

---

---

**Information technology —  
Metamodel framework for  
interoperability (MFI) —**

**Part 5:  
Metamodel for process model  
registration**

*Technologies de l'information — Cadre du métamodèle pour  
l'interopérabilité (MFI) —*

*Partie 5: Métamodèle pour l'enregistrement du modèle de procédé*



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, 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  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>2</b>
<b>3 Terms, definitions and abbreviated terms</b> .....	<b>2</b>
3.1 Terms and definitions.....	2
3.2 Abbreviated terms.....	4
<b>4 Conformance</b> .....	<b>5</b>
4.1 General.....	5
4.2 Degree of conformance.....	5
4.2.1 General.....	5
4.2.2 Strictly conforming implementation.....	5
4.2.3 Conforming implementation.....	5
4.3 Implementation Conformance Statement (ICS).....	5
<b>5 Structure of MFI Process model registration</b> .....	<b>6</b>
5.1 Overview of MFI Process model registration.....	6
5.2 Associations between MFI Process model registration and other parts in MFI.....	7
5.3 Metaclasses in MFI Process model registration.....	8
5.3.1 Dependency.....	8
5.3.2 Event.....	9
5.3.3 Join_Dependency.....	9
5.3.4 Join_Dependency_Option.....	11
5.3.5 Process.....	11
5.3.6 Process_Model.....	13
5.3.7 Process_Model_Element.....	14
5.3.8 Process_Modelling_Language.....	16
5.3.9 Resource.....	17
5.3.10 Sequence_Dependency.....	18
5.3.11 Split_Dependency.....	19
5.3.12 Split_Dependency_Option.....	20
<b>Annex A (informative) Examples of MFI Process model registration</b> .....	<b>21</b>
<b>Annex B (informative) List of process modelling languages</b> .....	<b>34</b>
<b>Bibliography</b> .....	<b>35</b>

## 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 19763-5 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information Technology*, Subcommittee SC 32, *Data management and Interchange*.

ISO/IEC 19763 consists of the following parts, under the general title *Information technology — Metamodel framework for interoperability (MFI)*:

- *Part 1: Framework*
- *Part 3: Metamodel for ontology registration*
- *Part 5: Metamodel for process model registration*
- *Part 6: Registry summary*
- *Part 7: Metamodel for service model registration*
- *Part 8: Metamodel for role and goal model registration*
- *Part 9: On demand model selection [Technical Report]*
- *Part 10: Core model and basic mapping*
- *Part 12: Metamodel for information model registration*
- *Part 13: Metamodel for form design registration*

## Introduction

Business process collaboration and integration is growing due to worldwide economic pressures to streamline product development and delivery, and reduce operational costs. Enterprises are merging and forming partnerships to address these issues. Providing for the registration of process models in a standard registry so that they can be discovered, understood and compared for use and integration, will help to promote interoperation within and across enterprises.

Business process modelling languages and notations are widely used to represent processes for different purposes. However, the differences in the syntax and semantics of process models hamper sharing and reusing them among enterprises. Therefore, it is necessary to provide a generic mechanism to support registration of administrative information and selected metadata about process models.

This part of ISO/IEC 19763 provides a metamodel to support the registration of selected metadata and semantics of process models for process discovery and reuse. It offers guidance which highlights the common semantics of process models, helps people clarify the structure of a process and the relationship between processes, and aids in discovering processes, regardless of the notation in which they were originally written. Any information related to the details of process modelling languages or the platform for process execution is not taken into account. In particular, although the registration information of process models can be used to support further discovery of web services in terms of the associations between process and web services, the process representing either the execution order within a web service or the orchestration of a set of web services is out of the scope of this part.

**NOTE** In this part, 'process' is meant to be 'business process', and 'process model' is meant to be 'business process model'.

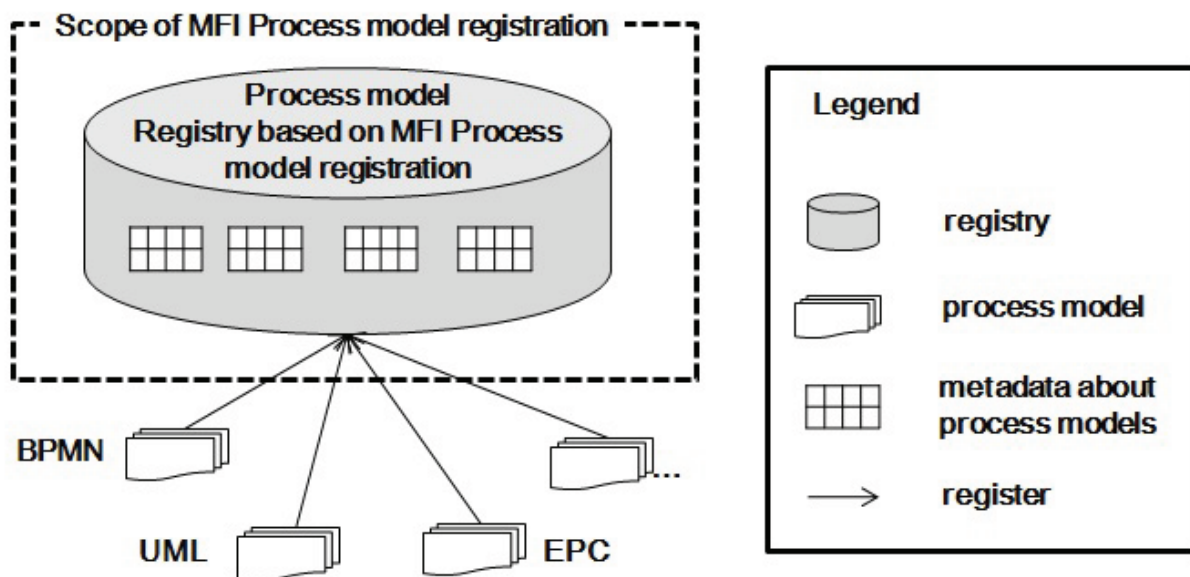
# Information technology — Metamodel framework for interoperability (MFI) —

## Part 5: Metamodel for process model registration

### 1 Scope

The primary purpose of the multipart standard ISO/IEC 19763 is to specify a metamodel framework for interoperability.

This part of ISO/IEC 19763 specifies the metamodel that describes a facility to register administrative information and selected metadata about process models. The metamodel specified in this part of ISO/IEC 19763 is intended to promote semantic discovery and reuse of process models within/across process model repositories. For this purpose, it provides selected metadata and common semantics of process models created with a specific process modelling language, including Business Process Model and Notation (BPMN)<sup>[1]</sup>, UML (Unified Modelling Language) Activity Diagram<sup>[5]</sup> and EPC (Event-driven Process Chain)<sup>[2]</sup>, etc. The metamodel can help discovery of the function and composition of a process, and promote reuse of its components at different levels of granularity. [Figure 1](#) shows the scope of this part of ISO/IEC 19763.



NOTE Not every model needs to exist in a repository before registration.

**Figure 1 — The scope of MFI Process model registration**

The following are outside the scope of this part of ISO/IEC 19763:

- details related to modelling notations or descriptive languages of process models;
- runtime environments or implementation platforms for executing processes.

## 2 Normative references

The following referenced documents are indispensable for the application 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 19763-1, *Information technology — Metamodel framework for interoperability (MFI) — Part 1: Framework*

ISO/IEC 19763-7, *Information technology — Metamodel framework for interoperability (MFI)— Part 7: Metamodel for service model registration*

ISO/IEC 19763-8, *Information technology — Metamodel framework for interoperability (MFI) — Part 8: Metamodel for role and goal model registration*

ISO/IEC 19763-10, *Information technology — Metamodel framework for interoperability (MFI) — Part 10: Core model and basic mapping*