



Technical Report

ISO/IEC TR 31700-2

Consumer protection — Privacy by design for consumer goods and services —

Part 2: Use cases

*Protection des consommateurs — Respect de la vie privée assuré
dès la conception des biens de consommation et services aux
consommateurs —*

Partie 2: Cas d'usage

**Second edition
2026-07**



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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.

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 44, *Consumer protection in the field of privacy by design*.

This second edition cancels and replaces the first edition (ISO/TR 31700-2:2023), which has been technically revised.

The main changes are as follows:

- the list of high-level requirements (Table 1) has been updated to align with ISO 31700-1 [\[1\]](#);
- editorial corrections have been made to figures.

A list of all parts in the ISO/IEC 31700 series can be found on the ISO and IEC websites.

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

ISO 31700-1 [\[1\]](#) provides high-level requirements and recommendations for organizations using privacy by design in the development, maintenance and operation of consumer goods and services. These are grounded in a consumer-focused approach, in which consumer privacy rights and preferences are placed at the heart of product development and operation.

Use cases help to identify, clarify and organize system requirements related to a set of goals, by illustrating a series of possible sequences of interactions between stakeholder(s) and system(s) in a particular ecosystem.

The use cases in this document use a template that is based on IEC 62559-2 [\[2\]](#) while enabling a focus on privacy by design challenges.

Although a wide range of use cases exist, this document focuses on three sample use cases to illustrate the implementation of ISO 31700-1 [\[1\]](#): online retailing, a fitness company and smart locks.

Consumer protection — Privacy by design for consumer goods and services —

Part 2: Use cases

1 Scope

This document provides illustrative use cases, with associated analysis, to assist in understanding the requirements of ISO 31700-1 [\[1\]](#).

The intended audience includes engineers and practitioners who are involved in the development, implementation or operation of digitally-enabled consumer goods and services.

2 Normative references

There are no normative references in this document.

Bibliography

- [1] ISO 31700-1, *Consumer protection — Privacy by design for consumer goods and services — Part 1: High-level requirements*
- [2] IEC 62559-2, *Use case methodology - Part 2: Definition of the templates for use cases, actor list and requirements list*
- [3] ISO 31700-1:2023, *Consumer protection — Privacy by design for consumer goods and services — Part 1: High-level requirements*
- [4] ISO/IEC TR 27550, *Information technology — Security techniques — Privacy engineering for system life cycle processes*
- [5] The NIST Privacy Framework, A Tool for Improving Privacy through Enterprise Risk Management. Version 1.0 (January 2020), <https://doi.org/10.6028/NIST.CSWP.01162020>
- [6] Zwingelberg Harald, Hansen Marit, Privacy Protection Goals and Their Implications for eID Systems. 7th PrimeLife International Summer School (PRIMELIFE), Sep 2011, Trento, Italy. pp.245-260, [ff10.1007/978-3-642-31668-5_19](https://doi.org/10.1007/978-3-642-31668-5_19)ff. [ffhal-01517607f](https://doi.org/10.1007/978-3-642-31668-5_19)
- [7] ISO/IEC/IEEE 15288, *Systems and software engineering — System life cycle processes*
- [8] Organization for the advancement of structure information standards (OASIS) Privacy Management Reference Model and Methodology (PMRM), May 2016. <http://docs.oasis-open.org/pmr/pmr/v1.0/PMRM-v1.0.pdf>