The Integrity Advantage, Adrian Gostick and Dana Telford (2003) build a compelling case that makes this point.
 - ❖ It is a short book well worth reading.

What characteristics we need here?

Ethical behavior is good business

- ☐ To Gostick and Telford, the foundation for **good moral decisions** is integrity.
- ☐ Integrity is **probably a synonym** for the **moral compass** referred to many times in this book.
- ☐ Gostick and Telford (2003) have quantified it by proposing the ten characteristics of **integrity**.

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Ethical behavior is good business

❑ The following list is taken directly from their book:

1. You know that little things count. (It's all about the details.)
2. You find the white (when others see gray).
3. You mess up, you fess up. (Admit your mistakes.)
4. You create a culture of trust.
5. You keep your word (To do what one promised).
6. You care about the greater good. (Benefits beyond an individual, often for society or the world.)
7. You're honest but modest.
8. You act like you're being watched.
9. You hire integrity.
10. You stay the course. (Keep going strongly to the end of a race or contest.)

***These truths are especially applicable to business or government,
but they also apply to the rest of life.***

Leadership-ethics challenges for young leaders

- ❑ So far, the we have **presented a case** for strong, people-centric leadership, alignment of project stakeholders, ethical behavior, and **effective team collaboration**.
- ❑ **These strategies** have been shown to **create high-performance** project delivery teams and successful **project outcomes**.
- ❑ But leadership issues and ethical problems can create **challenges** for young leaders that are **career-threatening**.

Leadership-ethics challenges for young leaders

- ❑ Probably one of the best ways to illustrate the devastating effects that leadership-ethics challenges can have is to **review two case studies**.
- ❑ Both involve **fictitious young project managers**, a few years into their construction careers.
- ❑ In each case, the **leaders are young** and have **different leadership styles**.
- ❑ So far, they've stretched their wings and added **successful experience** to their innate aptitude.
- ❑ But they **haven't flown** into the kind of **unseen and disastrous glass obstacle** that leadership and ethics issues can be—**until now**.

Case study 1

- ❑ Linda is a **project engineer** employed by a **City of New York public agency** responsible for the **design and construction** of infrastructure projects.
- ❑ She is a **graduate engineer**, has passed the fundamentals of engineering examination, and is **preparing** for her professional engineer license examination.
- ❑ Over the years, since graduating, she has given a lot of **thought to leadership** and to the **ethics** associated with her job.
- ❑ She has been an **assistant project manager** and is now assigned as the owner's construction manager for the **reconstruction of 50 blocks** of public street utilities in Manhattan, New York.
- ❑ This **major, multimillion-dollar project** will have a **serious effect on the economy** of the **community** along the street and on the City's traffic flow

Case study 1

- ☐ At the **pre-project meeting**, she **greet**s the contractor PM and superintendent as well as the designer.
- ☐ They discuss **each other's objectives** and **negotiate how they can** accomplish each of the parties' objectives for the job.
- ☐ She recognizes the **contractors' need** for positive cash flow and agrees to **pay in 15 days** after receiving an **approved requisition**.
- ☐ **She convinces** the contractor of the **importance of the schedule** and the necessity to keep **adequate resources** on the job.

Case study 1

- ☐ As the **job progresses**, she and the contractor **meet at lunch every day**, and they **alternate paying** for the **sandwiches**.
- ☐ They use this time to **work out problems** and **tentative solutions** before meeting with the project team.
- ☐ They have a **good working relationship**.
- ☐ They **like** each other and **respect** each other's professionalism.
- ☐ The project is on budget and ahead of schedule.
- ☐ The **Mayor** visits the job and **complements** Linda and her bosses.
- ☐ The **local community board** members are **happy with the progress**.

Case study 1

- ❑ **Linda and the contractor's PM** are both members of the American Society of Civil Engineers (ASCE) Metropolitan Section Construction Technical Group.
- ❑ Because **New York State** requires that professional engineers **attend at least 12 professional development hours** of continuing technical education each year,
Linda and her spouse hold a small **party** for some friends and professional colleagues.
- ❑ They **invite** the contractor PM and companion.
- ❑ The **companions** **get acquainted** while the construction and engineering professionals discuss their projects in order to **satisfy the continuing education requirement**.

Case study 1

- ❑ The Society of American Military Engineers (SAME) held its **annual Scholarship in the fall**.
- ❑ Because **one of Linda's bosses** was to receive an **award**,
SAME invited Linda and some other colleagues to be **guests of their Post**.
- ❑ **She and her companion** were assigned to sit at the **table with the contractor's PM**.

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Case study 1

- ☐ **One evening** during the holidays, Linda **received a package** from the corporate **office of the contractor**.
- ☐ It contained a **pen** set worth about \$900.
- ☐ The next day **she gave** the set back to the **contractor PM**,
saying that **he knew she could not accept** a gift from his company.
- ☐ The **contractor PM apologized** and said it was a mistake by their **business development office**.

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Case study 1

- ☐ **Late in the spring**, the project is **still under budget and ahead of schedule**.
- ☐ The **contractor PM** felt it was **his turn** to have the **ASCE group to his house**.
- ☐ **Linda and her companion attended** along with a dozen or more young professionals.

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Case study 1

- ❑ In the **summer**, during a **routine audit**,
the **auditor** found a **mistake in the excavation quantities** that resulted in an **overpayment** of over \$200,000 to the contractor (about 1% of that total contractor's payment).
- ❖ He **confronted Linda** with the error.
 - ✓ She thanked him.
 - The **requisition** in which the auditor found the mistake was for an **amount in excess of \$20,000,000**.
 - She **told the auditor** she would **correct this error** on the next requisition.

Case study 1

- ☐ That evening the **auditor** stopped off at **his favorite restaurant**.
- ☐ After his **launch**, he was talking loudly to a man he had just met there at the **restaurant**.
- ☐ He **bragged** about how he **found a quarter of a million-dollar error** and how the **PM was a close friend** of the **contractor PM**.
- ☐ He **explained loudly** how she would have lunch with him and **go over to his house**, how **they'd have parties together** and give **each other presents**, and how they **were probably in love** with each other.

Case study 1

- ☐ A **young newspaper reporter** was sitting **near and listening** to the exchange.
- ☐ Thinking it would make a **good story**, he **called Linda**.
- ☐ He asked: Do you have lunch together each day? Did you go to a party at his house?
Did you attend the black-tie event together? Did he give you a Christmas present?
- ☐ By the way, **how much of** the \$200,000 did you get?
- ☐ She finally **slammed down the telephone**.
- ☐ The next day, the **second page** of the paper read: CORRUPT CITY ENGINEER
AND CONTRACTOR STEAL \$200,000.

Case study 1 – What is wrong with this picture

- ☐ **Our PM** was in the **process of delivering** a successful project.
- ☐ **She provided sustained** visible leadership both to her project team and the contractor's resources.
- ☐ **She clearly identified** and defined the goals and objectives and worked to provide equitable risk allocation among all the project team members.
- ☐ **She established proper relationships** and integrated teams as well as demonstrated competencies and capabilities.

She demonstrated ethical behavior—or did she?

Case study 1 – What is wrong with this picture

- ❑ If she had been working in **private industry**, her conduct would have likely been **considered ethical**.
 - ❖ However, in the **public sector**, she may have possibly **violated regulations** concerning the **acceptance of gratuities**.
- ❑ On either private or public jobs, a **lot would have depended** on whether she had **received proper written management approval** for attending the lunches, professional meetings, and social events.

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Case study 1 – What is wrong with this picture

- ❑ However, as we mentioned earlier, even the **possibility** of a conflict of interest **can be as bad** as the conflict itself.
- ❑ In this case, “**trial-by-media**” swept away any reasonable due process, and she was **removed** from the job.
- ❑ We put forth this example to make the secondary point that a **project manager** must always be aware of **public perception**,
especially on public works projects in large cities.

Case study 2

**Case study 2 is your homework
Send it in a week to my email.
ralavipour@gmail.com**

Case study 2

- ❑ Now let's study a similar fictitious case where the project manager took a different approach to leadership and ethics. The project engineer, Landon, is employed by the City of New York. He is a graduate engineer, has passed the fundamentals of engineering examination, and is preparing for his professional engineer license examination. Over the years since graduation, he has not spent much time thinking about the aspects of leadership and ethics associated with his job. He has been an assistant project manager and is now being assigned as the owner's project manager for the reconstruction of over 50 blocks of a major New York City thoroughfare. The Mayor expects another great job. His boss (after Linda's recent episode) assigns our engineer to the job of PM with the instructions, "Watch that contractor and don't let him get away with anything." The project is scheduled to take two years to complete.

Case study 2

- ❑ Landon calls for the first meeting. “My name is Landon; you can call me sir,” he says. He then lays down the law. “I am the boss. You do everything right. I think you are crooks and you will not get away with anything.” He rants on in an adversarial tone

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Case study 2

- ❑ The job starts slowly. At the end of the first month, the contractor has only a few workers on the job. He is still arguing and negotiating with his subs. He submits a requisition that is front-loaded. To show him he is the boss, Landon sits on the requisition. After two months, he sends the requisition back with a note to correct the calculation errors and typos. The contractor has not received a single payment. The contractor PM asks Landon to have lunch to discuss how they can work better together. Landon states that he does not eat lunch or have any other social contact with contractors. Not much is happening on the job. The contractor wants a meeting. After a week, they meet. “I need to be paid. I owe tens of thousands of dollars for payroll and subs,” says the contractor. Landon says the contractor has only 15 people on site and has accomplished virtually nothing. Three months have gone by. Landon tells the contractor to get busy and get this project on schedule.

Case study 2

- ❑ Six months later, three blocks have been torn up, the water sub has walked off the job, and it is clear to everyone that the job will not be completed within four years at this rate.

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Case study 2

- ❑ At the request of the Community Board, the Mayor visits the job with a number of city officials and Landon's boss. They get an ear full from the Community Board. The job is a disaster. The boss yells at the PM (Landon) to get the job on schedule. The PM yells at the contractor, his staff, and the subs. Nothing changes.
- ❑ Landon's boss sends him a letter asking him to show cause why he should not be fired.

**Tell me what's wrong with this case?
And what was your alternates?**



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بخش چهارم: اجرای پروژه

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(PhD, PMP, CMIT)

دانشگاه Illinois Tech آمریکا

What we will learn?

- ☐ Project delivery
- ☐ Aligned project delivery
- ☐ Other essential elements of project execution
- ☐ Project success

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Introduction

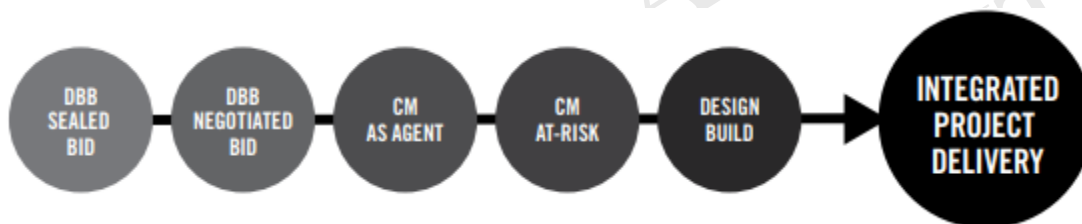
- ❑ This part of the course puts Project Execution into a **new perspective**.
- ❑ In this section, we **review the framework** and **nature of project execution** and **how it builds** on leadership and ethics.
- ❑ We then present the **important concept** of Project Delivery.
- ❑ In this section, we extend this concept to Aligned Project Delivery and the optimal delivery environment that supports the development of high-performance teams.
- ❑ From there, we circle back to **traditional project practice** and **review Other Essential Elements** of Project Execution.
- ❑ Finally, we present a **complete model** for Project Success and how to achieve it.

PROJECT DELIVERY

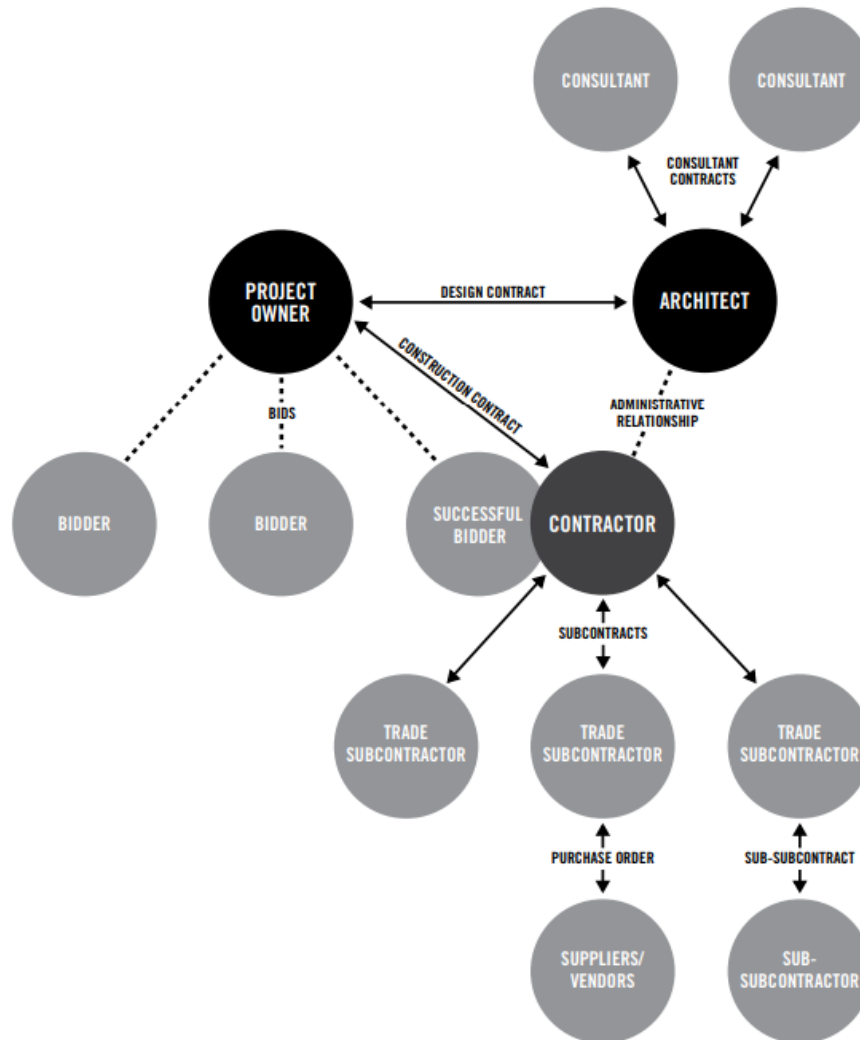
Leadership and ethics in relation to the PDM

- ❑ The **Project Delivery model** involves the contracting and purchasing strategies for procuring all the services, goods, and materials that the project delivery team will need in order to realize the **owner's expectations**.
- ❑ It requires **extraordinary leadership** to
 1. Implement it,
 2. Carry out the project's mission, and
 3. Balance shareholder interests.
- ❑ And, **every time** that money changes hands, it involves **ethical challenges**.
- ❑ That is **why** we prepared you with leadership skills and ethical guidance **before tackling** the subject of project execution.

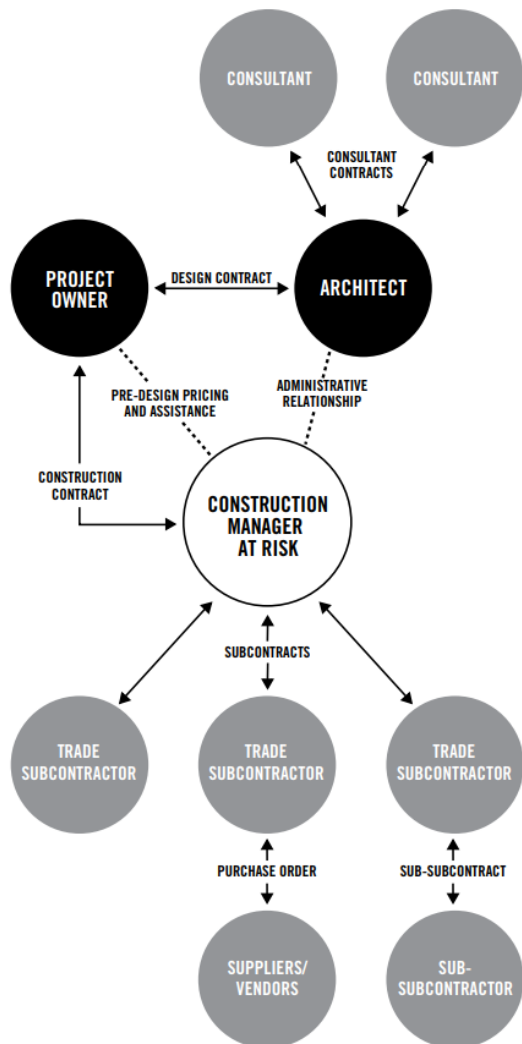
Level of collaboration



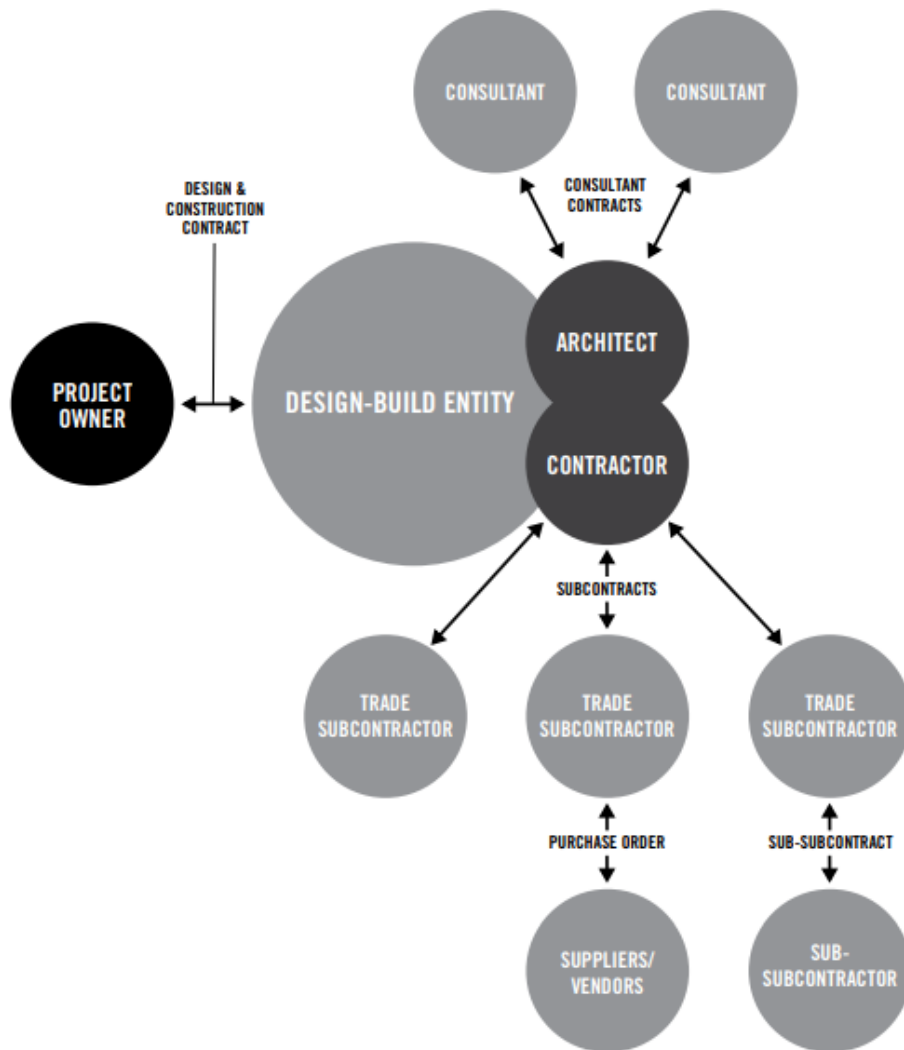
DBB Contract relationships



CMR Contract relationships

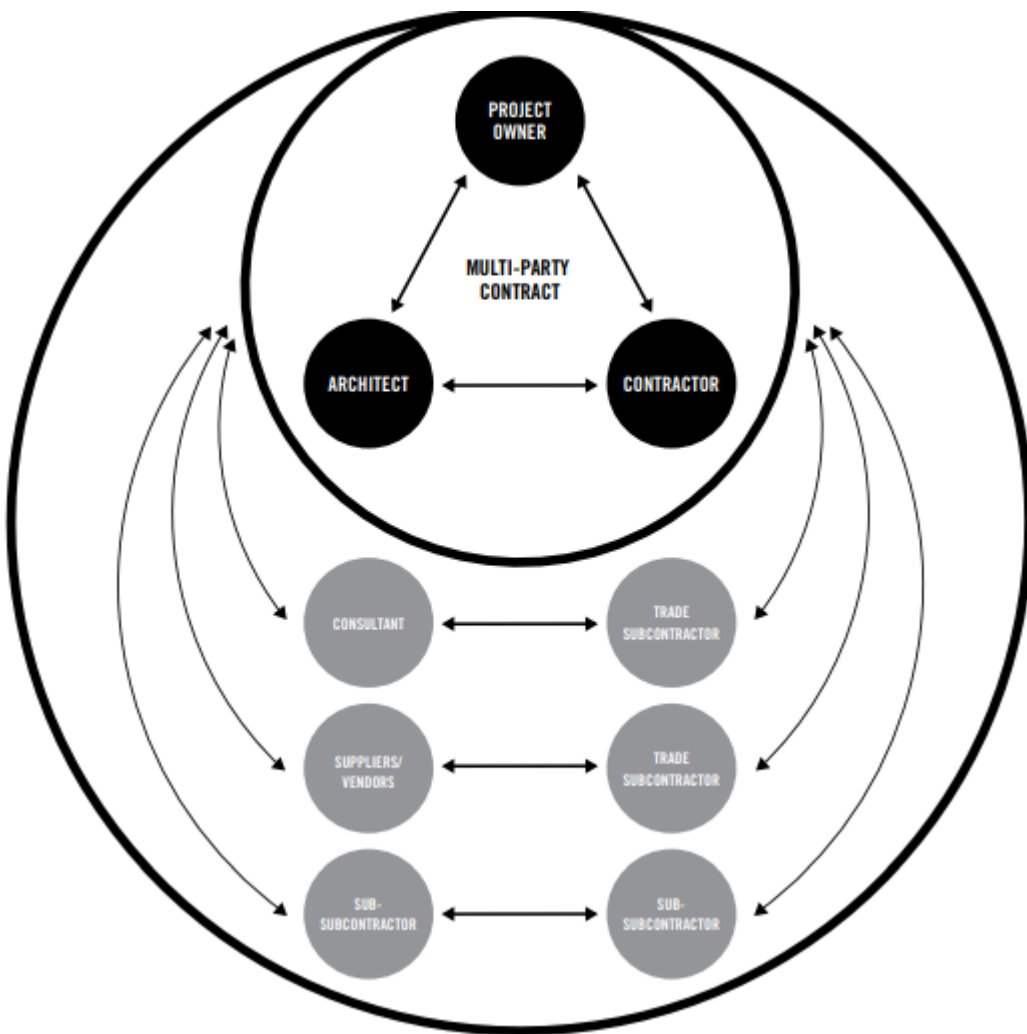


DB Contract relationships



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IPD Contract relationships



- ❑ The **contracting principles** are derived directly from the Stakeholder Alignment Proposition Elements.
- ❑ They include, to mention a few:
 - ❖ **Constructive relationships** and integration between the parties
 - ❖ **Ethical** behavior, honesty, accountability, and transparency that lead to
 1. Trust **equitable risk** allocation and balanced financial objectives;
 2. Fair and prompt **payments**;
 3. Prompt resolution of **change** management issues
 - ❖ Joint risk management
 - ❖ Clearly defined goals, objectives, scope of work, and terms

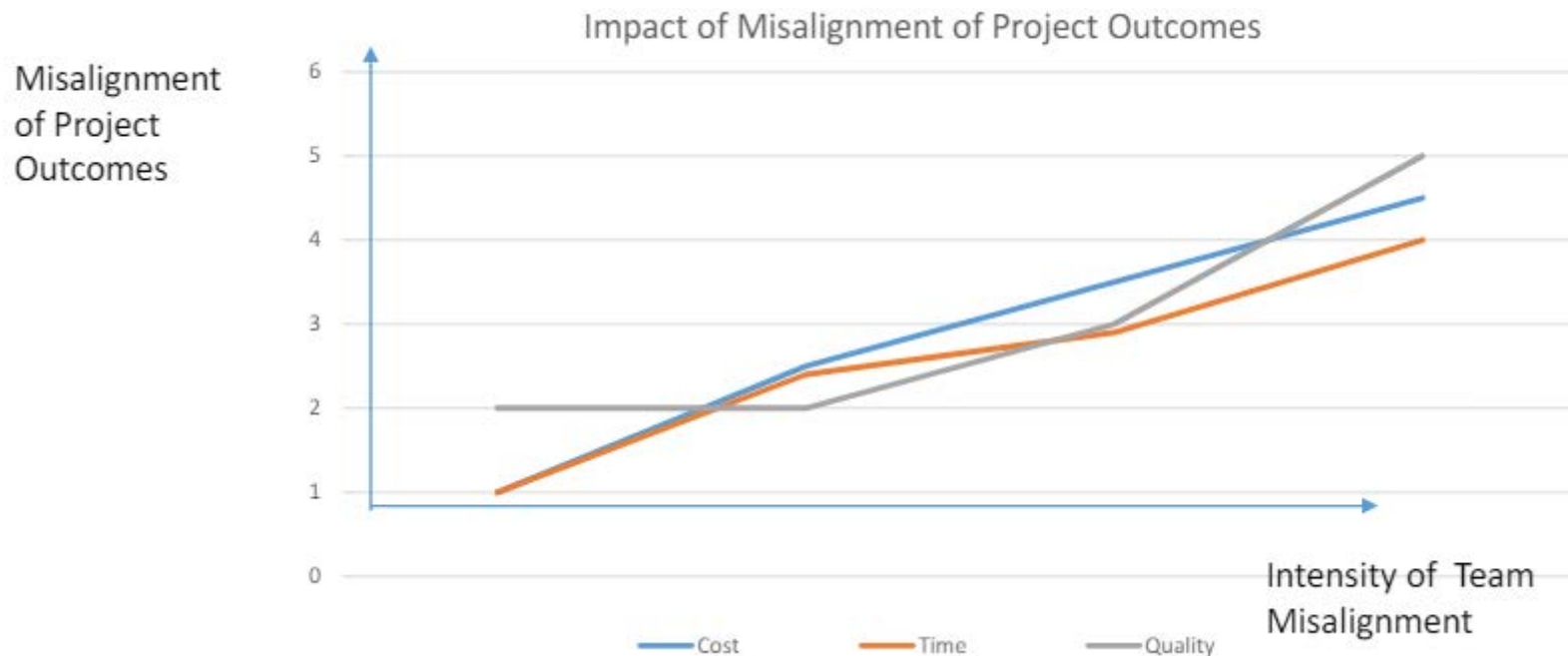
- ☐ The intent and tone of the contract shall be **non-adversarial**.
- ☐ **All stakeholders** must be committed to maintaining non-adversarial relations.
- ☐ A **detailed description of actual contracting terms and documents** is beyond the scope of this COURSE.

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Aligned project delivery

- ❑ The **effectiveness** of the project delivery team (which includes design consultants, construction manager, trade contractors, material vendors, and the project owner) rests upon **each team member's inherent ability** to effectively **engage with other team members**.
- ❑ With that in mind, we shall **now develop** a concept of Aligned Project Delivery.
- ❑ This process works for **all PDMs** and leads to **highly successful** project outcomes.
- ❑ In other words, any project, **no matter the PDM selected**,
can be successful **if its stakeholders are properly aligned**.

Aligned project delivery



Aligned project delivery



ALIGNED PROJECT DELIVERY

What do we mean by aligned project delivery

- ❑ The 2012 Construction Industry Institute (CII) Best Practices Guide defines **alignment** as follows:
 - ❖ *The condition in which the **appropriate project participants** are working within **acceptable tolerances** to develop and meet a **uniformly defined and understood set of project objectives.***
- ❑ At the **end** of the alignment process **each member** is focused on the **same set of project goals and objectives** **instead** of their **individual** company interests, since they are **incorporated** in the overall project objectives.
(CII 2012b)

Rapid alignment initiated delivery

- ❑ A **support tool** for partnering team alignment facilitation
- ❑ Rapid Alignment Initiated Delivery™ is introduced as a **change management tool** to **improve the process** and the **effectiveness** of the project delivery team.
- ❑ It serves as a **guide** for the project delivery team to **acquire insights** that will **allow leadership** to make informed decisions regarding team behaviors and cultural change.

Model description

*Treat each program as a
Mission Critical Cannot Fail (MCCF)
project.*

ETHICAL BEHAVIOR

Characterized by honesty, accountability, and transparency that supports the conditions to build trust amongst the project stakeholders. A top-down attribute, leadership exhibiting ethical behavior will foster a culture of cooperation.

RELATIONSHIPS AND INTEGRATED TEAMS

Primary stakeholders working together in the best interest of the project. **(Project First Thinking)**.

The arrangement requires a willingness to share knowledge that supports an interdependent, team-based approach to work.

SUSTAINED VISIBLE LEADERSHIP

The visible leader sets a clear vision for the project, creates a tone for engagement fostering a building of trust in relationships. Sustained visible leadership requires ethical leaders.

EQUITABLE RISK ALLOCATION

Reasoned risk allocation, prompt payment and change management practices all supported by fairness and equity in relationships.

DEMONSTRATED COMPETENCIES AND CAPABILITIES

Demonstrated competencies and capabilities lead to excellence in project team performance.



CLEARLY DEFINED OBJECTIVES AND GOALS

Goal setting involves the team's conscious process of establishing high levels of performance and a shared vision for achievability to obtain desired performance outcomes.

Aligned project delivery

Stakeholder Alignment Risk Analysis

USTA-NTC Risk Register Project Phase	ID	Risk Description	Project Schedule Impact of Risk Event	Project Cost Impact of Risk Event	Responsibility-POC	Affected Project Objectives
Pre – Design Phase	P-01	CM – Contract – Damages Clauses	High Risk	High Risk	ECM Leadership	Cost, Firm Existence
Pre – Design Phase	P-02	Permitting Delays	High Risk	Low Risk	ECM - Permit Consult.	Time
Pre – Design Phase	P-03	Geotechnical Issues – Borings Soil Bearing Capacity – Land Fill	Medium Risk	Medium Risk	Geo-tech Engineer	Time, Scope, Cost
Pre – Design Phase	P-04	Environ. – Regulation Changes	Low Risk	Low Risk	Environmental Engr.	Cost
Pre – Design Phase	P-05	Understanding Project Objectives Stakeholder Alignment	Medium Risk	Medium Risk	ECM, USTA - NTC Design Consultants	Scope, Time, Cost, Quality
Pre – Design Phase	P-05A	Project Schedule - Achievability	High Risk	Medium Risk	ECM, USTA, Design	Time, Cost
Pre – Design Phase	P-06	Construction Funding – USTA-NTC	Low Risk	Low Risk	USTA-NTC	Cost, Time
Pre – Design Phase	P-07	Revision NY State Building Code Seismic Considerations	Medium Risk	Medium Risk	Design Engineer	Quality, Scope, Cost
Design Phase	D-01	Consulting Engineers Understaffed	Low Risk	Low Risk	Design Engineer	Time
Design Phase	D-02	Check Design – Code Assumptions	Medium Risk	Medium Risk	Design Engineer/ECM	Scope, Quality, Cost
Design Phase	D-03	Maintain Design Dev. Schedule	High Risk	Medium Risk	ECM Construction	Time
Design Phase	D-04	Information Systems - Adequacy	Low Risk	Low Risk	ECM Construction	Cost
Design Phase	D-05	Over Design – Value Engineering	Medium Risk	High Risk	Design Engineer/ECM	Cost, Quality, Scope
Bid and Award Phase	B-01	Material Availability – Structural Steel, Railings, Stadia/Seating	High Risk	High Risk	ECM, USTA - NTC, Design Consultants	Cost, Time, Quality
Bid and Award Phase	B-02	Trade Subcontractor Bid Coverage	Medium Risk	Medium Risk	ECM Project Manager	Cost, Time, Quality
Bid and Award Phase	B-03	Unions – Non – Union / Merit Shop Awards	Medium Risk	Medium Risk	ECM Project Manager USTA-NTC	Cost, Time, Quality
Bid and Award Phase	B-04	Complexity of Contract	Low Risk	Medium Risk	ECM – Project Exec.	Scope, Cost, Quality
Bid and Award Phase	B-05	Financing – Working Capital	High Risk	High Risk	ECM – Project Exec.	Cost
Construction Phase	C-01	Labor Issues - Availability	High Risk	High Risk	All Trade Contractors	Cost, Time
Construction Phase	C-02	Labor Issues – Strikes	Medium Risk	Medium Risk	All Trade Contractors	Cost, Time
Construction Phase	C-03	New – Untried Techniques	Low Risk	Low Risk	ECM – Project Exec.	Quality, Time
Construction Phase	C-04	Acts of God – Earthquake, Flood, Inclement Weather	High Risk	High Risk	ECM – Project Exec.	Time, Cost
Construction Phase	C-05	Security Issues – Terrorism	Medium Risk	Medium Risk	USTA – NTC, NYPD	Scope
Construction Phase	C-06	Worker Safety	High Risk	High Risk	ECM – Safety Manager	Time, Cost
Construction Phase	C-07	OSHA – Revised Safety Regulations	Low Risk	Low Risk	ECM - Safety Manager	Time, Cost
Construction Phase	C-08	Foundation Installation – Technical Issues - Achievability	High Risk	High Risk	Concrete Contractor	Cost, Time, Scope

Model description

Figure 13.1 The Rapid Alignment Initiated Delivery™ Method

Table 13.4 Examples of Key Diagnostic Topics

<i>SAPE Diagnostic Category</i>	<i>Example of Team Readiness Assessment Areas</i>
SAPE 1: Ethical behavior	Shared vision for ethical approach to the work; code of conduct for holding stakeholders accountable; good faith effort in change-order negotiation; trade contractor identification and selection; accountability mechanisms for all team members; accepted behavioral norms; ethical leadership; team commitment to develop a culture of trust
SAPE 2: Clearly defined goals/objectives	Clarity of vision and goals that guide the project delivery team; understanding of cost, schedule, and quality objectives; priority issues made known to primary stakeholders; determine achievability of objectives; incentivizing financial objectives of team members linked with performance; project scope definition and control

(Continued)

Model description

Table 13.4 (Continued)

<i>SAPE Diagnostic Category</i>	<i>Example of Team Readiness Assessment Areas</i>
SAPE 3: Sustained visible leadership	Purpose of the leadership team; consistent stakeholder representation with the authority to make decisions; guide project team to execute objectives; defines the path to project achievability; sets ethical barometer for the team; commitment to develop a high-performance team culture
SAPE 4: Demonstrated competencies and capabilities	Early disclosure of team members and experience levels; knowledge and skills team members hold for project execution; value engineering; preplanning; supply chain management; resources; financial capabilities; effectiveness of project controls; decision-making
SAPE 5: Relationships and integrated teams	Engagement of team members; preconstruction partnering events; timely conflict and issue resolution; early involvement of team members and project end users; urgency
SAPE 6: Equitable risk allocation	Joint representation for strategic planning and risk management; assessment of individual stakeholder interest; determine whether goals and objectives of each primary stakeholder are consistent with those of the collective team; understanding of stakeholder/team member risk perception

Source: DarConte et al. 2020.

Model description

Table 13.5 Examples of Strategic Planning and Risk Management Tasks

<i>SAPE Diagnostic Category</i>	<i>Examples of Strategic Planning and Risk Management Tasks</i>
SAPE 1: Ethical behavior	Project safety—zero accident policy; prompt payment to constructor and trade contractors; eliminate practice of holding float; identify true value of change-order work and pay accordingly; communicate all relevant information—transparency; develop ethical culture that fosters trust; team members demonstrate willingness to mitigate changes; maintain key personnel throughout the delivery process
SAPE 2: Clearly defined goals/objectives	Align goals of cost, quality, and schedule; define from day one; target value design, no claims goal, zero punchlist goal; achievability; set challenging goals; mission-critical-cannot-fail; diversity procurement—establish meaningful participation goals; safety objectives; minimize project scope creep
SAPE 3: Sustained visible leadership	Lead the transformation of an organizational culture; transparent communication right down to the trade contractors if necessary; trades and vendors need to know their interests are leadership's interest; communicate a shared vision for project achievability; foster a willingness for every team member to meet the challenge
SAPE 4: Demonstrated competencies and capabilities	Early disclosure of team members and experience levels; knowledge and skills; best value selection of trade contractors and vendors; move past lowest cost objective; identify project labor and material availability; promote innovative practices; supply chain management

Model description

<i>SAPE Diagnostic Category</i>	<i>Examples of Strategic Planning and Risk Management Tasks</i>
SAPE 5: Relationships and integrated teams	Co-location of team members; build consensus decisions; strip away unproductive tasks; no blame culture that supports accountability; trust in communications—keep it real; eliminate practice silos; preconstruction project team alignment workshop; communicate freely about roles and responsibilities; move away from “capture and punish” culture; seek opportunities to foster open communication and continuous improvement
SAPE 6: Equitable risk allocation	Review of contract-damages clauses; accelerated requisition schedules coupled with prompt payments; full team representation at risk management workshops; establish true cost of changes and fairly assign responsibility; understanding of stakeholder risk perception—what puts a knot in their stomach

Source: DarConte et al. 2020.

The rapid alignment initiated delivery team alignment assessment tool

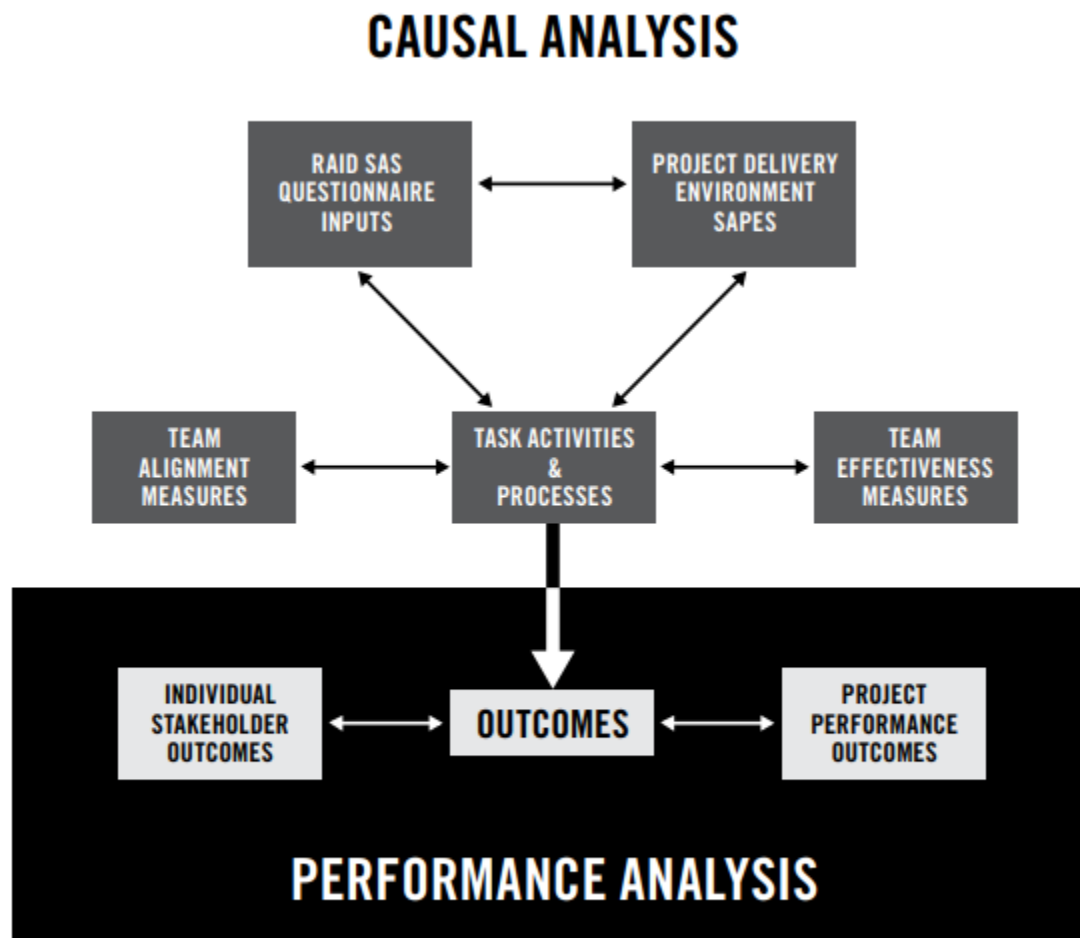
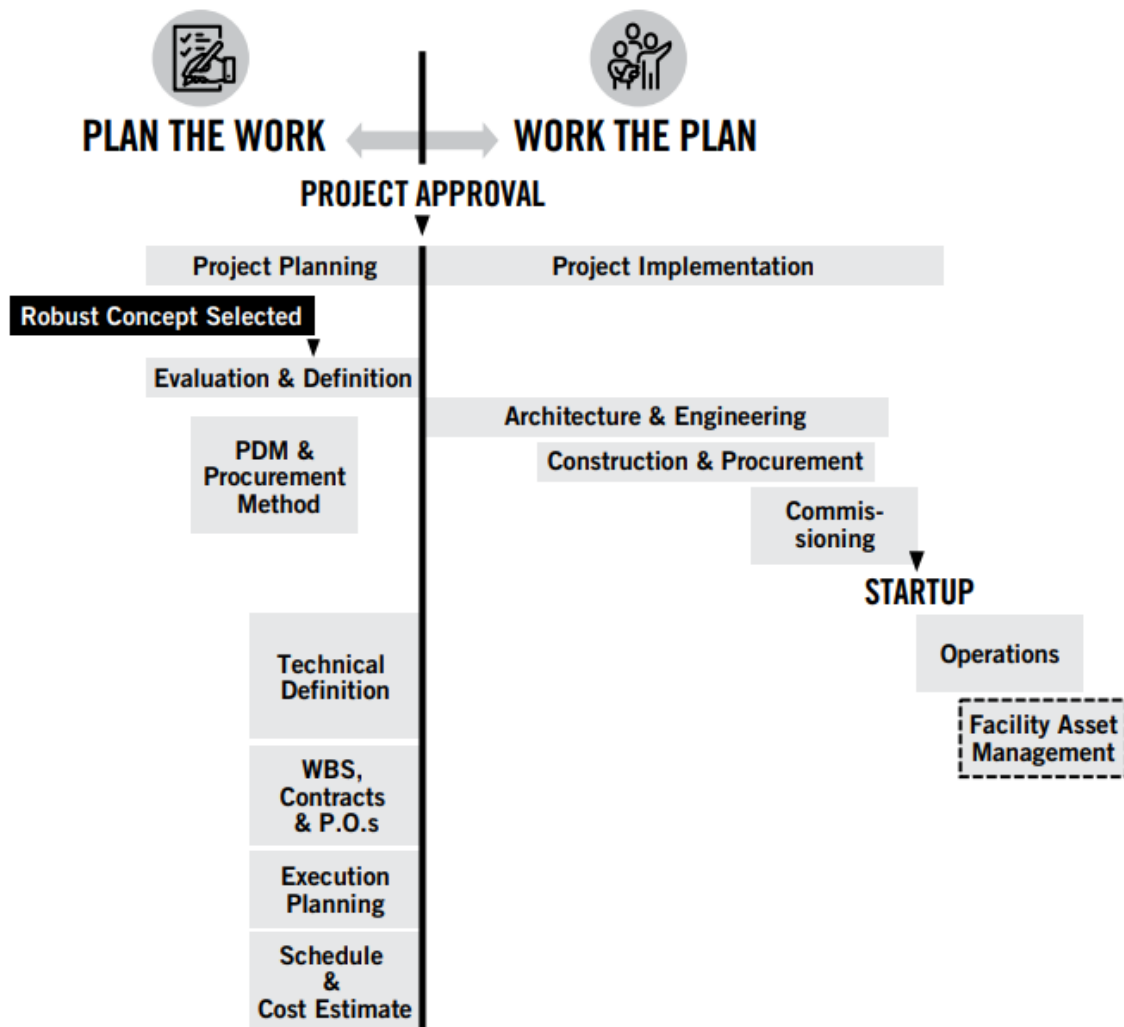


Figure 13.4 Rapid Alignment Initiated Delivery™ (RAID) Framework for Causal and Performance Analysis

OTHER ESSENTIAL ELEMENTS OF PROJECT EXECUTION

Overall project planning



Overall project planning

- ☐ Robust concept selected
- ☐ Project delivery method
- ☐ Technical definition
- ☐ Work breakdown structure (WBS), contracts, and purchase orders
- ☐ Execution planning
- ☐ Project control schedule
- ☐ Project control cost estimate

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Professional project management: Core competences – a pragmatic approach

- ❑ The **realization** of design and construction projects is embedded in the **ongoing process** of professionally managing the planning, design, and construction tasks.
- ❑ This **process aims** to deliver a project under the established criteria as defined by the **delivery team**.
- ❑ The **Construction Management Association of America (CMAA)** defines the practice of professional management as
planning, design, and construction of projects from inception to completion
for the purpose of controlling time, scope, cost, and quality (CMAA 2021).

Professional project management: Core competences – a pragmatic approach

- ❑ The **CMAA** is **just one** of several prominent professional societies and industry associations operating in the United States that offer a **body of knowledge (BOK)**, typically connected to a **Standards of Practice**.
- ❑ *Each tends to be slightly tailored to the specific professions—The American Institute of Architects (AIA), The American Society of Civil Engineers (ASCE), The National Society of Professional Engineers (NSPE), The Associated General Contractors of America (AGC), and the Construction Specifications Institute (CSI) are but a few of the more well-established examples.*
- ❑ All of the aforementioned offer common guidelines, standards, and recommendations for the application of **planning, design, and construction management** principles in practical terms.
- ❑ Moreover, **none** are intended to be a **sole source** of guidance for undertaking the design and construction management of a project.

Professional project management: Core competences – a pragmatic approach

- ☐ There are **many components** that make up the **idea of professional practice**.
- ☐ **Professional practice** is a people-driven exercise.

How to create operational process?

Professional project management: Core competences – a pragmatic approach

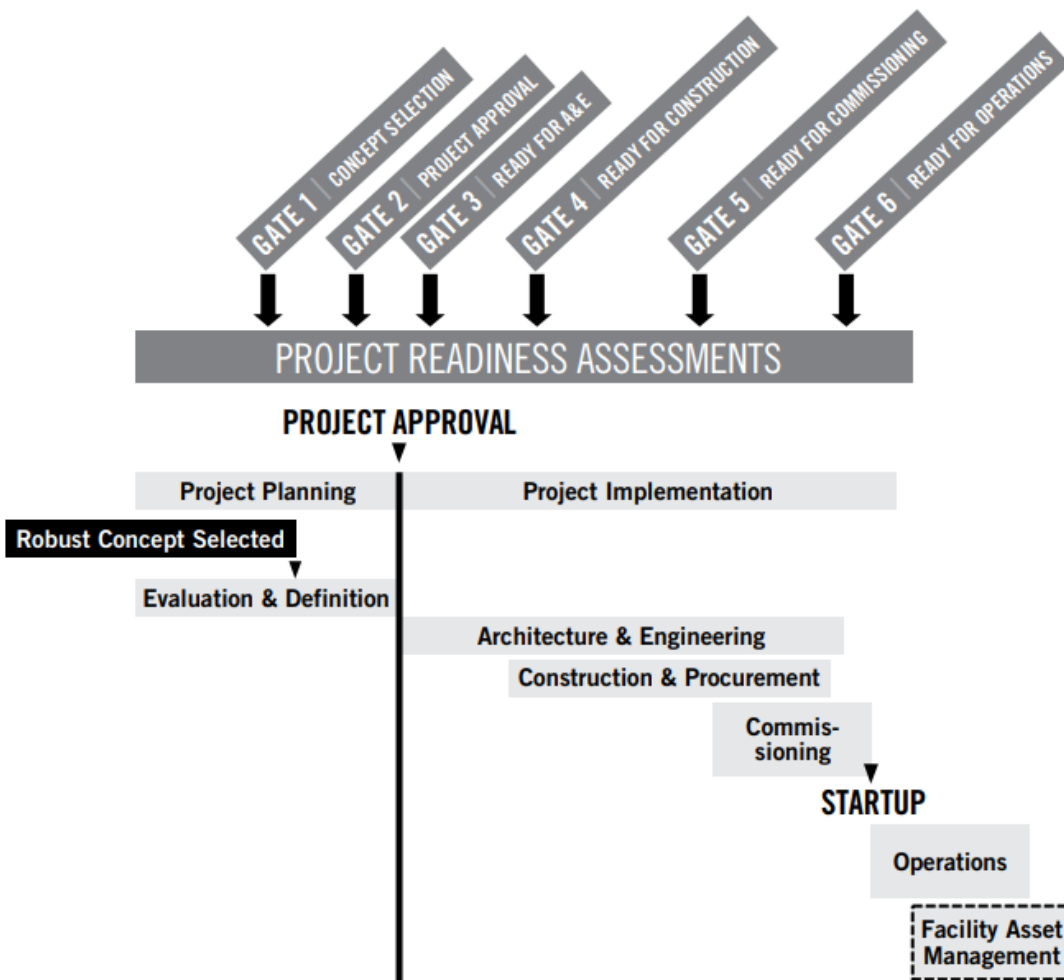
- ❑ To some extent, **each process** is taught in every sound **construction engineering or construction management curriculum**.
- ❑ **Countless textbooks and guides** focus on applying the **hard-system tools** (e.g., CPM, WBS, EVMS) that support the eight management functions.
 - ❖ However, it is **critical to understand** the distinction between
 - ✓ What a tool produces as a software output and
 - ✓ How the tool is used to manage the project.
 - For example, the CPM schedule can define the team's critical path to follow.

Professional project management: Core competences – a pragmatic approach

- ❑ However, **should not greater consideration** be given to **how** the project manager and project superintendent plan for and utilize resources, labor, and materials to **meet** the critical milestones represented in the schedule?
- ❖ This is a question and, more importantly, an **answer not usually found in textbooks.**

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Gate system for assessing readiness



Bring the project to an efficient close

- ☐ The **worst possible event** in the project completion phase is
a massive claim, legal action, labor dispute, civil disturbance, or other disasters
that prevent the facility from being completed.
- ☐ On the hard-systems side, **attention to detail** is needed.
- ☐ On the soft-systems side, **leadership** is required.

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Case study: Ethical leadership and its influence on corporate decision-making

- ❑ **Ethical leadership** is a critical operational task and **serves** as an important management construct—
setting the **tone for ethical behavior** within the organization.
- ❑ **Employees** often take their cue from the CEO and in most situations, are **very in tune** to what the **CEO wants**, and **will strive hard** to accomplish it.

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Case study: Ethical leadership and its influence on corporate decision-making

☐ Using the following case study,

consider the **natural tension** between

- ✓ What the CEO may be communicating and
- ✓ An employee's desire to meet their firm's business objectives.

☐ The **case** deals with **ethical aspects** of strategic planning.

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Case study: Ethical leadership and its influence on corporate decision-making

- ❑ **Derringer International Inc. (DII)** is a **leading supplier** of modular housing units and structural precast concrete systems,
with **manufacturing plants** throughout the United States and Europe.
- ❑ The **precast concrete systems** have been **selling well** in its existing markets and the company has **recently ramped up some new technologies**,
creating new products with its modular construction division.
- ❑ And **like many international companies**, DII is **eager to expand** its global business footprint.

Case study: Ethical leadership and its influence on corporate decision-making

- ❑ At a **recent long-term planning strategy session** with its business development group,
the DII CEO and the modular and precast concrete division **managers** agreed to **explore the potential of expanding** their business units to **three countries** in South America.
- ❑ The **three countries** have the potential to grow into a **significant marketplace** because the **creation of affordable** housing units is a **priority**.
- ❑ Also, the **DII modular technology engineering group** has recently solved a critical structural design issue that allows for the construction of a greater number of floors—**more than any** of their potential competitors operating in the three countries.

Case study: Ethical leadership and its influence on corporate decision-making

- ❑ However, the **development group's initial research reveals** that where there are **opportunities** to expand into three countries, **bribe-taking** is considered a **normal part** of doing business.
- ❑ The **group's research** raises one **major concern** for the division managers.
- ❑ In each of the marketplaces, a “**pay to play**” scheme with **local government officials** is normally required to get projects approved, operation licenses granted, and the plants built.
- ❑ These are all **high-risk concerns** and any **remedy to effectively mitigate** them will be considered by the team.
- ❑ The **CEO** says to the team, “*we know of many other international companies doing business in these countries for decades—how do they get around the problem?*”

Case study: Ethical leadership and its influence on corporate decision-making

- ❑ The **business development group** has investigated the question **thoroughly**.
- ❑ They **believe most companies** currently operating plants contracted with third party agents to represent them to **navigate the approval processes**.
- ❑ Apparently, the arrangement is **fairly common** because the CEOs of all those **companies** were able to **sign disclosure statements** required by law saying that under no circumstances did their firm **offer a bribe or special favor** to a **government official** prior, during, or after the project development process.

Case study: Ethical leadership and its influence on corporate decision-making

- ❑ The **CEO** conveys to his team that he is **not very comfortable** with the idea of payoffs **being a part of a business execution plan**
but understands that if the company **does not move aggressively** into the South America marketplace,
the **opportunity and potential lost revenue** for the firm will be significant.
- ❑ Several of the **division managers** are eager to take **advantage of this opportunity** and **recommend** to the CEO that DII move quickly to establish **third party relationships** in each of the countries.

Case study: Ethical leadership and its influence on corporate decision-making

- ☐ The **CEO understands** both the need to make a prompt decision and the potential ethical tension this creates for him and his team.
- ☐ It is obviously important for the **CEO to create shareholder value** for the firm and **provide opportunities** for his employees to grow both professionally and financially.
- ☐ It is **very hard to simply walk away** from this development opportunity.

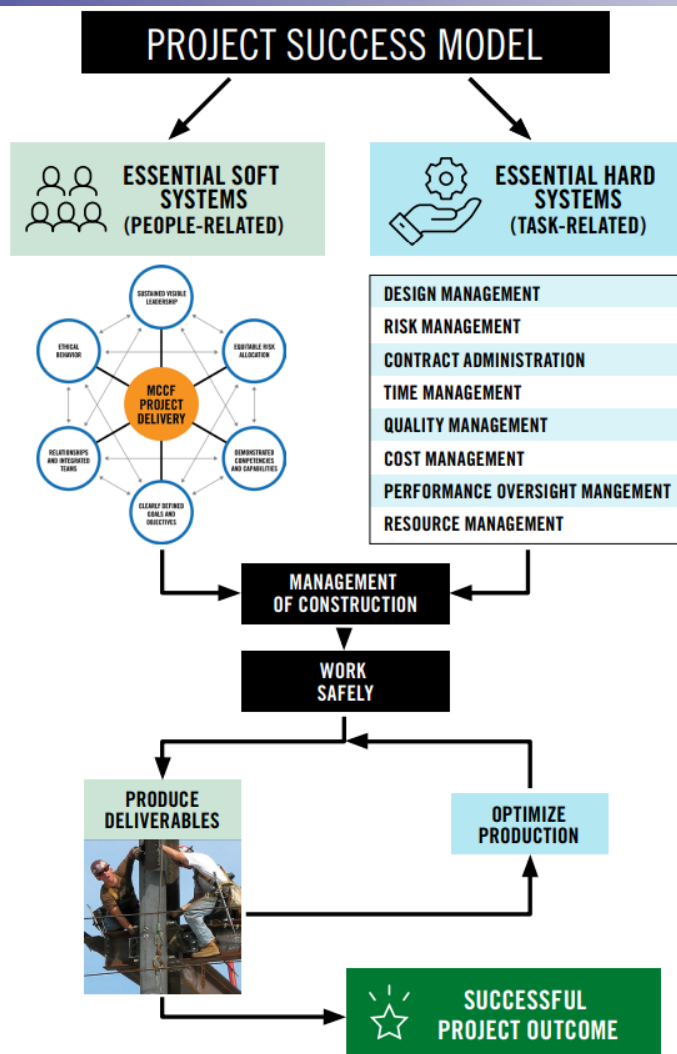
Case study: Ethical leadership and its influence on corporate decision-making

1. Given the circumstances, **what decision** should the CEO make? Why?
2. Because business in the **three countries has always been conducted** this way with the use of a “third party” representatives, **does it make it right?**
3. **What type of impact** does the **CEO’s decision** have on his **division managers’ future behavior?**
4. Does a **technological breakthrough** such as the structural engineering solution for the modular housing units **play into the go-no go decision-making?**
5. **If a third-party representative** conducted itself **unlawfully,**
should DII be responsible?

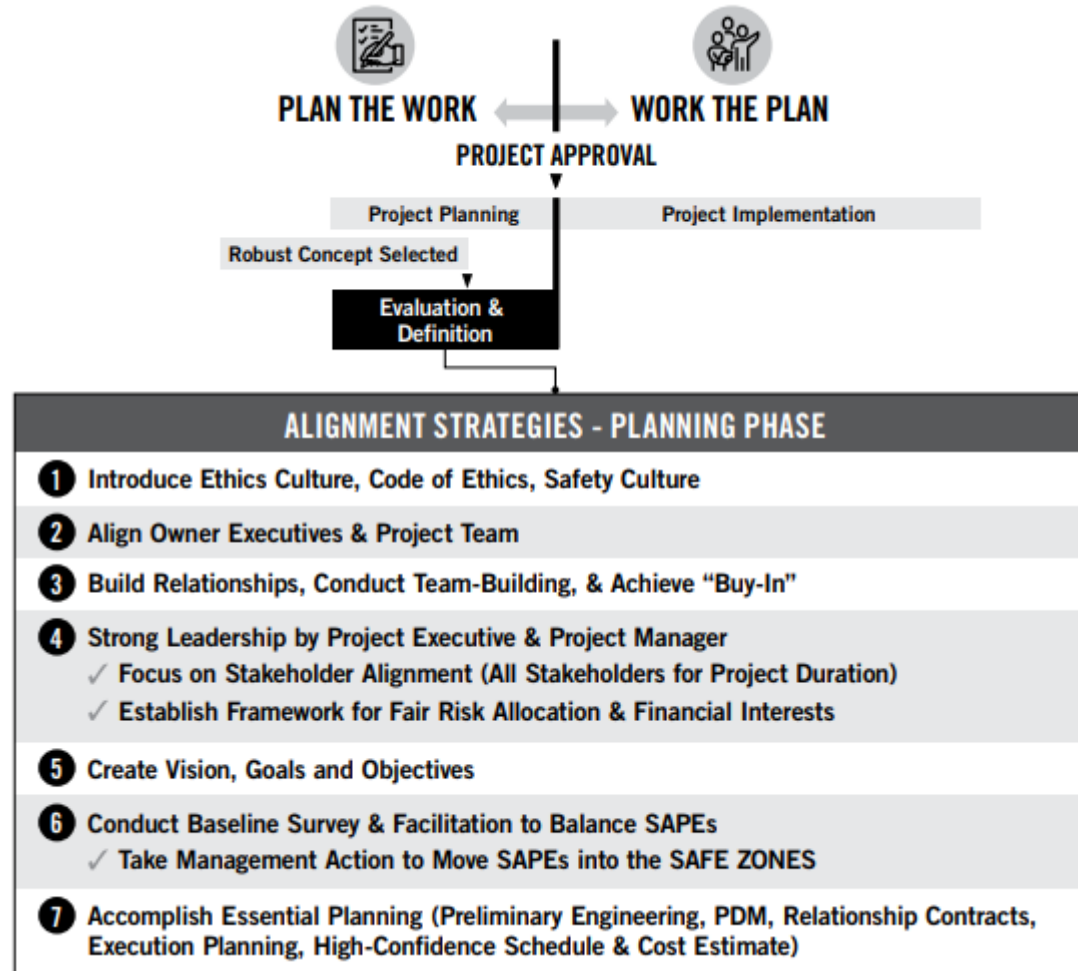
Should the CEO or its division managers **care?**

PROJECT SUCCESS

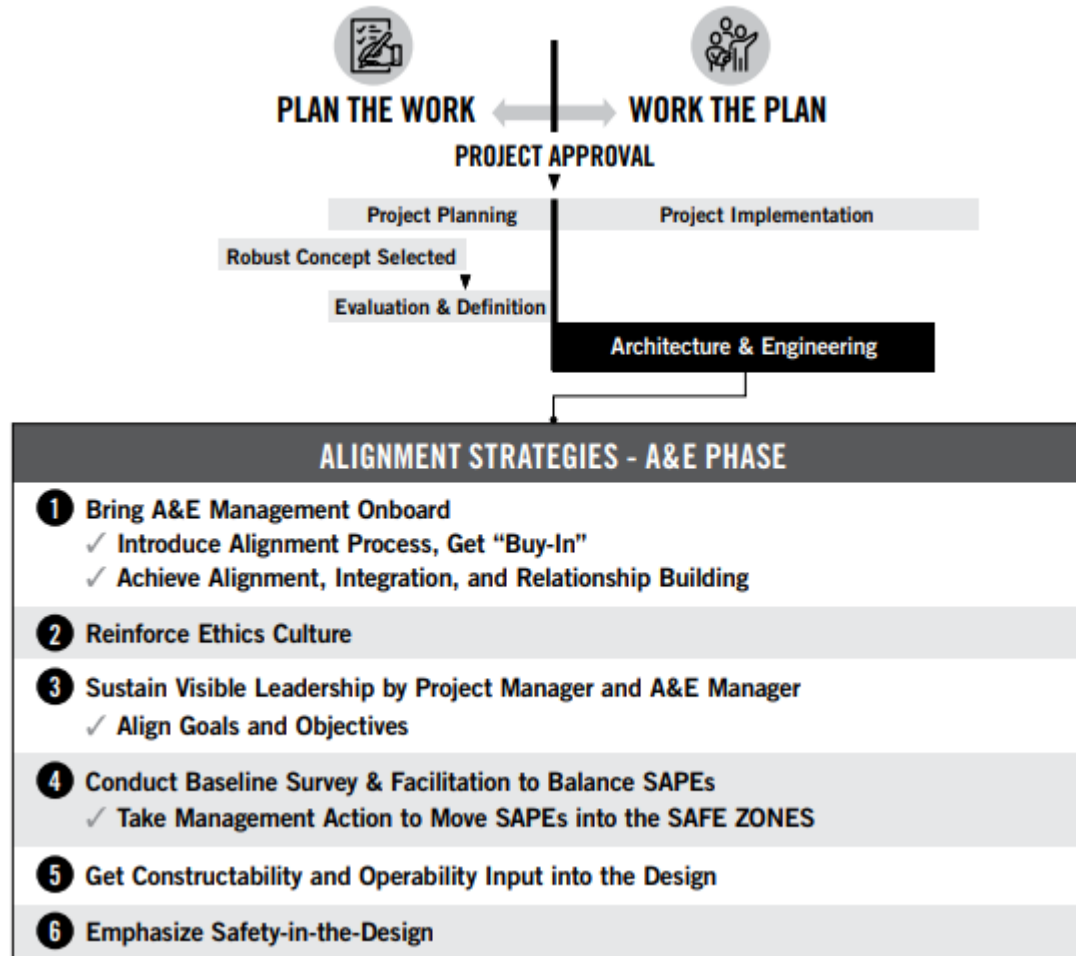
Project success model



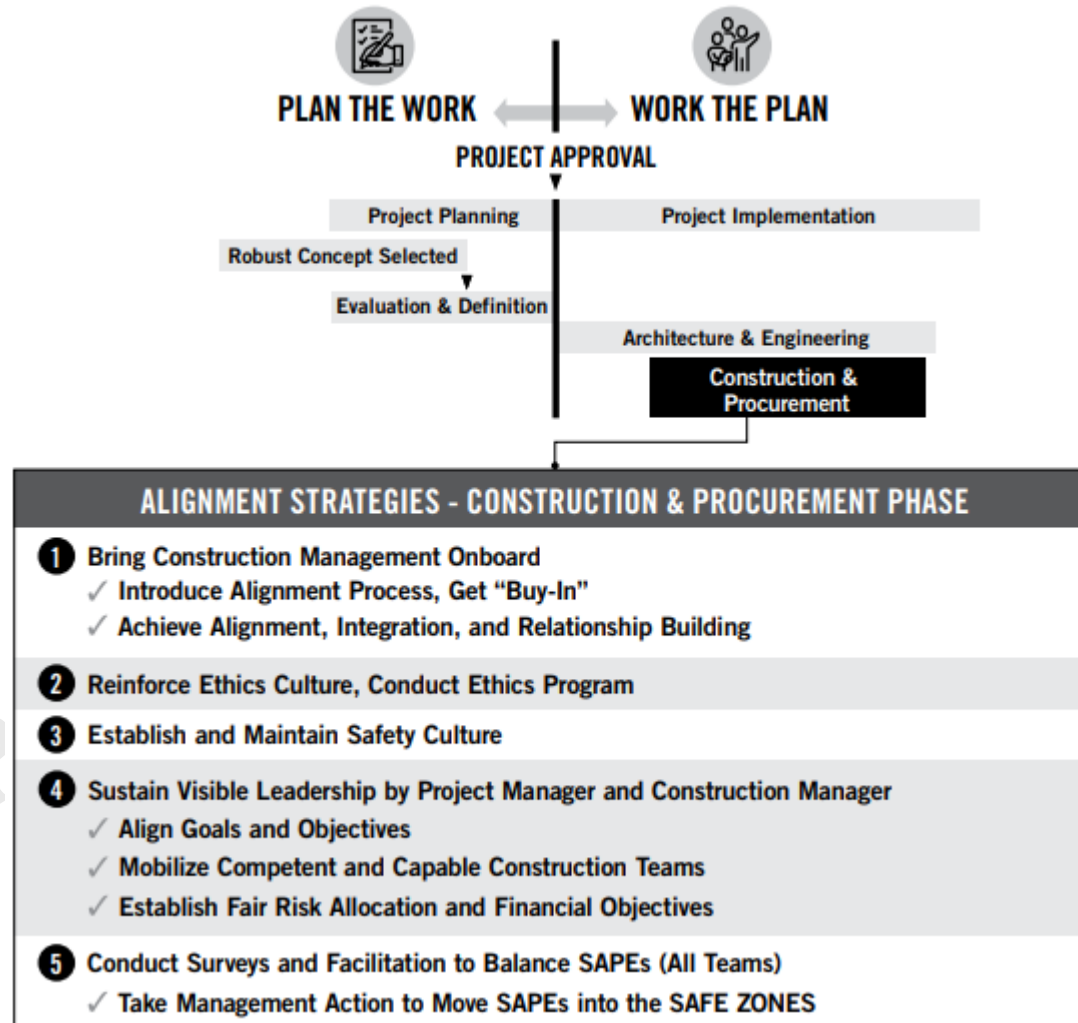
Alignment strategies for the project planning phase



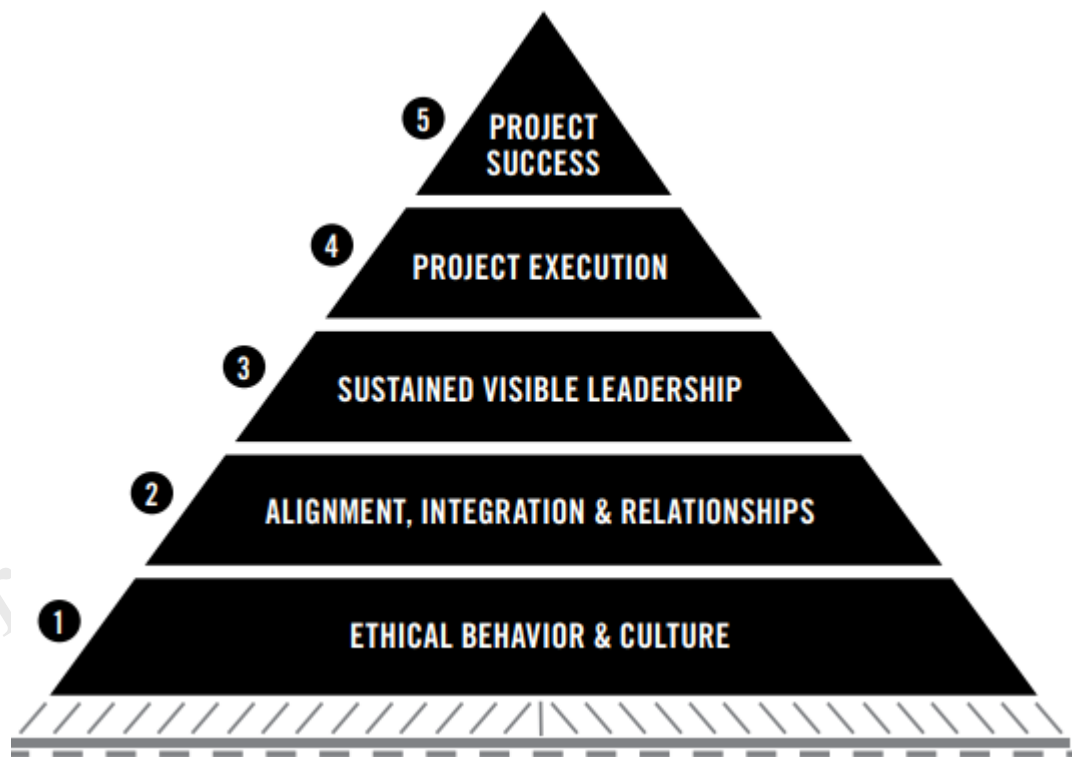
Alignment strategies for architecture and engineering phase



Alignment strategies for construction and procurement phase



Element of project success



Leadership and management functions to secure project success



TASK-ORIENTED

- ★ SET DIRECTION & CONVEY VISION
- ★ ESTABLISH CLEAR GOALS & OBJECTIVES
- ★ CREATE MISSION FOCUS
- ★ LEAD SAFETY; CREATE A SAFETY CULTURE
- ✓ PLAN/SCHEDULE/BUDGET
- ✓ ORGANIZE & STAFF
- ★ ASSEMBLE A COMPETENT TEAM
- ★ ALLOCATE RESOURCES
- ✓ DELEGATE
- ✓ CONTROL
- ✓ MANAGE CHANGE
- ★ MANAGE RISKS & OPPORTUNITIES
- ✓ INTEGRATE
- ✓ MEASURE
- ✓ IMPROVE
- ★ LEAD DECISION MAKING
- ★ NEGOTIATE



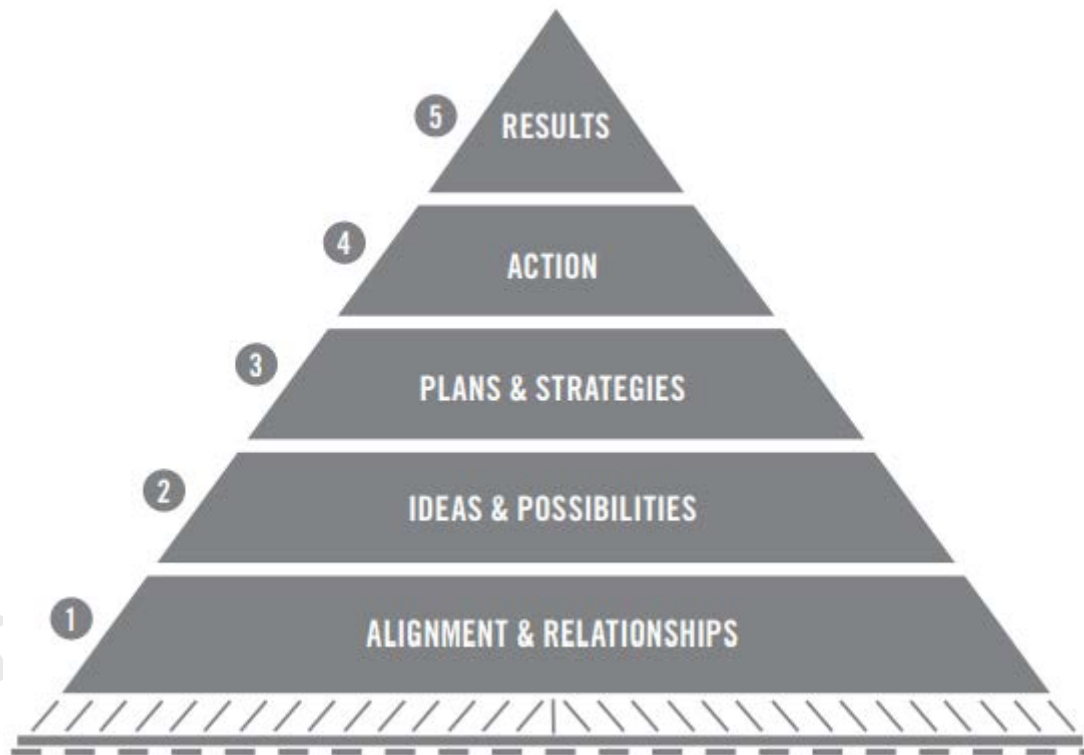
PEOPLE-ORIENTED

- ★ PROHIBIT RUDE BEHAVIOR
- ✓ PROMOTE ETHICAL BEHAVIOR
- ★ BUILD TRUST & CREATE ETHICS CULTURE
- ✓ BUILD COMMITMENT TO CLEARLY DEFINED GOALS
- ✓ BUILD A COMPETENT TEAM
- ✓ ALIGN ALL PARTIES
- ★ CREATE SUCCESS EQUILIBRIUM
- ✓ ALLOCATE RISKS EQUITABLY
- ★ MOTIVATE & INSPIRE
- ★ EMPOWER
- ★ TAKE CARE OF EMPLOYEES, CUSTOMERS, STAKEHOLDERS, & SUPPLIERS
- ★ DEVELOP LEADERS & TEAMS (LEADERSHIP CULTURE)
- ★ DEVELOP EMPLOYEES
- ✓ COMMUNICATE
- ✓ LIAISON OUTSIDE THE UNIT
- ✓ RESOLVE CONFLICTS

★ LEADERSHIP FUNCTIONS

✓ MANAGEMENT FUNCTIONS

High-performance teams model





مدیران حرفه‌ای صنعت ساخت (بر اساس سندی از انجمن مدیریت ساخت آمریکا (CMAA))

فصل اول: راهنمای رفتار حرفه‌ای برای مدیران ساخت

بخش پنجم: پذیرش مسئولیت حرفه‌ای در قبال صنعت، جامعه و نسل آتی

ارائه دهنده:

سید محمدرضا علوی پور

(PhD, PMP, CMIT)

دانشگاه Illinois Tech آمریکا



What we will learn?

- ☐ Introduction
- ☐ Advancing the profession
- ☐ Fair business practices
- ☐ Sustainability/resiliency
- ☐ Conclusion

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INTRODUCTION

❑ A CM **avoids** actions

that **promote** the CM's **self-interest** at the expense of

1. The industry,
2. The public, and
3. The needs of future generations.

❑ A CM

- ❖ **Strives** to **create** a diverse and inclusive workforce,
- ❖ **Follows** **fair** business practices,
- ❖ **Remains** **current** with the latest industry trends, and
- ❖ **Considers** the **impact** of their work on future generations.



Professional CM

مدیریت حرفه‌ای صنعت ساخت (بر اساس سندی از CMAA)
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❑ A professional CM:

- ❖ **Contributes** to the **advancement** of the profession by
 1. **Continuing** their own education and
 2. **Developing** a diverse, equitable, and inclusive workforcethat **promotes** a culture of belonging within their organization;
- ❖ **Only offers** services that they are qualified and able to **offer** which follow industry standards, laws, and regulations; and
- ❖ **Helps** the **owner** define and meet **requirements** for environmental sustainability and resiliency.

ADVANCING THE PROFESSION

Continuous learning

- ☐ To **contribute** to the construction management profession,
a CM must **continue** their professional education.
- ☐ **Design** and **construction processes** change over time
when new tools, techniques, software, regulations, and other trends emerge in
the industry.
- ☐ A CM must **understand**
that the standards, materials, technologies, etc.,
that a **CM has used** before
may no longer be best for a project or program.

- ❑ A CM also **contributes** to the development of the future workforce to **ensure** that the **profession** is able to **continue** to meet challenges on projects and programs.
- ❑ CMs
 - ❖ **Seek opportunities** to grow the profession and
 - ❖ **Understand** that the industry **cannot meet** owners' current and future requirements **without a talented workforce** that is diverse, equitable, and inclusive with a culture of belonging.
- ❑ Workforce development **benefits** projects/programs, organizations, and society.

Continuing professional education



A CM must continue their professional education to remain current with the latest industry trends.

Construction laws and regulations, technology, equipment, materials, prices, software, standards, and best practices change over time, so the CM recognizes that the way they have done something in the past might no longer be ethical, legal, or the most competitive. In other words, how the CM has done something before may no longer be the best way. The best way to meet an owner's requirements may be new or unique.

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Continuing professional education

❑ The CM must **remain** current with changes in

design and construction processes to manage the team.

❖ For example, the CM

- ✓ **Ensures** coordination among designers, leads design reviews, and
- ✓ **Identifies** variances to help the **design (or design-build) team** meet the owner's requirements.

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Continuing professional education

1. When acting as a **CM as agent** (or on the owner's staff),
the CM must **understand** and **monitor** the builder's means and methods
during construction
to **ensure** they are reasonable and meet the owner's requirements.
2. If a **CMAR**, the CMAR **needs** their knowledge of construction means and methods
to **direct processes** on the jobsite.

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Continuing professional education

- ❑ The CM should **recognize**

that **teams may use** many **different systems** to

plan and execute the work,

but these **standards** also expand and change over time.

- ❑ The CM must **understand** how to use the **latest versions** of these systems,
if the owner requires.

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Continuing professional education

❑ For example:

❖ **Owners** increasingly **ask contractors** to apply lean construction principles, methods, and practices,

such as the **Last Planner® System of Production Control**.

❖ There are also **several common specification systems** that the team may use, including

MasterFormat®,

National Master Specification, and

Unified Facilities Guide Specifications.

Continuing professional education

☐ Many organizations **offer**

1. Online courses,
2. Hands-on training,
3. Conferences, and
4. Publications

on a variety of design and construction topics that are relevant to construction management.

☐ A CM **engages** with these resources, as appropriate.



Continuing professional education

❑ Examples include (but are not limited to):

- ❖ Colleges and universities;
- ❖ Government agencies;
- ❖ Independent consultants;
- ❖ Owner organizations;
- ❖ Professional societies; and
- ❖ The CM's own organization.

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Continuing professional education

□ Meanwhile, topics for the **CM's continuing education** may include (but are not limited to):

- ❖ Artificial intelligence
- ❖ Asset management
- ❖ Augmented reality
- ❖ Budgeting/cost management
- ❖ Building information modeling
- ❖ Business intelligence
- ❖ Change orders
- ❖ Claims management
- ❖ Commissioning
- ❖ Conceptual studies
- ❖ Contract administration
- ❖ Construction Products Regulations (CPR)

Continuing professional education

□ Meanwhile, topics for the CM's continuing education may include (but are not limited to):

- ❖ Critical path method
- ❖ Cybersecurity
- ❖ Data management
- ❖ Delivery methods
- ❖ Design reviews
- ❖ Earned value management
- ❖ Equipment
- ❖ Estimating
- ❖ Ethics
- ❖ Experience modification rates
- ❖ Geographic information systems
- ❖ Hazardous materials

Continuing professional education

❑ Meanwhile, topics for the CM's continuing education may include (but are not limited to):

- ❖ Insurance
- ❖ Labor hours
- ❖ Management information systems
- ❖ Managing out-of-sequence work
- ❖ Materials
- ❖ Occupancy planning
- ❖ OSHA
- ❖ Partnering
- ❖ Permitting
- ❖ Photogrammetry
- ❖ Prefabrication methods
- ❖ Procurement planning

Continuing professional education

❑ Meanwhile, topics for the CM's continuing education may include (but are not limited to):

- ❖ Project/program management
- ❖ Public relations
- ❖ Quality management
- ❖ Risk management
- ❖ Safety management
- ❖ Scheduling
- ❖ Site access
- ❖ Supply chains
- ❖ Sustainability rating systems
- ❖ Value engineering
- ❖ Virtual reality
- ❖ Work breakdown structures

Continuing professional education

- ❑ Finally, **good leaders look** beyond the technical side of their business to **add** the necessary personal skillsets to their repertoire, so a CM also **continues** their leadership training.
- ❑ CMs **manage** teams of people, which requires the CM to
 - ❖ Have **interpersonal skills** to develop the team,
 - ❖ Support the **profession**, and
 - ❖ Accomplish the **owner's requirements**.
- ❑ These skills require ongoing practice and training.
 - ❖ For example, the CM may **regularly participate** in communication training to develop their public speaking, teambuilding, and conflict resolution skills.

Continuing professional education

❑ **Leadership skills** help the CM enhance the productivity of

all team members, including CM's

subordinates,

peers, and

superiors.

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Creating a diverse, equitable, and inclusive workforce with a sense of belonging

- ❑ A diverse, equitable, and inclusive workforce that **promotes** a culture of belonging **strengthens** projects/ programs, organizations, communities, and society.
- ❑ Meanwhile, **workforce shortages** can create safety issues, delays, cost overruns, or quality errors that put teams, the public, and future generations at **greater risk**.
- ❑ A CM **understands** that the industry, public, and future generations need a talented, diverse, and engaged workforce with a **robust talent pipeline** to meet challenges on future projects and programs.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging



Therefore, helping to recruit a diverse, equitable, and inclusive workforce and retain that workforce by building a culture of belonging is one of the CM's critical responsibilities to the industry, the public, and future generations.

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Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ A professional CM

- ❖ **Takes pride** in the profession
- ❖ **Helps** widen the pipeline of talent into the industry,
- ❖ **Seeks** to
 - ✓ **Develop existing** talent, and does **not discriminate** based on race, color, gender, marital status, religion, national origin, age, disability, or sexual orientation, or
 - ✓ Does **not Tolerate** any form of harassment (including sexual harassment and bullying).

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Recruiting talent

- ❖ A CM looks for opportunities to **attract new workers** to the industry.
- ❖ These opportunities include (but are not limited to):
 - ✓ Teaching courses in colleges and trade schools to
 - o Share knowledge and
 - o Tell engaging stories about the profession;
 - ✓ Building connections to a range of local postsecondary institutions and recruiting from small schools, two-year institutions, Historically Black Colleges and Universities, and other Minority-Serving Institutions;

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Recruiting talent

- ❖ These opportunities include (but are not limited to):
 - ✓ **Considering students** with useful skills **from other majors** besides architecture, engineering, and construction management, such as liberal arts and sciences, technology, data science, and business;
 - ✓ **Using co-ops and internships** to provide students with **experience-for-credit** and improve the likelihood that they will **stay in the profession** after graduation; and

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Recruiting talent

❖ These opportunities include (but are not limited to):

✓ Welcoming other “**non-traditional**” candidates

who have **relevant skills and experience**, such as

- Workers from other industries with excellent communication,
- Problem-solving, and
- Management skills (teachers, law enforcement, customer service, firefighters, military, etc.) And
- Formerly-incarcerated people who have a desire to work in the industry.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Recruiting talent



A CM understands that a collaborative and supportive culture is critical to retaining talent. As a leader, the CM plays an influential role in their organization's culture, particularly how the organization values and develops their workers.

- ❖ The CM must **remember** that teams **consist** of human beings with different backgrounds, personalities, and skills who can all bring value to a project or program.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ Some organizations **lose good employees** because those workers were **afraid to talk** to an executive,
so a **CM finds** the **right balance** between micromanaging and ignoring their employees.
- ❖ A CM **schedules** regular one-on-one check-in meetings to ask **team members** **questions** that are **relevant to them**, such as
 1. How they feel about their projects/programs,
 2. What support they need, and
 3. What their career goals are.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

❖ A CM also **uses opportunities** to create mentor-mentee relationships.

✓ For example, a CM **may hold** informal meetings

that are **completely off the record** to help workers discuss issues and
find a mentor or ally.

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Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ A CM **encourages** their organization to
 1. **Connect pay** to clear performance benchmarks and
 2. **Educate employees** about their organization's business model.
- ❖ **Team members** should **understand how their supervisor(s)** will objectively evaluate and compensate good performance.
- ❖ The team should also **understand** how the project/program **budget** may determine compensation.
 - ✓ For example, if a **construction management firm** charges a project owner a **fixed fee**, then the **firm's personnel** should generally understand
 1. What the firm's **expenses** are for that project,
 2. How the firm will **compensate** project leadership, and
 3. What will determine their **own individual compensation**.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ A CM **understands** that organizations should define and communicate a **variety of career paths** that **appeal** to a wide range of people.
- ❖ The CM should **not try to replicate** their own career path for everyone in their organization or on their team.
 - ✓ Instead, the CM **looks for ways** to promote the training and opportunities that are **best suited** to their employees.
 - For example, the CM could allow a **new team member** to try a **rotation** in a different specialty for a few weeks to **help that team member** identify their passions and talents.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ In other words, a CM **tries** to create career stability for their **team members**.
 - ✓ For example, **instead** of releasing underutilized employees after a project ends,
 - the CM's firm could **create a fund** (e.g., putting aside a small percentage of every billable hour) to **retain staff** between projects.
 - o This fund would **show staff** that the CM's organization **cares about them** and **builds time** to train employees, which increases overall workplace **flexibility** and a **sense** of belonging.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ A CM also **understands** how to **foster** a supportive team culture that **avoids** harmful comments and actions, known as **microaggressions**.

Microaggressions are

1. Intentional or unintentional comments or
 2. Actions that communicate a bias against a historically marginalized group.
- ✓ In other words, a **microaggression** is a statement or an action that has a **negative meaning**.
 - Although a microaggression may be **subtle**, it is **harmful to the team members** who **identify** with the selected group.

Creating a diverse, equitable, and inclusive workforce with a sense of belonging

❑ Retaining talent

- ❖ Therefore, the CM **makes** an effort to be conscious of **their own** and **their team members' biases**

to prevent and respond to microaggressions in the workplace.

- ❖ Preventing and responding to microaggressions **require** sensitivity and humility.
- ❖ The CM **sets an example** with their actions, such as
 - ✓ Using professional language that avoids personal opinions,
 - ✓ Correcting any of their own negative biases, and
 - ✓ Confronting negative comments and actions from others.
- ❖ Ultimately, team members should **feel empowered** by the CM's example to
 - ✓ Confront microaggressions and
 - ✓ Have an opportunity to correct their biases.

FAIR BUSINESS PRACTICES

Meaning and necessity

❑ Fair business practice **means** a CM only offers services that they are **qualified** and **able** to offer.

- ❑ **Fair business practices** are necessary to
- ❖ Uphold the highest industry standards,
 - ❖ Prevent fraud, and
 - ❖ Protect the public.

What CM should do here?

CM's function

- ❑ A CM always **follows** fair business practices based on
 - ❖ General industry procurement processes and
 - ❖ Laws specific to the jurisdiction(s) where the CM practices.
- ❑ The CM also
 - ❖ **Competently Assesses** what services the owner might need and
 - ❖ **Fairly represents** what compensation the CM will need.

How the owner may select the CM?

CM selection process

- ❑ Note that CM selection practices will **vary** from owner to owner based on many factors, including (but not limited to)
 - ❖ The owner's unique requirements,
 - ❖ The part of the industry,
 - ❖ Location,
 - ❖ Form of CM (agency or at-risk),
 - ❖ Delivery method, and
 - ❖ Applicable laws and regulations.

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CM selection process

☐ Owners may

1. Follow a qualifications-based selection,
2. Use price-based criteria, or
3. Have some combination in the selection process.

❖ For example, a public owner in the United States may follow a **qualifications-based CM selection process** based on federal law, such as the **Brooks Act**.

What should CM do with regard to selection?

CM selection process

- ☐ Professional CMs **understand** the general CM selection process.
- ☐ The CM must always **recognize** the **differences** between
 1. An owner's request for quote (RFQ) or
 2. Request for proposal (RFP) and
 3. Know how to respond with a statement of qualifications (SOQ) or technical proposal.

What are their differences?

CM selection process – RFQ/SOQ

- ☐ An **RFQ** invites **interested parties** to **submit quotes** for a project/program and is usually the **beginning** of the selection process.
- ☐ At this point, the **owner** may not fully understand
 1. What CM services they wish to procure or
 2. Have a finalized budget.

How the CM should respond?

CM selection process – RFQ/SOQ

❑ A professional CM **responds** to an RFQ with an SOQ

that **generally describes** the CM firm's (or team of firms')

- ✓ Knowledge,
- ✓ Experience,
- ✓ Past performance on similar projects/programs, and
- ✓ Capacity to meet the owner's needs.

Three key points in writing SOQ?

CM selection process – RFQ/SOQ

❑ The SOQ

1. **Honestly represents** the CM and their firm(s),
2. Does **not undermine** other firms, and
3. Does **not** attempt to **manipulate** the owner's selection process.

Let's see an example

CM selection process – RFQ/SOQ

❑ For example:

- ❖ The CM's SOQ does **not overstate** their qualifications to attempt to move forward to the **next round** of the selection process; and
- ❖ The SOQ is **transparent** about any limitations the CM may have e.g., **other work still** in progress for another owner.

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CM selection process – RFQ/SOQ

❑ The CM understands that

1. **Slandering** other firms,
2. Understating, or
3. Exaggerating

to **win a bid** may ultimately **cause great harm**, such as

- ❖ Damaging the CM's reputation (and odds of winning future bids),
- ❖ Owner's interests,
- ❖ Profession, and
- ❖ Public's safety.

CM selection process – RFQ/SOQ

- ❑ Furthermore, a professional CM understands that **reaching the next round** (often known as the “shortlist” or “shortlisting”) is usually **not the end** of the selection process.

How about RFP?

CM selection process – RFP/technical proposal

- ❑ An **owner's RFP** provides a detailed description of the project/program, including
 - ❖ Budget,
 - ❖ Major constraints,
 - ❖ Any unusual services the owner may require, and
 - ❖ Details about compensation.

Difference between RFP and RFQ?

CM selection process – RFP/technical proposal

- ☐ An RFP will generally have **more specific information** than an RFQ.
- ☐ The **owner** generally issues the RFP
only after establishing the project's/program's technical requirements.

Does the process vary?

CM selection process – RFP/technical proposal

❑ However, the RFP process **may vary**.

❑ For example, the **owner** might:

1. **Send RFPs** to those **shortlisted firms**

that the owner judges are **qualified** based on the **SOQs**;

2. **Prequalify** certain firms and

send them RFPs directly (skipping the RFQ/SOQ process);

3. Issue a **public RFP** to encourage more bids; or

4. Follow some **other method**.

How the CM responds?

CM selection process – RFP/technical proposal

- ☐ The CM **responds** with a technical proposal that provides
 1. **Information** about their firm's (or team of firms') **qualifications** and
 2. **Their intent** to perform the requested services.

- ☐ **Like** an SOQ, a CM's technical proposal is honest,
does **not** slander other firms, and
does not attempt to manipulate the process.

Is it more detailed?

CM selection process – RFP/technical proposal

- ❑ However, **technical proposals** usually include **more**
 1. Project- or program-specific **details** and
 2. **Pricing** information (although some owners may follow a separate fee proposal process).

What key points?

CM selection process – RFP/technical proposal

- ❑ A CM's **technical proposal** must competently **assess** the owner's requirements.
- ❑ A competitive proposal **shows**
how the CM can **help** the owner deliver their project/program in a way that
meets the owner's requirements.
- ❑ A **well-written proposal** also considers the **impacts** the project/program may have
on
 - ❖ Owner's portfolio,
 - ❖ Industry,
 - ❖ Public, and
 - ❖ Environment.

What should the CM do before submitting the proposal?

CM selection process – RFP/technical proposal

- ☐ **Before** the CM **submits** their proposal, the CM should **review**
 1. Owner's desired **scope** of services and
 2. Form of construction management **agreement**.
- ☐ The **proposed** construction management **contract** should clearly define
 1. Risks
 2. Authority
 - assumed by the CM and those the owner retains.
 3. How changes in scope or CM services will be addressed.
- ☐ Note that **even if** the owner uses a standard form of contract,
it may require **some tailoring** to the specific project or program.
- ☐ The CM and the owner should always **consult with** appropriate legal counsel when reviewing contracts.

CM selection process – RFP/technical proposal

- ❑ The CM should **realize** that the **owner's requirements** may involve **more than** on-time and on-budget delivery that meets the **design specifications**.
- ❖ For example, a **transportation owner's priority** may be to complete the project in a **busy area** without disrupting surrounding traffic.
- ❖ The CM should **consider how** these and other factors may **determine**
 1. Services the owner needs and
 2. CM's fee.

What factors may influence owner's requirements?

CM selection process – RFP/technical proposal

- ❑ **Factors** that may influence the **owner's requirements** include (but are not limited to):
- ❖ Applicable laws or regulations;
 - ❖ End-users' requirements;
 - ❖ Energy usage, waste, runoff, noise, or other environmental issues;
 - ❖ Lenders' or investors' requirements;
 - ❖ Safety requirements;
 - ❖ The owner's capabilities and resources;
 - ❖ The owner's customers' expectations;
 - ❖ The owner's organizational mission;
 - ❖ The owner's relationship with the community (i.e., the project's/program's "public image"); and
 - ❖ Workforce availability (including designers, construction workers, and the owner's and CM's own workforces).

How to define CM fee?

CM selection process – Fee

- ☐ If the owner does **not follow** a separate fee proposal process, the technical proposal should show a **cost breakdown** in the **format** the owner requires.
- ☐ Often, the owner will want **each proposal** broken down by cost for each **major task**, along with a **supporting rationale**.
- ☐ The CM's supporting narrative must address **all the critical issues** that the **owner/contract documents** require.

What the cost proposal should reflect?

CM selection process – Fee

- ❑ The **proposal** must reflect the **full scope**, including (but not limited to)
 - ❖ All direct labor costs,
 - ❖ Indirect costs (such as fringe benefits, overhead, insurance, etc.),
 - ❖ Applicable proposals from trade partners/consultants,
 - ❖ Travel,
 - ❖ Material,
 - ❖ Equipment, and
 - ❖ Profit/fee percentage.

What if the GMP used?

CM selection process – Fee

- ❑ When the owner uses a **guaranteed maximum price (GMP)** contract, the owner and CM should
 1. **Base the GMP** on total estimated construction cost and
 2. **Establish** clear rules for a construction management contingency.
 - ❖ A contingency between 1% and 3% is common and **paid by the owner separately** based on the CM's documented expenditures.

Is there accepted industry-wide standard for determining compensation?

CM selection process – Fee

- ❑ However, note that there are **no accepted industry-wide standards** for **determining compensation** for construction management services.
- ❑ The **CM's fee** typically depends on
 - ❖ Types of services that the owner requires,
 - ❖ CM's (and their staff's) expertise and
 - ❖ Number of hours spent on the project/program.

Is there any range?

CM selection process – Fee

- ❑ Industry surveys have shown that fees usually range from **3%-10%** of the **total estimated cost of construction**

but vary widely by project/program

- ❖ Type,
- ❖ Size, and
- ❖ Level of service.

Factors that may influence the CM's fee?

CM selection process – Fee

❑ **Factors** that may influence the **CM's fee** include (but are not limited to):

- ❖ Applicable laws and regulations;
- ❖ Estimated construction costs;
- ❖ Project or program duration;
- ❖ Skills and number of required construction management staff;
- ❖ The CM's authority and relationships to the other team members;
- ❖ The CM's risk;
- ❖ The form of contract (agency or at-risk);
- ❖ The owner's scope; and
- ❖ When the CM joins the team.

How about vendor procurement process?

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