

NIST AI RMF to ISO/IEC FDIS 42001 AI Management system Crosswalk

AI RMF		ISO/IEC FDIS 42001	
Govern 1.1	Legal and regulatory requirements involving AI are understood, managed, and documented.	4.1	Understanding the organization and its context
		6.2	AI objectives and planning to achieve them
		B.2.2	AI policy
		B.2.4	Review of the AI policy
Govern 1.2	The characteristics of trustworthy AI are integrated into organizational policies, processes, procedures, and practices.	B.9.3	Objectives for responsible use of AI system
		B.6.1.2	Objectives for responsible development of AI system
		B.6.1.3	Processes for responsible design and development of AI systems
		B.10.3	Suppliers
		B.2.2	AI policy
		4.4	AI management system
		5.2	AI Policy
Govern 1.3	Processes, procedures, and practices are in place to determine the needed level of risk management activities based on the organization's risk tolerance.	6.1.2	AI risk assessment
		6.1.1	General
		6.1.3	AI risk treatment
Govern 1.4	The risk management process and its outcomes are established through transparent policies, procedures, and other controls based on organizational risk priorities.	6.1.2	AI risk assessment
		6.1.3	AI risk treatment
		8.3	AI risk treatment
Govern 1.5	Ongoing monitoring and periodic review of the risk management process and its outcomes are planned and organizational roles and responsibilities clearly defined, including determining the frequency of periodic review.	8.2	AI risk assessment
		8.3	AI risk treatment
		8.4	AI system impact assessment

Govern 1.6	Mechanisms are in place to inventory AI systems and are resourced according to organizational risk priorities.	B.4.5	System and computing resources
		B.4.3	Data resources
		B.4.4	Tooling resources
		B.4.6	Human resources
		B.4.2	Resource documentation
Govern 1.7	Processes and procedures are in place for decommissioning and phasing out AI systems safely and in a manner that does not increase risks or decrease the organization's trustworthiness.	B.6.2.6	AI system operation and monitoring
Govern 2.1	Roles and responsibilities and lines of communication related to mapping, measuring, and managing AI risks are documented and are clear to individuals and teams throughout the organization.	9.1	Monitoring, measurement, analysis and evaluation
		5.3	Roles, responsibilities and authorities
		7.1	Resources
		7.2	Competence
		7.3	Awareness
		7.4	Communication
		B.3.2	AI roles and responsibilities
Govern 2.2	The organization's personnel and partners receive AI risk management training to enable them to perform their duties and responsibilities consistent with related policies, procedures, and agreements.	7.2	Competence
Govern 2.3	Executive leadership of the organization takes responsibility for decisions about risks associated with AI system development and deployment.	5.1	Leadership and commitment
		9.3.1	General
		9.3.2	Management review inputs
		9.3.3	Management review results
		5.2	AI Policy

Govern 3.1	Decision-making related to mapping, measuring, and managing AI risks throughout the lifecycle is informed by a diverse team (e.g., diversity of demographics, disciplines, experience, expertise, and backgrounds).	B.4.6	Human resources
		B.5.4	Assessing AI system impact on individuals and groups of individuals
Govern 3.2	Policies and procedures are in place to define and differentiate roles and responsibilities for human-AI configurations and oversight of AI systems.	B.6.1.3	Processes for responsible design and development of AI systems
		B.9.3	Objectives for responsible use of AI system
		B.4.6	Human resources
		B.5.3	Documentation of AI system impact assessments
		7.2	Competence
		B.3.2	Management review inputs
Govern 4.1	Organizational policies and practices are in place to foster a critical thinking and safety-first mindset in the design, development, deployment, and uses of AI systems to minimize potential negative impacts.	B.5.2	AI system impact assessment process
		B.6.1.2	Objectives for responsible development of AI system
		B.6.1.3	Processes for responsible design and development of AI systems
		B.9.2	Processes for responsible use of AI
		B.9.3	Objectives for responsible use of AI system
		B.10.3	Suppliers
		B.5.4	Assessing AI system impact on individuals and groups of individuals
Govern 4.2	Organizational teams document the risks and potential impacts of the AI technology they design, develop, deploy, evaluate, and use, and they communicate about the impacts more broadly.	B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.8.5	Information for interested parties
		7.4	Communication
		6.1.4	AI system impact assessment
		B.5.5	Assessing societal impacts of AI systems

Govern 4.3	Organizational practices are in place to enable AI testing, identification of incidents, and information sharing.	B.6.2.4	AI system verification and validation
		B.6.2.6	AI system operation and monitoring
		B.6.2.7	AI system technical documentation
		B.8.2	System documentation and information for users
		B.8.3	External reporting
		B.8.4	Communication of incidents
		B.8.5	Information for interested parties
		B.6.1.2	Objectives for responsible development of AI system
		B.6.1.3	Processes for responsible design and development of AI systems
Govern 5.1	Organizational policies and practices are in place to collect, consider, prioritize, and integrate feedback from those external to the team that developed or deployed the AI system regarding the potential individual and societal impacts related to AI risks.	B.10.4	Customers
		B.5.3	Documentation of AI system impact assessments
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.8.3	External reporting
Govern 5.2	Mechanisms are established to enable the team that developed or deployed AI systems to regularly incorporate adjudicated feedback from relevant AI actors into system design and implementation.	B.8.3	External reporting
		B.10.4	Customers
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
		B.6.1.3	Processes for responsible design and development of AI systems
Govern 5.2	Mechanisms are established to enable the team that developed or deployed AI systems to regularly incorporate adjudicated feedback from relevant AI actors into system design and implementation.	B.6.2.6	AI system operation and monitoring

Govern 6.1	Policies and procedures are in place that address AI risks associated with third-party entities, including risks of infringement of a third-party's intellectual property or other rights.	B.10.2	Allocating responsibilities
		B.10.3	Suppliers
Govern 6.2	Contingency processes are in place to handle failures or incidents in third-party data or AI systems deemed to be high-risk.	B.10.2	Allocating responsibilities
		B.10.3	Suppliers
Map 1.1	Intended purposes, potentially beneficial uses, context specific laws, norms and expectations, and prospective settings in which the AI system will be deployed are understood and documented. Considerations include: the specific set or types of users along with their expectations; potential positive and negative impacts of system uses to individuals, communities, organizations, society, and the planet; assumptions and related limitations about AI system purposes, uses, and risks across the development or product AI lifecycle; and related TEVV and system metrics.	6.1.4	AI system impact assessment
		B.5.2	AI system impact assessment process
		B.5.3	Documentation of AI system impact assessments
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
Map 1.2	Interdisciplinary AI actors, competencies, skills, and capacities for establishing context reflect demographic diversity and broad domain and user experience expertise, and their participation is documented. Opportunities for interdisciplinary collaboration are prioritized.	B.4.6	Human resources
		7.2	Competence

Map 1.3	The organization's mission and relevant goals for AI technology are understood and documented	4.1	Understanding the organization and its context
		5.2	AI Policy
		6.2	AI objectives and planning to achieve them
		7.5.3	Control of documented information
		7.3	Awareness
		7.4	Communication
Map 1.4	The business value or context of business use has been clearly defined or – in the case of assessing existing AI systems – re-evaluated.	5.1	Leadership and commitment
		4.1	Understanding the organization and its context
		B.2.2	Customers
		B.5.2	AI system impact assessment process
		B.9.4	Intended use of the AI system
		B.6.2.2	AI system requirements and specification
Map 1.5	Organizational risk tolerances are determined and documented.	6.1.1	Objective
Map 1.6	System requirements (e.g., "the system shall respect the privacy of its users") are elicited from and understood by relevant AI actors. Design decisions take socio-technical implications into account to address AI risks.	B.6.2.2	AI system requirements and specification
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
Map 2.1	The specific tasks and methods used to implement the tasks that the AI system will support are defined (e.g., classifiers, generative models, recommenders).	B.6.2.3	Documentation of AI system design and development
		B.4.2	Resource documentation
		B.4.3	Data resources
		B.4.4	Tooling resources
		B.4.5	System and computing resources
		B.4.6	Human resources

Map 2.2	Information about the AI system's knowledge limits and how system output may be utilized and overseen by humans is documented. Documentation provides sufficient information to assist relevant AI actors when making decisions and taking subsequent actions	B.6.2.7	AI system technical documentation
		B.9.3	Objectives for responsible use of AI system
		B.8.2	System documentation and information for users
Map 2.3	Scientific integrity and TEVV considerations are identified and documented, including those related to experimental design, data collection and selection (e.g., availability, representativeness, suitability), system trustworthiness, and construct validation.	B.6.1.3	Processes for responsible design and development of AI systems
		B.6.2.7	AI system technical documentation
		B.7.2	Data for development and enhancement of AI system
		B.7.3	Acquisition of data
		B.7.4	Quality of data for AI systems
		B.7.5	Data provenance
		B.7.6	Data preparation
		B.6.2.4	AI system verification and validation
Map 3.1	Potential benefits of intended AI system functionality and performance are examined and documented.	B.5.2	AI system impact assessment process
		B.5.3	Documentation of AI system impact assessments
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
Map 3.2	Potential costs, including non-monetary costs, which result from expected or realized AI errors or system functionality and trustworthiness – as connected to organizational risk tolerance – are examined and documented	B.5.2	AI system impact assessment process
		B.5.3	Documentation of AI system impact assessments

		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
		8.2	AI risk assessment
		8.3	AI risk treatment
		8.4	AI system impact assessment
Map 3.3	Targeted application scope is specified and documented based on the system's capability, established context, and AI system categorization.	4.3	Determining the scope of the AI management system
		B.5.2	AI system impact assessment process
		B.5.3	Documentation of AI system impact assessments
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
Map 3.4	Processes for operator and practitioner proficiency with AI system performance and trustworthiness – and relevant technical standards and certifications – are defined, assessed, and documented.	7.2	Competence
		B.4.6	Human resources
Map 3.5	Processes for human oversight are defined, assessed, and documented in accordance with organizational policies from the GOVERN function.	B.6.1.3	Processes for responsible design and development of AI systems
		B.6.2.7	AI system technical documentation
		B.8.2	System documentation and information for users
Map 4.1	Approaches for mapping AI technology and legal risks of its components – including the use of third-party data or software – are in place, followed, and documented, as are risks of infringement of a third party's intellectual property or other rights.	4.1	Understanding the organization and its context
		B.2.2	AI policy
		B.9.2	Processes for responsible use of AI systems
		B.9.4	Intended use of the AI system

Map 4.2	Internal risk controls for components of the AI system, including third-party AI technologies, are identified and documented.	B.6.2.7	AI system technical documentation
		B.8.2	System documentation and information for users
		B.10.3	Suppliers
Map 5.1	Likelihood and magnitude of each identified impact (both potentially beneficial and harmful) based on expected use, past uses of AI systems in similar contexts, public incident reports, feedback from those external to the team that developed or deployed the AI system, or other data are identified and documented.	6.1.2	AI risk assessment
		B.5.2	AI system impact assessment process
Map 5.2	Practices and personnel for supporting regular engagement with relevant AI actors and integrating feedback about positive, negative, and unanticipated impacts are in place and documented.	B.6.1.3	Processes for responsible design and development of AI systems
		B.6.2.6	AI system operation and monitoring
		B.8.3	External reporting
Measure 1.1	Approaches and metrics for measurement of AI risks enumerated during the MAP function are selected for implementation starting with the most significant AI risks. The risks or trustworthiness characteristics that will not – or cannot – be measured are properly documented.	6.1.1	General
		6.1.2	AI risk assessment
Measure 1.2	Appropriateness of AI metrics and effectiveness of existing controls are regularly assessed and updated, including reports of errors and potential impacts on affected communities.	B.6.2.4	AI system verification and validation
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.2	AI system impact assessment process
		B.5.5	Assessing societal impacts of AI systems

Measure 1.3	Internal experts who did not serve as front-line developers for the system and/or independent assessors are involved in regular assessments and updates. Domain experts, users, AI actors external to the team that developed or deployed the AI system, and affected communities are consulted in support of assessments as necessary per organizational risk tolerance.	6.1.2	AI risk assessment
		9.2.2	Internal audit programme
		B.5.2	AI system impact assessment process
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
Measure 2.1	Test sets, metrics, and details about the tools used during TEVV are documented.	B.8.4	Communication of incidents
		B.6.2.4	AI system verification and validation
		B.6.2.7	AI system technical documentation
		B.4.2	Resource documentation
Measure 2.2	Evaluations involving human subjects meet applicable requirements (including human subject protection) and are representative of the relevant population	B.6.2.4	AI system verification and validation
Measure 2.3	AI system performance or assurance criteria are measured qualitatively or quantitatively and demonstrated for conditions similar to deployment setting(s). Measures are documented.	B.7.4	Quality of data for AI systems
		B.6.2.6	AI system operation and monitoring
Measure 2.4	The functionality and behavior of the AI system and its components – as identified in the MAP function – are monitored when in production.	9.1	Monitoring, measurement, analysis, and evaluation
		B.6.2.6	AI system operation and monitoring
		B.6.2.8	AI system recording of event logs

Measure 2.5	The AI system to be deployed is demonstrated to be valid and reliable. Limitations of the generalizability beyond the conditions under which the technology was developed are documented.	B.6.2.4	AI system verification and validation
		B.6.2.5	AI system deployment
		B.6.2.7	AI system technical documentation
		B.8.2	System documentation and information for users
Measure 2.6	The AI system is evaluated regularly for safety risks – as identified in the MAP function. The AI system to be deployed is demonstrated to be safe, its residual negative risk does not exceed the risk tolerance, and it can fail safely, particularly if made to operate beyond its knowledge limits. Safety metrics reflect system reliability and robustness, real-time monitoring, and response times for AI system failures.	B.6.2.8	AI system recording of event logs
		B.6.2.6	AI system operation and monitoring
		B.6.2.4	AI system verification and validation
		8.2	AI risk assessment
Measure 2.7	AI system security and resilience – as identified in the MAP function – are evaluated and documented.	B.7.2	Data for development and enhancement of AI system
		B.3.2	AI roles and responsibilities
		B.2.3	Alignment with other organizational policies
		B.5.2	AI system impact assessment process
		B.6.1.2	Objectives for responsible development of AI system
		B.6.2.3	Documentation of AI system design and development
		B.9.3	Objectives for responsible use of AI system
Measure 2.8	Risks associated with transparency and accountability – as identified in the MAP function – are examined and documented.	B.7.2	Data for development and enhancement of AI system
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
		B.6.1.2	Objectives for responsible development of AI system
		B.9.3	Objectives for responsible use of AI system

		6.1.2	AI risk assessment
Measure 2.9	The AI model is explained, validated, and documented, and AI system output is interpreted within its context – as identified in the MAP function – to inform responsible use and governance.	B.7.5	Data provenance
		B.6.2.5	AI system deployment
		B.6.2.7	AI system technical documentation
		B.8.2	System documentation and information for users
Measure 2.10	Privacy risk of the AI system – as identified in the MAP function – is examined and documented.	B.5.2	AI system impact assessment process
		B.7.2	Data for development and enhancement of AI system
		B.7.3	Acquisition of data
		B.2.3	Alignment with other organizational policies
Measure 2.11	Fairness and bias – as identified in the MAP function – are evaluated and results are documented.	B.5.5	Assessing societal impacts of AI systems
		B.5.4	Assessing AI system impact on individuals and groups of individuals
Measure 2.12	Environmental impact and sustainability of AI model training and management activities – as identified in the MAP function – are assessed and documented.	B.5.5	Assessing societal impacts of AI systems
		B.4.5	System and computing resources
Measure 2.13	Effectiveness of the employed TEVV metrics and processes in the MEASURE function are evaluated and documented.	B.6.2.4	AI system verification and validation
		B.6.2.6	AI system operation and monitoring
Measure 3.1	Approaches, personnel, and documentation are in place to regularly identify and track existing, unanticipated, and emergent AI risks based on factors such as intended and actual performance in deployed contexts.	8.2	AI risk assessment
		4.4	AI management system
		8.4	AI system impact assessment

Measure 3.2	Risk tracking approaches are considered for settings where AI risks are difficult to assess using currently available measurement techniques or where metrics are not yet available.	B.6.2.8	AI system recording of event logs
		B.6.2.6	AI system operation and monitoring
		10.1	Continual improvement
Measure 3.3	Feedback processes for end users and impacted communities to report problems and appeal system outcomes are established and integrated into AI system evaluation metrics.	B.8.2	System documentation and information for users
		B.8.4	Communication of incidents
		B.8.3	External reporting
Measure 4.1	Measurement approaches for identifying AI risks are connected to deployment context(s) and informed through consultation with domain experts and other end users. Approaches are documented.	B.6.2.4	AI system verification and validation
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.5.5	Assessing societal impacts of AI systems
		9.1	Monitoring, measurement, analysis, and evaluation
Measure 4.2	Measurement results regarding AI system trustworthiness in deployment context(s) and across the AI lifecycle are informed by input from domain experts and relevant AI actors to validate whether the system is performing consistently as intended. Results are documented.	9.1	Monitoring, measurement, analysis, and evaluation
		B.8.2	System documentation and information for users
		9.2.1	General
		B.8.3	External reporting

Measure 4.3	Measurable performance improvements or declines based on consultations with relevant AI actors, including affected communities, and field data about context relevant risks and trustworthiness characteristics are identified and documented.	9.3.1	General
		B.6.2.6	AI system operation and monitoring
		B.6.2.7	AI system technical documentation
Manage 1.1	A determination is made as to whether the AI system achieves its intended purposes and stated objectives and whether its development or deployment should proceed.	B.9.3	Objectives for responsible use of AI system
		B.9.2	Processes for responsible use of AI systems
		B.9.4	Intended use of the AI system
		B.6.1.3	Processes for responsible design and development of AI systems
		B.6.2.4	AI system verification and validation
		B.6.2.4	AI system verification and validation
Manage 1.2	Treatment of documented AI risks is prioritized based on impact, likelihood, and available resources or methods.	9.3.3	Management review results
		6.1.2	AI risk assessment
		6.1.3	AI risk treatment
		6.1.4	AI system impact assessment
Manage 1.3	Responses to the AI risks deemed high priority, as identified by the MAP function, are developed, planned, and documented. Risk response options can include mitigating, transferring, avoiding, or accepting.	6.1.1	General
		6.1.2	AI risk assessment
		6.1.3	AI risk treatment
		6.1.4	AI system impact assessment
Manage 1.4	Negative residual risks (defined as the sum of all unmitigated risks) to both downstream acquirers of AI systems and end users are documented.	B.5.3	Documentation of AI system impact assessments
		B.5.4	Assessing AI system impact on individuals and groups of individuals
		B.6.2.7	AI system technical documentation

		B.8.2	System documentation and information for users
Manage 2.1	Resources required to manage AI risks are taken into account – along with viable non-AI alternative systems, approaches, or methods – to reduce the magnitude or likelihood of potential impacts.	B.4.2	Resource documentation
		7.1	Resources
Manage 2.2	Mechanisms are in place and applied to sustain the value of deployed AI systems.	B.3.3	Reporting of concerns
		B.6.1.2	Objectives for responsible development of AI system
		B.6.1.3	Processes for responsible design and development of AI systems
		B.6.2.4	AI system verification and validation
		B.6.2.6	AI system operation and monitoring
		B.7.2	Data for development and enhancement of AI system
		7.1	Resources
		10.1	Continual improvement
Manage 2.3	Procedures are followed to respond to and recover from a previously unknown risk when it is identified.	10.2	Nonconformity and corrective action
		6.1.1	General
		6.1.2	AI risk assessment
		6.1.3	AI risk treatment
Manage 2.4	Mechanisms are in place and applied, and responsibilities are assigned and understood, to supersede, disengage, or deactivate AI systems that demonstrate performance or outcomes inconsistent with intended use.	B.9.4	Intended use of the AI system
		B.8.2	System documentation and information for users
		B.6.2.7	AI system technical documentation
		B.6.1.3	Processes for responsible design and development of AI systems
Manage 3.1	AI risks and benefits from third-party resources are regularly monitored, and risk controls are applied and documented.	B.10.3	Suppliers
		B.10.2	Allocating responsibilities

Manage 3.2	Pre-trained models which are used for development are monitored as part of AI system regular monitoring and maintenance.	B.4.4	Tooling resources
		B.6.2.6	AI system operation and monitoring
Manage 4.1	Post-deployment AI system monitoring plans are implemented, including mechanisms for capturing and evaluating input from users and other relevant AI actors, appeal and override, decommissioning, incident response, recovery, and change management.	9.2.1	General
		B.6.2.6	AI system operation and monitoring
		B.8.3	External reporting
		B.10.4	Customers
Manage 4.2	Measurable activities for continual improvements are integrated into AI system updates and include regular engagement with interested parties, including relevant AI actors.	9.3.3	Management review results
		B.6.2.4	AI system verification and validation
		B.6.2.6	AI system operation and monitoring
Manage 4.3	Incidents and errors are communicated to relevant AI actors, including affected communities. Processes for tracking, responding to, and recovering from incidents and errors are followed and documented.	9.3.2	Management review inputs
		B.8.5	Information for interested parties
		B.6.2.6	AI system operation and monitoring