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Information technology — Data usage — Guidance for data usage

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Preface

This Standard was prepared by the Standards Australia Committee IT-027, Data Management and Interchange.

The objective of this document is to provide high-level guidance to data users, whether organizations or individuals, to assist in realizing the benefits from data usage while managing risks.

This document is identical with, and has been reproduced from, ISO/IEC 5212:2024, *Information technology — Data usage — Guidance for data usage*.

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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 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 or www.iec.ch/members_experts/refdocs).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

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 and www.iec.ch/national-committees.

Introduction

This document is a high level, principles-based advisory International Standard. It sets out a framework of two elements with the relevant concepts, that can be referenced by organizations, persons and systems that use data. The framework and concepts outlined in this standard should be read in conjunction with the terms and definitions contained in ISO/IEC 5207.

Organizations of all types (including commercial enterprises, government agencies, not-for-profit organizations), sizes and purposes depend on the use of data for day-to-day business operations and are increasingly reliant on data dependent systems such as information technology management, cloud computing, big data, Internet of Things, and artificial intelligence.

There are numerous approaches to data usage, from the most complex which includes highly sensitive personal or confidential information to the least sophisticated data capture systems. Within each data usage scenario, there are different approaches to system integrity, data quality, data user capabilities, and organizational governance.

This document has been prepared using a principles-based approach to encourage organizations to implement data governance to manage risks at each stage of data use, exchange or sharing. This approach supports organizations seeking greater value, knowledge and insights from data while providing a framework for data users. As data are essential to a broad range of roles within an organization, it is imperative that all users have a fundamental understanding of data use to ensure appropriate data management. There is a risk that as the use of data is ubiquitous within organizations, users without appropriate knowledge, context and expertise can inadvertently lead to incorrect data usage.

The sharing or exchange of data can involve multiple individuals, systems or organizations with different processes and procedures. Furthermore, each entity involved in the sharing or exchange of data can have different approaches to security, privacy, data sensitivity or legal considerations. While data usage activities can be managed under different governance arrangements such as a formal contract or data sharing agreement, there are many steps involved in data usage that may not be formalized. This document uses a risk identification and management methodology which can be considered by any data user, be they an individual or organization. There can be an advantage for organizations operating with existing data or technology governance processes, such as those outlined in International Standards related to the governance of information technology, such as ISO/IEC 38500 or ISO/IEC 38505-1.

In addition, organizations can consider the suitability of IT systems, security and storage requirements to support governance capabilities which are addressed within ISO/IEC 27001, ISO/IEC 27701 and ISO/IEC 27040.

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1 Scope

This document provides high-level guidance to data users, whether organizations or individuals, to assist in realizing the benefits from data usage while managing risks.

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/IEC 5207, *Information technology — Data usage — Terminology and use cases*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 5207 apply.

ISO and IEC maintain terminological 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 Abbreviated terms

DLO data level objective

DQO data quality objective

DSA data sharing agreement

IoT internet of things

PII personally identifiable information

SLA service level agreement

SLO service level objective

5 Introduction to data usage

5.1 Overview

5.1.1 The context of data usage

Data usage is any activity involving data. This includes the use, sharing and exchange of data that can occur across entities of all types, sizes, and purposes. The decision-making process around data usage requires the identification of:

— the decision to use, exchange or share data;

— the purpose for data use, exchange or sharing;

— details about the data itself including its characteristics, quality, security, and privacy;