




SUSTAINABLE FM:

aligning the ISO 41000 series with the UN's SDGs

Stephen Ballesty, In-Touch Advisory




Celebrating WORLD FM Day 2022




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FMA Australia Life Member



Stephen's Sydney based consulting firm **In-Touch Advisory** connects stakeholders with sustainable solutions for the Built Environment across the property-construction-facilities life cycle.

Stephen is an Australian delegate for the ISO international FM standards initiative (ISO 41000 since 2012), ISO/TC-267's global liaison to ISO/TC-251 (ISO 55000 asset management since 2014).

Also he is currently a member of IFMA Standards Committee and the Regional Director - Australasia for IFMA's FM Consultant Council.

Stephen is a former member of the IFMA' Global Board of Directors and Past Chairman of the IFMA Research Committee, IFMA Foundation and FMA Australia.

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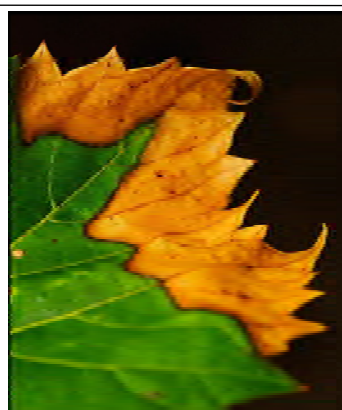
Acknowledgements: AIQS ~ FMA ~ HBR ~ ICMS ~ IEA ~ IFMA ~ IPCC ~ ISO ~ RICS ~ SASB ~ UN ~ WRI & others



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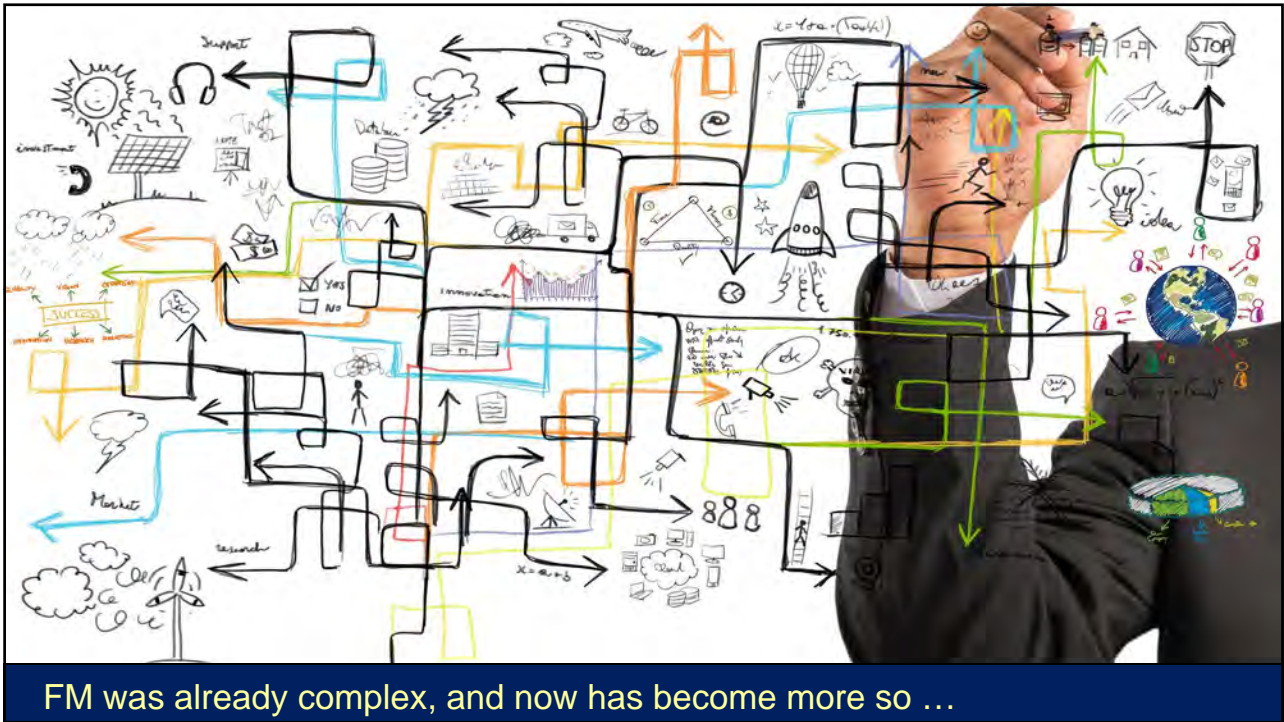
- ▶ Today's challenges ... and context
- ▶ What is Sustainable FM?
- ▶ Drivers of innovation and change
- ▶ Transformation for Sustainable outcomes
- ▶ Resources and FM standards
- ▶ UN's Sustainable Development Goals (SDGs)
- ▶ ISO/TR 41019 what to expect?
- ▶ FM's role



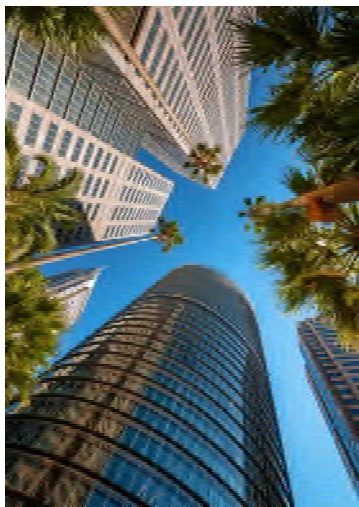
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SUSTAINABLE FM: an origins story



"Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs"

Gro Harlem Brundtland

Norwegian Prime Minister (1981, 1986-89, and 1990-96)
 World Health Organization's Director-General (1998-2003)
 UN Special Envoy on Climate Change (2007-2010)
 Chair / Author, the UN's Our Common Future, also known as the Brundtland Report, published in October 1987



SUSTAINABLE FM: characteristics



Managers	v's	Leaders
Responds to change; <i>reactive</i>		Shapes change; <i>proactive</i>
Works <i>IN</i> the organisation		Works <i>ON</i> the organisation
Cautious about Risk; <i>fate</i>		Careful about Risk; <i>destiny</i>
<i>Controls</i> actions & events		<i>Facilitates</i> actions & events
Supports <i>core business</i>		Supports <i>transformation</i>
Does the <i>things right</i>		Does the <i>right things</i>
<i>Problem Solvers</i>		<i>Solution Seekers</i>
Takers	v's	Makers



TODAY'S SUSTAINABILITY CHALLENGES ...



alarmingly there are many, such as ...

- ▶ Climate change and carbon emissions
- ▶ Increasing demand (urbanization, consumption and waste, etc.)
- ▶ Constrained ecosystem and depleted resources (pressure on land, water, forests, non-renewables, etc.)



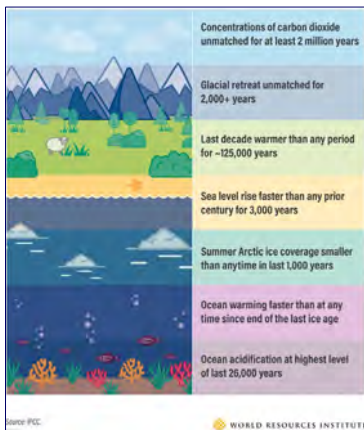
... and of course it's complex, these issues are interrelated and have far-reaching social impacts.

Does FM contribute to our 'Quality of Life' ?





TODAY'S SUSTAINABILITY CHALLENGES ... CLIMATE CHANGE our number 1 challenge?



Source: World Resources Institute based on IPCC - WGI Report, 5 Aug 2021

- ▶ Buildings and construction's 2020 share global energy (36%) and carbon emissions (37%).
Source: [2021 UNEP Global Status Report for Buildings & Construction](#)
- ▶ "The cumulative scientific evidence is unequivocal: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and **rapidly closing window of opportunity to secure a liveable and sustainable future for all**".

UN Certainty Assessment: **very high confidence**

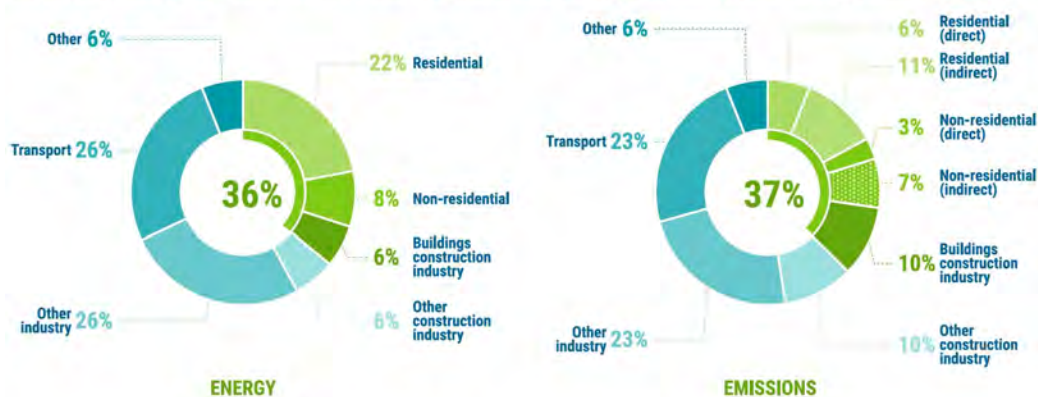
Source: [IPCC - WGII Report: Impacts, Adaptation and Vulnerability, 28 Feb 2022](#)



TODAY'S SUSTAINABILITY CHALLENGES ... CLIMATE CHANGE our number 1 challenge?



Figure 2. Buildings and construction's share of global final energy and energy-related CO₂ emissions, 2020



Note: "Buildings construction industry" is the portion (estimated) of overall industry devoted to manufacturing building construction materials such as steel, cement and glass. Indirect emissions are emissions from power generation for electricity and commercial heat.
Source: IEA 2021a. All rights reserved. Adapted from "Tracking Clean Energy Progress"






STANDARDS MATTER in the pursuit of ...

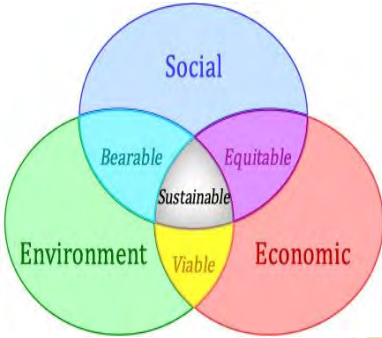
- a common language
- consistent reporting
- greater transparency
- data capture, costing, analysis and forecasts
- ability to performance benchmarking
- increased confidence through reduced risk

... of global market transparency, comparability and collaboration on solutions.


SUSTAINABLE FM: defined



- **Sustainability** is the "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"



Source: ISO Guide 82: 2019 Guidelines for addressing sustainability in standards (2nd edition, 2019)



SUSTAINABLE FM: defined



- ▶ **FM** is an *"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 41011:2017, adopted as AS ISO 41011:2019



SUSTAINABLE FM: defined



- ▶ **FM** is an *"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 41011:2017, adopted as AS ISO 41011:2019



SUSTAINABLE FM: an evolution


The diagram illustrates the evolution of Sustainable FM through three stages: 'then', 'now', and 'beyond'. Each stage is represented by an illustration and a corresponding label below it. 'then' shows four figures with tools, labeled 'Resources'. 'now' shows figures with colorful puzzle pieces, labeled 'Systems'. 'beyond' shows a figure with a puzzle piece, labeled 'Solutions'. The FMA logo is in the top right, and the In-Touch Advisory logo is in the bottom right.

SUSTAINABLE FM: drivers of innovation

The diagram shows five stages of innovation driven by sustainability, presented as a large arrow pointing right. The stages are: Stage 1: Viewing Compliance as an Opportunity; Stage 2: Making Value Chains Sustainable; Stage 3: Designing Sustainable Products and Services; Stage 4: Developing New Business Models; Stage 5: Creating Next-Gen Practice Platforms. The FMA logo is in the top right, and the In-Touch Advisory logo is in the bottom right.



Source: Harvard Business Review (2009), "Why Sustainability Is Now the Key Driver of Innovation"

SUSTAINABLE FM: drivers of change




- ▶ ESG is a generic term used in capital markets and commonly used by investors to evaluate the behaviour of companies in terms of non-financial performance indicators which include ethical, sustainable and corporate issues.
- ▶ Sustainability Accounting Standards Board (SASB) has developed a set of 77 industry-specific sustainability accounting standards in 2018, including Engineering & Construction and Real Estate.

Source: [SASB Standards](#)






SUSTAINABLE FM: drivers of change



- ▶ United Nations (UN) 2030 Agenda has at its heart the 17 Sustainable Development Goals (SDGs), 169 targets and 247 indicators. 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.

Source: [17 Sustainable Development Goals \(un.org\)](#)

SUSTAINABLE FM: drivers of change

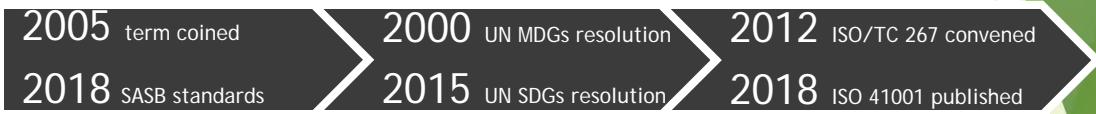


- ▶ ISO 41000 series for FM.
- ▶ FM is an "organizational function which **integrates** people, place and process within the Built Environment with the purpose of improving the quality of life of people and the productivity of the core business".

Source: ISO 41011:2017, adopted as AS ISO 41011:2019



SUSTAINABLE FM: in context



SUSTAINABLE FM: Transforming the World



* Source: Six Transformations to Achieve the SDGs working paper, J.D. Sachs, et al (2019)



SUSTAINABLE FM: Transforming the World



Required Transformations*
1) Education, Gender, and Inequality
2) Health, Wellbeing and Demography
3) Energy Decarbonisation and Sustainable Industry
4) Sustainable Food, Land, Water, and Oceans
5) Sustainable Cities and Communities
6) Digital Revolution for Sustainable Development

* Source: Six Transformations to Achieve the SDGs working paper, J.D. Sachs, et al (2019)

** Note: Ballesty approximations of FM contribution by stars for illustration only.



SUSTAINABLE FM: an evolution

then now beyond

Operational FM **Integrated FM** **Sustainable FM**

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SUSTAINABLE FM: local resources

Multiple publications by:

- ▶ Facility Management Association
- ▶ Infrastructure Sustainability Council
- ▶ Green Building Council
- ▶ Property Council
- ▶ [Australian](#), State and Local governments
- ▶ and others

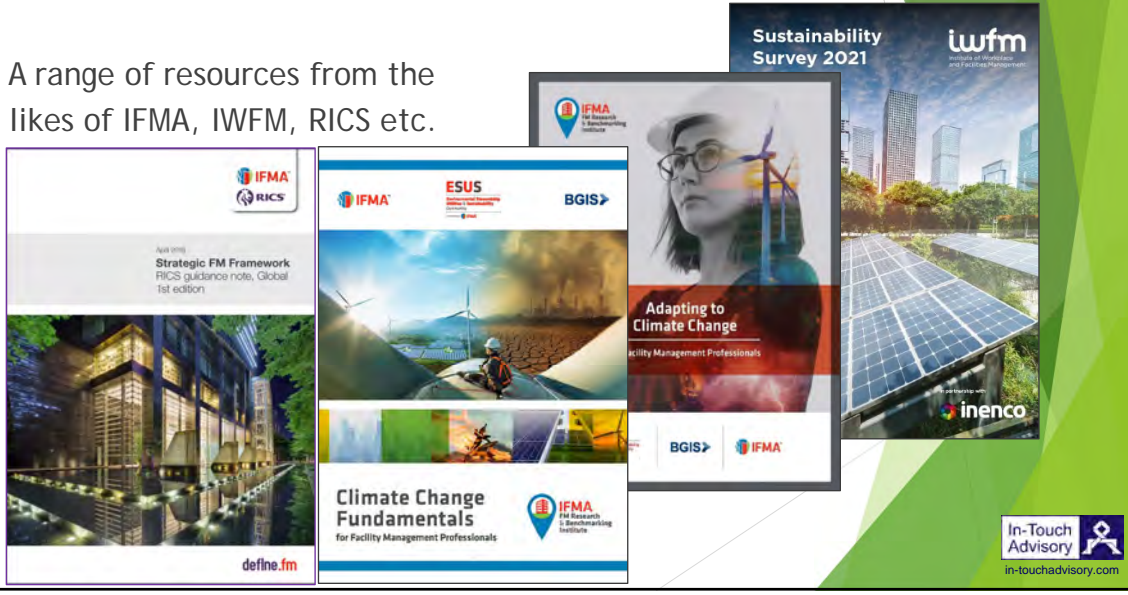
Life Cycle Cost Analysis
information paper released by the [AIQS in Feb. 2022](#)

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SUSTAINABLE FM: international resources



- ▶ A range of resources from the likes of IFMA, IWFM, RICS etc.



SUSTAINABLE FM: ICMS resources



- ▶ ICMS Coalition formed in 2015
International Cost Management Standard (ICMS) *scope covers buildings and civil engineering assets*
- ▶ ICMS#1 (2017) *capital cost focus*
- ▶ ICMS#2 (2019) *plus life cycle costs*
- ▶ ICMS#3 (2021) *plus carbon emissions*

Free: <https://icms-coalition.org/>



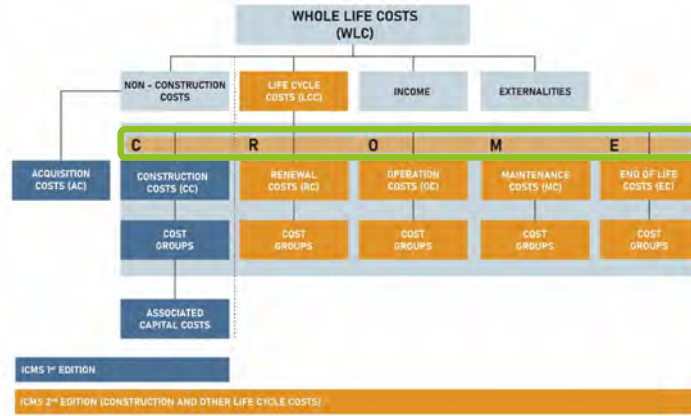
SUSTAINABLE FM: consistent communication



ICMS#1 (2017) versus ICMS#2 (2019) footprint

ICMS#2 (2019) defined C.R.O.M.E. as the new framework:

- ▶ Construction
- ▶ Renewal
- ▶ Operational
- ▶ Maintenance
- ▶ End of Life



Source: ICMS#3 (2021), per AIQS LCC Analysis (2022)



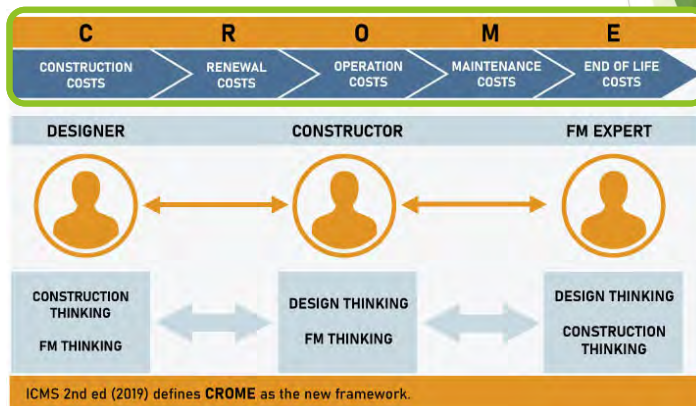
SUSTAINABLE FM: consistent communication



ICMS#2 (2019) defined C.R.O.M.E. framework.

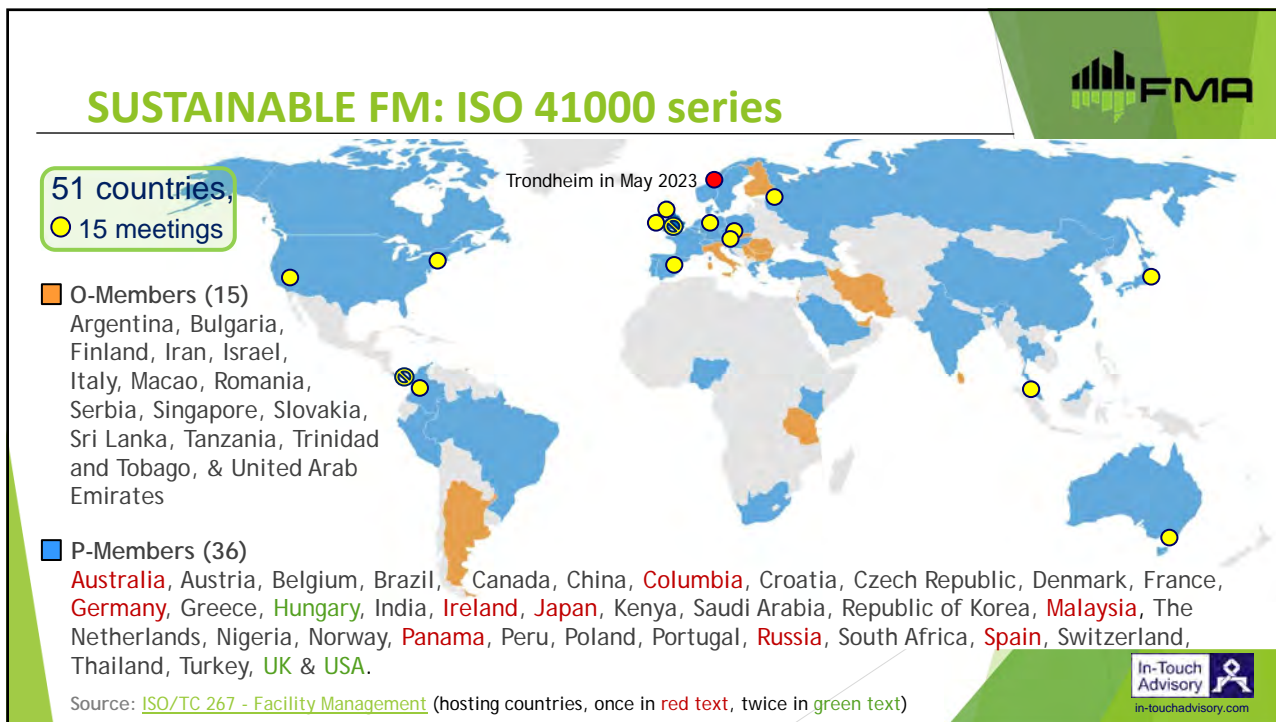
ICMS#3 (2021) framework extended to carbon emissions reporting.

- ▶ Consistent framework for cost and carbon reporting provides us with an invaluable communication tool.



Source: ICMS#3 (2021), per AIQS LCC Analysis (2022)






SUSTAINABLE FM: ISO 41000 series


PUBLISHED ISO STANDARDS *	UNDER DEVELOPMENT (titles subject to revision)
ISO 41011: 2017 FM vocabulary (1 st ed.)	ISO 41011 FM vocabulary (2 nd edition, revision)
ISO/TR 41013: 2017 FM Scope, key concepts and benefits	ISO/TR 41019 The role of FM in sustainability and resilience
ISO 41012: 2017 FM Guidance on strategic sourcing and the development of agreements	ISO 41018 Development of FM policy
ISO 41001: 2018 FM Management systems - Requirements with guidance for use	ISO 41015 FM influencing organizational behaviours for improved facility outcomes
ISO 41014: 2020 Development of FM strategy	ISO 41016 Technology in FM - Scope, key concepts and benefits
	ISO 41017 FM guidance on emergency management of epidemic prevention in the workplace
	ISO 41020 FM performance measurement and improvement

Source: [ISO/TC 267 - Facility Management](#)

* Note: All have been identically adopted as local FM standards - [Facility Management | Standards Australia](#)

SUSTAINABLE FM: ISO 41001 MSS





DEMAND ORGANIZATION

Core Business Strategy Supported by FM

FM Strategy

FM Policy

FM Plans


(FM) ORGANIZATION

Source: Adapted from ISO 41001: 2018


Management Systems Standard (MSS)

1. Scope
2. Normative References
3. Terms & Definitions
4. Context of the Organization
5. Leadership
6. Planning
7. Support
8. Operation
9. Performance Evaluation
10. Improvement


Using the **Plan-Do-Check-Act** (PDCA) approach.




SUSTAINABLE FM: integration



- ▶ **Transformation...** for sustainability, resilience and adaptability.
- ▶ Management Systems Standards, such as:
 - ❑ ISO 9001: 2015 Quality Management
 - ❑ ISO 14001: 2015 Environmental Management
 - ❑ ISO 22301: 2019 Business Continuity Management
 - ❑ ISO 27001: 2013 Information Security Management
 - ❑ ISO 31000: 2018 Risk Management
 - ❑ **ISO 41001: 2018 Facility Management**
 - ❑ ISO 45001: 2018 Occupational Health and Safety Management
 - ❑ ISO 50001: 2011 Energy Management
 - ❑ ISO 55001: 2014 Asset Management





ISO & the SDGs





<https://youtu.be/uM6DBqVVCtU>



ISO 41000 series & the SDGs



- ▶ FM professionals should consider current and future implications of a range of project / facility decisions, and be aware of carbon emissions, the circular economy, and the UN's **17 Sustainable Development Goals (SDGs)**, etc.

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION 
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	

Source: <https://sdgs.un.org/goals>



ISO 41000 series & the SDGs



- ▶ ISO/TC 267 in 2020: formed a 14 member **SDG Task Group** from eight countries in to determine the ISO 41000 series alignments to the UN's SDGs and prepare a plan to enhance FM standards.

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	18 SDG WHEEL

Source: <https://sdgs.un.org/goals>



ISO 41000 series & the SDGs



- ▶ During 2020: the **ISO 41000 & SDGs alignment matrix** was created by the SDG Task Group comparing ISO 41001, 41011, 41012, 41013, 41015 (draft) and 41016 (draft), with the 17 SDGs ... 119 potential intersections.

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	18 SDG WHEEL




Source: <https://sdgs.un.org/goals> & [ISO/TC 267 - Facility Management](#)




ISO 41000 series & the SDGs

► During 2020: the SDG Task Group had identified eight (8) SDG alignments for **ISO 41001: 2018 Management Systems Standard (MSS)**. This applies equally to the identically adopted Australian Standard AS ISO 41001: 2019.

Source: <https://sdgs.un.org/goals> & ISO/TC 267 - Facility Management

ISO 41000 series & the SDGs

► By 2021: ISO/TC 267 committed to developing, under Australia's leadership, **ISO/TR 41019 "The role of FM in sustainability and resilience"** to validate and expand the alignments of the ISO 41000 series with the UN's SDGs.


The balance of the ISO 41000 series contributed a further 45 alignments with SDGs.

Since 2021 the scope of the ISO 41000 series has increased with five (5) revised or new publications underway.

Source: <https://sdgs.un.org/goals> & ISO/TC 267 - Facility Management







ISO 41000 series & the SDGs

IMPACT AT A GLANCE

ISO contributes to all of the SDGs. Here you can see the number of ISO standards that are directly applicable to each Goal.

30,321 individual ISO standards alignments with single SDGs, including 53 from ISO 41000 series.

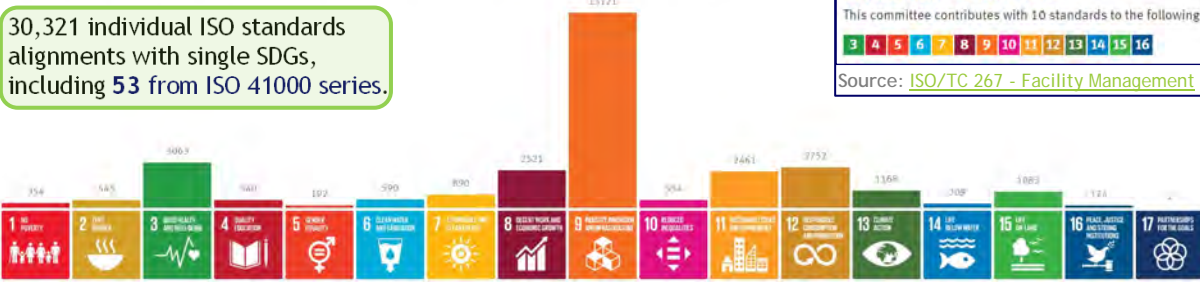
ISO 41000 series FM standards
14/17 SDGs

SUSTAINABLE DEVELOPMENT GOALS

This committee contributes with 10 standards to the following

3 4 5 6 7 8 9 10 11 12 13 14 15 16


Source: [ISO/TC 267 - Facility Management](#)



SDG	Number of ISO Standards
1	354
2	545
3	3003
4	540
5	102
6	590
7	800
8	2525
9	13121
10	554
11	2461
12	3752
13	1368
14	208
15	1803
16	123
17	0

Source: [ISO - Sustainable Development Goals](#) Information correct as at 31/04/2022.

Coming soon:
ISO/TR 41019 The role of FM in sustainability and resilience




ISO/TR 41019 ... what to expect?

- ▶ Deliverable: an ISO Technical Report in support of FM standards and the SDGs.
- ▶ Status: research and drafting is underway, publication late 2023.
- ▶ Style: concise and practical guidance for FM professionals.
- ▶ **Scope: FM's role in sustainability, resilience, adaptability, etc.**
 - ❑ Introduction, terms and definitions.
 - ❑ Concepts, challenges, climate change, and the SDGs.
 - ❑ Role of ISO standards in supporting the SDGs.
 - ❑ FM and SDGs in context.
 - ❑ FM defined per ISO 41011, and SDGs alignment and impacts by terms.
 - ❑ Role of current and planned ISO 41000 series standards.
 - ❑ Towards Sustainable FM and transforming our world.
 - ❑ Annexures - potential tools, related standards and bibliography.



FM must lead and ACT now and for our future!



SUSTAINABLE FM: ... your role




- ▶ Long-term quality thinking: embrace sustainability and related standards and go 'beyond compliance'.
- ▶ Manage demand: improve planning, and optimize utilization, consumption, recycling and waste, etc.
- ▶ Stewardship of our ecosystem: embracing respect for resources and regard for all life and the future.

... *these are interrelated and have far-reaching social impacts.*

- ▶ Commitment to the SDGs: Government and corporate leadership support for investment in widespread transformative structural change.
- ▶ Re-definition of success: new FM metrics for sustainability, resilience and adaptability with focus on liveability and affordability outcomes.
- ▶ Recognition of quality of life: The needs of current and future generations.

Transformation for sustainable outcomes will NOT be easy ...



ISO/TC 267: celebrating 10-years




- ❑ ISO standards status
<https://www.iso.org/committee/652901.html#meetings>
- ❑ ISO/TC267 website
<https://committee.iso.org/home/tc267>
- ❑ ISO/TC267 frequently asked questions
<https://committee.iso.org/sites/tc267/home/faq.html>
- ❑ TC267 on LinkedIn, and follow #ISO41000
<https://www.linkedin.com/company/iso-tc-267>
- ❑ ISO standards store (ISO 41001 link)
<https://www.iso.org/standard/68021.html>
- ❑ Standards Australia store (AS ISO 41001 link)
<https://www.standards.org.au/41001>
- ❑ Additional questions:
ISO41000@in-touchadvisory.com



SUSTAINABLE FM: then, now and beyond



"The best way to predict future is to create it"

Peter Drucker (1909-2005)

Author, widely regarded as the 'founder of modern management' and the concept of 'management by objectives'



Thank you, and
QUESTIONS

 In-Touch Advisory ... connecting you with solutions for your Built Environment 