



# Technical Report

**ISO/TR 41030**

## **Facility management — Existing performance management in facility management organizations — State of the industry**

*Facility management — Gestion de la performance dans les  
organismes de facility management — État de l'industrie*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 267, *Facility management*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Facility management (FM) directly involves or impacts a significant portion of the world's total workforce, indicating that improving FM can have a significant impact on how demand organizations function worldwide. As a result, effective FM performance measurement and management is essential within the FM profession to ensure FM professionals and their organizations understand and meet the objectives of demand organizations. While there is a large body of existing efforts to provide meaningful performance measures that align with demand organization objectives and business practices, there does not seem to be a clear and consistent approach across the FM industry.

This document provides a summary of existing research, methodologies and performance indicators, and creates a path forward for standard development which addresses performance measurement and management needs.

This document builds on previous efforts completed by ISO/TC 267 regarding performance measures and improvement. The underlying strategy is threefold and designed to provide efficient progress towards a well-organized collection of work outputs:

- a) exploring a broad understanding of the current state of FM performance measures and improvement across all demand organizations with an anticipated greater interest and engagement from a broad-based perspective;
- b) modularizing work output development into smaller, more focused initiatives that are part of the broader framework (allowing greater participation and a work output focused on meeting specific requirements);
- c) creating a long-range approach that can be adjusted and enhanced as circumstances dictate, allowing for improved life cycle management of the work output products.

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# Facility management — Existing performance management in facility management organizations — State of the industry

## 1 Scope

This document provides a robust understanding of existing performance measures in facility management (FM) organizations and the needs of both:

- the demand organization;
- the FM organization across the breadth of public and private sector organizations, profit and not for profit.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 41011, *Facility management — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 41011 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Context

### 4.1 History

Since its beginning in 1980s, as studies related to the history of FM show, the profession has evolved from a function with responsibility for dealing only with “hardware,” such as buildings, furniture and equipment, to a professional discipline concerned with “software,” looking at people, processes, data, environment, and health and safety.

For some, FM went from being the custodial function of a building superintendent/janitor concerned largely with operational issues of maintenance, cleaning and tenant security to a more complex one, where the cost of its management and operation has led to the need for tactical and strategic functions.

This has raised the profile of the discipline along with other support functions such as human resources management and information technology.<sup>[22]</sup>

Demand organizations range from private sector entities with a financial performance focus to public sector and federal government organizations whose primary objectives are often not financially driven. Similarly, profit versus not for profit influences the selection of the demand organization's performance indicators and, in many instances, FM organizations become nested with supporting roles between a demand organization and a third-party service provider delivering some or all of the FM activities to the demand organization. These entities typically have different objectives.

How different countries with dissimilar social-economic milestones adopt FM must also be considered. The research by Lindholm and Leväinen<sup>[17]</sup> reveals how the diverse approaches adopted by societies in cultivating leadership and organizational growth are directly influenced by societies and social, economic and historical progress. Every country has its own culture, type of organization and leadership, resulting in different levels of FM at different stages of development. Due to these differences in leadership and organizational structure, it is logical that the demands set for facility professionals differ and the quality realized is valued differently. Differences in FM leadership and organizational structure also impact the way in which FM is performed, measured and managed.

Historically, performance management and measurement has mainly focused on outcomes, utilizing available information to establish a quantifiable indicator, and then measuring whether the desired performance was achieved in the context of the performance measurement. More recently, performance management has expanded within FM organizations to incorporate forward-looking performance management that also incorporates measurements assessing an organization's ability to identify and adapt to future requirements versus historical performance.

Performance measurement is important because it provides the basis for an organization to assess how well it is progressing towards its predetermined objectives, to identify areas of strengths and weaknesses, and to decide on future initiatives, while aiming to improve organizational performance.<sup>[2]</sup> The function of performance measurement is to generate a class of information that will be useful in a wide variety of problems and situations. It focuses on the means and results (ends) or processes and outcomes and can be described in terms of practices and metrics. Performance measurement includes:

- enhancing improvements;
- adopting a long-term perspective;
- more precise communication;
- allocating resources to the most attractive improvement activities;
- an effective and efficient planning, control and evaluation system;
- motivating individuals and encouraging the correct organizational behaviour;
- supporting management initiatives and managing change.

Organizations can use performance measures to:

- identify success;
- identify whether they are meeting customer requirements;
- understand their processes (to confirm what they know or reveal what they do not know);
- identify where problems, bottlenecks and waste exist, and where improvements are necessary;
- ensure that decisions are based on facts, and not supposition, emotion or intuition;
- show if the improvements planned actually happened.

A performance measurement system can be defined as a complete set of performance measures and indicators derived in a consistent manner according to a forward set of rules or guidelines. It is a means of monitoring and maintaining organizational control, i.e. the process of ensuring that an organization pursues strategies that lead to the achievement of overall goals and objectives. Performance measures can be used to force an organization to focus on the right issues.

To reduce the complexity of performance measurement, a wide range of measurements must be arranged or categorized. Representing the cause-and-effect relationship of an organization's strategy has shown to be helpful to categorizing a huge number of measurements in connection to core business and surroundings.<sup>[12]</sup> On the other hand, the overview of key performance indicators (KPIs) can be useful to organizations in different contexts and on different levels: operational, tactical and strategic.



The measurements can provide performance management information that affects positive change in organizational culture, systems and process. The shift from performance measurement to performance management is accomplished by helping to set the agreed-upon performance goals, and allocating and prioritizing an organization's resources.

Many authors have reflected on general performance measurement and performance criteria, i.e. different aspects or areas of performance, and tried to link and categorize performance to concepts such as quality, effectiveness, efficiency, productivity, innovation, profitability/budgeting and others.

Performance management programmes provide feedback based on specifics rather than generalizations and are based on specific objectives derived from the desired outcome of performance measurement results.<sup>[2]</sup>

## 4.2 Impact of FM on the world

The significance of FM's impact on global gross domestic product (GDP) suggests that improved performance management and measurement can directly contribute to global economic productivity with both quantitative and qualitative benefits. This applies to practitioners, demand organizations and individuals that are directly or indirectly the beneficiaries of improved performance with clearly quantifiable benefits across all 17 of the United Nations (UN) Sustainable Development Goals (SDGs).<sup>[11]</sup>

Enhancing FM performance measurement and management represents a clear opportunity to both support demand organization objectives and complement global economic performance and established sustainable development goals.

## 4.3 State of the industry

This document discusses performance measurement and management based on a review of over 150 source documents. While common thinking exists across many of the documents, the reviewed literature is inconsistent in its use of terminology, and approaches the development of performance measurement and management with varying methodologies and performance metrics.

According to the literature, performance measurement has been developed in two phases.<sup>[16]</sup> In the first phase (which went on until the 1980s), performance measurement primarily focused on financial criteria. Since the late 1980s, the second phase revealed that the traditional performance measures had severe limitations, including the encouragement of short-term thinking, lack of a strategic focus and insufficient local optimization.

Eleven representative examples were selected from the overarching reference list which represent some of the methods or frameworks presented for analysis and definition of performance indicators. They are summarized in [Annex A](#).

## 4.4 Industry survey

In a survey conducted in the preparation of this document, there were several findings that provide more context for the opportunities and recommendations.

Here are some highlights from the survey:

- Only 40 % of the respondents are measured using performance indicators. This is a low number and likely reflects the misuse or the non-use of performance measurements in FM.
- Only 56 % of those respondents are measured based on demand organization's measures/objectives, which possibly reflects a lack of connecting the FM strategy with the organizational strategy.
- While 85 % say they differentiate between KPIs and other indicators, several other responses suggest that the difference is understood, and the respondents are correctly differentiating between them.
- 70 % use a standard or reference to develop performance measurements (i.e. ISO, IFMA, ISSA, LEED, etc.). However, the references are more related to benchmarking than performance requirements for

the specific demand organization's objectives, possibly indicating a disconnect between practice and the theory identified in the above references.

- The number of measurements ranged from a total of 8 to 65. This is a very wide variation of measurements which possibly indicates a lack of consistency in application and use of measurements, such as the difference between KPIs and non-KPIs.
- Very few respondents indicated that they have a resource assigned to analysing performance data. This suggests that even when FM organizations measure results, there is not necessarily consistent and widespread management of the results to improve performance.

## 5 Challenges

Reliable, quantitative empirical data to inform business strategies and measure organizational performance are still scarce. One reason for this lack of data and problematic interpretations of cause-effect relationships is the broad scope of FM. This makes it difficult to trace and measure the impact of particular FM input. Clear standard performance indicators are in their infancy.<sup>[12]</sup>

Additionally, the FM practice, and broader industry application of performance measurement and management, appears inconsistent in its methodology, terms, definitions and application of standardized concepts. Industry research and existing technical publications indicate a strong need for a clear and consistent performance terminology that creates a foundation for a performance management framework and an associated development methodology that incorporates historical current, and future indicators for FM.

Existing performance measurement and management frameworks and publications provide a strong reference set of methodologies and structures but lack a consistent set of terms with associated definitions and a guidance document capable of supporting the FM organization in the development of a performance management framework suited to their demand organization.

Individual methods appear appropriate to subsets of the FM organization, but none is ideally suited to meet all the requirements of FM organizations across the spectrum of demand organizations and few, if any, create a management framework capable of addressing historical, current and future performance management requirements.

A number of opportunities exist to develop an integrated framework for FM performance measurement and management capable of addressing the identified gaps. These include the following:

- Terminology related to performance measurement and management is not consistently applied or clearly understood when applied (e.g. the use of the term "KPI" to describe any performance measures, whether key or not).
- The difference between types of FM delivery organizations and the relationship to the demand organization must be addressed (e.g. FM departments within a demand organization, outsourced FM providers delivering to demand organizations).
- The option to require tests to define which KPIs are being preferred in practice, why and by whom, and how the selection and priorities are linked to organizational characteristics and the external context.
- In order to make effective use of its performance measurement outcomes, an organization must be able to make the transition from measurement to management.<sup>[2]</sup>
- Indexes are valid for consideration and inclusion with the necessary context, in addition to other measures. Usage, validity, accuracy and context of some index-related measures are important to include.
- A consideration of the illustrations for guidance on approach.
- A consideration of the metric itself to be included. More importantly, a consideration of the format as a template to propose in the standard for laying out the measures.
- The fundamental principle of the balanced scorecard (BSC), i.e. that performance is evaluated against the organization's strategic objectives, applies specifically to FM. BSC scores based on management's

opinion on a ranking scale can lead to potential bias if based solely on management's opinion. Another option is to look for independent quantitative and qualitative indicators of facility performance that have an open-ended range that allows for objective and reliable performance assessment.<sup>[5]</sup>

- The relationship between core and non-core business, in the context of real estate management and FM, is not well understood.<sup>[17]</sup>
- Tangible and intangible assets are important to the successful support of the core business, which calls for a broader view of real estate's contribution to the firm. Not only direct facility costs, but indirect costs and contribution to the long-term success of the core business must be identified and measured.<sup>[17]</sup>
- The absence of some form of objective measurement using leading indicators as well as financial outcomes negatively affects the comparison of alternative corporate real estate management (CREM) strategies and, generally, leaves corporations unaware about what they are achieving.<sup>[17]</sup>
- Furthermore, a broader, more coherent assessment of the ability of best practice facilities to add value to the core business is missing.<sup>[17]</sup>
- Characterization of various value dimensions helps to differentiate between several FM-specific dimensions of benefits and costs (e.g. core benefits, add-on benefits, acquisition costs, operations costs, purchase price).
- Frameworks can vary depending on market settings, type of relationship, industry sector, specific situation, etc.

Performance measurements that appear to require more refinement include the following:

- Types of measurement and related methods to measure failure or non-performance with clear supporting definitions of what constitutes a KPI versus a non-KPI, how many are appropriate and similar standards.
- Lagging/leading measures and their use for continuous improvement.
- Performance measurement differences by type of organization (government, not for profit, for profit) or level within the organization.
- Standard or consistent process that applies to all demand organizations to facilitate the development and management of a performance framework for FM services.
- Standardized processes for determining the types of measurements that can be suited to supporting performance management and measurement aligned to the business objectives of the demand organization and which can vary depending on the demand organization.
- Managing data and analysis, including what data are required for perspectives and structure measurement. In perspectives, a consideration of:
  - the different perspectives of FM (e.g. viewpoints depending on the role);
  - whether the process to measure performance is the same structure measurement (e.g. what data are required).
- Clear direction and standards identifying what needs to be measured or managed for performance.

Several primary characteristics emerged that can be useful for characterizing demand organizations, their organizational objectives and, as a result, their performance management and measurement focus areas. [Figure 1](#) generalizes some of the differentiating characteristics identified through the technical research.



**Figure 1 — Demand organization characteristics**

Some performance metrics are binary such as compliance, whereas others are either quantitative (cost of service) or qualitative (customer satisfaction), and the emphasis on those performance measures can also shift across various demand organization segments.

A standardized methodology that supports the FM organization in developing a comprehensive performance management framework appropriate to its demand organization needs and unique characteristics was not identified as part of the technical research and represents a significant opportunity to enhance FM delivery.

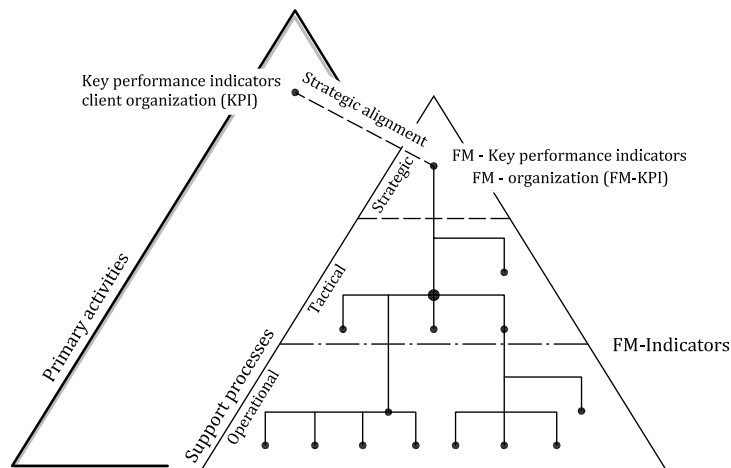
## 6 Opportunities

Today, many authors recognize that FM is an emerging discipline that is gaining recognition around the world. It remains strong and consistently increases by the day in today's service-oriented business management.

While FM performance measurement and management has existed in various forms for over 50 years, it is clear that there is a need for a management system with a standardized approach to the identification of appropriate measures and management, applicable to all demand organizations (from public to private, defence to recreational). FM can improve the performance of the demand organization's investment and align the life cycle of those facilities to the demand organization's requirements.

The review of existing body of academic and technical work has identified several key elements that would substantially improve the performance of demand organizations, FM organizations and the broader population that regularly interacts with those facilities. They include the following:

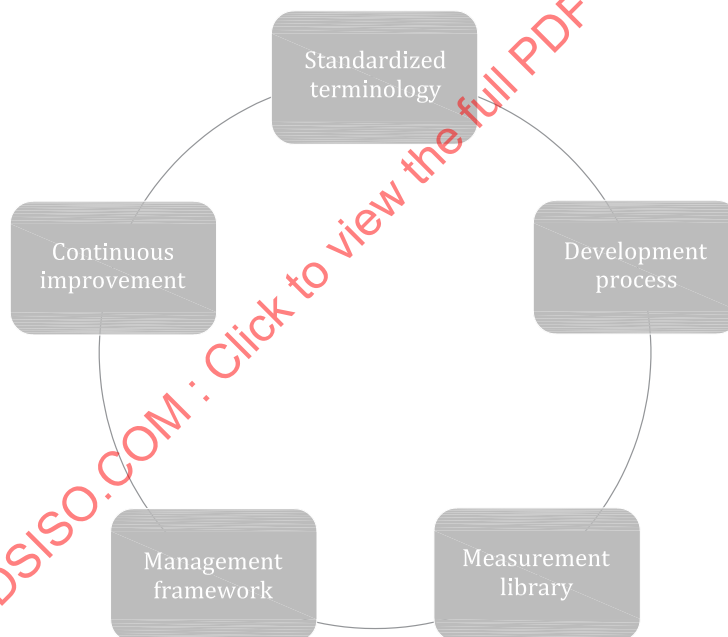
- Standardized terminology and nomenclature that provides consistency for the use of performance measurement and management terms to include KPIs, performance indicators, metrics, leading and lagging indicators, and future/forecasting indicators.
- A formal workflow process capable of identifying the demand organization's primary objectives and aligning the FM organization's performance measurement and management within the context of the demand organization, see [Figure 2](#).
- A structured library of KPIs, performance indicators and metrics with recommendations for units of measure (qualitative or quantitative) and appropriate application of the performance measure (e.g. availability of the equipment, system or facility and how the performance is captured).
- Industry-specific frameworks and guiding templates that utilize the terminology, workflow process and structured library to facilitate the FM organization's development and implementation of appropriate performance measurement and management frameworks.
- A continuous improvement process for testing the sensitivity and value of the performance measurement and management framework for the demand organization over time that refines and enhances the performance of the FM organization.



NOTE Source: EN 15221-3:2011.

**Figure 2 — KPI organization**

[Figure 3](#) represents a visual representation of the key elements of performance measurement and management standards which are required to develop a comprehensive approach across the range of FM and demand organizations identified.



**Figure 3 — Key elements of performance measurement**

Standards for each of these elements have the potential to be developed for individual demand organization segments (e.g. public versus private) or holistically across all demand organization types.

Each of these elements is essential to an effective FM performance measurement and management system. Elements of the five areas exist in academic and technical research, but an integrated approach suited to the requirements of FM is an opportunity with the potential to influence the economic, environmental and social performance of facilities for all demand organizations.

## Annex A (informative)

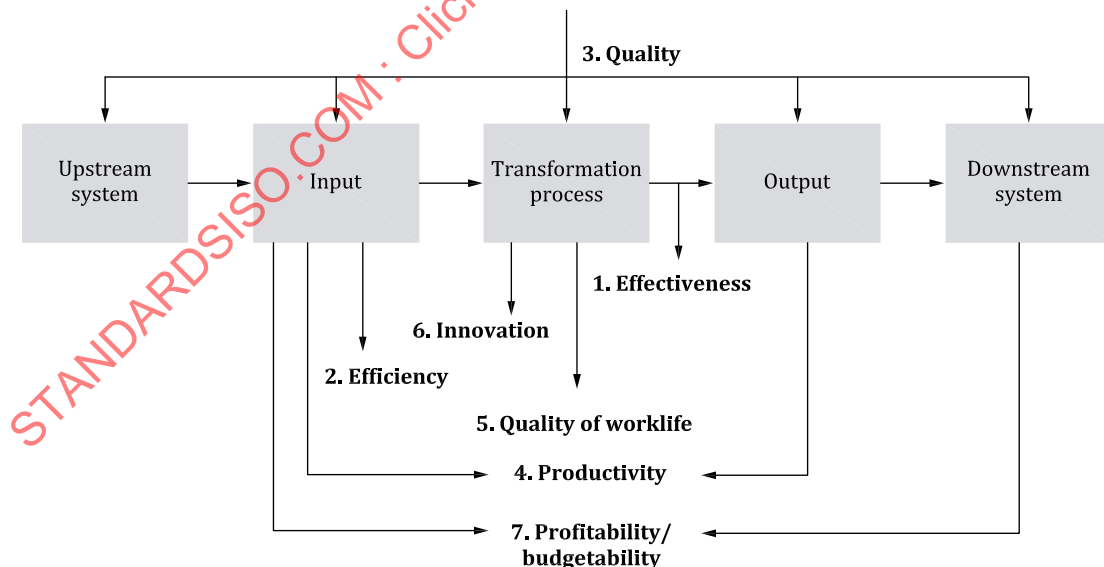
### State of the industry highlights

#### A.1 Seven performance criteria

NOTE See Reference [28].

Sink and Tuttle[28] indicate that the performance of an organization has a complex interrelationship between different perspectives of performance criteria. They identify the following interrelated seven performance criteria, see Figure A.1:

- Effectiveness, “doing the right things, at the right time, with the right quality”: in practice, effectiveness is expressed as a ratio of actual output to expected output.
- Efficiency, “doing things right”, defined as a ratio of resources expected to be consumed to resources actually consumed.
- Quality: since quality is an extremely wide concept, to make the term more tangible, quality is measured at six checkpoints: upstream systems, inputs, transformation value-adding process, outputs, downstream systems and quality management process.
- Productivity, the traditional ratio of output to input.
- Quality of life, an essential contribution to a system which performs well.
- Innovation, a key element in sustaining and improving performance.
- Profitability/budget ability, representing the ultimate goal for any organization.



NOTE Source: Reference [28].

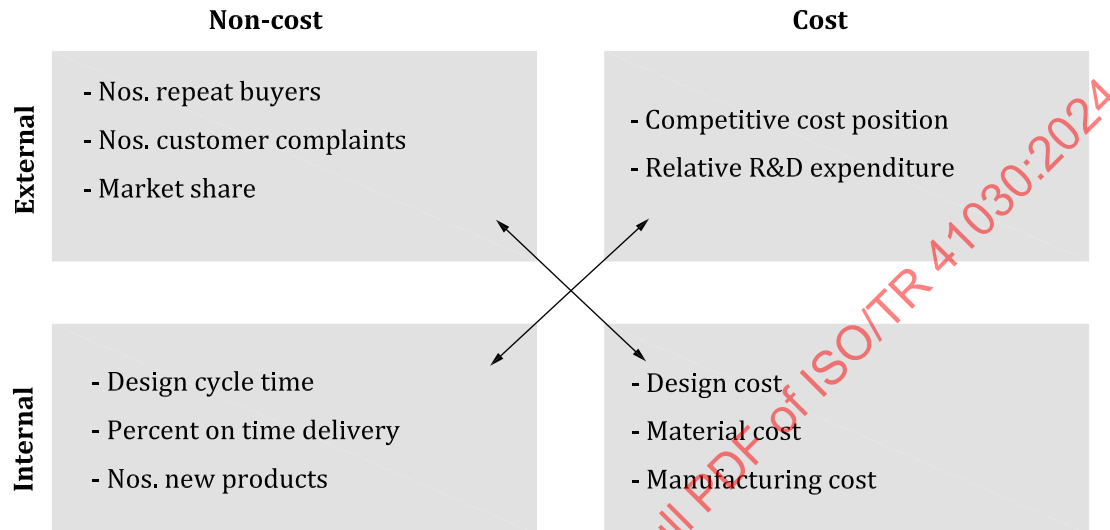
**Figure A.1 — Interrelationship between seven performance criteria**

## A.2 Performance measurement matrix

NOTE See Reference [15].

Keegan et al. [15] have developed a balanced performance measurement matrix that integrates four different classes of business performance: cost, non-cost, internal and external. This matrix is a simple and flexible framework capable of accommodating any measure of performance. [3]

According to Bourne et al. [3], the strength of the performance measurement matrix is that it seeks to integrate different classes of business performance.



NOTE Source: Reference [15].

**Figure A.2 — Performance measurement matrix**

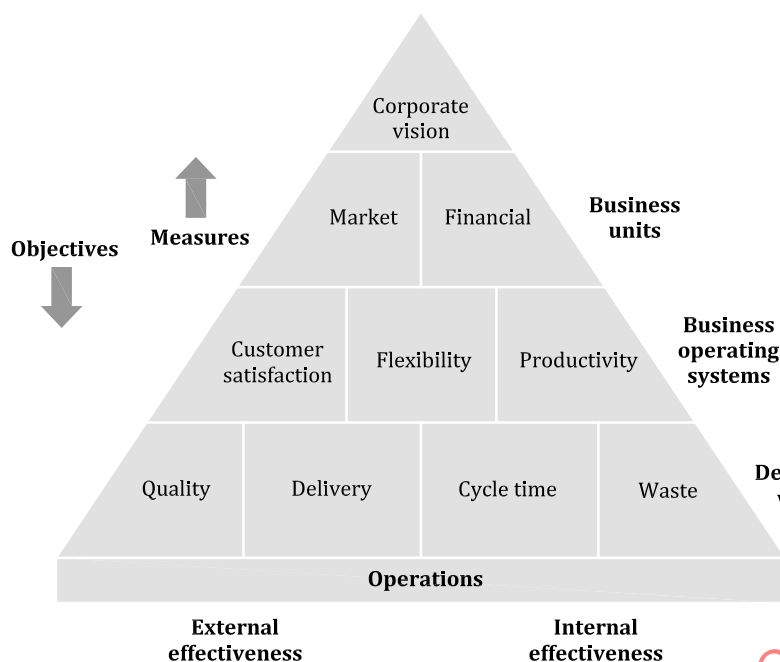
## A.3 Performance pyramid

NOTE See Reference [19].

The performance pyramid by Lynch and Cross [19][20] establishes a clear relationship between goal setting and measurement, and between business strategies and implementation. It also identifies measurements at the team level: work teams focus on quality measures, whereas leadership teams focus on process or strategy [19], see Figure A.3.

The strength of this framework is that it distinctly ties together the hierarchical view of business performance measurement with the business process view. [3] Its objectives and related measures focus on vision, business unit (market, financial), business operation system (customer satisfaction, flexibility, productivity), department and work centre (quality, delivery, cycle time, waste), and operations.





NOTE Source: Reference [19].

Figure A.3 — Performance pyramid

## A.4 Balanced scorecard

NOTE See Reference [13].

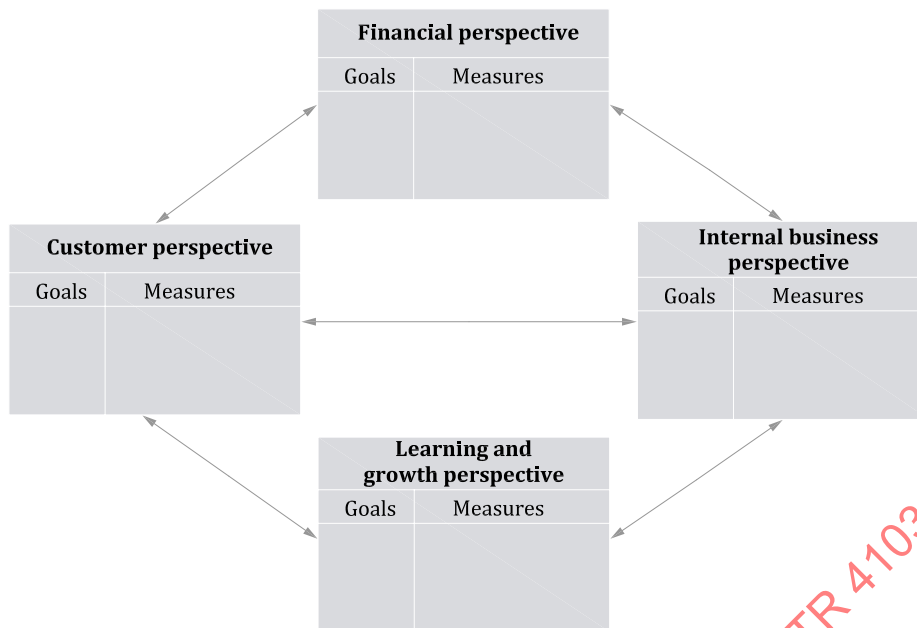
One of the most well-known performance measurement frameworks is the BSC developed by Kaplan and Norton<sup>[13]</sup>, see Figure A.4. The basic notion of the BSC is that organizational performance is evaluated from more than simply a financial perspective. It helps to translate the strategy into actions from the following four perspectives:

- Financial: Traditional measures of profitability, revenue and sales growth.
- Customer: Customer retention, customer satisfaction and market research.
- Internal business processes: Processes to meet or exceed customer expectations.
- Learning and growth: How the organization and its people grow and meet new challenges.

In the BSC, the balanced set of four perspectives of performance measures involves the following four fundamental questions:

- How do we look to our shareholders? (financial perspective)
- How do our customers see us? (customer perspective)
- What must we excel at? (internal business processes perspective)
- How can we continue to improve and create value? (learning and growth perspective)





NOTE Source: Reference [13].

**Figure A.4 — Balanced scorecard**

The introduction of new performance measures such as shareholder value, economic profit, customer satisfaction, internal operations performance, intellectual capital and intangible assets reflected a more holistic and integrated approach, also taking into account benefits.<sup>[3]</sup>

The main changes from traditional performance measurement systems towards modern innovative performance measurement systems<sup>[23]</sup> are given in Table A.1.

**Table A.1 — Trends in development of performance measurement systems**

| Traditional performance measurement systems | Innovative performance measurement systems |
|---------------------------------------------|--------------------------------------------|
| Based on cost/efficiency                    | Value-based                                |
| Trade-off between performances              | Performance compatibility                  |
| Profit-oriented                             | Customer-oriented                          |
| Short-term orientation                      | Long-term orientation                      |
| Prevalence of individual measures           | Prevalence of team measures                |
| Prevalence of functional measures           | Prevalence of transversal measures         |
| Comparison with standard                    | Improvement monitoring                     |
| Aim at evaluating                           | Aim at evaluating and involving            |

Performance measurement has changed from simply focusing on the effectiveness and efficiency of an organization to a wider set of criteria.

The same trend becomes important in the fields of FM and CREM.<sup>[12]</sup> Organizations try to manage the performance of real estate and real-estate-related facilities and services to support organizational performance and to create a positive added value or to avoid a negative influence on their goals. There is a need to identify FM- and CREM-related KPIs to focus on benefits (performance) in relation to costs, such as the resources spent on real estate and other facilities.

## A.5 Establishment of KPIs to measure performance

NOTE See Reference [16].

Performance measurement through the establishment of KPIs helps the senior management team to make important strategic decisions. It is essential for organizations to describe their performance requirements in terms of factors that are critical to their successful operation.

KPIs represent a set of measures focusing on those aspects of organizational performance that are the most critical for the current and future success of the organization. KPIs are used both as indicators of individual performance and to inform business decisions. Six KPIs of facilities are:

- no loss of business due to building services or systems failure;
- operating costs controlled and within budget;
- proactive reporting and planning carried out;
- low-cost, functional buildings;
- corporate image promoted;
- reduced occupancy cost versus revenue.

## A.6 FM value map

NOTE See Reference [12].

In this FM value map, the resources of FM are divided into facilities, technology, FM staff and management. The resources lead to results divided into space, service, knowledge and relations, which leads to impacts divided into satisfaction, cost, productivity and risk reduction, which all are related to the core business and surroundings. These impacts are of benefit for the stakeholders at the top divided into owners, customers, FM staff and society.

A categorization was used to analyse the interdependencies between categories. Some categories had the character of being effects while others had the character of being causes or resources. The following three levels of details were developed, see [Figure A.5](#):

- The top level (level 1) did not include any of the specific parameters but only the overall structure of FM divided into resources, processes and provisions, with impacts on the core business and surroundings providing benefits to one or more of the four target groups: owners, staff, customers, and society.
- The second level (level 2) included the parameters for FM resources, processes and provisions as well as the impact parameters for the core business and surroundings.
- The third level (level 3) gives examples of the content of each parameter and for each type of stakeholder.

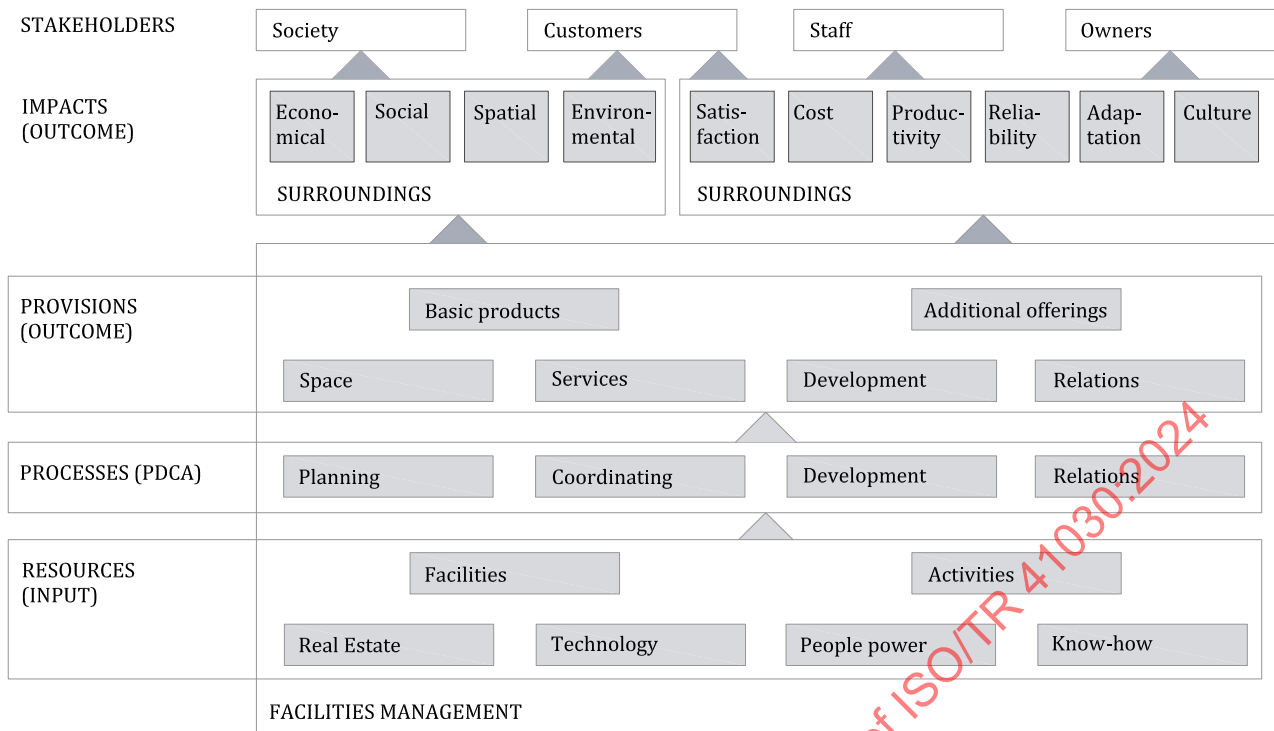


Figure A.5 — FM value map, generic version, level 1 and level 2

The FM value map provides a very broad and qualitative framework. The value map does not reflect the distinction between strategic, tactical and operational levels of FM. It does not take the core business strategy as a starting point but reflects a resource-based view rather than a market- and customer-related view.

This distinguished characterization of various value dimensions helps to differentiate between several FM-specific dimensions of benefits and costs, e.g. core benefits, add-on benefits, acquisition costs, operations costs, purchase price.

The value map is also fairly static. It can be used to create an overview and basic understanding, for analysing and illustrating specific cases, and as a framework for developing strategies for adding value, but it is not action oriented.

The value of FM can be very different, depending on market settings, type of relationship, industry sector, specific situation, etc.

## A.7 Conceptual framework of de Vries

NOTE See Reference [26].

De Vries et al. [9] proposed a theoretical model of the impact of real estate interventions on organizational performance and tried to trace quantitative values of the effects. The added value of CREM was defined as the contribution of real estate interventions to productivity, profitability and competitive advantage, see Figure A.6. This model shows facilities as one of the five resources of an organization. Its added value can be measured by a number of performance indicators, taking into account that “performance is in the eye of the stakeholder” and is affected by the external and internal context.

Research demonstrated both positive and negative effects of real estate interventions on the organizational performance of academies of applied sciences, caused by real estate influences on production, customer satisfaction, cost reduction etc. However, it was also concluded that cause-effect relationships were hard to prove, due to simultaneous changes in organizational characteristics and the external context.

CONTEXT: Legislation, society, market, demography

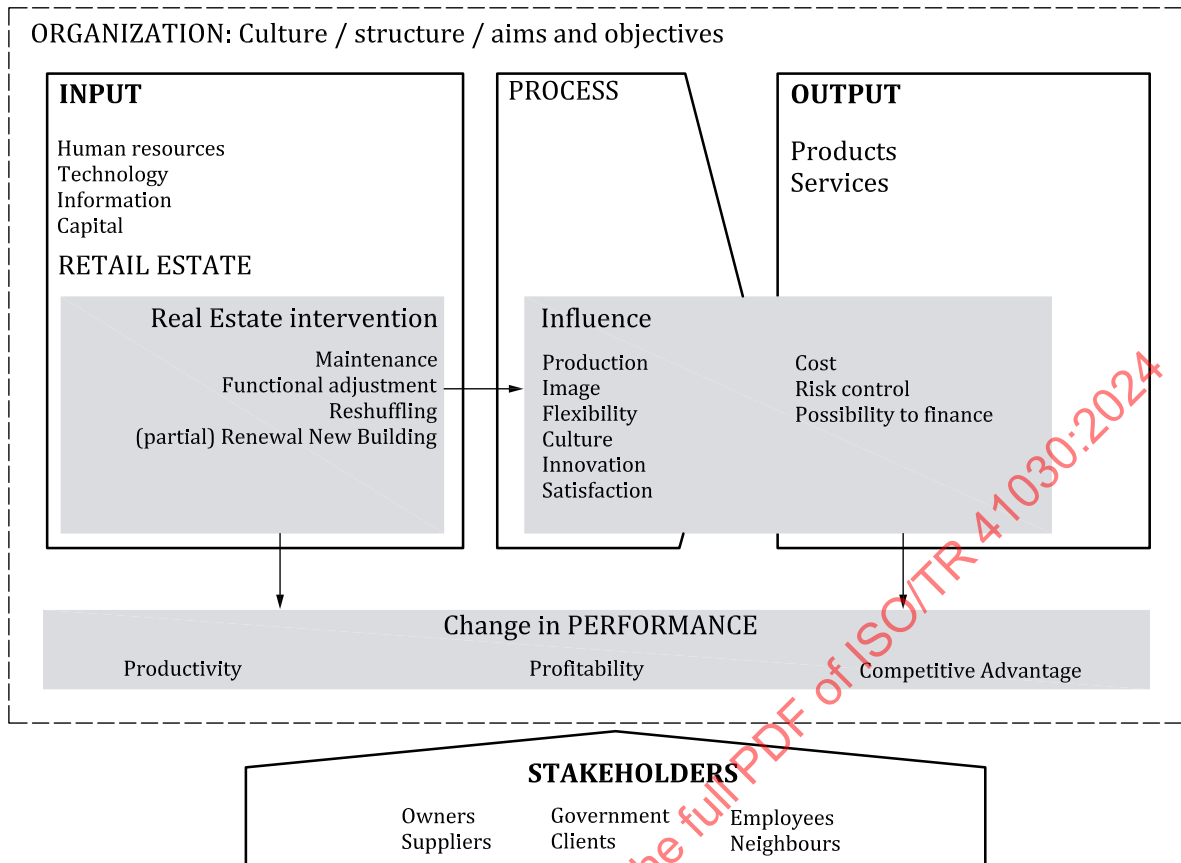


Figure A.6 — Conceptual framework

## A.8 Indicators relating to building and facilities in four categories

NOTE See Reference [16].

Based on a literature search, Lavy et al. [16] presented 35 major indicators relating to building and facilities, classified in the following four categories, see Table A.1:

- Financial indicators, which relate to costs and expenditures associated with operation and maintenance, energy, building functions, real estate, plant, etc.
- Physical indicators, which are associated with the physical shape and conditions of the facility, buildings, systems and components.
- Functional indicators, which are related to the way the facility and the building function and which express building appropriateness through space adequacy, parking, etc.
- Survey-based indicators, which are based solely on respondents' opinion to surveys that are primarily qualitative in nature.