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CONTEXT MATTERS

Localising UNESCO's Readiness
Assessment Methodology

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INTRODUCTION

UNESCO's Recommendation on the Ethics of Artificial Intelligence (hereafter: "the Recommendation") is the world's first global normative instrument for AI governance. It is implemented through two primary instruments: the Readiness Assessment Methodology (RAM) at a national level to develop policy, and the Ethical Impact Assessment at the level of algorithmic systems.

As people globally have been inspired by the RAM, a critical gap has emerged between national policy and local implementation. While national assessments are vital for generating evidence and high-level political will, countries often have significant diversity within their borders. The diversity which makes up the richness of our societies, including linguistic, cultural and governance variations, means that levels of AI readiness vary significantly across provinces, regions and communities.

To address this gap, this brief proposes Local RAMs as an additional implementation mechanism for the Recommendation. It presents methodological reflections and lessons learned from four case studies in which the RAM and the Recommendation were adapted to subnational realities.

The case studies present a diversity of ways in which context matters. Each case developed its own version of a Local RAM, using different strategies to respond to their context-specific priorities and needs. The Flanders Region in Belgium focused on mapping complex legal interdependencies across federal and regional scales. In Indonesia, one specific agency adapted the methodology to assess organizational readiness and internal competence at the organisational level. The Municipality of Las Condes in Chile developed a municipal index prioritizing procurement and administrative protocols as key regulatory levers inspired by the RAM. Finally, the State of Guanajuato in Mexico used a mixed-method, participatory process to co-create a regional roadmap, based on the Recommendation, rather than the RAM.

The drive to adapt the RAM comes from three distinct needs for AI readiness assessment: proximity, agility, and operational authority.

First, from the perspective of administrations, the frontline of AI-enabled public services is increasingly regional, municipal, and sectoral. Agencies interact directly with their constituents, and this proximity means the everyday experience of AI becomes more visible. Practical risks such as bias or surveillance overreach are easier to identify. As a result, this is where trust is either built or eroded when citizens interact with the state.

INTRODUCTION

Second, local and sectoral bodies are often procedurally more agile than national legislatures, and may be better positioned to directly observe the concrete impacts. In contexts like Indonesia, vertical agencies are better positioned to enact binding AI rules because their authority is grounded in deep sectoral expertise and administrative control, allowing them to respond to fast-moving technological issues that centralized institutions cannot easily address.

The third lever is operational authority. In cases like Chile, which has an advanced National AI Strategy, much of the procurement and deployment of technology occurs at the municipal level. Yet national readiness assessments often fail to capture this reality because they rely on sovereign indicators such as the power to enact liability laws or national R&D expenditure. These metrics are neither measured nor decision-relevant for a commune. A municipality cannot control the national internet infrastructure, but it must manage the interoperability of its data within a metropolitan grid.

Developing a Local RAM will move beyond a snapshot assessment toward a practical and hands-on guide for action. By shifting the focus from sovereign indicators to operational levers, a contextualised and localised approach becomes viable. The proposal reflects on recent pilots and develops a future agenda for a Local RAM methodology that empowers local governments to align with global ethical standards.



CASE

FLANDERS REGIONAL-LEVEL RAM

Belgium

- Belgium is a federal state in Europe
- Population of approximately 11 million people (Statistiek Vlaanderen)
- GDP (gross) is 33 billion EUR and GDP per capita of EUR 31,100 of 2024. (Eurostat, 2025)
- Parliamentary monarchy, known for its sophisticated governance architecture, in which a complex system of legal competences is distributed across federal, regional, municipal and linguistic levels.

Flanders

- Flanders is the Dutch-speaking region and community of Belgium
- Population of approximately 6.8 million people
- Area of 13,522 km²
- Functions as a national government, composed of three main bodies: the Flemish Government, the Flemish public administration, and the Flemish Parliament.
- Significant investment in AI adoption: the Flemish Policy Plan AI, launched in 2019, provides the overarching framework for how AI is developed, funded, and implemented across the region. Its annual budget is EUR 30 million.

Background

Flanders is the first sub-national region worldwide to adapt the RAM, and the second European entity to do so. The RAM was conducted as part of the European Commission-funded project AI Ready Flemish Public Administration, in collaboration with the AI Expertise Centre of Digital Flanders. This position was unique, in that most of the team working on the RAM was primarily focused on strengthening public administration capacities, while also using the RAM to contribute to a growing AI governance ecosystem. The RAM recommendations emerging from the multistakeholder process will be shared with the Flemish government. At the time of writing, the Flanders RAM remains ongoing.

Localizing the RAM

Adapting the RAM to a subnational level presented a few key challenges. The first is the legal complexity of mapping the AI governance landscape. While governance competencies in Belgium are mapped across mandates, in practice, and especially around emerging technologies, there are often gray areas where identifying institutional responsibility remains a process. For the RAM, this meant that mapping the legal dimension was done across three layers: European, federal, and Flemish regional. Significant energy was invested in mapping different competencies, all while the governance landscape is shifting in response to changing developments of the EU AI Act. For instance, during the RAM process, Flanders was still in the process of determining which entity would become designated as the competent authority, the agency mandated with enforcing the EU AI Act.

The second challenge was methodological, in the challenge of adapting the national-level indicators to a sub-national context. Several questions in the RAM refer to national-level indices, where Flanders

is simply not represented. In most cases, federal-level indicators were a poor proxy due to the diversity of the nation. In the report itself, switching between regional-level indicators and federal-level proxies felt challenging. Several indicators are per capita, which stakeholders did not recognize as meaningful.

The third challenge was geographical. Flanders is relatively small and dense, and in this context, indicators premised on a concept of sovereignty simply did not make sense. For example, assessing computing infrastructure required focusing less on assets physically located within Flemish borders and more on the supercomputing resources to which Flanders has access. Some data centres serving Flemish institutions are located just across the regional border in Brussels. Similarly, in April 2026, Flanders will increase its supercomputing power through the Belgian AI Factor Antenna, an initiative of the European High Performance Computing Joint Undertaking (EuroHPC JU), where Belgium will be able to use the infrastructure developed in Germany and Finland. In this sense, the capacity of networked access and interdependent relationships was more meaningful than pure sovereignty.

Implementation and impact

Finally, within the public administration, there was also a strong desire for transforming the national priorities into organisational-level roadmaps and then articulating these into project-level action plans. The AI Maturity Framework, developed alongside the RAM as part of the project, combined RAM dimensions with existing maturity frameworks to create a roadmap at the organisational level, which was widely received as an important strategic guidance operating with a much faster turnaround time than regional-national level strategies in a complex political landscape. Similarly, RAM recommendations were also operationalised into concrete action plans for increasing ethical AI governance capacities of the public administration.



CASE

INDONESIA'S DIRECTORATE GENERAL OF TAXES READINESS ASSESSMENT

Indonesia

- Indonesia is Southeast Asia's most populous country: 281.56 million in 2025,
- The world's largest archipelagic state: over 13,000 inhabited islands across 38 provinces. Under the provinces, there are 416 regencies and 98 cities
- GDP (Nominal) of \$1.443 trillion and GDP per capita of \$5,074
- Highly diverse nation, religiously, culturally, and ethnically: home to the world's largest Muslim population
- Presidential democracy with a bicameral legislature

Directorate General of Taxes

- The Directorate General of Taxes (Direktorat Jenderal Pajak or DJP in Indonesian) is an Indonesian government agency under the Ministry of Finance
- Mandated to formulate and implement tax policies and related standardization for the country's 90 million tax subjects

Background

Following the implementation of the RAM in Indonesia, government officials approached the UNESCO team to explore the possibility of conducting similar readiness assessments at the agency level. These proposed assessments would focus on day-to-day practices, operational processes, governance mechanisms, and internal capacity development, an approach distinct from the national-level RAM as well as from existing project-based or procurement-oriented Ethical Impact Assessments (2023), which evaluate individual AI initiatives rather than institutional capacity.

One of the government agencies that engaged in this effort was Indonesia's Directorate General of Tax (Direktorat Jenderal Pajak, DJP). In partnership with Germany's Society for International Development (GIZ), KORIKA (Collaborative Research and Industrial Innovation in AI - the country's national multi-stakeholder AI collaborative), and Indonesia's UNESCO AI Ethics Experts without Borders, the joint team conducted an institutional-level AI readiness assessment. As the agency responsible for tax administration, DJP aims to leverage AI to improve business processes and enhance tax compliance, thereby increasing efficiency and contributions to state revenue. Assessing its AI practices and organizational competencies was therefore seen as pivotal to achieving these objectives.

Localizing the RAM

The RAM was originally designed for national-level assessments across five pillars: legal/regulatory, sociocultural, economic, scientific/educational, and technological/infrastructure. In adapting the RAM for institutional use, most of these pillars were retained in order to emphasize the sociotechnical nature of AI, in contrast to more narrowly technical AI competence assessments. The scientific/educational pillar, as defined in the UNESCO RAM, was excluded because it primarily addresses national research ecosystems, academic curricula, and broader educational initiatives. Given DJP's mandate as a tax administration agency, its AI readiness was understood to depend more on internal organizational capabilities and immediate operational needs than on contributions to national research or academic collaboration.

The remaining four pillars were contextualised for organizational relevance:

- **Legal and Regulatory:** Rather than examining formal legal instruments, this pillar assessed DJP's internal knowledge around Indonesia's AI and digital-related regulations (as reflected in the RAM indicators) that might apply to them, as well as the existence of internal AI governance structures and ethics-related practices.





- **Sociocultural:** While the sociocultural dimension in UNESCO's RAM typically encompasses broad societal factors such as cultural heritage, language, and diversity, the assessment focused instead on internal organizational culture. Key considerations included building trust in AI systems for both tax subjects and officials within DJP, fostering practices that promote inclusive stakeholder consultation when developing AI tools, ensuring human agency in decision-making, and promoting ethical awareness within DJP as an institution themselves.
- **Technological Infrastructure:** This pillar evaluated infrastructure readiness and development practices, supplemented by external criterias such as data quality, project governance, model monitoring, and the suitability of infrastructure.
- **Economic Feasibility:** This dimension examined budgeting practices that account for post-deployment monitoring, the capacity to conduct cost-benefit analyses, and the presence of risk mitigation strategies for AI projects.

The framework was further enriched with micro-level measures to assess institutional talent capacity. These included AI literacy assessments, which are used to measure knowledge gains among non-technical staff, as well as competency evaluation tools, focusing on participants' ability to design AI use cases and critically assess associated risks.

Implementation and Impact

The assessment was conducted through a three-day workshop in February 2025. Participants included staff and management from IT, data and information services, regional operations, and compliance units, all from the Directorate General of Taxes. Each pillar was evaluated using a mixed-methods approach that combined qualitative analysis of engagement in workshop activities, such as speculative design exercises, case study discussions, and retrospectives, with quantitative measurements in form of quiz score results on literacy benchmarked against achievement of the similar quiz when given to the general public.

While the results are not shared publicly, the process and insights derived are referenced as a supporting document of the institution's AI roadmap. It also enabled further extended engagement beyond the workshop itself, including the co-development of AI initiatives between DJP and the assessment team with external partners to support robust AI governance and ethical implementation. This exercise illustrates the value of applying the RAM framework at sub-national levels, particularly within state institutions, as a means of strengthening overall national AI readiness.





CASE

LAS CONDES MUNICIPAL AI INDEX

Chile

- Chile is a country in South America with a population of approximately 20 million and a GDP per Capita of \$16,709.9 as of 20241.
- Chile is a unitary state with a presidential regime with a bicameral congress.
- Chile is divided into 16 regions, 56 provinces, and 346 communes, which are the smallest territorial units.
- Municipalities are autonomous public corporations that administer the communes, led by a Mayor and a Council, both elected through direct vote every 4 years.
- Chile has an advanced national AI governance, with a National Strategy published in 2021 and updated in 2023 after being the first country to implement UNESCO's RAM. Las Condes
- Urban commune located in the northeast sector of Santiago, Chile's capital. It has a population of approximately 340,000 in an area of 99km². It is one of the communes with the highest socioeconomic indicators, with an average household income of \$67,672 and poverty rates below 1%.

Las Condes

- Urban commune located in the northeast sector of Santiago, Chile's capital. It has a population of approximately 340,000 in an area of 99km². It is one of the communes with the highest socioeconomic indicators, with an average household income of \$67,672 and poverty rates below 1%.



Background

In 2023, the Municipality of Las Condes developed a pioneering Municipal AI Readiness Index to establish a baseline for Chile's first local AI strategy. The primary goal was to move beyond abstract national scores and measure readiness in a way that was decision-relevant for local administration. The municipality identified that national assessments relied on assumptions, such as the power to pass liability laws or fund national R&D, that do not apply to local governments. The initiative sought to replace these with municipal governance capacity indicators, focusing on operational levers like procurement and internal protocols that the municipality can actually control.

Localizing the RAM

By the time this project began, RAM had not yet been implemented in any countries. This index draws inspiration from UNESCO's recommendation, the first version of the Latin American AI Index, and the first version of the RAM instrument.

First, on the regulatory front, since municipalities cannot enact legislation, the index reframed the legal dimensions into administrative protocols and procurement. The Index measured the existence of binding internal norms for ethical AI, cybersecurity, and data protection, rather than national laws. For example, the index analyzed organizations, identifying gaps such as the lack of a formalized data officer.

Second, on the economic dimension, instead of macro-proxies like R&D spending, the Index measured budgetary permanence (whether AI funding is a fixed budget line item or a sporadic pilot) and the implementation-to-operations ratio, testing the sustainability of AI services.

Third, on the infrastructure dimension, instead of considering national connectivity indicators, they were replaced with ubiquity and transversality indicators. The index measured whether AI usage was siloed in specific units or integrated across municipal functions, revealing clustered adoption that limits scale.

Implementation and impact

The participatory processes combined a citizen survey with 1,564 participants to gauge general sentiment and specific concerns and then convened 10 thematic roundtables (7 online, 3 in-person) with 173 neighbours, utilizing a prospective methodology to co-design future scenarios for the commune. Residents expressed high optimism for AI areas such as traffic (84%) and public security (81%), but reported significant concern regarding domains like data privacy (72%), validating the need for local data governance.

The index and the participatory processes served to create a Municipal AI Policy. This is similar to how the RAM provides policy recommendations from which many countries develop or update their National AI policies.





CASE

GUANAJUATO'S STATE-LEVEL AI ROADMAP

Mexico

- Federal republic located in North America; it operates under a presidential system with a bicameral Congress.
- Population of approximately 129 million people
- GDP per capita of USD 13,790 as of 2024.
- The country is administratively divided into 32 federal entities, 31 states, and Mexico City, which possess constitutionally guaranteed autonomy in areas such as education, economic development, public security, and public administration.
- Mexico developed UNESCO's RAM in 2024, identifying opportunities and challenges to leverage AI responsibly.

Guanajuato

- Guanajuato is a state in central Mexico with a population of approximately 6.2 million people.
- It is one of the country's most dynamic regional economies and ranks among the top five states in terms of economic output, with a strong industrial base anchored in manufacturing, automotive, agro-industrial, and aerospace sectors.
- Guanajuato has developed a robust innovation and entrepreneurship ecosystem, supported by more than 100 higher education and research institutions and an active network of startups and innovation hubs.
- The state government plays a central role in coordinating economic development, innovation policy, and digital transformation initiatives across its territory.

Background

As AI adoption accelerates across productive sectors and public administration, the Government of Guanajuato identified a growing gap between global AI governance frameworks and the practical realities of subnational implementation. While international and national discussions on AI ethics and governance were advancing, there was no state-level instrument capable of translating these principles into actionable priorities aligned with Guanajuato's institutional capacities, economic structure, and social context.

In response, the State of Guanajuato, through its local Institute of Innovation, Science and Entrepreneurship for Competitiveness (Idea GTO), partnered with UNESCO and PIT Policy Lab¹ to develop a Roadmap for the Ethical Development and Implementation of AI. The objective was to generate a decision-relevant, locally grounded roadmap that could guide public action, ecosystem coordination, and future policy design in line with the UNESCO's Recommendation on the Ethics of Artificial Intelligence.

Contextualization and adaptation

The Roadmap explicitly adapted UNESCO's global normative framework to the realities of a Mexican state government. Rather than focusing on sovereign powers such as national legislation or international regulation, the process emphasized subnational levers: policy coordination, capacity building, ecosystem articulation, public sector adoption, and ethical guidance for industry and academia. While UNESCO's Readiness Assessment Methodology (RAM) offers a robust diagnostic framework, it was not fully suited to the project's timeline or to the state government's existing planning instruments. For this reason, rather than attempting a partial RAM adaptation, the Roadmap prioritized adapting UNESCO's Recommendation on the Ethics of AI into actionable subnational levers.

This contextualization operated on three levels. First, governance and regulations were reframed from binding AI laws toward state-level regulatory alignment, internal guidelines, and institutional governance mechanisms, recognizing the limits and opportunities of subnational authority within Mexico's federal system.

Second, instead of relying on macro indicators such as national R&D expenditure, the Roadmap focused on ecosystem capacity and readiness, including talent availability, digital and AI literacy, data governance practices, and the maturity of collaboration between government, academia, industry, startups, and civil society.

Third, ethical principles were translated into operational priorities across sectors. UNESCO's values: human rights, inclusion, transparency, accountability, and sustainability, were embedded into concrete axes of action such as talent development, lifelong learning, data governance, public awareness, and multistakeholder collaboration, ensuring that ethics was treated as a cross-cutting enabler rather than a standalone constraint.



Implementation and impact

The Roadmap was developed through a mixed-method, participatory, and multistakeholder process designed to reflect the diversity and complexity of Guanajuato's AI ecosystem. The first phase consisted of mapping and identifying key actors across government, academia, the private sector, startups, and innovation communities, establishing a shared baseline of capacities, gaps, and opportunities.

The second phase focused on thematic and capacity-building workshops, bringing together more than 60 representatives across sectors. These workshops explored AI use cases, risks, and opportunities from ethical, technical, regulatory, and socio-economic perspectives, combining global best practices with region-specific challenges relevant to Guanajuato's productive structure and public policy priorities.

The final phase centered on co-creation, where participants collectively defined the Roadmap's vision, principles, and prioritized actions.

outcome was a phased framework structured around three stages: –Knowledge and Activation, Deployment of Intelligent Solutions, and Leadership in Ethical Innovation, –and five strategic axes: AI talent and skills, digital literacy and lifelong learning, regulatory and governance frameworks, multistakeholder collaboration, and public awareness of AI impacts.

The Roadmap now serves as a strategic reference for Guanajuato's future AI policy development, informing state programs, public sector experimentation, ecosystem initiatives, and alignment with international ethical standards. Similar to how UNESCO's RAM process can support national AI strategies, the Guanajuato Roadmap functions as a subnational instrument that translates global principles into locally actionable guidance, strengthening institutional capacity, trust, and inclusive innovation at the state level.



LESSONS LEARNED

Reflecting on the comparative cases across the four contexts, several lessons emerge that are relevant for local application. This section first examines the challenges and limitations of applying the RAM at the local level, before drawing on insights from the four cases to identify how these limitations can be addressed to support more context-sensitive and effective local implementation.

CHALLENGES AND LIMITATIONS WHEN APPLYING RAM TO A LOCAL CONTEXT

The wholesale application of national-level RAM indicators, such as R&D expenditure, AI patent counts, or platform-based skill proxies (i.e., Kaggle grandmasters, or Coursera signups), does not translate well to sub-national contexts. These indicators often do not exist at provincial or municipal levels, and where they do, they frequently serve as poor proxies for actual institutional capacity. Across the cases examined, such metrics failed to capture how AI capabilities are developed, sustained, and exercised in everyday practice at sub-national scales.

Ignoring interdependence, whether infrastructural, legal, or economic, tends to misrepresent sub-national capacity and can lead to misleading benchmarks. Municipalities and government agencies operate within multi-layered governance systems characterized by shared competencies, political and legal complexity. These conditions fundamentally shape the extent to which sub-national actors can act autonomously and, consequently, what can meaningfully be measured as readiness. Metrics premised on sovereignty, therefore, obscure the relational and networked nature of sub-national AI capacity.

Moving beyond checklists, an emphasis on the mere existence of legal frameworks or infrastructural artefacts obscures the more consequential question of whether institutions possess the knowledge, resources, and organizational routines required to operationalize and comply with them. Readiness is not determined by formal regulation alone, but by the capacity to translate legal and ethical commitments into everyday administrative and technical practice. A Local RAM must therefore prioritize evidence of governance in use, meaning how rules, norms, and safeguards are enacted in practice, over the formal presence of policies or systems.

LESSONS LEARNED

SO WHAT WORKS?

Centering on the operational

A Local RAM requires reframing readiness around what sub-national actors can realistically control. At regional, municipal, and agency levels, readiness is less about the existence of laws or national infrastructure and more about administrative and operational capacity. While some countries have sub-national actor that

have big autonomy in their policymaking process, sub-national actors quite rarely hold primary legislative or broad policymaking authority, they govern AI primarily through operational levers such as procurement practices, internal protocols, and organizational norms. Effective adaptation of RAM in local contexts should be able to translate macro-level policy indicators into measures of institutional governance and operational capacity. In practice, this might involve:

- When appropriate, recasting national scientific and educational indicators as assessments of organizational AI literacy and competence.
- Assessing legal readiness through the presence of operational procedures, internal governance mechanisms, and institutional awareness of applicable regulations, rather than the assessment of existing laws.
- Translating economic indicators into measures more relevant for the scope of sub-national actors, such as budgeting structures, procurement practices, and resources for post-deployment monitoring and maintenance for AI systems.

Build capacity and trust

Local RAM must foreground capacity building and trust as core dimensions of readiness rather than downstream outcomes. At sub-national levels, AI readiness is generated, or eroded, more through day-to-day operational practices when compared to national RAMs, making access to everyday workflows essential for meaningful assessment. Trust is therefore central to readiness assessment, as it reveals whether frontline workers possess the skills, confidence, and ethical judgment to engage with AI systems in practice. Effective Local RAM adaptations treat trust as an operational quality that is built through participation, shared ownership, and accountability in routine use. In practice, this might involve:

- Embedding participatory design activities such as co-design workshops, scenario walkthroughs, and service prototyping into readiness assessments to surface tacit knowledge and ethical concerns.
- Involving frontline workers, managers, and affected communities in shaping AI use cases, success criteria, and safeguards, rather than limiting participation to technical teams.
- Assessing whether institutions have standing mechanisms for participatory feedback and iteration once systems are deployed, not only during design phases.

LESSONS LEARNED

- Evaluating how insights from participatory processes are translated into concrete changes in system design, workflows, or governance arrangements.
- Treating participation itself as an indicator of readiness, signalling institutional openness, reflexivity, and trustworthiness.

Embracing situatedness

Local RAM must explicitly account for the situated and interdependent nature of sub-national governance. Regions, municipalities, and agencies often do not operate as sovereign entities; their AI capacity is shaped by legal, infrastructural, and sociocultural relationships that extend beyond administrative boundaries. Readiness, therefore, cannot be assessed solely through territorially bounded indicators, but must reflect how institutions access, integrate, and coordinate resources across wider regulatory ecosystems and/or sociocultural ecologies. Effective Local RAMs embrace this situatedness by shifting from notions of self-sufficiency to relational capacity. In practice, this might involve:

- Evaluating access to shared or external infrastructure, data, and expertise rather than infrastructure ownership within jurisdictional borders.
- Assessing coordination mechanisms with national governments, metropolitan authorities, vendors, and other agencies that shape AI deployment in practice.
- Recognizing how local sociopolitical and cultural contexts condition the risks, benefits, and legitimacy of AI use

FUTURE AGENDA

Looking ahead, an immediate next step is to establish Local RAMs as a living and evolving body of practice. The case studies demonstrate that regional and sub-national readiness is highly context-specific: the institutional mandates, political leverage, and operational constraints of a state government, a municipality, or a single public agency can vary significantly, even within the same country. Moreover, linguistic, cultural, socio-economic, and demographic differences across territories can further shape levels of AI adoption, digitalization, and the readiness of different levels of government, factors that also affect how frameworks such as UNESCO's RAM can be implemented in practice.

Future research should focus on identifying what adaptation looks like in practice. This includes documenting new implementations, extracting comparable lessons across contexts, and refining an evidence base, which can serve as a baseline for developing more specific and localized instruments.

To achieve this, there are a series of priorities:

1. Mobilize dedicated funding to operationalize and scale the Local RAM framework. Moving from ad-hoc case studies to a robust, globally applicable methodology requires targeted financial investment. A dedicated funding stream should be established to develop a Local RAM toolkit and to launch a Global Sub-National AI Readiness Challenge. This funding would not only support the technical creation of these instruments but also provide the necessary resources and incentives for a diverse set of local governments to pilot and refine them.
2. Build a repository and a sustained pipeline of use cases across regions, particularly in the Global South, to ensure that methodological development is not disproportionately shaped by contexts with stronger data availability or more mature governance capacity.
3. Move from "assessment" toward a structured pathway for action. Across the cases, a consistent finding is that incentives for sub-national actors are often practical and implementation-driven: improving procurement practices, strengthening internal governance protocols, building staff competence, and translating ethical commitments into enforceable administrative levers. This suggests a key methodological opportunity: the development of an intermediate instrument that bridges the gap between UNESCO's national RAM and current Ethical Impact Assessments. Such a tool would preserve the sociotechnical framing of readiness (legal, sociocultural, research and education, economic, and infrastructure dimensions), while translating indicators into operational questions that sub-national governments can directly influence, such as budgeting, institutional roles for data stewardship, cross-departmental integration, and mechanisms to evidence social license.

FUTURE AGENDA

4. Develop practical templates and soft guidance to support adaptation efforts without imposing rigid checklists. Future work could include an assessment tool to assist in determining which kind of instrument and adaptation is better suited for each context. This can involve a set of modular indicators that can be selected based on governance tier and capacity, and facilitation guides for participatory workshops that build ownership and legitimacy. Importantly, these resources should not be designed as a one-size-fits-all export model, but as a flexible methodology that requires local expertise and contextual interpretation, recognizing that readiness in emerging technology governance is nonlinear and must be updated as institutions learn through implementation.
5. Convene partner governments willing to pilot early versions of Local RAM tools, through structured sub-national RAM challenges or regional cohorts. Such initiatives would accelerate learning and establish feedback loops, allowing the methodology to improve with each deployment.
6. Address persistent measurement gaps, including the limited validity of macro-indicators at local levels, the interdependence of infrastructure and competencies across administrative boundaries, and the need for metrics that capture internal trust, organizational culture, and government practices.

By adopting this iterative and practice-oriented approach, Local RAMs can evolve into a useful and globally relevant framework: one that strengthens local implementation capacity while remaining anchored in UNESCO's ethical standards.

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