



**AIN SHAMS UNIVERSITY  
FACULTY OF ENGINEERING  
STRUCTURAL ENGINEERING DEPARTMENT**

# **Improve Productivity in Egyptian Contracting Companies**

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**A thesis submitted in partial fulfillment of the  
requirements for the Master of Science Degree in  
Civil Engineering Department**

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## Statement

This submitter to Ain shams university for the degree of Master of Science in civil Engineering (Structural Engineering)

The work included in this thesis was carried out by the author in the department of structural Engineering, Faculty of Engineering, Ain Shams University from 1998 to 2005.

No part of this thesis has been submitted for a degree or a qualification at any other university or Institute.

Name

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The Searcher

***Eng. Mahmoud Fathy El-Haddad***

## PREFACE

The construction sector faces many challenges, some from local environment and others due to the globalization.

Many companies faces crises after the change in tendering processes from negotiation and direct order to a free tender between companies,—. Many companies faces a bad situation due to its inability to respond to this change and their inability to get a new work under the free tender.

The clients also face a bad situation, which comes from non-qualified companies that they contract with under the new rules, and fail to meet their requirements.

In addition, as we approach the new millennium, many radical theories and paradigm arises all-round the world that constitutes a new wave. and—Organizations deploy these approaches in management success to achieve a large-scale productivity and efficiency improvements.

The objective of this research is to develop a way to improve the performance of the ~~contractor~~ contracting companies, which constitutes a common target for:

1. the ~~contractor-contracting~~ companies which want to enhance their performance in order to maximize their profits and survive in this rapidly changing world

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2. the clients of the construction industry who want to maximize the value of their money

3. the whole community in which the ~~contractor~~ contracting companies constitute a major driving force in the whole economy. ~~and~~ The money they paid for almost every service or goods depends to a great extent on the money consumed in construction

First, ~~have~~ introduce a general discussion to the topics of management, the new emerging concepts, paradigm and tools.

Second, study the criteria ~~that~~ used in Japan, Europe and USA to assess performance of companies.

Then, develop our own criteria ~~depending on~~ criteria with the guide of those used in other countries, ~~that could~~ be used as a tool for companies' self-assessment, Benchmarking and as a tool for clients to assess companies to contract with.

Finally we conduct a survey to determine the area in our contracting companies that are most ly required to be enhanced.

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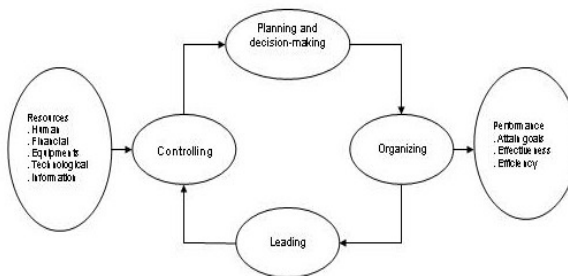
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# CHAPTER I

## Introduction to Management

## 1.1. Definition:

Management is the attainment of organizational goals in an effective and efficient manner through planning, organizing, leading and controlling organizational resources<sup>(1)</sup>



## 1.2. History of management theories

Management have been changed substantially over the past century, here are a Brief History of Management Theories

1. Scientific Management Theory (1890-1940), Frederick Taylor developed the: scientific management theory” which espoused this careful specification and measurement of all organizational tasks. Tasks were standardized as much as possible. Workers were rewarded and punished.
2. Bureaucratic Management Theory (1930-1950), focused on dividing organizations into hierarchies, establishing strong lines of authority and control,

organizations develop comprehensive and detailed standard operating procedures for all routinized tasks.

### 3. Human Relations Movement (1930 )

#### **1.3. Contemporary Theories in Management:**

1. Contingency Theory, asserts that when managers make a decision, they must take into account all aspects of the current situation and act on those aspects that are key to the situation at hand
2. Systems Theory, a system is a collection of part unified to accomplish an overall goal. If one part of the system is removed, the nature of the system is changed as well. At an organization, inputs would include resources such as raw materials, money, technologies and people. These inputs go through a process where they're planned, organized, motivated and controlled, ultimately to meet the organization's goals. This overall system framework applies to any system, including subsystems (departments, programs, etc.) in the overall organization.
3. Chaos Theory, suggests that systems naturally go to more complexity, and as they do so, these systems become more volatile (or susceptible to cataclysmic events) and must expend more energy to maintain that complexity. As they expend more energy, they seek more structure to maintain stability. This trend

continues until the system splits, combines with another complex system or falls apart entirely.

#### 1.4. New paradigm versus old one

The traditional paradigm assumes the purpose of management is to control and limit people, seek stability and efficiency, use rules and regulations, design a top-down hierarchy to direct people, and achieve bottom-line (profit) results. The newly emerging paradigm assumes the purpose of management is to harness people's enthusiasm and creativity; find shared vision, norms and values; share information and power; encourage teamwork, collaboration, and participation; and develop people to adapt to extraordinary environmental changes and achieve top-line (total sales or other measures of output) effectiveness. The following table summarizes the differences between the old and new paradigm<sup>4</sup>

Table 1.1 Old management paradigm versus new paradigm

Old Paradigm	New Paradigm
promote consumption at all costs	appropriate consumption
people to fit jobs	jobs to fit people
imposed goals, top-down decision making	autonomy encouraged, worker participation
fragmentation in work and roles	cross-fertilization by specialists seeing wide relevance
identification with job	identity transcends job description
clock model of company	recognition of uncertainty

aggression, competition	cooperation
work and play separate	blurring of work and play
manipulation and dominance	cooperation with nature
struggle for stability	sense of change, of becoming
quantitative	qualitative as well as quantitative
strictly economic motives	spiritual values transcend material gain
polarized	transcends polarities
short-sighted	ecologically sensitive
rational	rational and intuitive
emphasis on short-term solutions	recognition that long-range efficiency must take in to account harmonious work environment
centralized operations	decentralized operations when possible
runaway, unbridled technology	appropriate technology
allopathic treatment of symptoms	attempt to understand the whole, locate deep underlying causes of disharmony