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Facility Management - Part 7: Performance Benchmarking

Facility Management - Teil 7: Leistungs-Benchmarking

Facilities management - Partie 7: Étalonnage comparatif de performance

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Facility Management - Part 7: Performance Benchmarking

Facility Management - Teil 7: Leistungs-Benchmarking

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Foreword

This document (prEN 15221-7:2011) has been prepared by Technical Committee CEN/TC 348 "Facility Management", the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

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Introduction

Effective delivery of Facility Management support is a critical component in the working of most organisations. It impacts on organisations' own ability to deliver consistent products and services, supports the core business, and can be a component in achieving competitive advantage. However, effectiveness and efficiency in Facility Management has been notoriously difficult to assess because there has been no common methodology and no standard data collection methods. This standard on Performance Benchmarking, along with others in the EN 15221 suite, is a major step forwards in addressing those gaps.

Benchmarking is part of a process which aims to establish the scope for, and benefits of, potential improvements in an organisation through systematic comparison of its performance with that of one or more other organisations. It is a tool in common use across industries worldwide, but has often been misused and misunderstood within Facility Management.

Benchmarking is often associated with the term "best practice". Comparison with the best company or process within an industry is one of the most intelligent ways to improve one's own performance. Best practice can refer to adequate outcomes at the lowest cost, but this is not always the case. It can also refer to the best possible outcome, or the speediest process, or the one with the least environmental impact. What is common to all these is that no judgement on where one's organisation stands can be made without a valid comparison.

Financial comparisons can be an appropriate basis for a benchmarking process, as quantitative data are often more easy to reach and more easy to relate to than qualitative data. Historically most benchmarking in Facility Management has focused on this kind of "hard" data. However, what one can learn from quantitative data may be limited. This standard therefore tries to establish Performance Benchmarking as a data comparison method to support development and learning processes through some types of qualitative knowledge sharing.

This standard seeks to simplify a notoriously complex process. Until now, benchmarking projects have often been confused, over-ambitious, and lacking in effective data analysis. By establishing a coherent and comprehensive process for benchmarking, along with useable and logical comparators, and by clarifying the many pitfalls in the comparison process, this standard provides practising facility managers with a range of key indicators to identify areas in which there may be a need to improve the performance of their own team, their supply chain, or the entire organisation in which they work. It is this coherent approach within the EN15221 standards which supports the basis of the Benchmarking standard.

It is hoped that this platform will, in a short time, lead to a demand for more commonality in reporting of a range of comparators – financial, quality, and so on – which will make the work of facility managers more easy, and more easily understood by the organisation for which they work.

1 Scope

This Standard is applicable to Facility Management and covers benchmarking for existing owned or leased buildings as well as buildings in state of planning or development.

This standard presents a constructive framework for benchmarking and contains clear terms and definitions as well as methods for benchmarking facility management products and services related to buildings and/or parts of buildings, independent of their function.

This standard establishes a common basis for benchmarking facility management costs, floor areas and environmental impacts as well as service quality, satisfaction and productivity.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 15221-1, Facility Management – Terms and definitions

EN 15221-2, Facility Management – Guidance on how to prepare Facility Management agreements

EN 15221-3, Facility Management – Guidance on quality in Facility Management

EN 15221-4, Facility Management – Taxonomy, Classification and Structures in Facility Management

EN 15221-5, Facility Management – Guidance on Facility Management processes

EN 15221-6, Facility Management – Area and Space Measurement in Facility Management

ISO 32185, Assessments and benchmarking of terminological resources – General concepts, principles and requirements

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15521-1 and the following apply.

3.1 benchmarking
the process of comparing strategies, processes, performances and/or other entities against practices of the same nature, under the same circumstances and with similar measures

NOTE 1 Typically the purpose of benchmarking is to improve strategies, processes, performances and/or other entities, but may also be used for different purposes such as accountability.

NOTE 2 Measures may be quantitative or qualitative; comparators may be internal, competitors or cross-sector; domain may be local, national or international; frequency may be one-off, periodic or continuous.

NOTE 3 It should be recognised that it may also be beneficial to compare entities to practices of a different nature, under different circumstances and/or with dissimilar measures.

3.2 entity
any concrete or abstract thing that exists, did exist, or might exist, including associations among these things

3.3 benchmark
a reference point or metric against which a strategy, process, performance and/or other entity can be measured

3.4 reference point
a measure of extremes, central tendency or dispersion

3.5 measure of extremes
a measure that provides an indication of the extreme score in a data set

NOTE Typical measures of extremes are: minimum – the smallest number of the sample, and maximum – the largest number of the sample.

3.6 measure of central tendency
a measure that provides an indication of the typical score in a data set

NOTE Typical measures of central tendency are: mean – the average of all scores in the sample (calculated from scores), median – the score that lies in the middle of the sample (calculated from ranks), and mode – the most frequently occurring score (calculated from frequencies).

3.7 measure of dispersion
a measure that provides an indication of the typical bandwidths in a data set

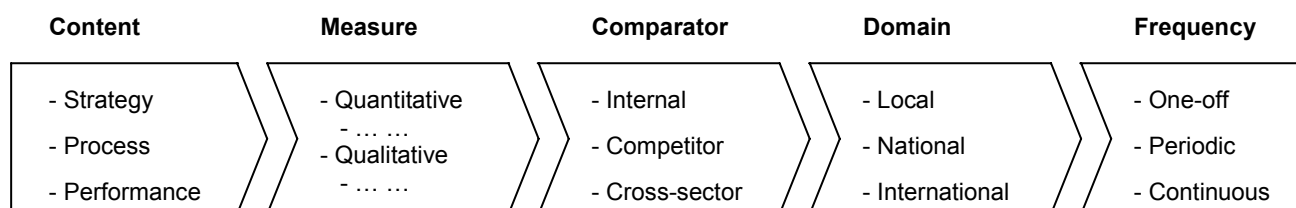
NOTE A typical measures of dispersion is: quartiles – any of the three values which divide the sorted data set into four equal parts, so that each part represents one fourth of the sampled population: first quartile (or lower quartile) cuts off lowest 25% of data (25th percentile), second quartile (or median) cuts data in half (50th percentile), and third quartile (or upper quartile) cuts off highest 25% of data (75th percentile).

3.8 outlier
an extreme score in a data set, having a disproportionate influence on determining reference points

4 Benchmarking forms

There are multiple aspects which affect the scope of a benchmarking exercise and impact on the selection of data. Figure 1 shows a categorisation of the major aspects classified into five main forms. The purpose of this classification is to assist facility managers in understanding the different character of each element and therefore to provide a guide to selecting the most appropriate form and methodology for the benchmarking exercise when planning the process set out later in this standard.

Figure 1 — Classification of benchmarking forms



Depending on the purpose of a benchmarking exercise, the scope (i.e. content, measure, comparator, domain and frequency) will differ. A non-exhaustive list of purposes and their typical scope is provided in Table 1.

purpose	content			measure							comparator			domain			frequency		
	strategy	process	performance	finance	space	environment	service quality	satisfaction	productivity	internal	competitor	cross-sector	local	national	international	one-off	periodic	continuous	
Identification of improvement options	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Resource-allocation decisions	✓			✓			✓				✓	✓		✓	✓	✓			
Prioritisation of problem areas		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓			
Verification legal compliance		✓			✓	✓				✓	✓		✓	✓		✓	✓		
Identification of best practices	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓			
Budget review and planning	✓			✓	✓	✓				✓	✓		✓	✓		✓	✓	✓	
Alignment with corporate objectives	✓			✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓		
Verification of process effectiveness		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		
Assessment of property performance			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
- Assessment of cost effectiveness			✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	
- Evaluation of floor space usage			✓		✓					✓	✓		✓	✓		✓	✓		
- Appraisal of environmental impacts			✓			✓				✓	✓		✓	✓		✓	✓		
- Assessment of service quality shortfalls			✓				✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	
- Evaluation of employee satisfaction			✓					✓		✓	✓		✓	✓		✓	✓		
- Appraisal of individual productivity			✓						✓	✓	✓		✓	✓		✓	✓		

Table 1 — Typical benchmarking purposes

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4.1 Benchmarking content

With reference to this document, the content of benchmarking can be: strategic, process, performance, etc.

4.1.1 Strategic benchmarking

Strategic benchmarking involves the assessment of strategic rather than operational matters. Typically focussing on the effectiveness of resource usage in the light of corporate objectives, strategic benchmarking may be used to establish a baseline for organisational review and to inform strategic decision-making. Strategic benchmarking may be used for:

- Alignment with corporate objectives
- Resource allocation decisions
- Budget review and planning

4.1.2 Process benchmarking

Process benchmarking pertains to discrete work processes and/or operating systems. Typically focussing on establishing ways of improving processes within a delivery system, process benchmarking may be used to improve service delivery, reduce corporate risk, streamline processes and systems, etc. Process benchmarking may be used for:

- Verification of process effectiveness
- Verification of legal compliance
- Prioritisation of problem areas

4.1.3 Performance benchmarking

Performance benchmarking concerns quantitative or qualitative inputs (such as costs, square metrage and energy usage) and outputs (such as service quality, employee satisfaction and productivity); or a combination of inputs and outputs which are understood to be correlated. Performance benchmarking may be used for:

- Assessment of property performance:
 - Assessment of cost effectiveness
 - Evaluation of floor space usage
 - Appraisal of environmental impacts
 - Assessment of service quality shortfalls
 - Evaluation of employee satisfaction
 - Appraisal of individual productivity

NOTE With reference to this document, the focus is on performance benchmarking.

4.2 Benchmarking measure

With reference to this document, the measure of benchmarking can be: quantitative, qualitative, a combination, etc.

4.2.1 Quantitative benchmarking

Quantitative benchmarking concerns entities that can be distinguished as tangible. Data is measured objectively and typically captured by common processes through routine systems (such as management information systems). Quantitative benchmarking may be used for:

- Assessment of financial expenditure (such as operating costs or capital costs)
- Assessment of floor space usage (such as space per FTE or linear metres storage)
- Assessment of environmental impacts (such as energy consumption or waste production)

NOTE With reference to this document, a quantitative measure can be: financial, spatial, environmental, etc.

4.2.2 Qualitative benchmarking

Qualitative benchmarking concerns entities that can be distinguished as intangible. Data is described subjectively and typically captured by specific processes through routine systems (such as focus groups and surveys). Qualitative benchmarking may be used for:

- Assessment of service quality (such as reliability or responsiveness)
- Assessment of satisfaction (such as employee or customer satisfaction)
- Assessment of productivity (such as repeat business or employee retention)

NOTE 1 With reference to this document, a qualitative measure can be: perceived quality, employee satisfaction, etc.

NOTE 2 For benchmarking purposes qualitative data is best captured or transformed into quantitative scores (1 = extremely poor / strongly disagree / very unimportant, 2 = poor / disagree / unimportant, 3 = insufficient/ mildly disagree / somewhat unimportant, 4 = fair / neutral / average, 5 = sufficient / mildly agree / somewhat important, 6 = good / agree / important, 7 = extremely good / strongly agree / very important)

4.3 Benchmarking comparator

With reference to this document, the comparator of benchmarking can be: internal, competitor, industry, etc.

4.3.1 Internal benchmarking

Internal benchmarking pertains to comparison against internal practices and is typically used to evaluate performance between business units within an organisation. Internal benchmarking may be used for:

- Identification of best practices
- Assessment of (re)location decisions
- Assessment of supplier performance

4.3.2 Competitor benchmarking

Competitor benchmarking pertains to comparison against competitor practices and is typically used to evaluate performance against peers within a market sector. Competitor benchmarking may be used for:

- Identification of competitive advantages
- Assessment of financial expenditure

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- Assessment of service quality

4.3.3 Cross-sector benchmarking

Cross-sector benchmarking pertains to comparison against industry practices and is typically used to evaluate performance against organisations across borders. Cross-sector benchmarking may be used for:

- Identification of co-operation opportunities
- Assessment of environmental impacts
- Assessment of productivity

4.4 Benchmarking domain

With reference to this document, the domain of benchmarking can be: local, national, international, etc.

4.4.1 Local benchmarking

Local benchmarking involves comparison at a local level and may be used for:

- Assessment of local performance variations
- Verification of cost rates

4.4.2 National benchmarking

National benchmarking involves comparison at a national level and may be used for:

- Assessment of regional performance variations
- Verification of labour rates

4.4.3 International benchmarking

International benchmarking involves comparison at an international level and may be used for:

- Assessment of national performance variations
- Verification of productivity rates

4.5 Benchmarking frequency

With reference to this document, the frequency of benchmarking can be: one-off, periodical, continuous, etc.

4.5.1 One-off benchmarking

One-off benchmarking pertains to exploring a status at one moment in time and is typically a response to a threat or an opportunity. One-off benchmarking may be used for:

- Identification of best practice examples
- Identification of improvement options

4.5.2 Periodic benchmarking

Periodic benchmarking pertains to verifying a status at set intervals and is typically a routine process, often undertaken annually. Periodic benchmarking may be used for:

- Evaluation against performance against others
- Evaluation against previous performance

4.5.3 Continuous benchmarking

Continuous benchmarking pertains to monitoring a status constantly and is typically used to assess trends and developments. Continuous benchmarking may be used for:

- Assessment of market trends and changes
- Assessment of causes and effects

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5 Benchmarking outputs

Because of the complexity of Facility Management and the vast range of activities covered by the discipline, it is impossible to set out all the possible comparisons which might be made. What follows therefore is considered to be an indicative list of some of the key ratio comparators which facility managers may wish to assess in understanding how effective their organisation's service are.

The six types of ratio set out are those against which facility managers and the supply chain may be measured. As there is no absolute baseline figure against which performance can be assessed (no "absolute zero degrees Kelvin"), the standard process assumes that these ratios are compared with appropriate peer buildings, organisations or operations; and that they be maintained and reported over time to allow an understanding of how the benchmarked organisation is progressing.

5.1 Financial benchmarks

In line with EN 15221-4, Facility Management – Part 4; Taxonomy, Classification and Structures in Facility Management, this section provides an overview of key financial benchmarks that may be used in Facility Management. For more details see Annex C – Collecting financial data.

5.1.1 Primary financial ratios

- Facility Management Costs per FTE (currency per annum)
- Facility Management Costs per workstation (currency per annum)
- Facility Management Costs per square metre NFA (currency per annum)

5.1.2 Secondary financial ratios

- Space & Infrastructure Costs per FTE (or workstation or m2 NFA)
- People & Organisation Costs per FTE (or workstation or m2 NFA)

5.1.3 Tertiary financial ratios

- Space Costs per FTE (or workstation or m2 NFA)
- Outdoors Costs per FTE (or workstation or m2 NFA)
- Cleaning Costs per FTE (or workstation or m2 NFA)
- Workplace Costs per FTE (or workstation or m2 NFA)
- Utilities Costs per FTE (or workstation or m2 NFA)
- Primary activities specific Costs per FTE (or workstation or m2 NFA)
- HSSE Costs per FTE (or workstation or m2 NFA)
- Hospitality Costs per FTE (or workstation or m2 NFA)
- ICT Costs per FTE (or workstation or m2 NFA)
- Logistics Costs per FTE (or workstation or m2 NFA)

- Business support Costs per FTE (or workstation or m2 NFA)
- Organisation specific Costs per FTE (or workstation or m2 NFA)

NOTE 1 FTE refers to Full Time Equivalent and can be determined by dividing the total number of hour worked by the number of regular working hours in a working week (e.g. working 32 hours when a regular working week consists of 40 hours equals 0.8 FTE).

NOTE 2 Workstation refers to a physical station - including a desk and a chair - that is specifically designed or suitable for work-related activities, such as reading, writing, telephoning and PC work, which meets legal requirements and that is adequate for permanent use.

NOTE 3 NFA refers to Net Floor Area as defined in EN 15221-6, Facility Management – Area and space measurement in Facility Management.

5.2 Spatial benchmarks

In line with EN 15221-6, Facility Management – Part 6: Area and Space Measurement in Facility Management, this section provides an overview of key spatial benchmarks that may be used in Facility Management. For more details see Annex D – Collecting spatial data.

5.2.1 Primary spatial ratios

- Net Floor Area per FTE (m2 NFA)
- Net Floor Area per person (m2 NFA)
- Net Floor Area per workstation (m2 NFA)

5.2.2 Secondary spatial ratios

- Net Floor Area / Total Level Area (%)
- Internal Area / Total Level Area (%)
- Gross Floor Area / Total Level Area (%)

5.3 Environmental benchmarks

In line with “IPD Environment Code - Measuring the Environmental Performance of Buildings”, this section provides an overview of key environmental benchmarks that may be used in Facility Management. For more details see Annex E – Collecting environmental data.

5.3.1 Primary environmental ratios

- Total CO₂ emissions (tonnes per annum)
- CO₂ emissions per FTE (tonnes per annum)
- CO₂ emissions per m² NFA (tonnes per annum)

5.3.2 Primary energy ratios

- Total energy consumption (kWh per annum)
- Energy consumption per FTE (kWh per annum)