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SINGAPORE STANDARD

**Asset management – Guidance on the
management of data assets**

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National Foreword

This Singapore Standard was prepared by the Working Group on Asset Management (also known as the National Mirror Working Group on ISO/TC 251 – Asset Management) set up by the Technical Committee on Organisational Resilience under the purview of the Safety and Quality Standards Committee.

This standard is an identical adoption of ISO 55013:2024, “Asset management – Guidance on the management of data assets” published by the International Organization for Standardization.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

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International Standard

ISO 55013

Asset management — Guidance on the management of data assets

*Gestion d'actifs — Document d'orientation sur la gestion de
données en tant qu'actifs*

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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).

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This document was prepared by Technical Committee ISO/TC 251, *Asset 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.

Introduction

0.1 General

This document gives guidance on the management of data when applying asset management principles or requirements for an asset management system. These principles and requirements are described in ISO 55000 and ISO 55001, respectively. Much of asset management involves decision-making with decisions being reliant on data, particularly for larger and more complex contexts.

This document is intended to facilitate organizations in their management of data in the context of asset management. Effective asset management typically relies on the proper management of data that is pertinent to the assets. Organizations can manage the data as an asset to support their organizational management. This document covers management of data both for supporting the practice of asset management and for handling the data as an asset.

NOTE For the purposes of this document, the term “asset data” is used to refer to data that lists and describes an asset and the term “data asset” is used to refer to collections of asset data that has the properties of an asset.

This document gives guidance for those who:

- a) are identifying the usefulness or fitness for purpose of data for achieving the asset management objectives of the organization, including fulfilling its accountability;
- b) are involved in the establishment, implementation, maintenance, stewardship and improvement of data in the context of asset management;
- c) are involved in the planning, designing, implementation and reviewing of data-based asset management activities along with service providers;
- d) are asset owners, asset managers, information managers, service providers, maintainers, partners, auditors, regulators and investors;
- e) are the internal and external stakeholders, including internal and external personnel, that affect, or are affected (positively or negatively) by, the management of data in the context of asset management.

Management of data can play a critical role in other management systems as well as in an asset management system. Meanwhile, there can be many benefits for organizations to integrate and implement multiple management systems. The achievement of mutual alignments to other management systems requires an approach based on an appropriate cross-functional data exchange and analysis within the organization.

0.2 Context of this document

Against a background of advances in information technology (IT) and diversifying stakeholder demands, how data should be managed in the context of asset management is now seen as a pressing issue for many organizations. As organizations get larger and tend to become more complex, the need for reliable data to support sound decision-making becomes increasingly important. Data acquisition and maintenance is a cost to an organization, while data's potential value is realized when it is used or can be used in the future. The value of data is diminished if it is unreliable, out of date and/or applied incorrectly.

Accordingly, the role of data is changing from being a resource that supports management activities to a non-physical asset from which value is generated by being managed in a coordinated way, just like any other tangible or intangible asset.

Data in the context of asset management has its own characteristics as follows:

- a) like physical assets, asset data follows a sequence of life cycle stages; it can be used many times although the usefulness of data can change as they move along their life cycle;
- b) data can be stolen if not protected appropriately; such data theft does not bring data loss and can therefore not be immediately evident to an organization yet create sustained negative impacts;

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- c) data are easy to copy, transport and even corrupt, but they can be difficult or impossible to reproduce if they are lost, destroyed or corrupted;
- d) data can be used for multiple purposes: the same data can even be used by multiple people at the same time; similarly, many people and processes can be adding or updating data simultaneously;
- e) data can generate new value when combined with other assets;
- f) many uses of data often lead to more data to handle as a result; most organizations manage increasing volumes of data and the relationships between data sets;
- g) data and information are essential in conducting business within an organization and/or between two functions or divisions; most business decisions from the strategic to the operational level generally involve the sharing of data.

While some of these characteristics are similar to other assets, as a whole, they differ in nature from those of other asset types. This requires different approaches to ensure that the management of data supports its objectives in the context of asset management.

Different data sets may be treated as assets which can be critical to the success of the organization. In such situations, organizations may treat such collections of data as data assets. The principles of asset management described in ISO 55000 should be applied to the management of data assets.

0.3 Relationship to ISO 55000 and ISO 55001

ISO 55000 is the foundation for implementing asset management, and therefore the prerequisite to understand this document.

ISO 55001 can be applied by organizations to establish and implement an asset management system. This also applies to an asset management system for data assets. On the other hand, since an organization's asset management system is supported by decision-making based on information or data and its analysis, the process of determining decision-making criteria in an asset management system that meets the requirements of ISO 55001 generally includes the process of managing data. As such, this document facilitates organizations to include data assets within their asset management system.

Asset management — Guidance on the management of data assets

1 Scope

This document gives guidance on managing data to support an organization in meeting its asset management objectives and by extension its organizational objectives.

This document is applicable to any organization, regardless of its type or size.

This document does not provide methodologies to derive or appraise value for data assets.

This document does not provide methodologies to derive financial values for data assets.

This document does not provide direction to organizations on the need (or not) for calculating financial values for asset data.

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 55000, *Asset management — Vocabulary, overview and principles*