



# Science and AI for the SDGs

## POTENTIAL BENEFITS

- | Capacity to accelerate progress toward all 17 SDGs

## POTENTIAL RISKS

- | Implications of misuse can work against sustainability principles

## SCIENCE FOR LEVERAGING AI

- | Insights and tools for decision-makers

## AI RESHAPING SCIENCE SYSTEMS

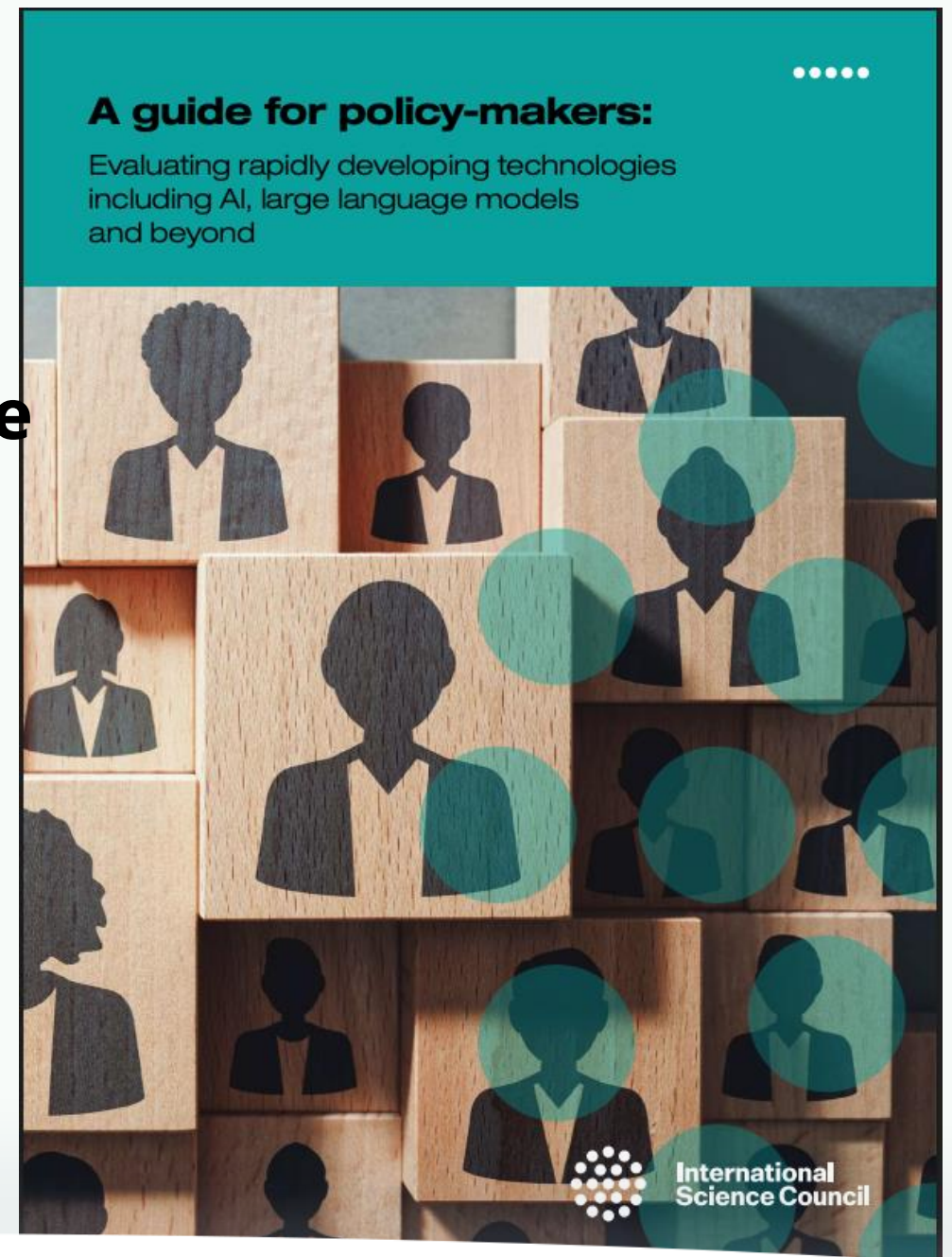
- | Creating communities of global experts



# Helping decision-makers understand, navigate, and leverage AI

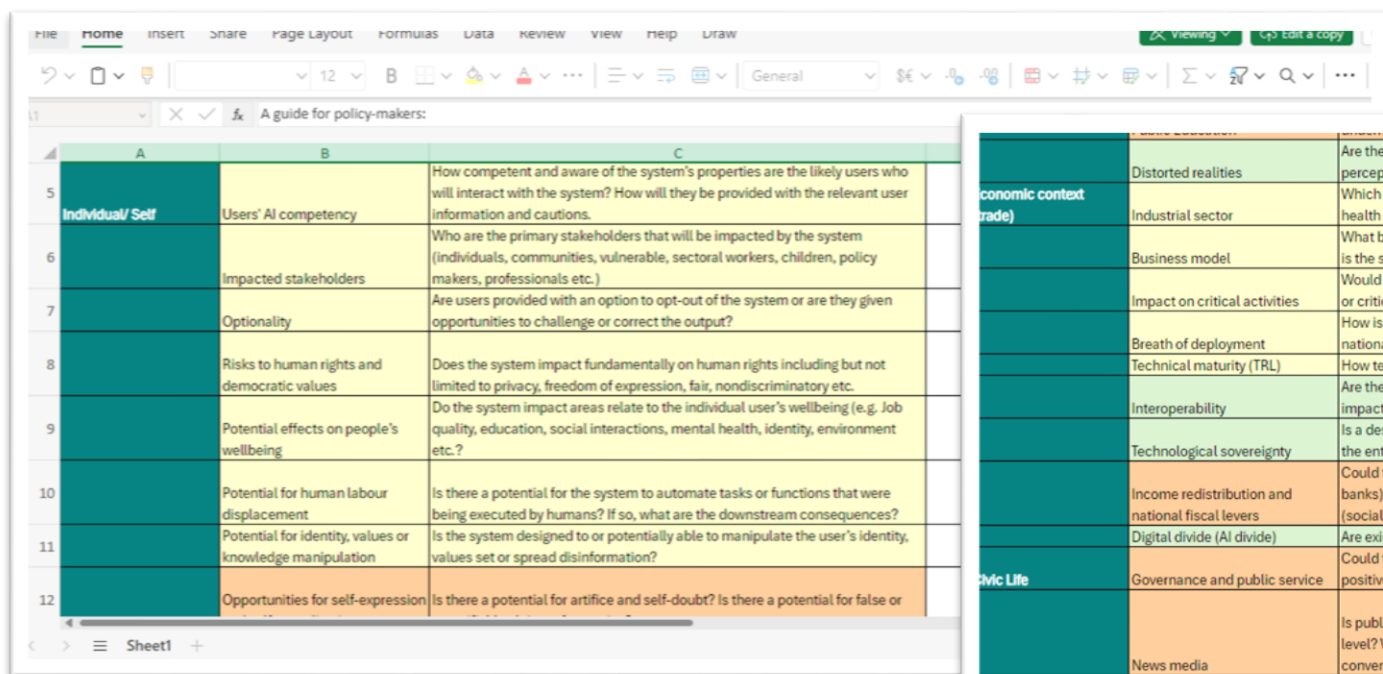
- Comprehensive, science-based framework
- Bridging the gap between high-level principles and practical, actionable policy

<https://council.science/publications/policy-makers-guide-framework-digital-technologies/>



# The framework tool:

An editable Excel sheet for use in your organization



A	B	C
Individual/ Self	Users' AI competency	How competent and aware of the system's properties are the likely users who will interact with the system? How will they be provided with the relevant user information and cautions.
	Impacted stakeholders	Who are the primary stakeholders that will be impacted by the system (individuals, communities, vulnerable, sectoral workers, children, policy makers, professionals etc.)
	Optionality	Are users provided with an option to opt-out of the system or are they given opportunities to challenge or correct the output?
	Risks to human rights and democratic values	Does the system impact fundamentally on human rights including but not limited to privacy, freedom of expression, fair, nondiscriminatory etc.
	Potential effects on people's wellbeing	Do the system impact areas relate to the individual user's wellbeing (e.g. job quality, education, social interactions, mental health, identity, environment etc.)?
	Potential for human labour displacement	Is there a potential for the system to automate tasks or functions that were being executed by humans? If so, what are the downstream consequences?
	Potential for identity, values or knowledge manipulation	Is the system designed to or potentially able to manipulate the user's identity, values set or spread disinformation?
	Opportunities for self-expression	Is there a potential for artifice and self-doubt? Is there a potential for false or

## A guide for policy-makers:

Evaluating rapidly developing technologies including AI, large language models and beyond

Economic context (trade)	Distorted realities	Are the methods we use to discern what is true still applicable? Is the perception of reality compromised?
	Industrial sector	Which industrial sector is the system deployed in (e.g. finance, agriculture, health care, education, defence etc.)
	Business model	What business function is the system employed in and in what capacity? Where is the system used (private, public, non-profit)?
	Impact on critical activities	Would a disruption of the system's function or activity affect essential services or critical infrastructures?
	Breath of deployment	How is the system deployed (narrow use within unit vs widespread nationally/international)?
	Technical maturity (TRL)	How technically mature is the system?
	Interoperability	Are there likely to be silos nationally or globally that inhibit free trade and impact cooperation with partners?
Socio-political Life	Technological sovereignty	Is a desire for technological sovereignty driving behaviors including control over the entire AI supply chain?
	Income redistribution and national fiscal levers	Could the core roles of the sovereign state be compromised (e.g., reserve banks)? Will the state's ability to meet citizens' expectations and implications (social, economic, political etc.) be advanced or reduced?
	Digital divide (AI divide)	Are existing digital inequalities exacerbated or new ones created?
	Governance and public service	Could the governance mechanisms and global governance system be affected positively or negatively?
	News media	Is public discourse likely to become polarised and entrenched at a population level? Will there be an effect on the levels of trust in the 4th estate? Will conventional journalist ethics and integrity standards be further affected?
	Rule of law	Will there be an effect on the ability to identify individuals or organisations to hold accountable (e.g., what kind of accountability to assign to an algorithm for adverse outcomes)? Is there a loss of sovereignty created (e.g., environmental, fiscal, social policy, ethics etc.)?

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**CALL TO ACTION:** Enhancing science-policy interfaces

