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# Information technology — Artificial intelligence (AI) — AI system impact assessment

*Technologies de l'information — Intelligence artificielle (IA) — Évaluation de l'impact des systèmes d'IA*

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# Foreword

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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 or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 42, *Artificial intelligence.*

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# Introduction

The growing application of systems, products, services and components of such that incorporate some form of artificial intelligence (AI) has led to a growing concern about how AI systems can potentially impact all levels of society. AI brings with it the promise of great benefits: automation of difficult or dangerous jobs, faster and more accurate analysis of large sets of data, advances in healthcare etc. However, there are concerns about reasonably foreseeable negative effects of AI systems, including potentially harmful, unfair or discriminatory outcomes, environmental harm and unwanted reductions in workforce.

The development and use of seemingly benign AI systems can have the potential to significantly impact (both positively and negatively) individuals, groups of individuals and the society as a whole. To foster transparency and trustworthiness of systems using AI technologies, an organization developing and using these technologies can take actions to assure affected interested parties that these impacts have been appropriately considered. AI system impact assessments play an important role in the broader ecosystem of governance, risk and conformity assessment activities, which together can create a system of trust and accountability.

ISO/IEC 38507, ISO/IEC 23894 and ISO/IEC 42001 all form important pieces of this ecosystem, for governance, risk and conformity assessment (via a management system) respectively. Each of these highlights the need for consideration of impacts to individuals and societies. A governing body can understand these impacts to ensure that the development and use of AI systems align to company values and goals. An organization performing risk management activities can understand reasonably foreseeable impacts to individuals and societies to appropriately incorporate into their overall organizational risk assessment. An organization developing or using AI systems can incorporate understanding and documentation about these impacts into its management system to ensure that the AI systems in question meet expectations of relevant interested parties, as well as internal and external requirements.

The act of performing AI system impact assessments and utilizing their documented outcomes are integral to activities at all organizational levels to produce AI systems that are trustworthy and transparent. To this end, this document provides guidance for an organization on how to both implement a process for completing such assessments and promote a common understanding of the components necessary to produce an effective assessment.

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# Information technology — Artificial intelligence (AI) — AI system impact assessment

## 1 Scope

This document provides guidance for organizations performing artificial intelligence (AI) system impact assessments for individuals and societies that can be affected by an AI system and its foreseeable applications. It includes considerations for how and when to perform such assessments and at what stages of the AI system life cycle, as well as guidance for AI system impact assessment documentation.

Additionally, this guidance includes how this AI system impact assessment process can be integrated into an organization's AI risk management and AI management system.

This document is intended for use by organizations developing, providing or using AI systems. This document is applicable to any organization, regardless of size, type and nature.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 22989, *Information technology — Artificial intelligence — Artificial intelligence concepts and terminology*

ISO/IEC 23053, *Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML)*

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