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Facility management's role in sustainability, resilience and adaptability

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Facility Management - Die Rolle von FM bei Nachhaltigkeit und Resilienz (ISO/TR 41019:2024)

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European foreword

This document (CEN ISO/TR 41019:2024) has been prepared by Technical Committee ISO/TC 267 "Facility management" in collaboration with Technical Committee CEN/TC 348 “Facility Management” the secretariat of which is held by SN.

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Foreword

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Introduction

Facility management's (FM) contribution to sustainability, resilience and adaptability of the built environment is evolving fast and is endorsed by an increasing number of countries and organizations. Given this dynamic, FM has a key role to play in taking the bold and transformative steps which are urgently needed to shift the world onto the path for a more sustainable, resilient and adaptive future.

The United Nations (UN) Sustainable Development Goals (SDGs) provide a holistic global framework for addressing poverty, inequality, climate change, environmental degradation, peace and justice. The 17 SDGs were adopted by the UN's 193 member countries in 2015 as a universal call to action to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity. The management of the built environment figures directly and substantially in achieving such aspirations.

This document is intended for use by organizations, regardless of size, maturity or industry, that wish to work towards a more sustainable FM. The SDGs provide a holistic global framework for addressing and reporting on a range of global challenges. Using this framework, this document provides contextual insight into ways that demand organizations, FM professionals and their organizations can contribute to achieving a more productive, sustainable and liveable built environment for all.

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Facility management's role in sustainability, resilience and adaptability

1 Scope

This document provides a broad societal context for facility management (FM) to inspire organizations that wish to:

— establish and improve a sustainable integrated FM system;

— embrace the wide-ranging and positive contribution that FM makes in managing the built environment;

— support the United Nations (UN) Sustainable Development Goals (SDGs).

This document provides a non-exhaustive contextual introduction to relevant concepts, initiatives and terms that are in common use.

It is acknowledged that the practice of FM internationally is dynamic and diverse, hence this document provides generic information based on current experience without setting out any specific requirements, recommendations or permissions. Organizations are encouraged to make their own enquiries as to the extent this document is applicable to their circumstances.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/

3.1
climate
statistical description of weather in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years

Note 1 to entry: The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organization.

Note 2 to entry: The relevant quantities are most often near-surface variables such as temperature, precipitation and wind.

[SOURCE: ISO 14090:2019, 3.4]

3.2
climate change
change in *climate* (3.1) that persists for an extended period, typically decades or longer

Note 1 to entry: Change in climate can be identified (e.g. by using statistical tests) by changes in the mean or the variability of its properties, or both.

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Note 2 to entry: Climate change might be due to natural processes, internal to the climate system, or external forcings such as modulations of the solar cycles, volcanic eruptions, and persistent anthropogenic changes in the composition of the atmosphere or in land use.

[SOURCE: ISO 14090:2019, 3.5, modified — Note 1 to entry has been modified.]

3.3
adaptation
climate change adaptation
process of adjustment to actual or expected *climate* (3.1) and its effects

Note 1 to entry: In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

Note 2 to entry: In some natural systems, human intervention can facilitate adjustment to expected climate and its effects.

[SOURCE: ISO 14090:2019, 3.1, modified — "to climate change" deleted from the preferred term.]

3.4
circular economy
economy that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles

[SOURCE: ISO 41011:2024, 3.6.3]

3.5
CO_2e
carbon dioxide equivalent
CO_2 equivalent
unit for comparing the radiative forcing of a *greenhouse gas* (3.7) to that of carbon dioxide

Note 1 to entry: Mass of a greenhouse gas is converted into CO_2e using *global warming potentials* (ISO 14050:2020, 3.9.2).

[SOURCE: ISO 14050:2020, 3.9.3, modified — CO_2e becomes the preferred term. Note 1 to entry added.]

3.6
demand organization
entity which has a need and the authority to incur costs to have requirements met

Note 1 to entry: This is typically an authorized representative within a functional unit of an organization.

[SOURCE: ISO 41011:2024, 3.3.4]

3.7
greenhouse gas
GHG
gaseous constituent of the atmosphere, both natural and anthropogenic (resulting from or caused by human activity), that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds

Note 1 to entry: For a list of GHGs, refer to the latest Intergovernmental Panel on Climate Change (IPCC) assessment report.

Note 2 to entry: Water vapour and ozone are anthropogenic as well as natural GHGs, but they are not included as recognized GHGs due to difficulties, in most cases, in isolating the human-induced component of global warming attributable to their presence in the atmosphere.

[SOURCE: ISO 41011:2024, 3.10.1]

3.8
greenhouse gas emission
GHG emission
release of a *GHG* (3.7) into the atmosphere

[SOURCE: ISO 14064-1:2018, 3.1.5, modified — Note 1 to entry deleted.]

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3.9
facility management
FM
facilities management
organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business

[SOURCE: ISO 41011:2024, 3.1.1, modified — Note 1 to entry deleted.]

3.10
stakeholder
interested party
person or organization that can affect, be affected by, or perceive itself to be affected by a decision or an activity

[SOURCE: ISO 41011:2024, 3.3.5]

3.11
life cycle
consecutive and interlinked stages related to a product, from raw material acquisition or generation from natural resources to end-of-life treatment

[SOURCE: ISO 14067:2018, 3.1.4.2, modified — Notes to entry deleted.]

3.12
sustainability
state of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generations to meet their own needs

Note 1 to entry: The environmental, social and economic aspects interact, are interdependent and are often referred to as the triple bottom line, also known as the three dimensions of sustainability.

Note 2 to entry: Sustainability is the goal of *sustainable development* (3.13).

[SOURCE: ISO 41011:2024, 3.10.4]

3.13
sustainable development
development that meets the environmental, social and economic needs of the present without compromising the ability of future generations to meet their own needs

Note 1 to entry: Derived from the Brundtland Report[53].

[SOURCE: ISO 41011:2024, 3.7.22]

3.14
social responsibility
responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that:

— contributes to *sustainable development* (3.13) including the health and the welfare of society;

— takes into account the expectations of *stakeholders* (3.10);

— is in compliance with applicable law and consistent with international norms of behaviour;

— is integrated throughout the organization and practised in its relationships.

Note 1 to entry: Activities include products, services and processes.

Note 2 to entry: Relationships refer to an organization's activities within its sphere of influence.

[SOURCE: ISO 41011:2024, 3.3.8, modified — "stakeholders" replaced "interested parties".]

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3.15
resilience
adaptive capacity in a complex and changing environment

[SOURCE: ISO 41011:2024, 3.7.17]

4 Concepts, context and challenges

4.1 United Nations 2030 Agenda

In 2015, the UN set an ambitious 15-year plan to address some of the most pressing issues faced by the world. All 193 Member States adopted "Transforming our world: the 2030 Agenda for Sustainable Development" [82] (also referred to as the "2030 Agenda") as a plan for achieving a better future for all.

The 2030 Agenda has at its heart the 17 SDGs and 169 targets. This agenda is a plan of action laying out a path to end extreme poverty, fight inequality and injustice, and protect our planet.

The SDGs provide an integrated and indivisible balance of the three dimensions of sustainable development: the economic, social and environmental, and are of critical importance to humanity. The SDGs focus areas are: People, Planet, Prosperity, Peace and Partnership.

As an extract from the preamble of the UN General Assembly Resolution 70/1, adopted on 25 September 2015, these are described as:

— "People: We are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment.

— Planet: We are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.

— Prosperity: We are determined to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.

— Peace: We are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

— Partnership: We are determined to mobilise the means required to implement this Agenda through a revitalised Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people."

Fulfilling these ambitions will require unprecedented effort by all sectors of society and business.

The UN "The Sustainable Development Goals Report 2021"[79] sets out that the global community is at a critical moment in its pursuit of the SDGs. Reporting that progress in key areas had either stalled or reversed. In the wake of the global COVID-19 pandemic, the human and economic toll has been unprecedented, and recovery efforts so far have been uneven, inequitable and insufficiently geared towards achieving sustainable development. Decades of development gains have been threatened, further delaying the urgent transition to a greener, more inclusive economies, and throwing progress on the SDGs even further off track. Under the UN Agenda 2030, the world could have been better prepared to face this crisis – with stronger health systems, expanded social protection coverage, the resilience that comes from more equal societies, and a healthier natural environment.

A recommitment by governments, cities, businesses and industries to ensure that the recovery reduces greenhouse gas (GHG) emissions, conserves natural resources, creates better jobs, advances gender equality, and tackles growing poverty and inequalities is a further imperative.

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4.2 CSR and ESG

With its origins in the 1950s, and coined as a term in the 1970s, the corporate social responsibility (CSR) concept is a self-regulating business model that helps an organization to be socially accountable to itself, its stakeholders, and the community. CSR evolved through the 1980s and 1990s, and by 2000 had become an essential strategy for many organizations. Through the practise of CSR, also sometimes referred to as "corporate citizenship", organizations were able to demonstrate accountability for their impacts on society, including economic, social and environmental issues.

By the 2000s, the environmental, social and governance (ESG) framework terminology emerged, taking the holistic view that sustainability extends beyond just environmental issues.

Overall, ESG criteria are considered more specific and actionable than CSR initiatives, leading to a growth in the alignment of ESG data with the UN SDGs since 2015.

In effect, CSR was the precursor to the ESG principles.

CSR provides a qualitative assessment of an organization's effects on its stakeholders and society. ESG measures an organization's impact on the environment and society, using quantitative measurement methods with the aim of delivering long-term stakeholder value. Concurrently, stakeholders and society are requiring that organizations become more transparent about their performance and reporting.

There is evidence of growing acceptance of ESG principles and the positive correlation with total shareholder return (TSR) as a measure of financial performance in terms of capital growth and dividends. There is also a trend toward more active regulation with increasingly granular requirements.

Despite the diversity of approaches to assessing ESG performance (see Clause B.3), the push has been for more accurate and robust disclosure. The implications of technologies, such as digital twins and data analytics, further blur the lines between physical and digital environments, along with challenging traditional concepts of connectivity, service level agreement, responsiveness, supply chains, carbon footprints, etc.

While the challenge remains that ESG has few uniform reporting standards, ESG principles, and making them quantifiable, meaningful and understandable across industries and sectors, are fundamental to achieving sustainability, resilience and adaptability.

4.3 Business and finance context

4.3.1 General

Global challenges and the rapidly changing complexity of society inform the development of mitigation plans. Increasingly FM is being required to be proactive in enhancing the demand organization's sustainability, resilience and adaptability capability to contribute to the quality of life of end users and the wider community.

The SDGs provide an overarching framework that can inform FM's contribution to a more sustainable, resilient and adaptive built environment. The SDGs can be used by organizations to directly inform their strategic goals, which in turn inform FM strategies, policies and operations.

In addition, the use of performance reporting frameworks, such as those observing the ESG principles, can be designed to support improved organizational outcomes in terms of efficiency, productivity, liveability, affordability, resilience and adaptability.

The prominence of the SDGs and ESG principles and influence on the demand organization's FM strategies, policies and operations, as shown in Figure 1, are crucial to achieving sustainable outcomes and addressing contemporary performance metrics.

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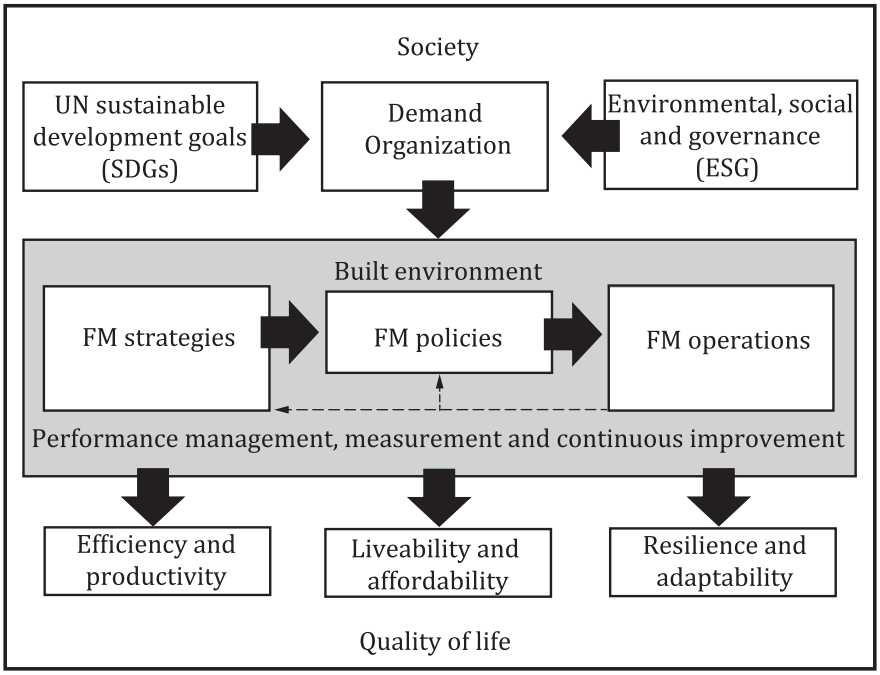

Figure 1 — Graphical representation of the broader societal context for the built environment and FM's contribution to quality of life

At a strategic level, the SDGs influence FM strategy as it relates to the organizational context and its impact on the demand organization's people and places with whom FM interacts in terms of core business, governance, inclusiveness and risk management. The processes that FM uses in services delivery are determined in terms of scope, specifications, sourcing and innovations. Specifically, examples include FM strategies covering:

— governance and context;

— core business activities;

— risk management;

— accessibility, inclusiveness and equalities of occupancy;

— functional requirements;

— scope of services;

— service specifications;

— outputs and targets;

— service levels, delivery, sourcing and innovations.

At the policy level, the SDGs inform by social responsibility, business relationships and financial systems, and the development of health, safety, security, environmental and information plans for the support of the demand organization's assets, workplace and occupancy. Specifically, examples include FM policies covering:

— health, safety and security;

— social factors;

— environmental management;

— information security;

— business continuity and recovery;

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