



مدیریت پروژه‌های صنعت ساخت (ساختمانی، زیرساختی و صنعتی)

فصل دوازدهم: مهارت نرم
تیم‌سازی و مدیریت ارتباطات

ارائه دهنده:

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(PhD, PMP, CMIT)

دانشگاه Illinois Tech آمریکا



What we will learn?

- ☐ The project team
- ☐ Communication, collaboration, and integration
- ☐ The AEC culture
- ☐ Management vs. Leadership
- ☐ CM roadmap related to this section

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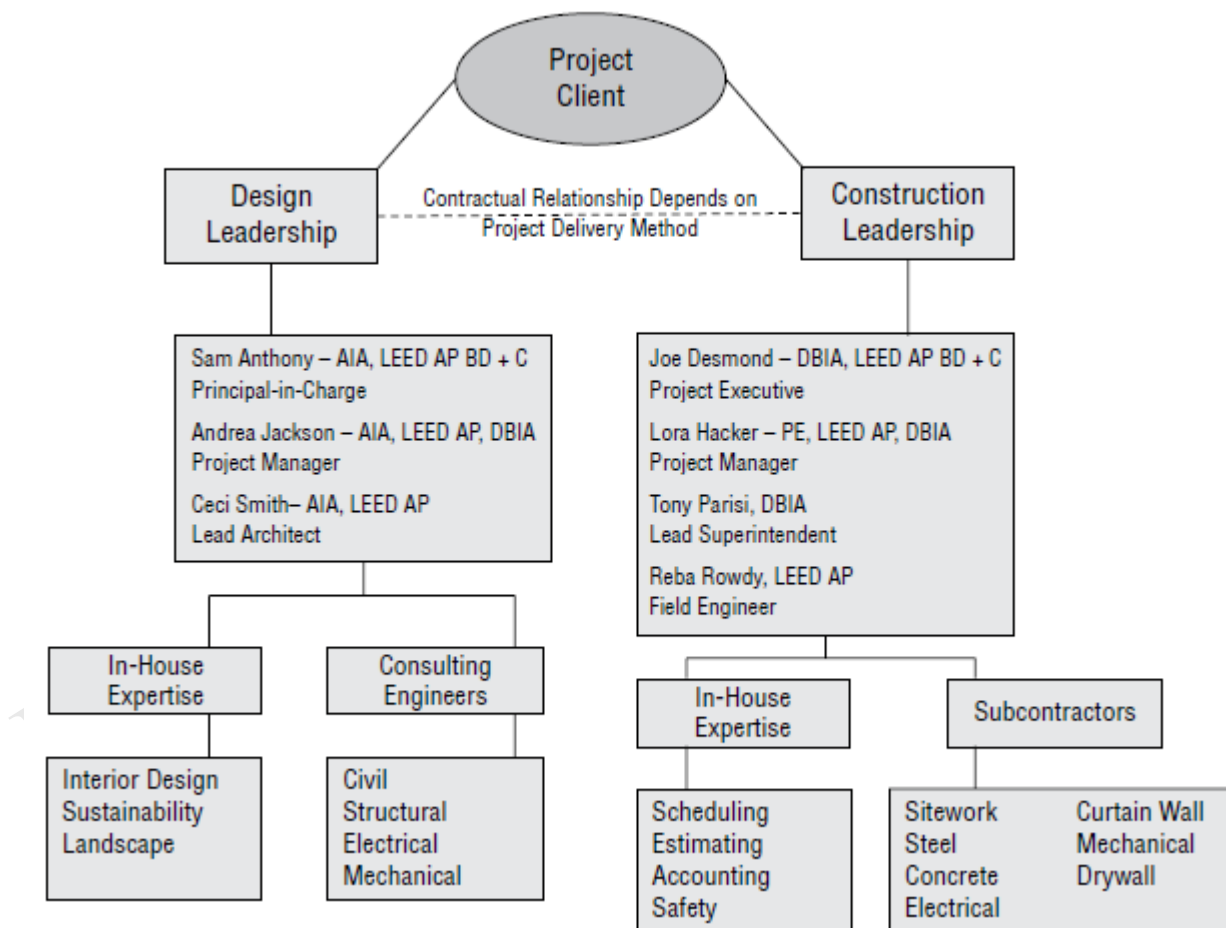
THE PROJECT TEAM

Organizational chart

- ❑ Just as a **construction company** has an organizational chart,
so will **each project** have its own organizational structure.
- ❑ Usually, the more complex the project, the more subcontracted parties there are.
 - ❖ **Every subcontracted party** becomes a part of the project team.

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Organizational chart



- ☐ Construction is a people business first and foremost
- ☐ The fact is, valued people show up differently.
- ☐ They show up **ready to work** and to solve problems.
- ☐ There's a big difference between willing collaborators, and resistant followers.
- ☐ The best way to create willing collaborators is by **truly valuing the contribution** that each individual makes to the team and **solving the problem**.
- ☐ It's also important to **let people** have a say in the **process and planning**—
to allow people the opportunity to figure things out and to engage their
abilities, skills, and values to solve a problem.

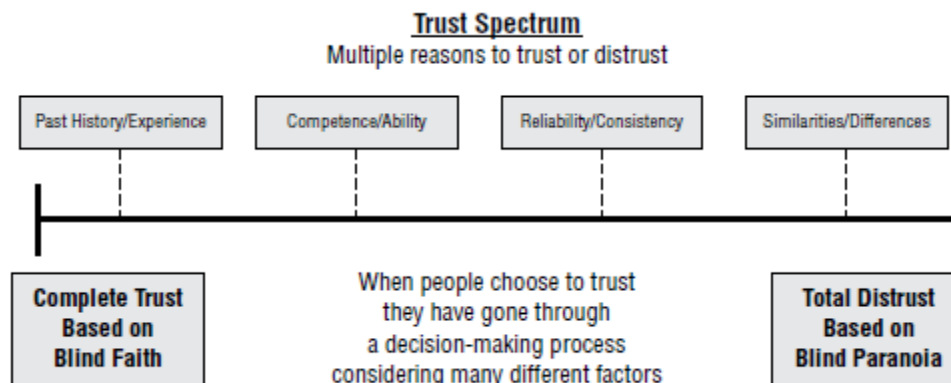
- ☐ **No one** wants to be told what to do all the time, or have someone looking over their shoulders.
- ☐ So often **managers believe** that their job is to “control” the people on their teams, but nothing could be further **from the truth**.
- ☐ No one wants to be controlled—they want to **be challenged**, and then **trusted to meet that challenge**.
- ☐ The **job of the manager** is to encourage, empower, and inspire people to bring their best game to the **challenge**.

☐ Here's **some tips** for being the right kind

1. Respect
2. Motivation
3. Appreciation and recognition
4. Sharing the why

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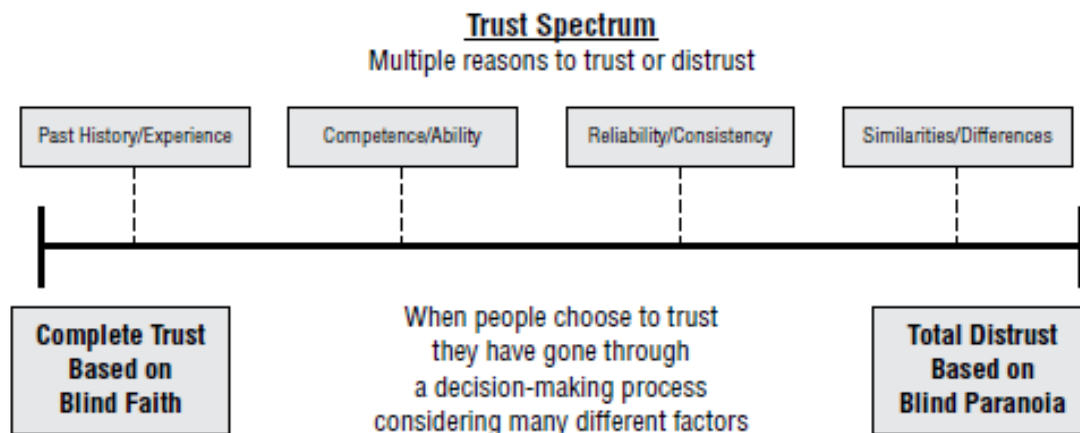
- ❑ There's **no doubt** that **building trust** on a team is one of the **more challenging aspects** of construction project management.
- ❑ It's critical to establish trust among team members if you want to achieve high goals and maintain healthy working relationships.



- ❑ In **Patrick Lencioni's** book, The Five Dysfunctions of a Team (Jossey-Bass, April 11, 2002),

he identifies the “**Absence of Trust**” as the **number one challenge** among teams.

Trust is the **foundation of any successful** teaming relationship.



Building trust

❑ There are **several common factors** that will influence your tendency to trust or not to trust.

- ❖ History and experience
- ❖ Competence and ability
- ❖ Similarities and differences
- ❖ Relative power and authority
- ❖ Character

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Accountability

❑ **Our success** is measured by **some pretty objective metrics**—budget, schedule, quality, and safety.

❖ Finger pointing game with the blame landing.

✓ Team as a whole.

The entire team either succeeds together or they fail together—and this is exactly why some people don't like being a part of a team.

❑ They **don't want** their **individual success or failure** to be dependent upon the performance of others,

primarily because **they don't know** how to control that performance.

Accountability

- ❑ Many team members are **very uncomfortable** holding another team member accountable.
- ❑ Our **usual approach** is to expect the team leader, or the manager,
to hold those **who aren't performing** or carrying their load **accountable**, and
when they don't,
we **become frustrated and annoyed**, or even angry—
especially when the project **begins to fail**, and
then the **finger pointing begins**.

Accountability

- ❑ The **practice of accountability** isn't just about catching someone failing.
 - ❖ It requires us to be **aware of the tasks and deliverables** **each team member** is accountable for, and
then checking in on one another to see how things are going, and if anyone needs any help.
- ❑ I refer to this practice as commitment management, and
it's **your job as a team member** to help fellow team members keep their commitments.
- ❑ That means you need to be in regular communication and conduct periodic check-ins with your team,
whether it's your job to do so or not.

commitment management

The practice of being aware of each team member's tasks and deliverables, checking in with them periodically, and helping when needed for the success of the project.

Accountability

- ❑ Once you have worked on a team where vulnerability-based trust and accountability exists,
you will **always want to work** in such an environment.

vulnerability-based trust

Establishing honesty among team members through authentic check-ins and providing the support needed to make sure all team members, and thereby the project, succeed.

Ethical dealings

❑ Ethical dealings have to do with

- ❖ Keeping your word,
- ❖ Being honest,
- ❖ Compensating your employees fairly,
- ❖ Paying your subcontractors and vendors on time,
- ❖ Finding ways to reward people for superior performance, and
- ❖ So many other acts of good faith.

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Ethical dealings

- ❑ Covey referred to as **building the emotional bank account**, years ago in his book The 7 Habits of Highly Effective People (Simon and Schuster, 1989, 2004).
- ❑ Covey suggested that it **takes time to build up** that emotional bank account with continued fair dealings, over a long period of time, to **build trust and respect**.
 - ❖ However, he also suggested that **it only takes one or two dishonest or unfair wrongdoings** to bankrupt the whole account and destroy all the goodwill that it may have taken you years to establish.

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Ethical dealings

- ☐ In this day and age, when **attracting and maintaining a skilled workforce** is more important than ever,
you really **can't afford not to operate** in an ethical manner.
- ☐ Today, **ethics** has become a cornerstone of construction education and is required curriculum by some accrediting bodies who assess construction management programs at many universities.

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COMMUNICATION, COLLABORATION, AND INTEGRATION

Importance

- ❑ Effective communication and collaboration are core to being a **successful manager** of diverse project teams.
 - ❖ However, most of us have **never had any formal training** associated with these two very important attributes.
- ❑ Often referred to as the “**softer skills**” associated with being a manager, they can actually be **pretty hard to learn**.
- ❑ They are somewhat abstract in theory, but **very valuable in practice**.

Effective communication

- ❑ **Fernando Flores** developed a way to **communicate** that he called language action theory.
- ❑ A **less academic way** of saying the same thing is, there's a way of speaking that causes people to **do something**—to be **in action**.

Language action theory—also called action language and action workflow theory—was developed by Fernando Flores. To learn more about the work of Flores, his background, and his books and writings, go to: <http://conversationsforaction.com/fernando-flores>

NOTE

Effective communication

- ☐ Flores suggests that **all work** is done on the basis of making and keeping commitments.
- ☐ He goes on to suggest that there are **five basic “speech acts”** that result in people either **committing to acting** or actually being in action.

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Effective communication

❑ These **five speech** acts are:

1. **Declare**—The action is to declare a new world of possibilities for action.
2. **Request**—The action is to ask someone to take care of something that you are concerned about.
3. **Promise**—The action is to offer or agree to take care of something that another person is concerned about.
4. **Assess**—The action is to assess how some action or thing relates to specific concerns or commitments.
5. **Assert**—The action is to assert or report facts pertinent to the concern at hand.

Effective communication

committed listening

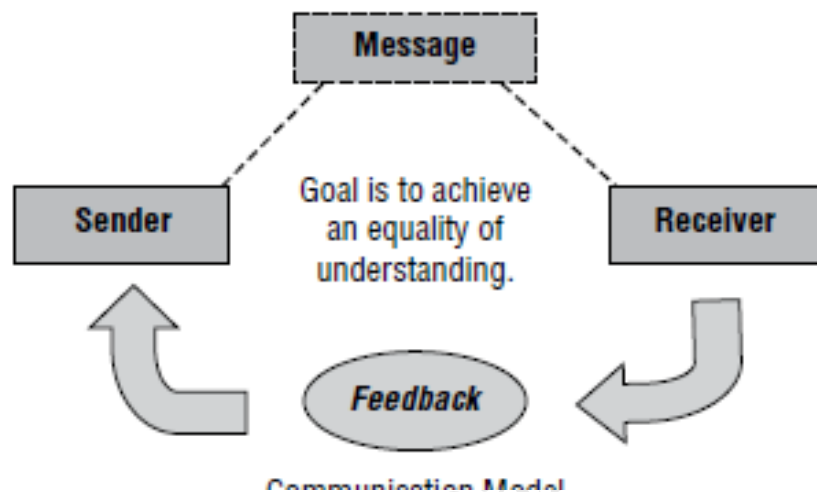
Listening intently to another person to make sure that you clearly understand what they mean by the words they are speaking without judging, assessing, or negating what they are saying.

committed speaking

Speaking with intention and purpose, using words specifically to clearly convey your exact meaning.

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Effective communication



Effective communication

NOTE

The Lean Construction Institute (LCI) adopted the work of Fernando Flores to create a methodology for improving the reliability of construction deliverables that it calls Reliable Promising. According to the LCI, reliable promising creates ownership and responsibility, and helps shift the culture from one of “holding people accountable” to a culture of “being accountable.” Reliable promising reduces rework, defects, and waste—and increases productivity. The basis of this method is grounded in action language.

reliable promising

Developed by the LCI, reliable promising and personal commitment making show respect for people and build trust among team members. Reliable promising creates ownership and responsibility and helps shift the culture from one of “holding people accountable” to a culture of “being accountable.” Reliable promising reduces rework, defects, and waste—and increases productivity.

Effective communication

❑ Here are a **several more traditional guidelines** for improving your listening and speaking:

- ◆◆ Guidelines for effective listening
- ◆◆ Stop talking
- ◆◆ Give others an extended chance to talk
- ◆◆ Hear their whole question/comment
- ◆◆ Paraphrase
- ◆◆ Assure your understanding
- ◆◆ Show respect and concern
- ◆◆ Withhold evaluation
- ◆◆ Patience is important
- ◆◆ Project positive listening energy

Effective communication

❑ Here are a **several more traditional guidelines** for improving your listening and speaking:

- ◆◆ Guidelines for effective speaking
- ◆◆ Ask for specifics and/or clarification
- ◆◆ Give examples
- ◆◆ Broad statements do not allow core understanding
- ◆◆ Watch for nonverbal cues
- ◆◆ Facial expressions and eye contact are clues for understanding
- ◆◆ Clarify your perceptions
- ◆◆ Review and summarize
- ◆◆ Rephrase what you determined to be key information
- ◆◆ Clarify what needs to be done now or “by when”

Effective collaboration and team integration

- ❑ Many people use the words **collaboration** and **integration interchangeably**, but they are **not actually the same thing**, although they are similar.
- ❑ To collaborate means to **work together—sharing information and data**.
 - ❖ But to integrate means to **blend into a whole**—to share experience, expertise, and ideas.
- ❑ Collaboration is **data centric** whereas integration is **knowledge centric**.
- ❑ You can **collaborate as a team** without ever truly integrating.
 - ❖ But it's **unlikely** that your team will become **fully integrated** without first being collaborative.

Effective collaboration and team integration

- ☐ **Integration** is **quite different** from simply working together, sharing information, and being transparent with your data.
- ☐ It's as **much of an art** as it is a science.
- ☐ The **team begins** to develop their integrative thinking skills, even if they **don't have formal training** in the techniques associated with the practice.

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Effective collaboration and team integration

- ❑ In his book The Opposable Mind (Harvard Business Press, 2008), Roger Martin defines Integrative Thinking as:

*the **ability to face constructively the tension of opposing ideas and, instead of choosing one at the expense of the other, generate a creative resolution of the tension in the form of a new idea that contains elements of the opposing ideas but is superior to each.***

Integrative thinking

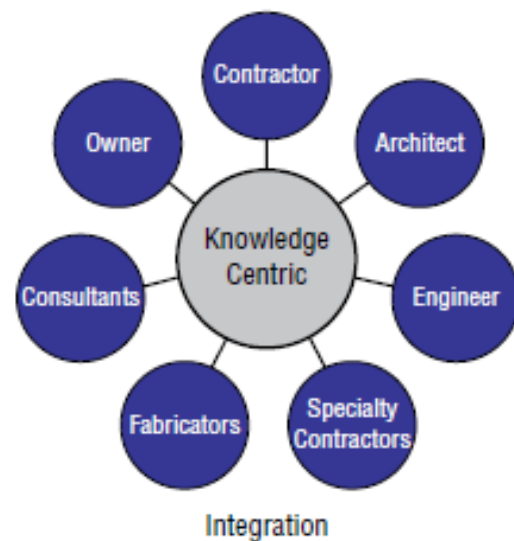
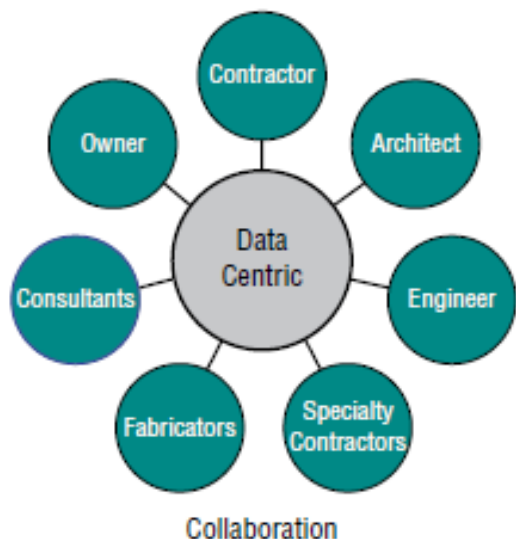
The ability to face constructively the tension of opposing ideas and, instead of choosing one at the expense of the other, generate a creative resolution of the tension in the form of a new idea that contains elements of the opposing ideas but is superior to each.

Effective collaboration and team integration

Integrative thinking is a competency that is ideally suited to the development of Integrated Project Leaders for the construction industry. Unfortunately, it is not generally taught at U.S. universities as of yet. It was developed by Roger Martin, who is a former dean of the Rotman School of Management, at the University of Toronto. To learn more about integrative thinking, go to <http://www.rotmanithink.ca/what-is-integrative-thinking>.

NOTE

Effective collaboration and team integration



THE AEC CULTURE

Introduction

❑ To add to the **complexity of the team management task**,

today more than ever,

the chasm between the **old culture and the new culture** of the AEC
(architecture, engineering, and construction) industry is more apparent
than ever,

and making the **shift has been challenging** to say the least.

We have been in the midst of this transformation for some time.

Introduction

- ❑ It started with a **shift in delivery approach** from traditional design-bid-build, which is epitomized by the **low-bid mentality** and a **command** and **control style** of leadership,
to the **more collaborative, team-based approaches** such as at-risk CM, design-build, and integrated project delivery,
where optimized solutions and value generation is the goal.

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Introduction

- ❑ Unfortunately, **even** when we change **delivery methods** or **contracting methods**, so often our **attitudes and beliefs** themselves don't change.
- ❑ From a cultural perspective, we are attempting to execute and leverage the **benefits of collaborative delivery strategies** while maintaining our **traditional command** and control cultures.

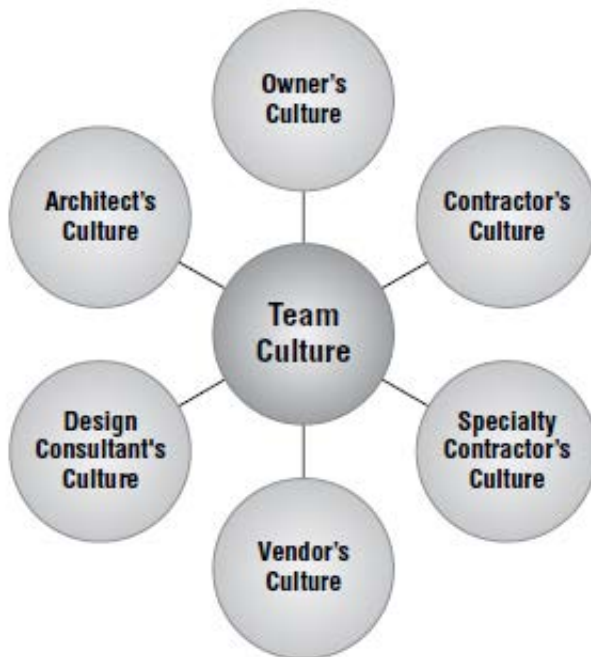
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Low-bid mentality

In my opinion, there is no greater risk to a client than a contractor who is losing money, and yet that is exactly the position that some contractors find themselves in after winning a low-bid contract. Many clients think they have won the lottery when the low bidder's price on their project seems to be well below the other competitors. But instead, that client should be very wary—because now the contractor will be operating from a position of fear and survival. It's just human nature. And yet it was the low-bid system that created this risk, and to no one's benefit. I often tell owners, believe it or not, you **DON'T ACTUALLY** want the lowest price. Instead you want the **RIGHT** price! And that's why any project delivery approach that promotes full transparency of costs and open communications to discuss and negotiate a reasonable price with a fair profit margin is far less risky than the lowest competitive bid.

NOTE

Large diverse teams



Large diverse teams

NOTE

Finding ways to establish a reciprocal working environment among your most trusted and aligned business and trade partners is well worth the effort. I call such a collaboration a *teaming enterprise or network*. This is where getting the chance to work with the same companies and individuals over and over again really has its advantages. You can begin to align such things as your quality standards, technologies, and reporting systems. Over time you build trust and relationships and you identify shared values and a mutual cultural perspective, which makes working together more efficient and effective. But none of this happens by accident. You must be intentional in this effort to make it happen. And this is where real leadership comes into play.

Multigenerational workforce

- ❑ Every business is **experiencing the challenges** that a multigenerational workforce brings, and construction is no different.
- ❑ **Workforce demographics** in construction now span **four generations**—the veteran generation, baby boomers, millennials, and generation Y.
- ❑ **Each of these generations** bring **their own** beliefs, values, perspectives, expectations, and work habits.
- ❑ Trying to **create a company**, or even a project culture, that can satisfy all of these different beliefs, habits, and perspectives is **not likely**.

teaming enterprise

Finding ways to establish a reciprocal working environment among your most trusted and aligned business and trade partners to create efficiency and effectiveness.

NOTE

Flexibility and agility, the hallmarks for successful business, especially today, are threats to the low-bid system that is still dominant in our business and our culture. Any good idea that varies from the prescribed plans and specs has to be pushed aside because there is little accommodation for good ideas, improved systems, or better ways in a low-bid model.

MANAGEMENT VS. LEADERSHIP

Introduction

- ❑ There is much written on how these **two capabilities are different**, but one of the simplest ways to understand the difference is that we manage things and lead people. For example, we manage things like project schedules, project budgets, and safety programs.
- ❑ But people don't respond well to **being managed** and, in some respects, the whole notion that **people need to be controlled or managed** is downright demeaning, especially in this day and age.

Leadership is about empowering others, encouraging others, and inspiring others.

Leadership is the ability to influence and persuade.

Introduction

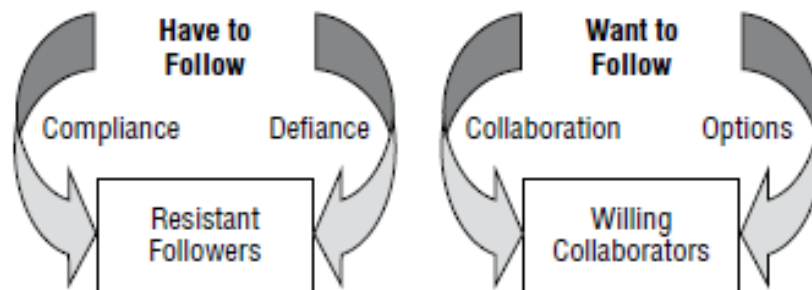
In their book *The Inspiring Leader, Unlocking the Secrets of How Extraordinary Leaders Motivate* (McGraw-Hill, 2009), authors John H. Zenger, Joseph R. Folkman, and Scott K. Edinger found that the top 10 percent of leaders were identified by one critical competency—the ability to inspire and motivate. Their research revealed that the top 10 percent of leaders generated twice the net revenue as the middle 80 percent did.

NOTE

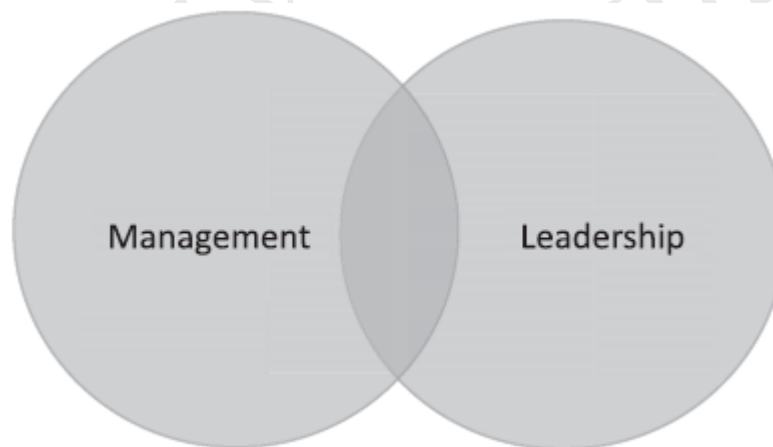
Introduction

- ❑ According to Michael Maccoby, in his book The Leaders We Need and What Makes Us Follow (Personal Strengths Publishing, 2018),
you **aren't a leader if no one wants to follow you.**
- ❑ **Leaders** are able to speak a vision in which **others see themselves**, and **choose to follow**, as willing collaborators.
- ❑ **Managers** who exert command and control authority over people may look like leaders to some, but **their subordinates** are often **resistant followers** who **reluctantly respond out** of fear and intimidation.
- ❑ This type of management or leadership approach has a **very negative impact** on morale,
and under such authority, there's usually a **high employee turnover**.

Introduction



Developing an Integrated Project Team



Integrated project leaders

- ❑ The **entire construction industry** is changing.
- ❑ Although the **debate is still active** among some industry practitioners,
in reality there is **no single discipline** among the three primary players
(constructor, architect, or engineer)
who is **automatically identified** as the leader of the team anymore.

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Integrated project leaders

- ❑ The abilities and knowledge needed by **IPLs goes beyond traditional construction management**, architecture, or engineering education.
- ❑ Competencies in communication, strategic foresight, and emotional intelligence are just a **few of the many new skills** needed to be effective as a manager/leader of multidiscipline project teams.
- ❑ In addition, we believe that the **next-generation construction project manager** should also have some awareness of how projects are financed, be familiar with land development and land entitlement processes, and have an understanding of the various design practices and services provided by architects and engineers.

Integrated project leaders

If there is one thing that I think a person could work on to transition from being a traditional construction manager to an integrated project leader, it would be to improve their EQ or Emotional (intelligence) Quotient. EQ, unlike our Intelligence Quotient (IQ), can be improved. Our IQ is something we are born with and it doesn't change over time. But we can work to improve our Emotional Intelligence. There are four basic skills associated with Emotional Intelligence. Two are related to Personal Competence. They are self-awareness and self-management. The other two are social awareness and relationship management, which relate to our Social Competence. You can also learn more about what Emotional Intelligence is and how you can enhance it by reading *Emotional Intelligence 2.0* by Travis Bradberry and Jean Greaves (Talent Smart, 2009). You can also benchmark your current EQ by accessing Talent Smart's EQ assessment at: <http://www.talentsmart.com/products/emotional-intelligence-appraisal.php>.

NOTE

Construction project leadership

Construction leadership traits

Accountable/Ethical

Adaptive/Flexible

Charismatic

Communicator

Confident/Assertive

Influential/Respect

Knowledge

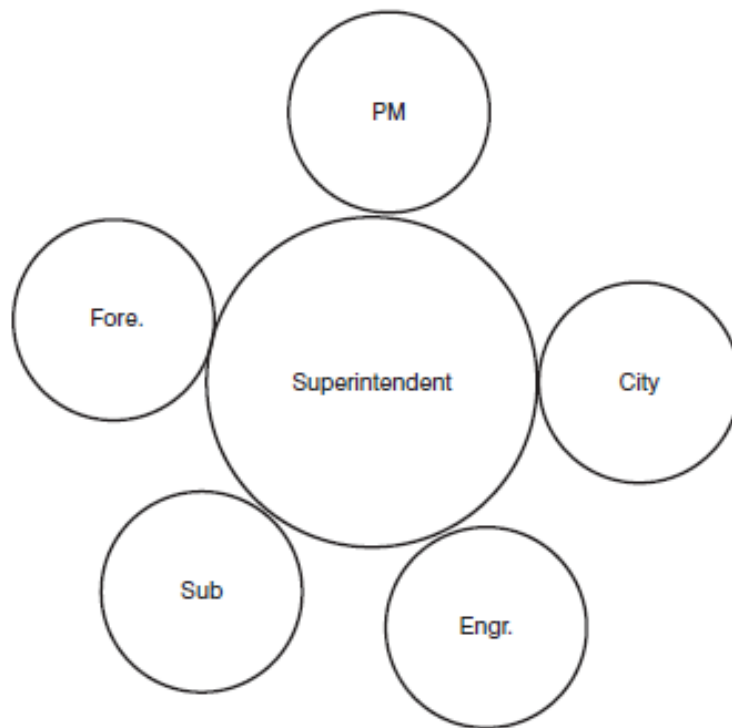
Motivational

Trust

Vision

Construction project leadership

Superintendent's inner-circle



**CM ROADMAP
RELATED TO THIS SECTION**

CM Roadmap – Soft skills



Relevant comprehensive courses



<https://dralavipour.com/general-course/communication-management>



<https://dralavipour.com/general-course/iqeqvq1>

Relevant comprehensive courses

**Stress Management
Next years...**

**Team Management
Next years...**

<https://dralavipour.com/general-course/stress-management>

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Relevant comprehensive courses

Negotiation Skills
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Conflict Management
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Relevant comprehensive courses

Leadership
Next years...

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CM Roadmap – Management skills



منتورینگ (Management Skills) - سطح مدیریتی

سطح ۵	سطح ۴	سطح ۳	سطح ۲	سطح ۱
پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود
داشتن مدرک مدیریتی سطح ۴	داشتن مدرک مدیریتی سطح ۳	داشتن مدرک مدیریتی سطح ۲	داشتن مدرک مدیریتی سطح ۱	دارای مدرک کارشناسی در زمینه مهندسی
تسلط بر مباحث مهارت‌های سخت و نرم سطح ۵	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۴	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۳	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۲	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۱



مدیریت پروژه‌های صنعت ساخت (ساختمانی، زیرساختی و صنعتی)

فصل سیزدهم: مدیریت کسب‌وکار
کسب‌وکار در صنعت ساخت

ارائه دهنده:

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What we will learn?

- ☐ Business aspect of construction management
- ☐ Business development
- ☐ Financial management
- ☐ Human resource management
- ☐ Marketing
- ☐ CM roadmap related to this section

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BUSINESS ASPECT OF CONSTRUCTION MANAGEMENT

Introduction

- ❑ The performance of the project team in managing the completion of a construction project significantly influences the economic performance of the **construction company**.
- ❑ In this section, we will examine **three basic business topics** that are important **to both**
 1. Project team
 2. Successful operation of a construction company

Business development

- ❑ The first topic is business development.
- ❑ Construction companies often have a business development staff to **identify** prospective customers,
but usually the project team needs to make the **sale by convincing** the prospective customer
that the team will provide the best value in
 1. Executing the contract
 2. Managing the project

Business development

- ❑ Also, a construction company's reputation is greatly influenced by the **performance** of its **project teams** as the **company aspires** to do repeat business with **desired customers**.

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Financial management

- ☐ The second topic is financial management.
- ☐ **Two aspects** are very important:
 1. Financial analysis of a construction firm
 2. Cash flow management
- ☐ The project team's ability to manage cash flow will affect overall financial condition of the construction company as will properly developing bids and proposals for **prospective construction contracts**.

Human resource management

- ❑ The third topic is human resource management responsibilities of the **construction manager**.
- ❑ Here we will discuss
 1. Staffing
 2. Performance measurement
 3. Employee development

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BUSINESS DEVELOPMENT

Introduction

❑ Business development is the process of **acquiring business** for a construction company.

❖ It means

1. Retaining customers the company **wishes to retain**
2. Acquiring new customers with whom the company desires to do business

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Components

☐ The basic components of business development are

1. Marketing
2. Sales

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❑ **Marketing** is the **process** of

1. Retaining desired existing customers
2. Identifying potential new ones
3. Attracting new customers

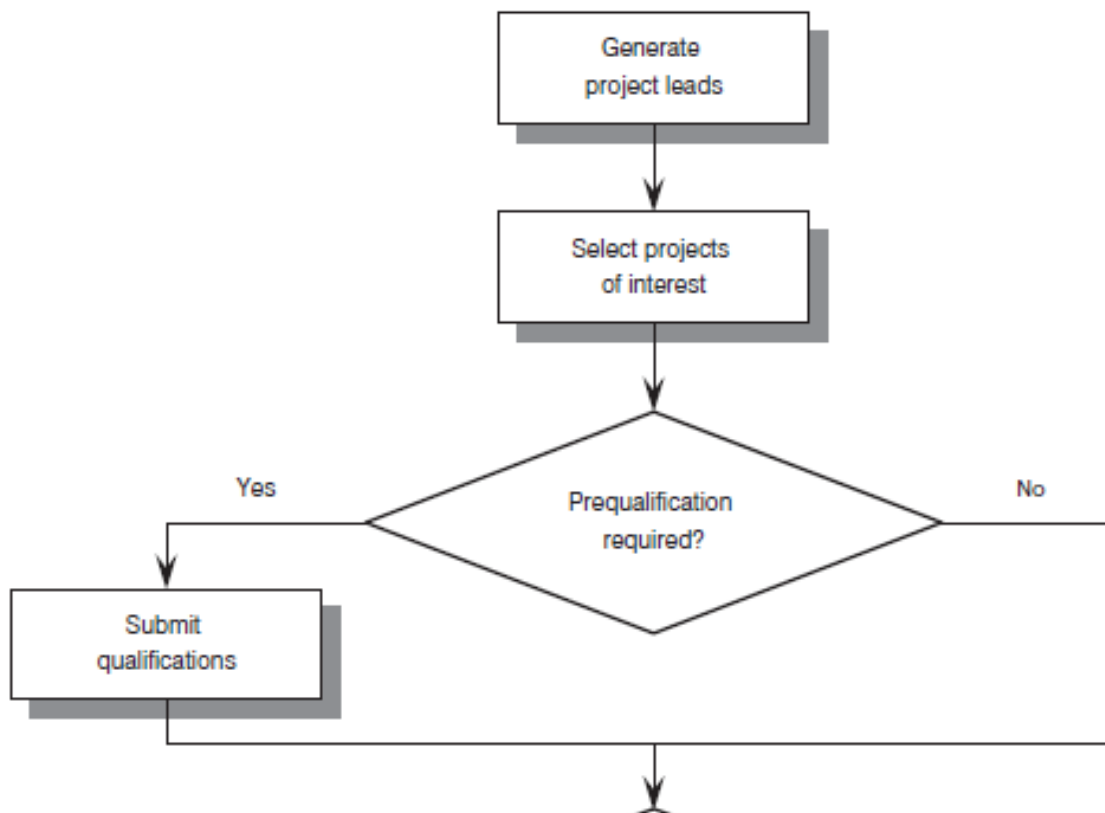
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□ Sales is

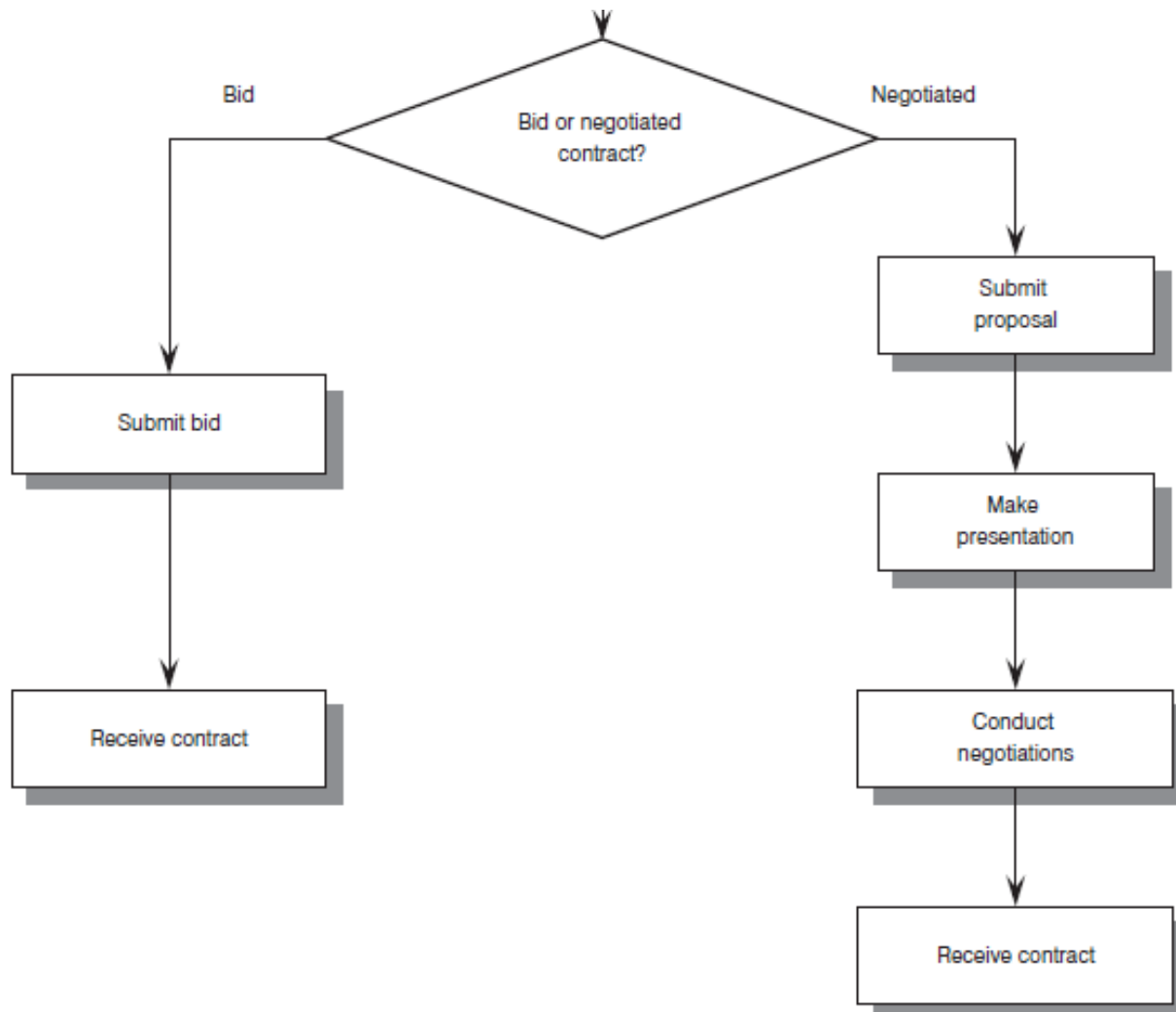
1. Contacting a specific potential customer
2. Winning a construction contract

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Business development process for construction services



Business development process for construction services



Business development process for construction services

- ❑ The process **parallels** the bid and negotiated procurement methods.
- ❖ With the **exception** of some speculative residential builders who **market products**,
most construction companies market services, either
 1. Construction services or
 2. Design and construction services

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Business development process for construction services

❑ **To be successful,**

construction companies must understand the service characteristics

desired by their customers and

provide those service characteristics

These characteristics often relate to cost, quality, safety, service, and timeliness.

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Business development process for construction services

❑ Most construction companies have business development staff members who

1. **Gather information** about prospective customers and projects

2. **Provide** the information to

- a) Company executives
- b) Construction managers
- c) Superintendents

who actually make the sales.

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Business development process for construction services

- ☐ **Most potential customers** want to purchase **services** from people, not companies, so the project team is critical in **obtaining a contract**.
- ☐ Often, **interviews** with **project teams** are required as part of the prospective customer's selection process.
- ☐ To establish **rapport** with major customers, **construction managers** often are **assigned responsibility** for cultivating and nurturing relationships with customers.

Business development process for construction services

❑ The **most important marketing resources** are

1. Construction company's reputation
2. Its satisfied customers

both of which are significantly affected by the **company's project teams**.

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Business development process for construction services

❑ Success depends upon **understanding**

1. **Process** used by potential customers in **selecting contractors** for their projects
2. **Customers'** specific project **requirements**

*Retaining customers depends on the project team's **ensuring customer satisfaction** so that there may be opportunities for **repeat business**.*

FINANCIAL MANAGEMENT

Introduction

- ❑ **Good financial management** skills are essential in the management of a construction company.
- ❑ The company must **generate sufficient resources** to be able to cover its financial obligations so as to **remain in business**.
- ❑ The **project team's ability** to manage cash on each project is a **critical component** of the company's financial management strategy.

Financial statements

❑ Financial statements are used to provide a **picture of the financial condition** of a company.

❖ They are used as part of

1. Subcontractor prequalification process
2. Bankers,
3. Surety agents,
4. Prospective customers

in **evaluating the financial condition** of a construction company.

Financial statements

☐ The two most commonly used financial statements are

1. Balance sheet
2. The income statement

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Balance sheet

- ❑ The balance sheet represents the **financial condition** of the company as of the **date of** the balance sheet, usually the end of a month, quarter, or year.
- ❖ Current assets are **non-depreciable assets**, such as cash, accounts receivable, and inventory.
- ❖ Fixed assets are **depreciable assets** that will be retained for **longer than 1 year**.
- ❖ Current liabilities are debts to be **paid in 1 year**.
- ❖ Accounts payable are **debts owed** to suppliers and subcontractors or for the purchase of **any good or service**.



Balance sheet

مدیریت پروژه‌های صنعت ساخت (ساختمانی، زیرساختی و صنعتی)
فصل سیزدهم: مدیریت کسب‌وکار: کسب‌وکار در صنعت ساخت

Eastside Excavating Company Balance Sheet

December 31, 2016

ASSETS:

Current Assets

Cash	\$2,024,188
Accounts Receivable – Trade	\$4,657,875
Accounts Receivable – Retention	\$430,500
Inventory	\$89,463
Prepaid Expenses	\$51,923
Total Current Assets	\$7,253,948

Fixed Assets

Land	\$414,725
Buildings	\$1,964,925
Furniture and Equipment	\$377,468
Motor Vehicles	\$561,938
Construction Equipment	\$3,917,500
Subtotal	\$7,236,555
Less Accumulated Depreciation	(\$2,313,350)
Total Fixed Assets	\$4,923,205

TOTAL ASSETS: **\$12,177,153**

LIABILITIES AND OWNERS' EQUITY:

Current Liabilities

Notes Payable	\$250,000
Accounts Payable – Trade	\$2,417,625
Accounts Payable – Retention	\$89,000
Accrued Payables	\$285,875
Accrued Taxes	\$169,875
Current Maturity – Long Term Debt	\$312,500
Total Current Liabilities	\$3,524,875

Long Term Debt **\$1,125,000**

TOTAL LIABILITIES: **\$4,649,875**

OWNERS' EQUITY

Capital Stock	\$1,250,000
Retained Earnings	\$6,277,278

TOTAL OWNERS' EQUITY: **\$7,527,278**

TOTAL LIABILITIES AND OWNERS' EQUITY: **\$12,177,153**

□ An example balance sheet for a specialty contractor.

Eastside Excavating Company Income Statement	
Calendar Year 2016	
Revenues:	
Sales	\$22,698,572
Cost of Sales	(\$17,854,395)
Gross Profit	<u>\$4,854,177</u>
Operating Expenses:	
Financing	\$250,875
Marketing	\$376,980
General and Administrative	<u>\$2,796,845</u>
Operating Expenses	<u>\$3,424,700</u>
Net Profit before Taxes:	\$1,419,477
State and Federal Taxes	<u>(\$236,579)</u>
Net Profit after Taxes:	<u>\$1,182,898</u>

- Gross profit = sales – cost of sales
- Net profit before taxes = gross profit – operating expenses
- Net profit after taxes = net profit before taxes – taxes

Financial analysis

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Debt-to-equity ratio} = \frac{\text{Total liabilities}}{\text{Owner's equity}}$$

$$\text{Return on assets} = \frac{\text{Net profit after taxes}}{\text{Total assets}}$$

Cash flow

- ❑ A construction company is dependent on maintaining a sufficient level of cash to finance its **daily operations**.
 - ❖ If **adequate cash** reserves are not maintained, the company must either
 1. Borrow from a bank or
 2. Default on its obligations
- ❑ If the **cost of borrowing** was not included in a project budget, the **interest charges** on borrowed cash may erode anticipated profits.

Cash flow

❑ **Cash is invested in projects** that then become accounts receivable.

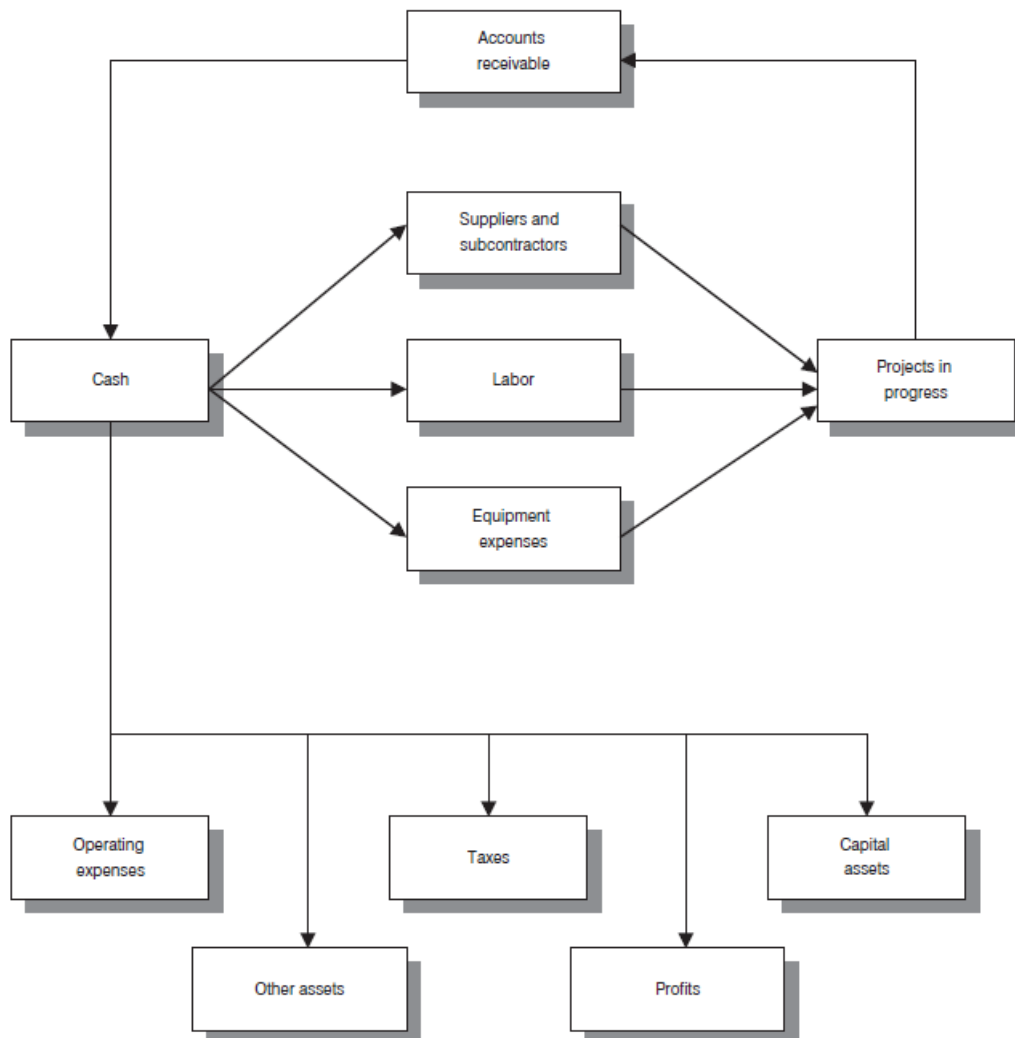
❖ The **receivables** are collected and become cash.

✓ **Some portions** of the accounts receivable may be withheld as

retainage by project owners until the completion of their projects.

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❑ Cash flow cycle



HUMAN RESOURCE MANAGEMENT

Introduction

❑ Human resource management involves

1. Design of the construction management **organization**
2. Recruitment and selection of **new employees**
3. Management of subordinates' work **performance**
4. Professional development of **subordinates**

❑ Organizational design involves

1. Identification of the basic construction management organizational **structure**
2. Determination of the specific **responsibilities** of each position

Job description and job specifications for administrative assistant

☐ Both

1. Job description
2. Job specifications

are used **when advertising** for new applicants.

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Job description and job specifications for administrative assistant

- ☐ Job description tells **prospective applicants** what the job entails
- ☐ Job description also is used by the **construction manager** to establish an **appropriate compensation rate** for the position.

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Job description and job specifications for administrative assistant

☐ Job specifications describe

1. Knowledge
2. Abilities
3. Skills

an **applicant must possess** to be considered qualified for the position.

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Job description and job specifications for administrative assistant

Job Title: Administrative Assistant

Reports to: Project Manager

General Responsibilities: Provides clerical and reception services for project field office. Assists project personnel in the preparation and processing of written, verbal, and electronic communications. Responsible for the operation and maintenance of project office equipment.

Specific Responsibilities:

1. Provides reception services for the project office. Receives, records, and directs site visitors, telephone communications, electronic mail, internal distribution, parcel deliveries, and postal mail.
2. Assists the project manager in maintaining project files. Copies project documents as required by the project manager and company operating procedures.
3. Provides data processing support to the project office. Inputs data as required into computer database management, spreadsheet, and other applications programs.
4. Prepares final copies of letters, memorandums, standard forms, and other written communications using word processing programs.
5. Coordinates maintenance of field office and office equipment to maintain a presentable, efficient, and functional environment. Ensures that all critical office equipment are operational at all times. Responsible for maintaining an operational stock of consumable office supplies.

Required Knowledge, Skills, and Abilities:

1. Knowledge of construction terms and construction documents.
2. Knowledge of the operation and user-level maintenance of standard office equipment.
3. Knowledge of computer database management, word processing, and spreadsheet software applications.
4. Skilled in keyboard operations for fast and accurate data input.
5. Able to communicate effectively in person and over the telephone. Able to maintain a focus on customer service and to represent the company at the project in a professional, courteous manner.
6. Able to organize, plan, and prioritize work efficiently. Must be able to work independently and productively with limited resources.

Experience Requirements: This position requires a minimum of five years experience in office administrative support functions, with a minimum of two years experience in construction field offices.

Standard compensation schedules

- ❑ Most construction firms have standard compensation schedules, which **list all types of positions**.
- ❑ Compensation decisions generally are based on
 1. **Relative worth of the work** to be performed
 2. **Compensation levels** for comparable positions in **other construction firms**

*The objective is to **make the position attractive** to qualified individuals.*

Process of hiring

- ❑ **After** the job descriptions and job specifications have been developed, **construction manager** determines with company executives which positions are to be **filled**.
- ❑ **Recruiting applicants** for positions to be externally filled may be through
 - ❖ Employment agency
 - ❖ Newspaper advertising
 - ❖ Internet advertising
 - ❖ University or technical school recruiting
 - ✓ Most construction firms require each applicant to **submit a standard application form**.

In addition, **résumés** also are customarily required.

Process of hiring

- ☐ Once the applications have been **received**,
the **construction manager** must decide to whom to offer each position.

- ☐ **Information** used in making the decision generally is
 1. Information contained on the application form
 2. Any letters of recommendation provided
 3. Applicant's résumé
 4. Contacts with listed references
 5. Applicant interviews

Process of hiring

- ☐ Most construction managers want to select **qualified individuals** who are self-motivated and will relate well with other team members.
- ☐ The **written documentation** typically is used to **screen the candidates** and select the most qualified individuals.
- ☐ The **top-ranked candidates** should be interviewed to assess their qualities and qualifications for the position and to provide them information regarding the position.

Process of hiring

❑ Interviews must be **planned carefully** to ensure each candidate is **evaluated** using the same criteria.

❖ Once new employees are selected, they must be oriented regarding

1. Company policies
2. Specific jobs

that they are to **perform as members** of the project management team.

Process of hiring

- ☐ Performance management involves
 1. **Establishment** of **performance standards** for each position
 2. **Creation** of a performance **appraisal system**
- ☐ Performance standards typically are developed **jointly** by the employee and his or her supervisor.

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Process of hiring

Performance Standards for Administrative Assistant

Name of Employee: Janet Smith

Supervisor: Ted Jones

Performance Standards:

1. Receive visitors, record their presence, and direct to appropriate office with no more than one error per month.
2. Receive telephone communications, electronic mail, and written documents and direct to appropriate individual with no more than 2 errors per month.
3. Maintain project files and misfile no more than 2 documents per month.
4. Prepare final copies of written communication with no more than one error per week.
5. Ensure reception area in project office is well organized and presents a professional image to visitors.
6. Keep office reproduction and facsimile machines operational by contacting appropriate vendor to perform any needed repairs.
7. Maintain a 30-day supply of consumable office supplies.

Employee Signature: *Janet Smith*

Date: August 24, 2016

Supervisor Signature: *Ted Jones*

Date: August 24, 2016

Appraisal

- ☐ The **appraisal** is prepared by the employee's supervisor and describes how well the employee has performed during the **review period**.
- ☐ The **appraisal** should focus only on performance attributes that relate to **organizational success**.
- ☐ **Appraisals** often are used to determine
 1. Compensation increases,
 2. Annual bonuses,
 3. Employee training needs

Appraisal

- ❑ The **appraisal system** works best when
 1. There is frequent feedback and
 2. Mentoring provided by the **supervisor to the employee** throughout the review period,
not just when the **appraisal form is completed**.

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Employee development

❑ There are **two** important aspects to employee development.

1. Skill-enhancement training

designed to **improve employee performance** in his or her current position.

2. Development training

to provide the employee with the **necessary skills** to allow him or her to compete for higher-level positions within the company.

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Employee development

❑ The first step in creating an employee development program is to

assess the needs of each employee for

1. Skill-enhancement training
2. Professional development

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Employee development

- ☐ Next, specific training programs are either established or identified.
- ☐ **Employees** are **sent** to specific training programs, and **their performance** is monitored to ascertain the effectiveness of the individual training programs.

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Employee development

- ❑ An individual development plan should be established for **each employee** as a part of the appraisal process.
 - ❖ This plan should be **created jointly** by the employee and his or her supervisor.
- ❑ Training needs should be prioritized, because most construction firms have limited training budgets.

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Employee development

مدیریت پروژه‌های صنعت ساخت (ساختمانی، زیرساختی و صنعتی)
فصل سیزدهم: مدیریت کسب‌وکار: کسب‌وکار در صنعت ساخت

Northwest Construction Company Annual Performance Appraisal

Name of Employee: _____

Name of Supervisor: _____

Evaluation Period: From _____ to _____

For each applicable performance area, mark the box that most closely reflects the employee's performance using the following scale: 1 = unacceptable; 2 = needs improvement; 3 = satisfactory; 4 = above average; and 5 = outstanding

Performance Area	1	2	3	4	5
Ability to make job-related decisions					
Accepts responsibility					
Attendance					
Attitude					
Cooperation					
Dependability					
Effective under stress					
Initiative					
Leadership					
Operation and care of equipment					
Quality of work					
Safety practices					
Technical abilities					

Job Strengths: _____

Areas for Improvement: _____

Training Needed: _____

Supervisor Comments: _____

Employee Comments: _____

Employee Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____

☐ Performance appraisal form

MARKETING

Introduction

- ❑ **Marketing** is acquiring and retaining customers.
- ❑ This is an essential project management skill,
because the **most effective marketing resource** is a satisfied customer.
- ❑ In most projects, the customer is the owner, and
 - ❖ **Customer satisfaction** is measured in terms of
 1. cost of construction,
 2. time to complete, and
 3. resulting qualityof the completed project.

Initial marketing task

- ☐ The **initial marketing task** is to determine which segment of the **overall market** the **contractor wants** for its customers.
- ☐ **Some contractors** may want to bid for public projects such as schools, government office buildings, or highways.
- ☐ **Others** may be interested only in privately funded projects such as shopping centers, private office buildings, hotels, or condominiums.

Second marketing task

❑ Once the **market segment** has been selected,

the contractor needs to target its marketing activities toward those **prospective customers**.

❖ Then, the **contractor organizes** its services to cater to the **specific market segment** selected.

This requires an **understanding** regarding

how the targeted owners **select contractors** for their projects and what project characteristics they value.

Second marketing task

- ❑ For example, **some private owners** are more interested in
 1. High-quality
 2. Short duration projects

than they are in **least cost**.
- ❑ The **contractor** should emphasize these characteristics in its **marketing initiatives**.
 - ❖ For example, a **contractor wanting** to enter the hotel construction market will want to ensure that **his or her project managers**
 1. understand prospective customers' **requirements**
 2. are skilled at **preparing** proposals and **making** presentations

for that **specific market and owner**.

- ❑ Everything that **occurs on a project** should be a part of the contractor's marketing strategy.
 - ❖ *The project sign, the organization and cleanliness of the project site, the treatment of subcontractors and suppliers, the condition of its equipment, and the accident rate all shape the public's and prospective owners' opinions regarding the contractor.*
- ❑ Public relations are also a part of **marketing**.
- ❑ Participation in professional organizations and **public service projects** establishes a **network of contacts** for the construction manager and significantly aids in marketing.
- ❑ Networking also results in **new insights** on marketing strategies and lessons learned.

Construction manager and superintendent roles

- ❑ A construction manager and superintendent do not have a project to manage **until one has been obtained.**
- ❑ **While** the contractor's business development staff may identify potential clients, it usually is up to the construction manager and superintendent to **obtain the project.**
 - ❖ This may occur by
 1. Preparing a **bid** for the project, or
 2. Preparing a **quality proposal** and making a winning presentation to the potential customer

Construction manager and superintendent roles

- ☐ Good marketing and presentation skills are just as **important as good technical skills** to be a successful construction manager.
- ☐ Once a **project has been acquired**, it is the responsibility of the construction manager and superintendent to complete the project to the owner's requirements.
- ☐ This is to **ensure the construction firm** is considered for future projects built by the owner.

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Opportunities for further work and marketing

- ❑ The **aim** of all Construction Managers should be to be awarded **additional work** on the project.
- ❑ Construction Managers and other senior project staff are in **regular contact** with the client, and
should use **these opportunities** to understand what other work the client may be considering,
both on the project and elsewhere,
so as to **promote their company**.
- ❑ For this reason it's also essential they have an **understanding of their company's capabilities**, as well as its current capacity.

Opportunities for further work and marketing

- ❑ The **additional work** is often more profitable than the original project, because you're **able to accomplish the extra work** using the **resources already established** for the original project.

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Opportunities for further work and marketing

Of course, the **best advertising a Construction Manager** can do is to ensure they deliver a quality project, on time and without any safety, environmental or industrial relations problems, and

that they are a pleasure to do business with.

**CM ROADMAP
RELATED TO THIS SECTION**

CM Roadmap – Hard skills

مهارت‌های سخت (Hard Skills) - سطح کارشناسی و اجرایی					
سطح ۵	سطح ۴	سطح ۳	سطح ۲	سطح ۱	دپارتمان‌ها
	استاندارد مدیریت ساخت CMAA	متدولوژی Prince2	راهنمای PMBOK	مدیریت پروژه‌های صنعت ساخت	مدیریت پروژه
	تامین مالی پروژه			مدیریت مالی و هزینه پروژه ارزیابی اقتصادی پروژه	مدیریت مالی و هزینه
				برنامه‌ریزی و کنترل پروژه نرم‌افزار MSP نرم‌افزار P6	مدیریت برنامه‌ریزی و زمان‌بندی
		مدیریت کیفیت پروژه			مدیریت کیفیت
اجرای پروژه به روش CM			مدیریت ادعاء و اختلافات	آنالیز تاخیرات پروژه	مدیریت قرارداد
		مدیریت ایمنی پروژه			مدیریت ایمنی
مدیریت طرح		مدیریت چابک Agile	مدیریت پروژه به روش Lean دفتر مدیریت پروژه (PMO)		مدیریت طرح و برنامه
		مدیریت پایداری پروژه			مدیریت پایداری
			مدیریت ریسک پروژه		مدیریت ریسک
			نرم‌افزار Power BI	مدیریت اسناد و مدارک پروژه	مدیریت اطلاعات
	مدیریت BIM در پروژه		نرم‌افزارهای BIM		مدیریت مدل‌سازی اطلاعات ساختمان (BIM)

Relevant comprehensive courses



مدیریت پروژه چابک (Agile) با نگاهی به
صنعت ساخت (مفاهیم، فکرافزارها و ابزارها)

[https://dralavipour.com
/general-course/agile](https://dralavipour.com/general-course/agile)



پیاده سازی و توسعه دفتر مدیریت پروژه
(PMO) در راستای دفتر مدیریت طرح

[https://dralavipour.com
/general-course/pmo2](https://dralavipour.com/general-course/pmo2)



اجرا و مدیریت پروژه به روش اصول ناب
(Lean Project Management)

[https://dralavipour.com
/general-course/lean1](https://dralavipour.com/general-course/lean1)

Relevant comprehensive courses

**Construction Program
Management
Next years...**

<https://dralavipour.com/general-course/construction-program-management>

**CM Delivery systems
Next years...**

<https://dralavipour.com/general-course/CM-delivery>

CM Roadmap – Hard skills



مهارت‌های سخت (Hard Skills) - سطح ارشد استراتژی

سطح ۵	سطح ۴	سطح ۳	سطح ۲	سطح ۱	دپارتمان‌ها
		منشور اخلاق در مدیریت پروژه			مدیریت پروژه
			استراتژی مدیریت هزینه و مهندسی ارزش		مدیریت مالی و هزینه
			استراتژی مدیریت برنامه‌ریزی و زمان‌بندی		مدیریت برنامه‌ریزی و زمان‌بندی
	استراتژی مدیریت کیفیت				مدیریت کیفیت
		استراتژی مدیریت قرارداد		اصول مدیریت ساخت	مدیریت قرارداد
	استراتژی مدیریت ایمنی				مدیریت ایمنی
استراتژی مدیریت طرح و برنامه					مدیریت طرح و برنامه
	استراتژی مدیریت پایداری				مدیریت پایداری
		استراتژی مدیریت ریسک			مدیریت ریسک
		استراتژی مدیریت اطلاعات			مدیریت اطلاعات
استراتژی مدیریت BIM					مدیریت مدل‌سازی اطلاعات ساختمان (BIM)

Relevant comprehensive courses

Strategy to Program Management
Next years...

<https://dralavipour.com/general-course/strategic-program-management>

CM Roadmap – Soft skills



Relevant comprehensive courses



<https://dralavipour.com/general-course/communication-management>



<https://dralavipour.com/general-course/iqeqvq1>

Relevant comprehensive courses

**Stress Management
Next years...**

**Team Management
Next years...**

<https://dralavipour.com/general-course/stress-management>

<https://dralavipour.com/general-course/team-management>

Relevant comprehensive courses

Negotiation Skills
Next years...

Conflict Management
Next years...

<https://dralavipour.com/general-course/negotiation-skills>

<https://dralavipour.com/general-course/conflict-management>

Relevant comprehensive courses

Leadership
Next years...

<https://dralavipour.com/general-course/leadership>

CM Roadmap – Management skills



منتورینگ (Management Skills) - سطح مدیریتی

سطح ۵	سطح ۴	سطح ۳	سطح ۲	سطح ۱
پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود	پیش‌نیاز ورود
داشتن مدرک مدیریتی سطح ۴	داشتن مدرک مدیریتی سطح ۳	داشتن مدرک مدیریتی سطح ۲	داشتن مدرک مدیریتی سطح ۱	دارای مدرک کارشناسی در زمینه مهندسی
تسلط بر مباحث مهارت‌های سخت و نرم سطح ۵	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۴	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۳	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۲	تسلط بر مباحث مهارت‌های سخت و نرم سطح ۱

CM Roadmap – Consulting skills



مشاوران (Consulting Skills) - سطح مشاوره

سطح ۵	سطح ۴	سطح ۳	سطح ۲	سطح ۱
مدیریت درس آموخته‌های پروژه	مدیریت کیفیت پروژه	جلوگیری و حل اختلاف در پروژه	برنامه‌ریزی پروژه	
	مدیریت ایمنی پروژه	آنالیز و مدیریت ریسک پروژه	مدیریت تغییرات پروژه	
			آنالیز و اجرای ساخت‌پذیری پروژه	

Relevant comprehensive courses

**Lessons Learned Management
(Best Practice)
Next years...**

<https://dralavipour.com/general-course/lessons-learned-management>

**CBM ROADMAP
RELATED TO THIS SECTION**

CBM Roadmap – Introduction



معرفی نقشه راه CBM

با رویکرد بین‌المللی

نقشه‌راه

Construction Business Management CBM

اولین نقشه راه جامع مدیریت کسب و کار در صنعت ساخت ایران



CBM Program

بسیاری از شرکت‌های فعال در صنعت ساخت ممکن است در کشورهای مختلف فعالیت نموده و با اصول، ساختار، رویه و چهارچوب این نوع سازمان‌ها در ساختار بین‌الملل آشنا نباشند. از این‌رو، موسسه ACEMI بر اساس استانداردها، رویه‌ها و Best Practice‌هایی که برای Construction Business Management ارائه شده و شاید شناخت کافی نسبت به آنها در کشورمان نباشد، اقدام به ارائه این برنامه که از ماژول‌های مختلفی تشکیل شده، می‌نماید. مبانی که از مطالعات و درس آموخته‌های شرکت‌های موفق تدوین گردیده و به صورت کاملاً اجرایی در بخش‌های مختلف ارائه می‌شود. این برنامه در سطح متخصصان کسب‌وکار، مدیران ارشد و مدیران عامل در صنعت ساخت تدوین گردیده و در جهت تکمیل نقشه راه مدیریت ساخت و پروژه از سطح کارشناسان، مدیران و مشاوران پروژه تا سطح متخصصان کسب‌وکار، مدیران ارشد و مدیران عامل ارائه می‌گردد.

CBM Roadmap – Modules and certificates

ماژول‌ها و گواهینامه‌های CBM Program

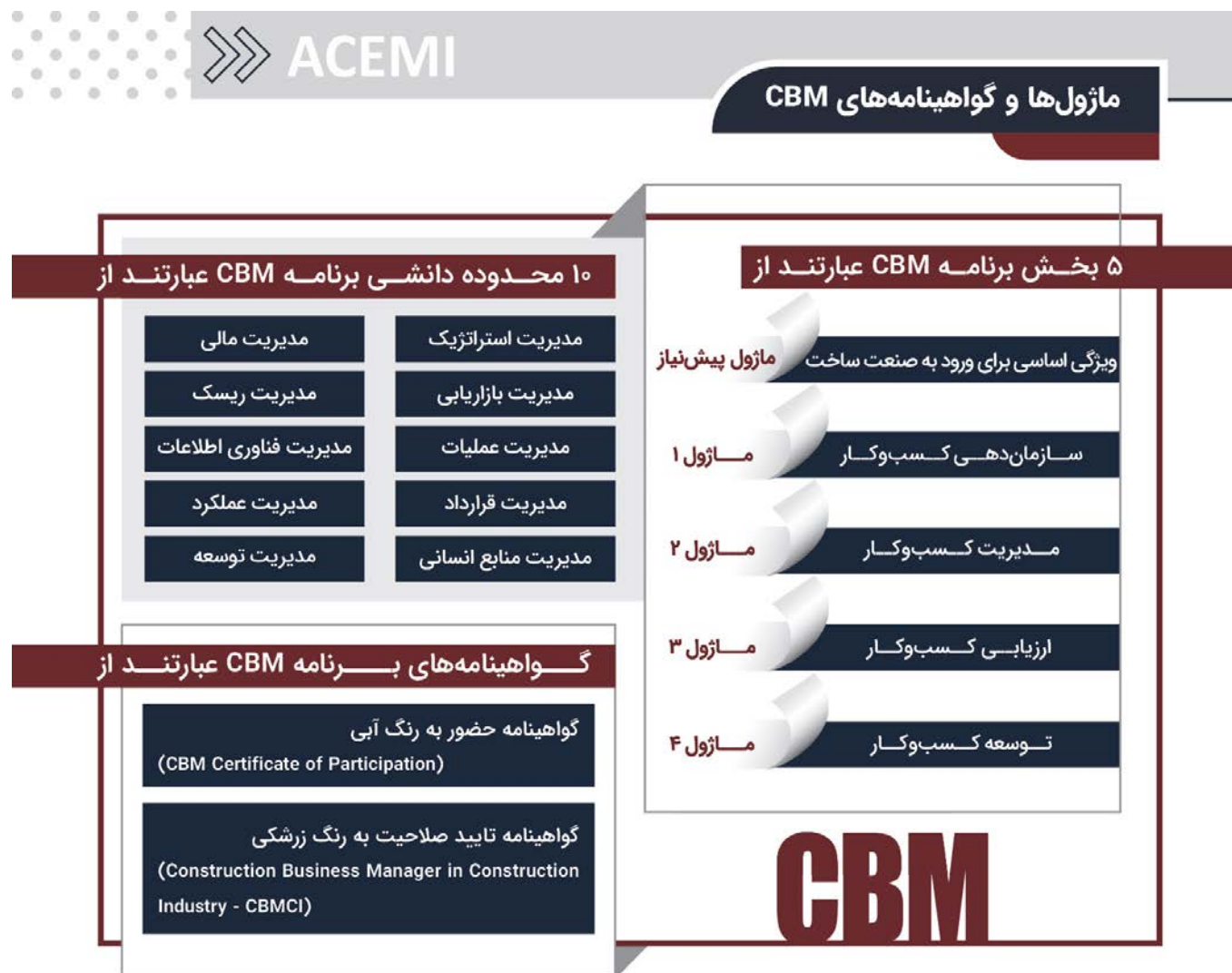


نقشه راه تدوین شده در ۵ ماژول (۱ ماژول پیش‌نیاز و ۴ ماژول اصلی) و ۱۰ محدوده دانشی ارائه گردیده است. حضور و ارائه تجارب از سوی متخصصان کسب‌وکار در صنعت ساخت، به همراه ارائه سرفصل‌های جامع آموزشی، در کنار برگزاری پنل تخصصی پرسش‌وپاسخ و مشاوره سازمانی، بخش‌هایی هستند که این دوره جامع و منحصربه‌فرد را شکل داده‌اند.

برای این Program یک گواهینامه حضور به رنگ آبی (CBM Certificate of Participation)، با حضور حداقل ۶۰ درصدی در دوره و یک گواهینامه تایید صلاحیت به رنگ زرشکی (Construction Business Manager in Construction Industry)، پس از موفقیت در آزمون (کسب نمره ۷۰ و بیشتر) صادر می‌گردد. این گواهینامه که به اختصار CBMCI شناخته می‌شود، بیان‌گر صلاحیت فرد به عنوان مدیر کسب‌وکار در صنعت ساخت است.

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CBM Roadmap – Modules



CBM Roadmap – Framework

 ساختار CBM					
ماژول اصلی					
عنوان	ماژول پیش‌نیاز	ماژول ۱	ماژول ۲	ماژول ۳	ماژول ۴
اصول بنیادین	سازماندهی کسب‌وکار	مدیریت کسب‌وکار	ارزیابی کسب‌وکار	توسعه کسب‌وکار	
مدیریت استراتژیک	«الزامات رفتاری مدیران» «ارشد برای موفقیت» «نقش مدیران ارشد»	«ساختارسازی» «مدیریت استراتژیک»			
مدیریت بازاریابی	«فروش بازاریابی و توسعه»	«بازاریابی و مدیریت بازار»			
مدیریت عملیات		«مدیریت عملیات»			
مدیریت قرارداد		«مدیریت قرارداد»			
مدیریت منابع انسانی		«مدیریت منابع انسانی»			
مدیریت مالی	«تامین مالی»	«مدیریت مالی»			
مدیریت ریسک		«مدیریت ریسک»			
مدیریت فناوری اطلاعات		«مدیریت فناوری اطلاعات»			
مدیریت عملکرد			«امکان‌سنجی و ارزیابی سازمان برای فعالیت در بازارهای بین‌المللی» «اجزای موفقیت و شکست سازمان» «اندازه‌گیری عملکرد»		
مدیریت توسعه				«توسعه پروژه‌ها» «توسعه محدوده‌های جغرافیایی» «توسعه خدمات» «توسعه نیروهای کلیدی» «بلوغ مدیریتی» «پارامترهای موفقیت برای توسعه» «توسعه برای نسل آینده»	

CBM Roadmap – Certifications



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با سخنرانی متخصصان کسب‌وکار در صنعت ساخت
به همراه پنل پرسش‌وپاسخ و مشاوره سازمانی

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CBM Roadmap – Certifications



شرایط اخذ گواهینامه‌ها در CBM

حضور بیش از ۶۰ درصد در دوره <--- اخذ گواهینامه حضور (CBM Certificate of Participation)

قبولی در آزمون <--- اخذ گواهینامه تایید صلاحیت (CBMCI Certification)

Relevant comprehensive courses



Construction Business Management

<https://dralavipour.com/general-course/construction-business-management>

موسسه مهندسی و مدیریت ساخت علوی پور (ACEMI)

دفتر آموزش



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