

INTERNATIONAL  
STANDARD

ISO/IEC  
23751

First edition  
2022-02

---

---

**Information technology — Cloud  
computing and distributed platforms  
— Data sharing agreement (DSA)  
framework**

ISO/IEC 23751:2022 - Preview only Copy via ILNAS e-Shop



Reference number  
ISO/IEC 23751:2022(E)

© ISO/IEC 2022



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

Foreword.....	v
Introduction.....	vi
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Symbols and abbreviated terms.....</b>	<b>3</b>
<b>5 Overview of DSAs.....</b>	<b>3</b>
5.1 General.....	3
5.2 Data sharing scenarios.....	4
5.3 Role of the DSA.....	7
5.4 Trust as a key element in data sharing.....	7
5.5 Data access and processing rights.....	7
5.6 Data flow and DSA elements.....	9
5.7 Relationship between data sharing and data portability.....	10
5.8 Data sharing agreements (DSAs) in data lifecycles.....	10
5.9 Data sharing agreements (DSAs) governance.....	10
<b>6 Dataset description.....</b>	<b>11</b>
6.1 General.....	11
6.2 DLOs and DQOs.....	11
6.2.1 Title.....	11
6.2.2 Domain.....	11
6.2.3 Data dictionary.....	11
6.2.4 Format.....	11
6.2.5 Data types.....	11
6.2.6 Data gathering policy.....	11
6.2.7 Revision history.....	11
6.2.8 Pre-existing transforms.....	11
6.2.9 Date of the dataset.....	11
6.2.10 Number of instances.....	12
6.2.11 Summary statistics.....	12
<b>7 Data use obligations and controls.....</b>	<b>12</b>
7.1 General.....	12
7.2 DLOs and DQOs.....	13
7.2.1 Regulatory obligations and controls.....	13
7.2.2 Data holder obligations and controls.....	13
7.2.3 Allowed data uses.....	13
7.2.4 Disallowed data uses.....	14
7.2.5 Allowed uses of the data processing output.....	14
7.2.6 Disallowed uses of the data processing output.....	14
7.2.7 Data user obligations and controls.....	14
<b>8 Data provenance records, quality, and integrity.....</b>	<b>14</b>
8.1 Data provenance records.....	14
8.1.1 General.....	14
8.1.2 DLOs and DQOs.....	14
8.2 Data quality.....	15
8.2.1 General.....	15
8.2.2 DLOs and DQOs.....	15
8.3 Integrity.....	16
8.3.1 General.....	16
8.3.2 DLOs and DQOs — Dataset integrity.....	16
<b>9 Chain of custody and transfer of custody.....</b>	<b>16</b>

9.1	Chain of custody.....	16
9.1.1	General.....	16
9.1.2	DLOs and DQOs.....	16
9.2	Transfer of custody.....	17
9.2.1	General.....	17
9.2.2	DLOs and DQOs.....	17
<b>10</b>	<b>Security and privacy.....</b>	<b>17</b>
10.1	General.....	17
10.2	DLOs and DQOs.....	18
10.2.1	Data holder security requirements.....	18
10.2.2	Data user security requirements.....	18
10.2.3	Data holder privacy requirements.....	18
10.2.4	Data user privacy requirements.....	18
<b>11</b>	<b>Proof of compliance.....</b>	<b>18</b>
11.1	General.....	18
11.2	DLOs and DQOs — Proof of compliance mechanisms.....	19
	<b>Annex A (informative) Governance in ecosystems.....</b>	<b>20</b>
	<b>Annex B (informative) Examples of alternatives to bespoke data sharing agreements (DSAs).....</b>	<b>21</b>
	<b>Annex C (informative) ISO/IEC standards for identity, privacy, chain of custody, forensics and security.....</b>	<b>22</b>
	<b>Bibliography.....</b>	<b>24</b>

ISO/IEC 23751:2022 - Preview only Copy via ILNAS e-Shop

## 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](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

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](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 38, *Cloud computing and distributed platforms*.

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](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

## Introduction

For decades, organizations regarded data and its processing as an expense, necessary to business operations but not an opportunity. What has changed recently is the realization of the value of data and the added value that can potentially be generated by combining datasets. Artificial Intelligence (AI), Big Data, analytics, and cloud computing are making this value proposition much more obvious and the emergence of Internet of Things (IoT) is further driving the economic opportunities around data. Data is the raw material for AI, a key component of the fourth industrial revolution.

Sharing datasets to create combined datasets can have several technical, business, and regulatory challenges. One challenge is the lack of a common language to describe data sharing concepts across the entire data lifecycle and the lack of guidance for developing data sharing agreements (DSAs). This document offers standardized terminology for data sharing along with common building blocks that can be used in the development of DSAs. The aim of the project is to reduce the time and cost required to initiate data sharing projects.

Figure 1 illustrates the structure of this document, representing the Data Sharing Framework as defining both Data Qualitative Objectives (DQOs) and Data Level Objectives (DLOs) over six distinct aspects of data sharing. Each aspect is described in a separate section.

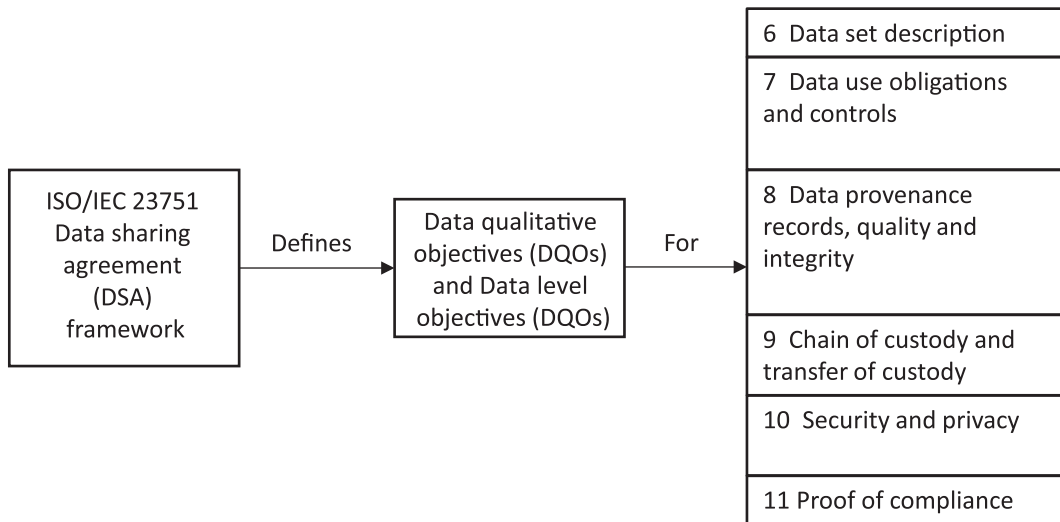


Figure 1 — Structure of this document