CHAPTER 1
THE FACILITY MANAGEMENT:
NON CORE SERVICES DEFINITION AND TAXONOMY

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1.1 INTRODUCTION
In the past, organizations used to manage in-house most or even all of the non core services (services supporting internal operations). Only in few cases, some activities, like cleaning, security and maintenance, were contracted out. In the recent years organizations tend to outsource not only non core processes and manufacturing, but even most of the services that support them.

A considerable number of these services belongs to the Facility Management (FM) field. Worldwide, public and private organizations are constantly raising their attention to an efficient and effective management of facility services. This generated a strong growth in the sector of companies specialized in providing support services.

The aim of this chapter is to introduce the reader to the facility management world. First of all we clarify what is facility management, what are its main purposes and its typical activities. Then, a facility management definition is suggested, based on a wide analysis of the national and international specialized literature. Subsequently we propose an overview of non core services, focusing on FM ones. Following, some standard FM classifications are illustrated in order to understand opportunities and criticalities faced everyday in the facility management and to outline the future development of the sector.

1.2 WHAT IS FACILITY MANAGEMENT?
Facility management was born as a company internal procedure in the United States at the end of the seventies (Rondeau et al., 1995). This practice was focused on the control of those activities supporting the core business, perceived less strategic but important for the company success. In Europe, facility management became a managerial practice starting in the eighties, first in UK and subsequently in the other countries.

The main international association is the International Facility Management Association (IFMA), which is represented in 60 nations. As a demonstration of FM’s practical nature, this association was founded in 1977 in Michigan with the name of Facility Management Institute (FMI) by Herman Miller Inc., US company leader in the office furniture industry. Later, the name turned into National Facilities Management Association (NFMA) and finally, in 1980, it became IFMA with the entry of Canada.

Few years after its birth, FM became a standard procedure in the private sector of services’ providers. In fact, already in the fifties, a strong impulse was given to the
policy of services’ outsourcing, so favoring the consolidation of a first group of specialized companies. Starting with the contracting out of a single service, the FM discipline developed with the purpose of integrating and coordinating many activities at the same time achieving efficiency, effectiveness and reduction of services’ cost. The strategic goal of FM companies and of their facility managers, in charge of the management and the organization of support services on behalf of the client, has always been to fulfill the client need of a single qualified and specialized point of reference. The referents have to optimize the activities related to the management of instrumental, auxiliary or support services and to obtain efficient solutions being directly responsible for the accomplishment of the planned objectives (Fiorentino, 2003). FM is a discipline born essentially from the practical experience in the field of business support services, as a synthesis of real estate management, business administration, business organization and finance.

The word facility management is often and wrongly considered as a synonym of outsourcing. This misunderstanding is due to the fact that often the facility activities, instead of being managed in-house, are contracted out to FM companies. As a matter of fact, these activities are not always outsourced; there are some organizations, particularly corporations, where there is a facility management unit in charge of non core services (e.g. accounting, maintenance, ICT, etc.) and administered by an internal facility manager. Sometimes, the competences attained by these units become so high to enable them to offer services in the market, thus turning into a facility management company.

In literature the practice to contract out some of the critical and/or non-critical business processes to external specialists is called Business Process Outsourcing (BPO) (Johnson, 2006). Companies consider the BPO activity as an efficient way to cut costs and to obtain a stronger competitive advantage. Therefore, when outsourced, the discipline of facility management belongs to the wider sector of the BPO.

1.2.1 The definition of facility management: a literature overview

As time goes by, facility management has constantly increased its range of offered services, and thus of primary activities, becoming therefore a more and more interdisciplinary practice (Nutt, 1999; Nutt and McLennan, 2000; Green and Price, 2000). All this led to many misunderstandings about the facility management definition. As a matter of fact, the constant and quick expansion of the facility management borders brought such a literature inconsistency that academics, organizations and international associations coined for this concept many non homogeneous definitions and classifications (Iadecola, 2003). Consequently, the international facility management literature presents definitions which appear to be contradictory and questionable. Therefore there is great difficulty and need to find a definition that can be universal and recognizable both by academics and practitioners.

The literature analysis highlighted that the most cited, accepted and shared definition, supported by IFMA too, is the one proposed by Cotts and Lee (1992):
FM is the practice of coordinating the physical workplace with the people and work of the organization; it integrates the principles of business administration, architecture, and the behavioral and engineering sciences.

Integration and coordination concepts emerge from this definition. The capacity of integrating and coordinating many activities, which need different distinctive competences and have substantially heterogeneous technological contents, fitting the client’s organizational model, is exactly the core know-how of a facility management company and of the facility manager.

According to Regterschot (1988), the integrated management of real estate, services and resources is based on designing, planning and monitoring the operations, in order to support the client strategy in an effective, efficient and flexible way. This way, the facility management is seen as a discipline responsible for coordinating the efforts related to the planning and management of the building and its systems, plants and furnishing in order to support the client in the unpredictable competitive environment (Becker, 1990).

Facility management uses the typical Project Management (PM) approach. The PM is the practice of managing a group of complex and interrelated activities with a precise goal that can be reached through synergetic and coordinated efforts within a predefined period of time and with an exact quantity of human and financial resources (Tonchia and Nonino, 2007). In the same way, the FM performs a coordinated and integrated management of services that can be exactly classified as complex and interrelated activities. “Precise goal”, “time period”, “human and financial resources” are set through mid/long term contracts typical of FM. Thus, the facility manager handles projects that have a beginning and an end (always established by contract) through strategic and operational decisions supported by human and financial resources. A facility management company works through multi-project strategies where the goal is to maximize the projects’ portfolio profit. Curcio (2003) suggests and emphasizes the integration concept:

FM is the integrated management of all non core services (addressed to buildings, spaces and people) linked to the management of real estate.

This definition introduces a peculiar aspect of the facility management: the emphasis on non core services. Generally, services may in fact be split into core and non core (Chase et al., 2004). The term non core refers to all the activities that are complementary to the distinctive organization process (core activities). On the other hand core activities are those by which a company offers a unique value to its client (Nellore and Soderquist, 2000) and are directly linked to the organization main competences. These activities allow to achieve the typical performance goals such as quality, flexibility, timing and cost. On the contrary, the non core activities are identified as the organization processes that marginally contribute to accomplish company goals, but are however necessary for the organization functioning; in fact without these activities organizations would not be able to operate.
The facility management activities may include a wide range of services. Facility management can be intended as the function that coordinates and integrates the physical resources as well as the working space and offers the services supporting the core business to the organization staff and process (Chotipanich, 2004). Therefore the management of the activities supporting the client core business should be a distinctive element to define facility management; in fact this theory is supported by many authors (e.g.: Kincaid, 1994; Klee, 1994; Van Krimpen, 1997; Maas and Pleunis, 2001), who also emphasize the FM’s relationship with the company strategic activities (e.g.: Alexander, 1996).

Although the abovementioned literature definitions present valid concepts, in our opinion, none of them is thoroughly complete. In fact, most of the authors (coming from heterogeneous academic and managerial experience) are inclined to describe facility management focusing on their own working area, but omitting some qualifying aspects. It is now legitimate to question whether all these themes have a distinctive character and are adequate to define the facility management. The answer is not positive: as a matter of fact those definitions lack the fundamental concepts that, as demonstrated before, distinguish the facility management, i.e. the integration and coordination of the activities as well as the design, planning and monitoring of non core services.

### 1.2.2 The suggested facility management definition

In order to suggest a definition of facility management, that arises from the literature, including the FM distinctive concepts and clarifying its nature and fields, we analyzed the main definitions suggested by authors and organizations. Among these definitions we selected just the ones that significantly contribute to clarify what FM is, by use of concepts that are frequently repeated in literature. The final result is a matrix (Table 1.1) where authors and organizations who produced the definitions are put in relation with three groups of keywords:

- **identification terms**: distinctive words specifying what facility management is;
- **typical contractor activities**: actions undertaken by the provider of facility management services;
- **client services objectives**: areas of the client organization affected by facility management operations.

Summarizing and integrating the matrix definitions, we suggest a facility management definition that contains the main concepts stated by major authors and organizations (grey highlighted cells in the matrix):

Facility management is a multidisciplinary approach for designing, planning and managing the non core services in an integrated and coordinated way; these services - linked particularly to real estate - support the strategic core activities and are essential for the effective and efficient functioning of an organization.
Analyzing the matrix resulted from the literature analysis it is evident that there is a lack of universal agreement among authors and organizations on the typical facility management themes. Although the activities of managing, coordinating, planning, strategically supporting and integrating are common to most of the definitions, from a longitudinal analysis of the matrix the lack in the first definitions of a shared vision of the “typical activities” and of the “services objectives” emerges. The initial confusion regarding the facility management origin led to a sort of discrepancy about the contractor interest fields. Just lately real estate has been recognized in literature both as a physical space and as a building containing people, or more precisely all the individuals that facility management services are directed to. The “non core” keyword recurs often and indicates the client processes that the facility management services are directed to. Consequently the wider concept “non core services mainly connected to the organization real estate” has been used in the proposed definition, also considering that the FM universe is so wide that it cannot be defined and described by a brief definition (as reported in the next paragraph).

Table 1.1 - Keywords of the Facility management definition

<table>
<thead>
<tr>
<th>AUThORS</th>
<th>FACILITY MANAGEMENT</th>
<th>IDENTIFICATION TERM</th>
<th>TYPICAL CONTRACTOR ACTIVITIES</th>
<th>CLIENT SERVICE OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILLER H. (1970)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>BECKER F. (1990)</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>THOMSON T. (1991)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>COTTS D. e LEE M. (1992)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>KINCAID D. (1994)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>KLEE H. L. (1994)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>LAIRD S. (1994)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ALEXANDER K. (1994)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>BARRET B. (1996)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>VAN KIRPMEN J. (1997)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>ASSOCIATION</th>
<th>SUBJECT</th>
<th>VERB</th>
<th>DIRECT OBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRESAM</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>DE BRITIS ASSOCIATION FOR FACILITIES MANAGERS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>EUROPEAN FACILITY MANAGEMENT NETWORK</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>GERMANY FACILITY MANAGEMENT ASSOCIATION (GFEFA)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>INTERNATIONAL FACILITY MANAGEMENT ASSOCIATION (IFMA)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>NORDEMA</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>NLS FACILITY MANAGEMENT SKILLS PANEL</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

Main concepts use for defining the facility management
1.3 THE NON CORE SERVICES

Facility management and its managerial practices include a high number of services offered to the companies. In the past, these services were reception, cleaning, security, catering, internal logistics, mailing, space and layout management and document management. The continuous evolution of the FM sector has increased the number of outsourced support processes, thus enlarging the offer of services in the market.

Non core services, either outsourced or not, can be classified into homogeneous classes according to the different management areas. As mentioned above, the main field of facility management services is real estate. Three non core services’ classes are related to it: facility management services, property management services and asset and portfolio management services. To each class correspond a management focus: technical-functional management, technical-administrative management and strategic-financial management. Table 1.2 shows the three classes of real estate related services as well as other non core services.

Table 1.2 - Non core services and their management fields

<table>
<thead>
<tr>
<th>FACILITY MANAGEMENT SERVICES</th>
<th>PROPERTY MANAGEMENT SERVICES</th>
<th>PORTFOLIO AND ASSET MANAGEMENT SERVICES</th>
<th>OTHER SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>- people-related services</td>
<td>- technical services</td>
<td>- commercial services</td>
<td>-</td>
</tr>
<tr>
<td>- building-related services</td>
<td>- administrative services</td>
<td>- asset management strategic services</td>
<td>-</td>
</tr>
<tr>
<td>- space-related services</td>
<td></td>
<td></td>
<td>- Administrative and legal services</td>
</tr>
<tr>
<td>2. Utility services</td>
<td>6. Asset management strategic services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Technical services</td>
<td></td>
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</tbody>
</table>

1.3.1 Auxiliary services

In the facility management field, auxiliary services are the most characteristic ones and can be subdivided into three groups (Bombelli and Del Gatto, 2006) depending on what/whom they are related to.

- **People-related services**: reception, catering, cleaning, staff transportation, porterage, couriers, mail distribution, etc. Their management is defined as employee service management.
- **Building-related services**: building maintenance and functioning, restructuring, disposals, building efficiency securing, technical plant and equipment functioning,
cleaning, green area up keeping, etc. Their management is defined building management that is the management of the activities designed to monitor, to periodically inspect, to take care of the out-of-order and emergency signals, and to logistically support building and real estate maintenance activities (Curcio and Talamo, 2003).

- **Space-related services:** space allocation, configuration and reconfiguration, office signals, space use monitoring and inspection, office activity supporting, archives management, office layout, office furnishing and equipment, etc. The management of these services is defined space management.

Auxiliary service management has historically been identified with the term facility management. This historical meaning has now been worn out by the continuous sector evolution and, as it will be illustrated, FM covers a wider activity range. Moreover, it is to be noticed that the person-related services extend their typical facility management competences beyond the ones strictly connected to real estate management.

1.3.2 Utility services
These services intend to manage and to optimize consumption utilities (water, electricity and natural gas) for one buildings or for the real estate. Goal of these services is to ensure plants and networks efficiency avoiding wastages. They go beyond the border of the single business units, being transversal and common to most of the business processes. The handling of these services is called utility management.

1.3.3 Technical services
Technical services usually refer to one or few business processes in the productive and logistic field. These services are related to operations that, despite being non core, directly or indirectly affect the end-user. Some examples of these services are: industrial maintenance, manufacturing plants maintenance, repair services and technical assistance, office equipment maintenance, indoor material transportation, warehouse management, industrial waste disposal, etc. The handling of these services is called materials handling & maintenance management.

1.3.4 Property services
With the term property it is intended the land and/or the building belonging to it. These services aim to maintain and to create property value through the operations management and the coordination of commercial, administrative and technical processes of the real estate. The administration and organization of these processes is called property services management.

Commercial and administrative activities respectively intend to maximize real estate profitability and to control costs, considering the property investment strategy (Tronconi et al., 2002). Technical services have the purpose to standardize and to adjust the internal building services and future utilizations to the user’s requests as well as to avoid income losses due to the building and its plants degradation (Solustri, 1997). Examples of these activities are:
• **technical activities:** technical and functional analysis of buildings, management of the ordinary and extraordinary technical-maintenance activities, management of the building and plant monitoring activities, management of the plant checking systems (security, communication network, etc.), technical archive updating and management, etc.

• **commercial activities:** management of the relationships with administrators and sub-suppliers, trading assistance, real estate commercial value estimation, sale documentation groundwork, etc.

• **administrative activities:** arrangement, management and renewal of lease contracts (and relative deadlines) according to the asset management strategies (see par. 1.3.6); rent collection; guaranteed deposit management; management control; real estate accountability and taxes management; administrative, paper and IT archive management; insurance management, etc.

According to literature it is clear that technical property services overlap building auxiliary services, which are already accounted among the facility management typical activities.

### 1.3.5 Real estate portfolio selection services

An asset is a building or equipment with an economical value to be maintained for a certain period of time after its purchase. The portfolio management is the selection of a set of buildings that can ensure specific risks and potential revenues (Pisani, 2003). Real estate portfolio management is therefore the practice of defining and carrying out the investment strategies in order to create an optimal set of assets through the economical-financial analysis and according to an evaluation of the prospects of profitability increase.

### 1.3.6 Asset management strategic services

The asset management can be considered, in a broader sense, as the enhancing and optimizing process of real estate (Talamo, 1998), or of the property portfolio, from the purchase to the property strategic goal achievement (Cotts and Lee, 1992). Hence, the asset management includes a set of strategies related to the real estate possessions. It manages strategies and mid-long term investments aimed to maximize the real estate portfolio through projects and/or building investments (Curcio and Talamo, 2003). Other than the building purchase, there is the property management. In fact, the asset management deals with the “strategic monitoring” and therefore with the real estate value and profitability through market analysis, feasibility studies, reconversions, real estate purchases and sales (Pisani, 2003). Other activities are linked to the legal aspects, like legal contentious management and regulations editing, while the most relevant non strategic activities are the financial ones concerning the building management.

### 1.3.7 Application management services

The application services are directed to the management of information systems (which support the user through training and assistance), software packages, IT
ordinary maintenance, licenses and issues of software release and patch versions. All the software maintenance and development activities (carried out modifying, repairing or integrating the applications) are included in this class of services. Application services are also those supporting IT networks and the Application Service Provider (ASP) services. The managerial practice of these services is defined as application management.

1.3.8 Administrative and legal services
Administrative services are related to the organization financial flows that are not connected to the building like budget allocation, accountancy, cost accounting, financial forecasts, contracts payment, taxes, cash flow management, treasury, financial, insurance and tax collection services, financial consultancy, etc. Legal consultancies arising from contractual issues (e.g. the hiring process and the contractor and client legal contentious) are often connected to these kinds of activities. The administrative and legal consulting activities as well as the bureaucratic practice management ones are services supporting operational business activities and are necessary to the organization functioning. They can be defined as administrative and legal advices.

1.3.9 Non core service management practices
As a conclusion for this paragraph we propose Table 1.3 summarizing non core service management practices that support the abovementioned organizations.

1.4. NON CORE SERVICES INTEGRATED MANAGEMENT
The previous paragraph has shown how wide is the universe of the activities supporting core process that the organizations can either internally manage or outsource. The facility management companies manage most real estate non core services, in an integrated and coordinated way, but not all of them. As a matter of fact, until lately, the real estate strategic management has been the object of other management practices: the capital asset management and the real estate management. Recently the facility management borders have expanded including also major strategic activities and reaching therefore what is called the Total Facility Management.

1.4.1 The capital asset management
Tronconi (2006), agreeing with IFMA, defines the capital asset management as the "logical and continuous evaluation process of the real estate asset conditions (physical conditions, service quality, necessities and priorities of maintenance and requalification intervention and contracts) and performances (economical and financial ones) of an organization, as well as of the priority list of management changes, cessions, or investments (from a strategic point of view) with the aim to maximize the asset economical profitability". The capital asset management is therefore the real estate administration (property management) together with the strategic consultancy aimed to increase the real estate value (asset management), including the real estate portfolio management and selection activities (portfolio management).
Table 1.3 – Management practices and non core services object

<table>
<thead>
<tr>
<th>MANAGEMENT PRACTICES</th>
<th>SERVICE OBJECT</th>
<th>FURNISHED SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AUXILIARY SERVICES MANAGEMENT</td>
<td>EMPLOYEE MANAGEMENT</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>SPACE MANAGEMENT</td>
<td>Physical space</td>
</tr>
<tr>
<td></td>
<td>BUILDING MANAGEMENT</td>
<td>Buildings</td>
</tr>
<tr>
<td>2. UTILITY MANAGEMENT</td>
<td>Utilities</td>
<td>Manages and optimizes water, electricity and natural gas consumption for one or more buildings.</td>
</tr>
<tr>
<td>3. MATERIALS HANDLING &amp; MAINTENANCE MANAGEMENT</td>
<td>Internal transports and plant</td>
<td>Industrial maintenance, productive and technical plants maintenance, repair services and technical assistance, office equipment maintenance, indoor material transportation, storage management, industrial waste disposal, etc.</td>
</tr>
<tr>
<td>4. PROPERTY MANAGEMENT</td>
<td>Property (building and land): technical activities</td>
<td>Management of the ordinary technical-functional activities and of the building and plant monitoring activities, management of the plant checking systems (security, communication network, etc.), technical archive updating and management, etc.</td>
</tr>
<tr>
<td></td>
<td>Property (building and land): commercial and administrative activities</td>
<td>Commercial activities: management of the relations with administrator and sub-suppliers, trading assistance, real estate commercial value estimation, sale documentation groundwork, etc. Administrative activities: arrangement, management and renewal of the lease contracts (and relative deadlines), etc.</td>
</tr>
<tr>
<td>5. PORTFOLIO MANAGEMENT</td>
<td>Real estate portfolio</td>
<td>Selection of a set of buildings forming a portfolio that ensures specific risks and potential revenues.</td>
</tr>
<tr>
<td>6. ASSET MANAGEMENT</td>
<td></td>
<td>Emphasizes and optimizes the process of a real estate, or of a property portfolio, from the purchasing to the property strategic goal achievement.</td>
</tr>
<tr>
<td>7. APPLICATION MANAGEMENT</td>
<td>Information systems and software packages</td>
<td>Management of the information systems and of the supporting user software packages, of the IT ordinary maintenance and of the licenses. Maintenance and enhancement activities (carried out modifying, repairing or integrating the applications).</td>
</tr>
<tr>
<td>8. ADMINISTRATION &amp; LEGAL ADVICES</td>
<td>Administration and legal practices</td>
<td>Budget allocation, accountability, cost accounting, financial forecast, contract payment, taxes, cash flow management, services for treasury, financial, insurance and tax collection, legal consultancies arising from the contractual aspects, etc.</td>
</tr>
</tbody>
</table>
1.4.2 The real estate management

Real estate is defined as the land, above and beneath the ground, including all the natural and artificial elements permanently and physically belonging to it (Galaty et al., 1993). With the word “elements” it is intended the ensemble of single buildings or of group of buildings, encompassing the external spaces, the equipments and the infrastructures.

Real estate, other than physical features, has also economical features. The real estate management practice is aimed to optimize both types of features through the real estate activity management on a strategic, administrative, technical and commercial level. The management of real estate and of its connected services (i.e. the administration of real estate portfolio rents, people and resources) allows full real estate exploitation, both from the user and from the owner/investor point of view.

When we speak about corporate real estate management, we refer instead to the management of real estate owned by corporations. The decision of buying or renting some buildings belongs to the company spirit – its culture, its investment strategies and its inclination on control – and it depends on the company attitude to manage all the connected non core activities (Silverman, 1987). Essentially the corporate real estate management administers the company real estate, tuning up the real estate portfolio with its related services according to the company core business needs (Dewulf et al., 2000).

The modern concept of real estate management can be described from three points of view: asset and portfolio management, property management and facility management. They have different objects of interest: for the asset management it is the asset, for the property management it is the property together with the real estate and for the facility management they are buildings, space and people services. They have different goals as well: asset management aims at real estate profitability, property management at administrative and technical management of the building and of the plants, facility management at effective and efficient management of the services supporting the work and the productive processes. In conclusion, the real estate management includes the three fields introduced in the previous paragraph: strategic-financial management (asset management and eventual portfolio management), technical-administrative management (property management) and technical-functional management (facility management).

1.4.3 Total Facility Management or Integrated Facility Management

In the last years the concepts of Total Facility Management (TFM) and Integrated Facility Management (IFM) have been introduced and then translated in practical experience.

The Total Facility Management practice entrusts the whole facility management responsibility to a unique organization at a fixed price (Atkin and Brooks, 2000). In the outsourcing case, the TFM model offers the same integrated outsourcing advantages of the facility management further amplifying the outsourced process number and – obviously - the contractor responsibilities.
In this model, a total facility management company can offer and manage a wide service set in an integrated and coordinated way, either directly or through subcontracts. As a matter of fact, in the FM world it frequently happens that the contractor subcontracts some of the services (sometimes most of them or even all of them) to companies that are more specialized in a specific service sector. Moreover, the TFM transfers risks, responsibilities and all the core process supporting services, from the client organization to the contractor. Consequently, the FM service contractor is totally responsible for the risks connected to the facility functioning and efficiency preservation as well as to the assigned activities delivery, from both the financial and operational points of view.

Some authors introduced the Integrated Facility Management (IFM) concept, i.e. know-how supply and service management from one single source, starting from the property strategy development, driven by the business needs, to the facilities daily management. The IFM concept and the establishment of a global partnership are a natural development of the TFM concept (Worthington, 1997).

In fact, the integrated facility management does not distinctly differ from the total facility one, since it refers to the management of the same non core services. It just strongly focuses on the significance of the integration between contractor and client, going towards the partnership concept. Consequently, from now on, the two concepts will be considered as synonyms and we will indistinctly speak about total facility management or integrated facility management.

As described in the paragraph 1.2, inside real estate management, the facility management refers to the technical-functional part of services and to the people services. As a matter of fact, for many years now, this management activity includes, beyond the auxiliary services (“historical” FM services), also the activities connected to the handling materials & maintenance management and to the utility management. Nevertheless the expansion of the facility management activities is not over. The facility management activities cover all the property management processes, consequently extending inside the capital asset management borders.

Moreover the facility management market analysis shows how, in the last years, some companies coming from the real estate strategic management field entered it (for deeper information, see chapter 2 - facility management market analysis). These companies can expand the offer of the services connected to the real estate and to the technical-functional management of properties to those connected to the real estate portfolio management. This can be done even from a strategic point of view, moving out from the property typical competences and approaching the asset management.

Therefore with the integrated facility management concept we will refer to the extended management of the non core services, from the facility management typical ones to the property service management (Figure 1.1).
Historically, the facility management was a discipline arisen from the practical experience and kept for many years in the practitioner hands. This fact has not allowed to build a conceptual and theoretical structure. For this reason, perhaps, the FM is – surprisingly – not widely acknowledged as an activity to be enclosed in the service business field (Mc Lennan, 2004). In order to give more theoretical coherence and practical effectiveness to the FM sector it has to be inserted in a traditional management discipline: the service management.

Service management represents a conceptual reference model, which in the past dealt with many of the typical FM activities and therefore can provide it with the searched theoretical coherence. Once the FM services are identified, it is necessary to classify them according to frameworks of the service management world, which, since many years, has proven itself solid and effective, from both theoretical and practical points of view. The goal is to show, in the best way, the FM features and opportunities, indicating both the differences and the criticalities that the companies operating in this sector have to face daily to be competitive.
1.5.1 Taxonomy of the non core service management practice according to nature and service recipient

The facility management offers many services, or better, an integrated service package. The first step is to distinguish the tangible aspects of the service from the intangible ones (Levitt, 1981). The service includes, in fact, two kinds of elements: physical-tangible ones and intellectual-intangible ones that produce sensorial and psychological benefits (Heskett et al., 1990). In such sense, Lovelock (1983) suggests a matrix crossing the nature of service (tangible or intangible) with the recipient of service (people or objects). The matrix represented in Figure 1.2 uses the Lovelock proposed dimensions with the non core service management practices (described in paragraph 1.2 and summarized in Table 1.3). The multiplicity of the facility management proposed services covers two of the four matrix cells, since obviously there are not people’s mind services. We finally remark that the auxiliary services cover two matrix sectors, since there are both activities for the people and for the objects (i.e. physical space and building).

The same dimensions have been used also to classify the integrated management practices of the non core services (Figure 1.3).

Figure 1.2 - Nature and service recipient of the non core service management practices

<table>
<thead>
<tr>
<th>NATURE OF THE SERVICE</th>
<th>RECIPIENT OF THE SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANGIBLE</td>
<td>PEOPLE</td>
</tr>
<tr>
<td></td>
<td>SERVICES ADDRESSED TO GOODS AND OTHER PHYSICAL POSSESSIONS</td>
</tr>
<tr>
<td></td>
<td>SERVICES ADDRESSED TO PEOPLE’S BODIES</td>
</tr>
<tr>
<td></td>
<td>1. AUXILIARY SERVICES MNGT</td>
</tr>
<tr>
<td></td>
<td>2. UTILITY MNGT</td>
</tr>
<tr>
<td></td>
<td>3. MATERIALS HANDLING &amp; MAINTENANCE MNGT</td>
</tr>
<tr>
<td></td>
<td>4. PROPERTY MNGT</td>
</tr>
<tr>
<td></td>
<td>5. PORTFOLIO MNGT</td>
</tr>
<tr>
<td></td>
<td>6. ASSET MNGT</td>
</tr>
<tr>
<td></td>
<td>7. APPLICATION MNGT</td>
</tr>
<tr>
<td></td>
<td>8. ADMINISTRATION &amp; LEGAL ADVICES</td>
</tr>
<tr>
<td>INTANGIBLE</td>
<td>THINGS</td>
</tr>
<tr>
<td></td>
<td>SERVICES ADDRESSED TO INTANGIBLE ASSETS</td>
</tr>
</tbody>
</table>

Management practices of the Facility Management services

Management practices of the other no core services
1.5.2 Non core service management practice taxonomy according to management integration level

In this paragraph we suggest a taxonomy of the non core service management practices related to the management integration level (see Figure 1.4). In fact, the literature analysis allowed to identify this kind of classification according to the possible services that support the internal processes.

The management practices have been inserted in a matrix and referred to two of their dimensions: the service type and the service management integration level. The outsourcing service types considered in the first classification dimension are those described in paragraph 1.2 and summarized in Table 1.2.
About the service management integration level, two typologies have been identified:

- **not integrated services management**, where a single service or a service group are managed without coordination or integration (no facility manager);
- **integrated multiservice management**, where services are managed in a coordinated and integrated way through the principles of service management and project management (existence in the client organization of the internal or external facility manager).

Literature supports the taxonomy structure presented in Figure 1.4. However, the matrix enables to identify the different choices an organization can make regarding the core services, and describes their management evolution in four steps.

1. **Non core services management**: non integrated management of all the services that support an organization's main activities using practices of employee service management, building management, space management, utility management, property management portfolio management and asset management. Application management, administration & legal advice are included as well.

2. **Facility Management (historical meaning)**: integrated and coordinated multiservice management of the auxiliary services to satisfy many of the client needs.

3. **Facility Management (modern meaning)**: besides the typical facility management services of the mentioned historical meaning, the utility and technical services are included.

4. **Integrated Facility Management (Total Facility Management)**: besides the facility management typical services of the modern meaning, the property services integrated management is considered, extending the relative competences into the capital asset management borders.

However, in the matrix there are other integrated management practices of the non core services connected to the real estate:

- **Capital Asset Management**: integrated and coordinated multiservice management of the real estate services (property management) and strategic consultancy to increase the real estate value (asset management), where the management and selection activities of the real estate portfolio are included (portfolio management).
- **Real Estate Management**: technical-functional, administrative, commercial and strategic management of the real estate, and its connected resources and services.

### 1.6 FACILITY MANAGEMENT COMPANIES TAXONOMY

The evolution in managing the services that supports the core activities has moved from inside the company (where responsibility was assigned to the single department or to an internal structure in charge of the managing those activities) to outside, by subcontracting all the services that support the organization core activities (for deeper information refer to non core service management model in chapter 4).
1. THE FACILITY MANAGEMENT: NON CORE SERVICES DEFINITION AND TAXONOMY

Figure 1.4 - Non core service management practices and facility management evolution
At the moment the taxonomies can be found in the literature, but seems inadequate for a strategic placement analysis of the facility management companies. Therefore we propose a non core service company classification (Figure 1.5) which allows to emphasize the fields where the companies operate and to make their comparison easier, according to the offered service typology and the service management integration level.

Different models of support services providers or facility management companies correspond to the different non core service management practices (described in paragraph 1.2 and highlighted in Table 1.3). Organizations can refer to these company models in order to outsource the management of their own services supporting the core activities. The integration level of the outsourced service management is based also on the management approaches of the service companies to integrate themselves with their clients. These approaches derive from the organization model adopted by the service company (this topic will be widely treated in chapter 4). Models are sorted according to an increasing integration level regarding supplied services and client/contractor relation. To each of these levels correspond increasing competences and growing capacity of designing, planning and service management.

The typologies of company working in the facility management non core service sector can be classified in the matrix illustrated in Figure 1.4, where the relative managerial evolution can be understood as well. The typologies can be subdivided into:

- **Non core service companies (non integrated outsourcing):** these companies furnish non core services using practices of employee service management, building management, space management, utility management, property management portfolio management and asset management. Companies furnishing services of application management and administration & legal advices are included as well.

- **Facility management companies:** these companies furnish non core services in an integrated and coordinated way, satisfying many client needs; in the historical meaning these companies furnish only auxiliary services, while in the modern meaning they offer technical and utility services as well.

- **Asset management companies:** these companies furnish, in a integrated and coordinated way, services of real estate administration (property management), strategic consultancy to increase the real estate value (asset management) including real estate management and selection portfolio.

- **Integrated facility management companies:** besides typical facility management services, these companies furnish, in an integrated and coordinated way, also property management services, extending their own competences inside the capital asset management boarders. Compared to the previous ones, they aim to achieve a stronger integration and partnership with the client.

- **Real estate management companies:** these companies furnish a technical functional, administrative, commercial and strategic management of the real estate, of the resources and of the related services.
Figure 1.5 - Non core services companies typologies
From the graphic representation it can be easily inferred that there is an overlap of companies offering integrated facility management services and companies offering real estate management services. The first ones are the natural evolution of facility management companies which have proposed also commercial and administrative services. The second ones, traditionally less oriented to the technical-functional management, lack altogether in offering people-related services. The evolution of the real estate non core service companies brings to foresee a future competitive scenario where the facility management companies will increasingly overlap the real estate management companies. The first ones will propose to their clients also services connected to the capital asset management, while the second ones will offer also person related services.

1.7 FACILITY MANAGEMENT COMPANY CHARACTERISTICS
Facility management companies are above all companies providing one service or many services to a client organization. Two types of service content can be distinguished according to where the service is provided (Chase et al., 2004):
- **facility-based services**: the client operates inside the structure that provides the service;
- **field-based services**: the service is produced and consumed inside the client structure.
FM companies are certainly among the field-based service ones, that means working inside a manufacturing or service company. The matrix illustrated in Figure 1.6, suggested by Lovelock (1983), shows that the impact of the services provided to the client organization structure, is high in case of manufacturing companies, while it is really high in case of service companies. Consequently companies providing clients with supporting services have generally a critical role which becomes very critical when the client, in turn, provides services to the end-users.

![Figure 1.6 - Facility management service impact on the client organization structure (adapted from Lovelock, 1983)](image-url)
The challenge in providing field-based services arises also from the relationship with the client. In fact, it is important to clarify that the service companies, and therefore also the FM companies, are organizations whose primary activity needs a frequent relationship with the clients. The contractor-clients interaction level, expressed with the contact frequency, depends on the provided service typology. Moreover the relationship typology can substantially modify the organization structure, the service company management approach and the requested commitment in terms of human or technical/technological capital. Schmenner matrix (1986), shown in Figure 1.7, summarizes and illustrates these concepts in the best way. It analyzes a contractor according to two parameters:

- human capital intensity compared to the technical capital;
- client interaction degree and service customization.

**Figure 1.7 - Degree of labor intensity and interaction/customization in the facility management companies (adapted from Schmenner, 1986)**

<table>
<thead>
<tr>
<th>DEGREE OF INTERACTION AND SERVICE CUSTOMIZATION</th>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>SERVICE FACTORY (airlines, hotels, ...)</td>
<td>SERVICE SHOP (mechanical repairs, application service provider, ...)</td>
</tr>
<tr>
<td>FACILITY BASED</td>
<td>HIGH</td>
<td>PROFESSIONAL SERVICE (consultants, lawyers, ...)</td>
</tr>
</tbody>
</table>

Companies with low service customization and low interaction degree are known as service factories (low intensity of human capital) - e.g. hotels and airlines - or mass services (high intensity of human capital) - e.g. large retailers or banks. Using Schmenner’s matrix it can be inferred that the companies providing FM services belong, for the most part, to the service shop class while for a smaller part to the professional service class. This is due to the fact that the offered services are always characterized by a high customization level and are based, almost always, on a continuous contact with the client. The main difference can be identified through the human capital commitment required to provide the service; fundamental for some service typologies and marginal for technical ones.

Summarizing, FM companies offer field-based services with a high client interaction at a high customization and specialization level and a high impact on the client performances since they work inside the client structure. Brown et al. (2005) indicate some challenges the managers have to face in order to administer their own service company in an efficient and effective way and to prevail in their own market sector. The effect of a human capital force, lower than
the technical one, leads to direct capital investments toward a technological progress. Conversely, a human capital force, that is higher than the technical one, needs great attention in managing the hiring process and the following human resource training. The activities schedule has to be oriented, in the first case, toward the operational planning of the service providing system, and, in the second case, toward the operational planning of the labor force. The main goal of the service-shop and professional-service companies (i.e. companies with high interaction and customization level) is to prevent increasing costs while maintaining the required service quality. Moreover, the high interaction level with the client needs a quick reaction to the client interferences and to their new requests through an effective and efficient management of the service providing system.

1.8 THE GLOBAL SERVICE CONTRACT
It is important to highlight that facility management, but particularly the Total Facility Management or the Integrated Facility Management, can adopt the Global Service (GS) contract. The global service is a “contract that refers to a plurality of services, replacing the ordinary maintenance activities for which the service contractor takes full responsibility” (UNI110685). This type of contract moves the service objective from a specific activity implementation process to the effective achievement of satisfying results. So an integrated system of facility management services can be attained assigning the contractor with full responsibility on the results according to the performance levels expected by the client. This kind of solution ensures the contractor a continuous connection with the client during the contract lifespan and a best identification of the objectives enabling a structured approach in time and resource management.

1.9 THE INTEGRATION OF THE NON CORE SERVICES AND INVOLVED PLAYERS: THE OPEN FACILITY MANAGEMENT
The evolution of the management sector is moving the non core activities management practice toward a higher integration level both among the services and between client and contractor. For example, the integrated facility management or the total facility management, with a single contract for all the facility management services, is a unique point of reference for the client organization. Compared to a multi contract model, the integrated facility management (IFM) model has to be intended by the client organization as a management simplification (single point of reference with fewer transactions) and as a cost reduction. It is anyway necessary that the client organization entrusts the facility management company with a sufficient “working space” to manage the services, in an effective and efficient way.

1 UNI = Ente Nazionale Italiano di Unificazione = Italian Organization for standardization
The IFM is certainly an optimal solution, but only if the organization clearly identifies its own needs, coherently to its own strategy, defining the proper service conditions and subsequently identifying the possible best contractor. Nonetheless, the model of outsourced integrated services can cause several difficulties due to a lack of contract clarity.

Other criticalities can occur when clauses and conditions included in the main contract between contractor and client are not properly cited and transcribed in the contracts with the subcontractors. Particular contracts, like global service, increase the partnership level, especially when integrated with Service Level Agreement (SLA). The Service Level Agreement is a contract appendix that defines the service quality domain and parameters, penalty clauses and related prizes. In fact, the SLA identifies:

- the contracted output;
- the main client/contractor interfaces;
- the responsibilities of the contractor and of the service providers.

The service level agreement is not focused on the way to carry out the operations but on the results. Besides, other than defining the service object and domain, it provides some instructions for changing the required contract services.

In order to conclude this chapter, we suggest a management practice classification used by the companies supplying non core FM services, by focusing on the relation between client and contractor (Figure 1.8). This classification focuses on the service integration level and on the contract responsibility, drawing attention to the evolution of the management approach regarding the FM service sector.

The first classification dimension is the contract responsibility that determines how the client will verify that the service has been carried out in an efficient and effective way. Three cases can take place:

- **process control**: it represents the traditional contract case where the methods of carrying out the service are set;
- **result control**:
  - with global service contract, it establishes the responsibility in achieving the results according to defined, not changeable, target service levels (contract rigidity);
  - with service level agreement, it integrates, as an appendix, the GS contract. Thus the target service levels can be periodically changed (contract flexibility).

This classification, beyond the contract responsibility, is also based on the integration level, considering both the integration among the outsourced furnished services (which can exist or not) and the integration between contractor and client. In case of integration lack among services, single supporting activities are outsourced to external organizations, which simply manage those services (outsourcing service management). The multiservice integration is instead typical of the facility management domain, which uses global service contracts.
The evolution of the client-contractor-subsupplier relationships toward partnership will be the object of the last chapters of this book. These chapters will show the results of an exemplary case study where the integration level among the involved parties in the global service contract has been enhanced through specific tools of knowledge sharing, of performance measurement and of innovative management practices. To reach a real client-contractor integration it is necessary to find an agreement on the service levels, also achieving a true partnership. A starting point is the definition of the service level agreement, allowing periodically changes of the required service levels. However this is not enough: with the long-term contracts that the FM often uses, the dynamics of the client needs and the evolution of the management and technological solutions cannot be forecasted and efficiently managed. From this simple consideration, it becomes evident that there is a need to introduce new managerial orientations, which allow to fulfill the client needs evolution, even inside sufficiently tight contract constraints, in order to avoid opportunistic behaviors by any of the involved parties.

The new approach is based on the evolution of the managerial, organizational and legal practices of the facility management. This approach will be named Open Facility Management.
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FACILITY MANAGEMENT ASSOCIATIONS AND ORGANIZATIONS

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