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**Information technology — Big data  
reference architecture —**

**Part 2:  
Use cases and derived requirements**

*Technologies de l'information — Architecture de référence des big  
data —*

*Partie 2: Cas pratiques et exigences dérivées*





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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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)).

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)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information Technology*.

A list of all parts in the ISO/IEC 20547-series can be found on the ISO website.

## Introduction

This document is focuses on forming a community of interest from industry, academia, and government, with the goal of developing a consensus list of big data technical considerations across all stakeholders. This included gathering and understanding various examples of use cases from diversified areas (i.e., application domains). To achieve this goal, the following tasks were done:

- gathered input from all stakeholders regarding big data technical considerations;
- analyzed and prioritized a list of challenging use case specific technical considerations that may delay or prevent adoption of big data deployment;
- developed a comprehensive list of generalized big data technical considerations for ISO/IEC 20547-3, *Information technology – Big data reference architecture - Part 3: Reference architecture*; and
- documented the findings in this document.

# Information technology — Big data reference architecture —

## Part 2: Use cases and derived requirements

### 1 Scope

This document provides examples of big data use cases with application domains and technical considerations derived from the contributed use cases.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 20546 *Information technology — Big data — Definition and vocabulary*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 20546 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1 Terms defined elsewhere

None.

#### 3.2 Terms defined in this document

##### 3.2.1 use case

typical application stated at a high level for the purposes of extracting technical considerations or comparing usages across fields

#### 3.3 Abbreviated terms

2D	two-Dimensional
3D	three-Dimensional
6D	six-Dimensional
AOD	Analysis Object Data