
**Information technology — Business
Operational View —**

**Part 1:
Operational aspects of Open-edi for
implementation**

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ed4e9c5feb5f/iso-iec-15944-1-2011](https://standards.iteh.ai/catalog/standards/sist/33e95c12-e10c-4b46-b859-ed4e9c5feb5f/iso-iec-15944-1-2011)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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.

ISO/IEC 15944-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

This second edition cancels and replaces the first edition (ISO/IEC 15944-1:2002), of which it constitutes a minor revision. There are no changes of a technical nature between the first and second editions. Changes which have occurred are of an editorial nature only (e.g. a complete Table of Contents, updated references in the footnotes, etc.), reflecting the further development of the ISO/IEC 15944 series during this period as well as the second and third editions of ISO/IEC 14662, *Information technology — Open-edi reference model*.

ISO/IEC 15944 consists of the following parts, under the general title *Information technology — Business Operational View*:

- *Part 1: Operational aspects of Open-edi for implementation*
- *Part 2: Registration of scenarios and their components as business objects*
- *Part 4: Business transaction scenarios — Accounting and economic ontology*
- *Part 5: Identification and referencing of requirements of jurisdictional domains as sources of external constraints*
- *Part 6: Technical introduction to e-Business modelling* [Technical Report]
- *Part 7: eBusiness vocabulary*
- *Part 8: Identification of privacy protection requirements as external constraints on business transactions*

The following parts are under preparation:

- *Part 3: Open-edi description techniques (OeDTs)*
- *Part 10: Coded domains*

Traceability framework will form the subject of a future Part 9.

0 Introduction

0.1 Purpose and overview

ISO/IEC 14662¹⁾ described the conceptual architecture necessary for carrying out Open-edi. That architecture described the need to have two separate and related views of business activities. The first is the Business Operational View (BOV). The second is the Functional Service View (FSV). Figure 1 from ISO/IEC 14662 illustrates the Open-edi environment (for definitions of the terms in Figure 1, see Clause 3).

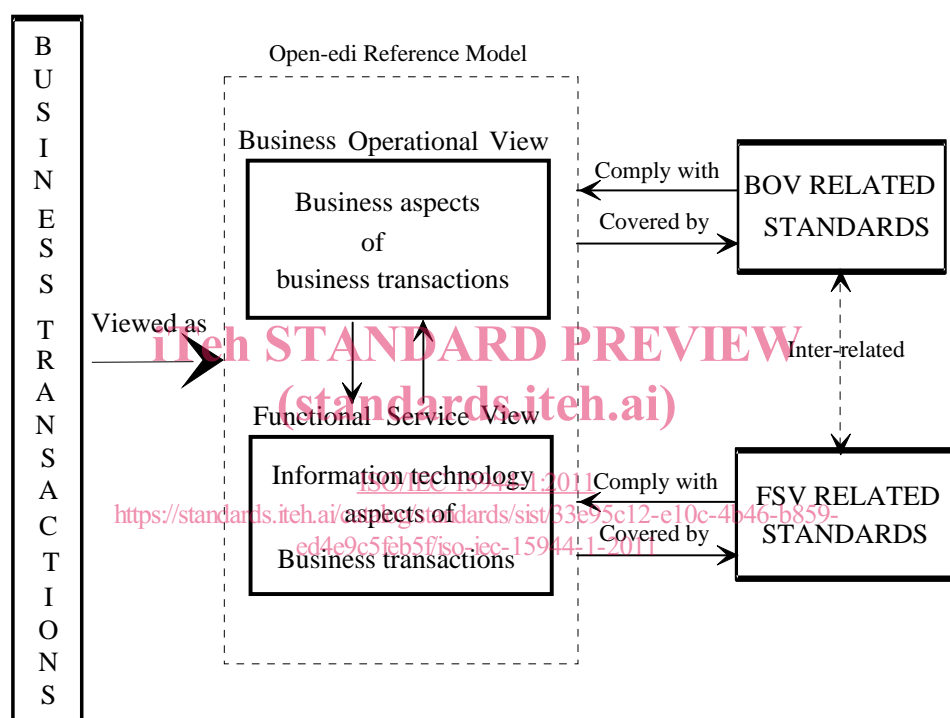


Figure 1 — Open-edi environment

In the BOV, the requirements that the business puts on the exchange of information are described using a modelling technique. ISO/IEC 14662 recognized that there was no single modelling technique identified whilst the International Standard (IS) was in preparation that would satisfy all of the conditions which could be identified as necessary input for the FSV. It was also recognized that business users would need a selection of modelling tools since some tools appear to be better suited to particular types of business specifications and descriptions than others.

To provide for a situation where business users can select from a range of modelling systems, selection criteria identifying the characteristics which any suitable modelling system must be able to support have to be defined. These criteria can be used in two ways. One is to be able to select a suitable modelling system. Another is to identify shortcomings in a modelling system currently in use so that the users can provide the extra information themselves if they prefer to use that modelling system.

1) ISO/IEC 14662:2010(E/F), *Information technology — Open-edi reference model/Technologies de l'information — Modèle de référence EDI-ouvert*. This is an English/French, side-by-side, International Standard.

ISO/IEC 15944-1:2011(E)

The BOV is used to capture the business processes from the business perspective, but there are other things that the BOV would not capture because they are part of the operation of the Open-edi architecture itself. One example is that a process must be able to relate to specific Information Bundles. This relationship has to be precise because any supporting IT system(s) application(s) has to be able to respond to the information structure that it receives as a result of a message from another Open-edi user. Another example is the need to provide for the ability to trigger an action because an event has not occurred (a message has been sent but no response has taken place). Therefore, it is necessary to identify those characteristics which are not expected to be captured in the BOV but are required by IT systems developers in their work on the FSV.

The FSV is used to express the technical methods by which the parts of the business processes used in Open-edi are developed. The FSV has to address the definition, development and lifecycle management of Information Bundles consisting of Semantic Components, together with any rules which are essential to their management and operation.

The FSV is a specification of the way in which the exchange of information is managed. It does not specify the syntax used to encode or represent information that is being exchanged. The selection of a suitable syntax is left to the Electronic Data Interchange (EDI) implementers, just as the selection of the data interchange service on which messages are sent and received is left to networking specialists. Appropriate specialists must ensure that these syntaxes and services are able to satisfy overarching communications requirements such as security services if these are not to be supported through the FSV.

In summary, ISO/IEC 15944 focuses on aspects of “What to do” as opposed to “How to do it”, as shown in Figure 2. Existing standards/tools will be used to the extent possible for the “How to.” ISO/IEC 15944-2 focuses on identification, registration, referencing and re-use of scenarios, their attributes and components).²⁾

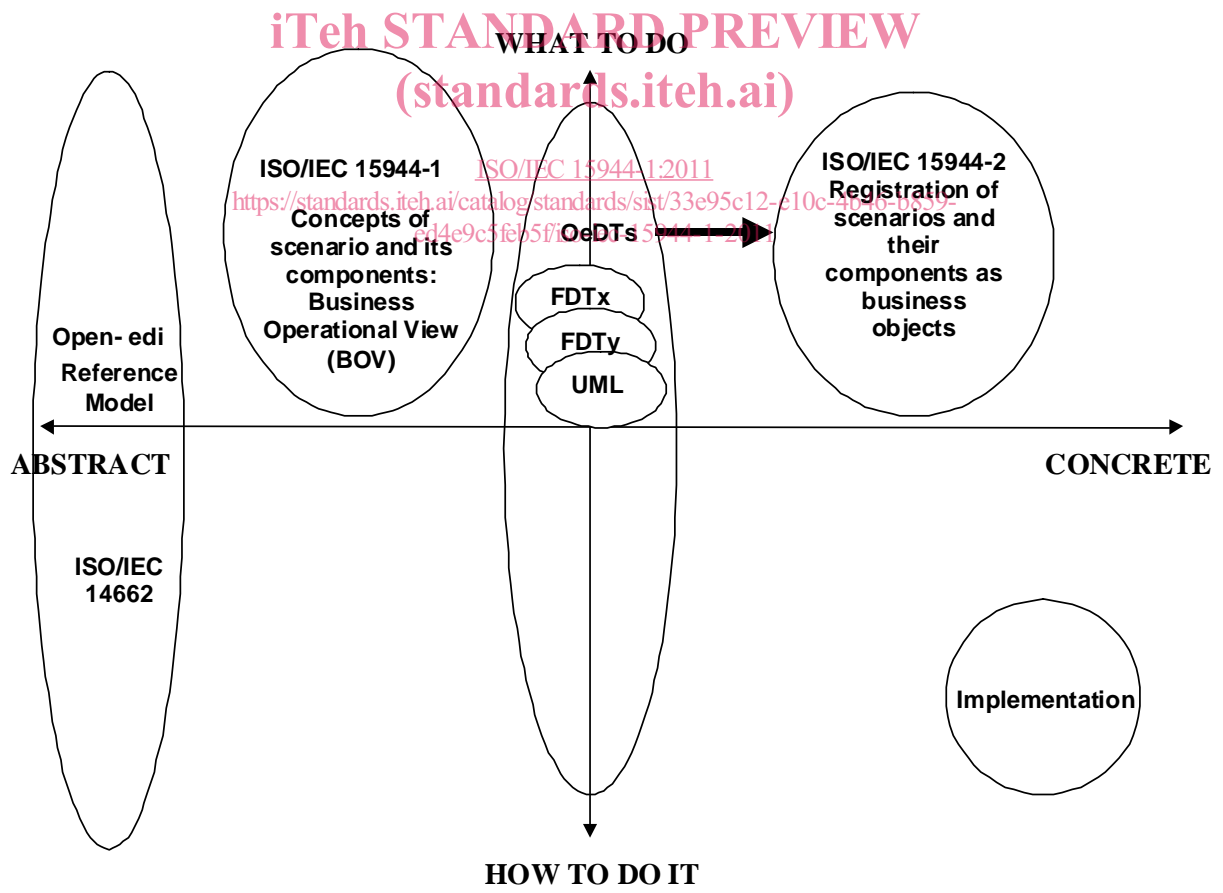


Figure 2 — Aspects of ISO/IEC 15944

2) See 0.6

0.2 Requirements on the business operational view aspects of Open-edi

The evolution of information and communications technologies has created a need and opportunity for different user groups to engage in business relationships using these technologies. This requires automated methods to carry out EDI among Persons.

Standards required for Open-edi cover a large spectrum of areas: commercial aspects, support for national and international laws and regulations, information technology perspectives, telecommunications and interconnections, security services, etc. To these are added public policy requirements of a generic and horizontal nature such as consumer protection and privacy. ISO/IEC 14662:2010, Annex A describes how the Open-edi reference model serves as the basis for coordination of work of different standardization areas and types of standardization for Open-edi.

In addition, the widespread adoption and use of Internet and World Wide Web (WWW)-based technologies by Persons as well as individuals has added urgency to the need to identify and specify the key components of a business transaction. For such specifications to be carried out as electronic business transactions supported by automated methods of the functional support services (FSV) requires a standards-based approach for business semantic descriptive techniques in support of the Business Operational View of Open-edi.

The sources of requirements on the Business Operational View (BOV) aspects which need to be integrated and/or taken into account in the development of business descriptive techniques for Open-edi based business transactions include the following:³⁾

- commercial frameworks and associated requirements;
- legal frameworks and associated requirements;
- public policy requirements, particularly those of a generic nature such as consumer protection and privacy;
- sectorial and cross-sectorial requirements;
- requirements arising from the need to support cultural adaptability requirements. This includes meeting localization and multilingualism requirements, i.e. as may be required to meet requirements of a particular jurisdictional domain or desired for providing a good, service, and/or right in a particular market.⁴⁾ Here, distinguishing between information technology (IT) interfaces and their multiple human interface equivalents is the recommended approach⁵⁾.

Figure 3 provides an integrated view of the business operational requirements.

3) This list of sources of requirements is a summary of Annexes A and B of ISO/IEC 14662:2010:

- Annex A (informative) Standardization areas and types of standardization activities/Annexe A (informative) Domaines de normalisation et types d'activités de normalisation pour l'EDI-ouvert {ISO/IEC 14662 :2010(E/F)}.
- Annex B (informative) Requirements for Open-edi standards/Annexe B (informative) Exigences des normes d'EDI-ouvert {ISO/IEC 14662:2010(E/F)}.

4) See Chapter 6 "*Horizontal aspects*" (pages 22-28) of the "Report of the ISO/IEC JTC1 Business Team on Electronic Commerce" (ISO/IEC JTC1 N5296).

5) For an example, see Annex B.