

AI Adoption in the Caribbean: A Comparative Analysis of Belize, Barbados, Jamaica, and Trinidad & Tobago

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Abstract

This research looks at how quickly Belize is adopting Artificial Intelligence (AI) in relation to regional leaders Jamaica, Trinidad and Tobago, and Barbados. It uses the Unified Theory of Acceptance and Use of Technology (UTAUT) to assess government policies, how developed the laws are, and how prepared the overall system is. This is done by looking at how people expect AI to work, how much effort they think using it will be, how much other people's opinions affect them, and how easy it is to actually get AI to work. Using this method to look at both the larger system and at individual institutional readiness for AI, explains up to 70% of why people are planning to use a technology. The findings show Belize has included digital aims in its National Digital Agenda for 2022 to 2025, but is at a very early "Explorer" stage. It does not have the detailed AI laws and institutional structures that its neighbors do. Jamaica and Trinidad and Tobago have created specific ministries and task forces, while Barbados, as a wealthier Small Island Developing State (SIDS), is leading the way in controlling its digital sovereignty and using AI for "Blue Economy" applications through "agile governance" models. The research concludes that Belize needs to move from horizontal digital frameworks to targeted vertical AI policy roadmaps. These AI plans need to cover the difference between how quickly AI is improving and how slowly the rules are being changed, and Belize needs to invest more in research and development. It also needs to adopt the agile governance models that Barbados uses to deal with the likelihood of job displacement and "AI capacity debt", and to help develop a skilled workforce within Belize itself.

Keywords: AI Adoption, Caribbean digitalization, Belize, UTAUT framework, AI governance, technological maturity, agile governance

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Introduction

The rapid growth of Artificial Intelligence (AI) offers Caribbean countries the opportunity to "leapfrog" over many of the difficulties they would normally encounter as they develop. For Small Island Developing States (SIDS), AI is now a foundational technology, significantly altering economic output, medical diagnosis, and the ability to withstand climate change (Aderibigbe et al., 2023; Russell & Norvig, 2020). Current assessments of readiness, however, reveal an increasing "maturity gap" within the region (International Monetary Fund [IMF], 2025).

Jamaica and Trinidad and Tobago, being larger economies, are moving from broad plans for digital technology to specific AI strategies, but Belize and other smaller nations are dealing with particular, inherent problems in their systems. This article will examine what causes these differences, and will offer a roadmap for Belize's advancement, by looking at how Jamaica and Trinidad and Tobago, as leaders in the region, are doing, and also at Barbados's ability to respond quickly and effectively to changing needs using a strategically agile model.

Rationale for Comparison

A comparison of Belize with Jamaica, Trinidad and Tobago, and Barbados is essential for a number of reasons:

- **Regional Leadership:** Jamaica and Trinidad and Tobago are the leading industrial and service-based "Adopters" of new technologies in the Caribbean. Jamaica has both formulated policy recommendations and a National AI Strategy, and Trinidad and Tobago has established the Artificial Intelligence Innovation Centre (Artificial Intelligence Innovation Centre [AIIC], 2025; Office of the Prime Minister [OPM], 2025a). Barbados, a high-income SIDS, has done better than average for the region in terms of digital readiness (United Nations Department of Economic and Social Affairs [UNDESA], 2024; IMF, 2025).
- **Scale vs. Strategic Agility:** The comparison between these nations shows how the size of an economy influences the ability to develop local innovation, as opposed to simply using Artificial Intelligence. Larger economies have more money available for Artificial Intelligence research and development (Economic Commission for Latin America and the Caribbean [ECLAC], 2025). Belize's slower progress is often explained by its smaller economy; however, Barbados, with a population relatively similar to Belize's, has achieved a greater level of maturity by focusing on technology as a priority (UNDESA, 2024).
- **Institutional Frameworks:** Looking at specialized organizations, for example, Trinidad and Tobago's Ministry of Public Administration and Artificial Intelligence compared to Belize's more general e-governance divisions, demonstrates how important a firm political decision to embrace technology is to its implementation (E-Governance and Digitalization Unit, 2022; Ministry of Public Administration and Artificial Intelligence [MPAAI], 2025).

Hypothesis Evaluation

The main argument is that Belize's progress with Artificial Intelligence is presently limited by its "horizontal" policy strategy of widespread digitalization, as opposed to having specific "vertical," institutional oversight to supervise AI itself (E-Governance and Digitalization Unit, 2022). This horizontal focus is on establishing the basic infrastructure and digital skills needed for a modern society. It is comparable to laying the railway tracks before the train can operate. However, it frequently does not include the specialized, vertical governance needed to respond to the specific ethical, legal and technical problems of AI (INSEAD Knowledge, 2025).

Although this basic groundwork is essential, without specific governmental institutions, such as a ministry or task force specifically for AI, there is no single authority to lead advanced AI research, development, and the application of appropriate controls. In contrast to its neighboring countries, which are employing a focused strategy with specialized task forces and ministries to encourage investment and to overcome AI-specific problems of algorithmic bias, data sovereignty, and rapid labor market shifts, Belize's use of broadly applicable policies may mean it will remain in its current "Explorer" position. This research suggests that

how organizations are prioritized and specialist laws are created are the primary drivers of AI maturity, and not simply a country's Gross Domestic Product (Venkatesh et al., 2003; ECLAC, 2025).

Literature Review

Theoretical Framework: The UTAUT Model

This research uses the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), to investigate the differences in how readily artificial intelligence is taken up. Four main ideas shape adoption: performance expectancy, effort expectancy, social influence and facilitating conditions.

1. **Performance Expectancy (PE)**, is the extent to which AI is thought to improve efficiency or economic development in tourism, healthcare, agriculture and other industries (Aderibigbe et al., 2023; Ayyoub, 2025). In the Caribbean, Jamaica has a high PE, tying AI to the reshaping of its workforce.
2. **Effort Expectancy (EE)**, refers to how simple it is seen to be to incorporate AI tools into current processes in both the public and private sectors (Russell & Norvig, 2020; Venkatesh et al., 2003). Belize finds effort expectancy a major problem, because the complicated administration of specific AI policies is progressing faster than the country's administrative ability.
3. **Social Influence (SI)**, is the effect of organizations in the region (CARICOM, IDB) and diplomatic leaders on what countries prioritize (Ayyoub, 2025; Caribbean Telecommunications Union [CTU], 2025). This research will use this to look at the "neighbor effect" whereby Barbados's achievements in areas such as the Blue Economy build regional pressure for other Small Island Developing States to use similar, agile models.
4. **Facilitating Conditions (FC)**, cover access to the specialized digital infrastructure needed, including fast broadband, a power supply and technical training (ECLAC, 2025). Belize's "Horizontal Focus" represents direct investment in FC, creating the necessary connectivity for future AI applications, likened to laying the rails for a train (Thompson, 2025).

Recent 2025 research (Hržica et al., 2025) found that the original UTAUT model is especially strong for understanding AI. This is because it considers adoption on two levels, combining wider systemic issues with individual readiness. UTAUT explains up to 70% of why people intend to use a technology, a substantial improvement on earlier models (Wolfe et al., 2025). The model accounts for the fact that the public sector isn't all the same and for the "tenure-based" civil service encountered in Caribbean governments by including critical moderators like experience and voluntariness. Also, more recent 2025 versions of the UTAUT model often include anxiety as a key element. This is because getting people to use AI isn't simply about installing a new program; it is a "psychological and cultural transformation" (Hržica et al., 2025). That's very important for Belize's "nascent ecosystem," where people being resistant to the idea of AI could be as much of a problem as a lack of technical skills.

The Caribbean AI Maturity Gradient

The AI Maturity Gradient is a benchmarking framework to measure how well a government is using artificial intelligence to improve services for people. Since early 2026, the standard for this measurement changed to look at a government's ability to manage AI, the quality of its data, and how quickly its rules can adapt, rather than just whether it has the technology itself. The 2025 Government AI Readiness Index places countries into tiers based on their ability to move from theoretical strategy to active implementation (Oxford Insights, 2025).

The categorization in Table 1 illustrates how a country progresses from simply using AI to becoming a leading developer of AI solutions.

- Jamaica and Trinidad & Tobago are in the 'Adopter' stage, and are going beyond general planning to actually begin applying AI to particular areas of the economy. Jamaica specifically has made building a workforce skilled in AI a priority, and is tackling the lack of AI expertise by creating educational courses in collaboration with employers (ECLAC, 2025; OPM, 2026; International Labor Organization, 2025).

- Barbados, classified as an Emerging Adopter, is using its strategic agility to its advantage, rather than merely depending on a large economy. Barbados, with its higher income, is drawing in 'digital nomads' and encouraging the growth of local businesses that provide AI-based services, including those for the 'Blue Economy', and is as a result avoiding some of the difficulties of traditional development (Ministry of Finance, Economic Affairs and Investment, 2025).
- Explorers such as Belize frequently encounter a 'connectivity paradox', meaning that while more people are getting online, they are lacking the detailed expertise and organizational structures needed to expand AI innovation. Belize's AI environment is very new, with limited funds for new businesses, a very early stage startup culture, and a main emphasis on general digitalization (E-Governance and Digitalization Unit, 2022).

Table 1: Caribbean AI Maturity Gradient (2025–2026)

Country	Maturity Tier	Key Indicators & Strategic Status
Jamaica	Adopter	Integrating AI into national productivity and MSME strategies to drive economic growth in sectors like tourism and agriculture.
Trinidad & Tobago	Adopter	Transitioning through specialized ministerial oversight and conducting national AI readiness assessments (RAM).
Barbados	Emerging Adopter	Demonstrating agile governance by embedding flexible mechanisms like "regulatory sandboxes" and ethics-by-design frameworks.
Belize	Explorer	Focused on foundational "horizontal" digital infrastructure, currently lacking the vertical, specialized AI governance seen in higher-tier neighbors.

Structural Barriers and the "Connectivity Paradox"

Current forecasts for 2026 are strongly indicating that effective governance is a more important factor for success than technological solutions in isolation. The situation between 2025 and 2026 illustrates that the Caribbean is among the least ready areas in the world. This is largely due to the fact that many projects are fragmented and difficult to expand, as there is a lack of clearly assigned responsibility (Oxford Insights, 2025). Research has identified a "connectivity paradox" for the Caribbean: digital activities are high despite the weakness of the infrastructure. Caribbean countries are, in fact, doing better than expected with artificial intelligence, specifically with applications geared towards the user, but a substantial shortage of funding exists. Despite the region's contribution of 6.6% to the world's Gross Domestic Product, it attracts only 1.12% of the world's investment in AI (ECLAC, 2025).

The difference between stronger and weaker tiers is often determined by:

- **Institutional specialization**, with some places having ministries specifically for the purpose (as in Trinidad and Tobago) and others having more general electronic governance departments.
- **Data sovereignty**, which is the possibility of progressing from simply sending data out of the region to creating artificial intelligence models that are specific to the region and its culture.
- **Agile governance**, the introduction of adaptable systems such as regulatory sandboxes to assess AI applications in areas like the "Blue Economy".

For Belize, these barriers are compounded by connectivity gaps; mobile broadband download speeds are considerably lower than the average for the region, which restricts the scaling of local technological initiatives within the country (IMF, 2025).

Comparative Analysis: Legislative and Institutional Frameworks

Table 2 offers a very careful comparison of the Artificial Intelligence maturity gradient across Belize, Barbados, Jamaica and Trinidad and Tobago in early 2026. The data, assessed using the UTAUT framework, demonstrate that the extent to which each country has specialized institutions, and makes AI a strategic priority, is directly related to how much the technology is being taken up in that area (Venkatesh et al., 2003). Belize is currently at the "Explorer" stage of development, because of its horizontal policies

being broad in scope, whereas its neighbors have reached "Adopter" level. This progress is due to their introduction of vertical, focused, AI-specific management and dedicated research centers (E-Governance and Digitalization Unit, 2022; Economic Commission for Latin America and the Caribbean [ECLAC], 2025).

Table 2: Comparison of AI-Related Legislative and Strategic Actions

Feature	Belize	Barbados	Jamaica	Trinidad & Tobago
Maturity Tier	Explorer	Emerging Adopter	Adopter	Adopter
Primary Driver	Facilitating Conditions (Infrastructure)	Social Influence (Regional Leadership)	Performance Expectancy (Productivity)	Effort Expectancy (Government Efficiency)
Secondary Driver (Anxiety)	High (Nascent Ecosystem)	Low (Agile Governance)	Moderate (Labor Shift)	Moderate (Institutional Shift)
National AI Strategy	Integrated into Digital Agenda 2022–2025 (E-Governance and Digitalization Unit, 2022)	Data Use Policy (Government of Barbados, 2019)	Policy recommendations and National AI Lab (OPM, 2025a)	National AI Readiness Assessment (RAM) (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2025)
Strategic Focus	Horizontal Digitalization	Digital Sovereignty & Blue Economy	Labor Force Transformation	Ministerial & Institutional Oversight
Dedicated Oversight	E-Governance & Digitalization Unit (E-Governance and Digitalization Unit, 2022)	Ministry of Industry, Innovation, Science & Tech (Central Bank of Barbados, 2024)	National AI Task Force (OPM, 2025a)	Ministry of Public Admin. & AI (MPAAI, 2025)
Specific AI Legislation	Data Protection Act (Government of Belize [GOB], 2021)	Remote Employment Act (Government of Barbados, 2020)	Strategic frameworks under discussion (OPM, 2025a)	Ethical governance through UNESCO RAM (UNESCO, 2025)
R&D Hubs	DIA Lab Belize (Belize Chamber of Commerce and Industry [BCCI], 2022)	Blue Economy Hub (United Nations Development Program [UNDP], 2025)	National AI Lab at UTech (OPM, 2025a)	D’Hub and UNESCO RAM (UNESCO, 2025)
Key AI Pilot Case	Belize Integral Security Program (BISP) (Ministry of Economic Development, 2025)	BlueBOT/ BlueDIGITAL, IoT Aquaponics & 3D Reef Mapping (Compete Caribbean, 2025; Global Ag Tech Initiative, 2025)	Education Sector Pilot (National Council on Education, 2025)	AI Academy (MPAAI, 2026)

Results and Discussion

Institutional Specialization

When assessing how Trinidad and Tobago and Belize are progressing in their adoption of artificial intelligence, it is important to examine the structure of their governmental organizations. As of 2026, the difference between Trinidad and Tobago's "vertical" specialized ministry and Belize's "horizontal"

centralized unit, which applies to many areas, is the main reason for their differing maturity tiers. This is shown in Table 3.

Table 3: Comparative Governance: Trinidad and Tobago vs Belize

Feature	Trinidad and Tobago (Adopter)	Belize (Explorer)
Primary Oversight	Ministry of Public Administration and Artificial Intelligence (MPAAI)	E-Governance and Digitalization Unit
Governance Model	Vertical Specialization: Dedicated ministerial status allows for direct AI policy-making and ethical auditing.	Horizontal Centralization: AI is integrated into a broader digital agenda focused on general infrastructure and digital literacy.
Key 2025/26 Milestone	Launched a National AI Readiness Assessment (RAM) with UNESCO and UNDP.	Launched "Pilot Project for Higher Tier Global Digital Services" focusing on foundational AI readiness skills.
Institutional Strategy	Merged Public Administration and Digital Transformation to prioritize AI across the civil service.	Aligned with "Plan Belize 2.0" to strengthen the Blue Economy through foundational digital transformation.

Trinidad and Tobago's advancement to the Adopter tier is largely due to their creation, in May 2025, of the Ministry of Public Administration and Artificial Intelligence (MPAAI, 2025). This was a significant change in how things are run in the region. This specialization enables more focused programs including:

- Direct accountability for AI ethical standards, classifying the risks involved and determining who has the authority to make decisions.
- Capacity development through focused development of skills with civil servants to deal with "agentic AI" (AI which acts on a user's behalf) which is a priority for 2026.
- Establishing strategic partnerships to allow for in-depth analysis. The UNESCO AI Readiness Assessment, for example, assesses the legal, social and technical issues relating to AI specifically, rather than the more general IT issues which are the concern of most e-governance departments (UNESCO, 2023).

Belize, on the other hand, remains at the Explorer tier because it continues with a centralized e-governance approach. Although this is successful for general digitalization and for establishing "horizontal" infrastructure such as submarine cables, Internet Exchange Points and satellites (E-Governance and Digitalization Unit, 2022), it lacks a dedicated "vertical" organization for regulating or researching AI governance, and frequently considers AI to be a secondary technical consideration (E-Governance and Digitalization Unit, 2022).

- The E-Governance and Digitalization Unit is responsible for a broad range of horizontal platforms, for example, e-ID systems and online application portals, and this breadth of responsibility can lessen the concentration of attention required for the complicated regulation of AI.
- The current focus of their strategies is on improving broadband access and digital inclusion - the "railroad," as it were - as outlined in the National Digital Agenda (2022–2025) risk categorization and the establishment of who has the power to make decisions.
- Belize has begun "AI Readiness" training for their Business Process Outsourcing sector, but these programs are still being piloted and are concentrating on basic digital skills for service provision instead of advanced AI research and development.

Experts in the region suggest Belize would need to incorporate the agile governance of the more advanced Caribbean nations to reduce the difference in advancement, and move towards employing agentic systems capable of managing complex activities like automated procurement and incident management.

The Barbados Model: Strategic Agility

Barbados provides a critical counter-argument to the idea that a large economy is essential for advancement and has established itself as a key center for the "Blue Economy" in the region, deploying artificial intelligence for both marine spatial planning and improving its ability to withstand the effects of climate

change (UNDP, 2025). Barbados's forward-thinking approach to "Digital Sovereignty", and the Barbados Remote Employment Act, has encouraged the growth of AI-based services within the country. Belize could emulate a similar course of action to address its current lack of development in this area and bridge its own maturity gap (Brathwaite, 2026).

Unlike Belize's comprehensive or "horizontal" plans, Barbados proves that a country does not require a very large economy to become highly skilled in AI; instead it is using strategic agility to concentrate on particular areas of high financial value. Barbados's development is defined by three main factors:

- **Vertical specialization** on the "Blue Economy" for which it specifically uses AI in marine spatial planning and for climate resilience,
- **Legislative innovation**, through its pioneering laws, specifically the Barbados Remote Employment Act which has allowed for an internal base of AI-based services to flourish by being attractive to digital nomads and experts in their fields,
- **Policy prioritization** where, despite having a population similar in size to Belize's, Barbados has reached Emerging Adopter status due to strong government support and strategic prioritization, rather than its Gross Domestic Product.

This research suggests Belize's advancement from Explorer to Adopter status will require a shift to an agile, vertical model that:

- **Transitions from a horizontal to a vertical agenda**, specifically, moving from a broad, "railroad" style digital plan, to a complete Vertical AI Policy Roadmap, which can be likened to a "train". The existing E-Governance and Digitalization Unit does not have to be replaced to achieve this, but should evolve into a department with the ability to perform AI-specific ethical audits and risk assessments.
- **Establishes dedicated oversight**, since in addition to utilizing the E-Governance and Digitalization Unit for general functions, a specific organization for researching or regulating AI governance, analogous to the dedicated Ministry in Trinidad and Tobago, is now essential.
- **Introduces targeted pilot cases**, that follow the Barbados examples, Belize should progress from individual, isolated projects to a coordinated national research and development process for essential areas, including healthcare, and agriculture.

Table 4 demonstrates an important change in how Caribbean countries are approaching digital strategy; they are moving from simply providing the basics to being able to use these systems effectively. Belize is very good at putting in place the Facilitating Conditions, things that make digital systems possible, such as digital infrastructure and digital identification, but higher-maturity neighbors are concentrating on Effort Expectancy, how easy it is to start using Artificial Intelligence. They are doing this by lowering technical, regulatory, and institutional barriers to AI adoption through specialized oversight (CTU, 2025; Ministry of E-Governance, 2025).

Table 4: Summary of Institutional Differences

Feature	Belize (Explorer)	Barbados (Emerging Adopter)	Trinidad & Tobago (Adopter)
Governance Style	Horizontal/Centralized: AI is one part of a broad e-governance mandate.	Agile/Strategic: Uses "sandboxes" and targeted pilots to enable rapid innovation.	Vertical/Ministerial: Dedicated Ministry (MPAAI) for direct AI oversight and auditing.
Primary Driver	Facilitating Conditions	Social Influence	Effort Expectancy
Strategic Focus	General Digitalization (The "Railroad").	Blue Economy & Sovereignty niche applications.	Institutional Capacity & Public Service Transformation.
Primary Challenge	AI Capacity Debt and lack of specialized oversight.	Maintaining scale while managing cross-border data flows.	Integrating "agentic AI" into legacy civil service systems.

Beyond the specific metrics in the table, the following assessment explains how the "pacing problem" - the disparity in speed of advancement - and institutional design are responsible for the functional differences between these Caribbean countries:

- **Horizontal vs Vertical Mandates:** In terms of mandates, Belize views AI as a broadly applicable service, while Trinidad and Tobago's approach is to consider AI as a field with its own specific risks and opportunities and therefore needing its own regulations.
- **The "Pacing Problem":** Barbados is dealing with the "pacing problem" or the discrepancy between how quickly technology advances and how slowly regulations are made, by using agile governance. This means they are replacing inflexible, fixed policies with dynamic policies that evolve based on current data and regulatory sandboxes.
- **Institutional Identity:** In the higher-tier nations, governing AI has matured from a solely administrative duty to being an operating reality; procurement, ethical considerations and control of data are included in all contracts within the public sector.

To avoid the "pacing problem," governments need to move beyond simply approving static, white-paper policies and then doing nothing further with them. Instead, they should adopt "AI Governance as an Operating Model", fully incorporating responsibility, evaluation of potential issues, and the tracking of results into the regular, ongoing operation of all deployed AI systems (Schellman, 2026; Truyo, 2026).

Barbados is an example of an Emerging Adopter, and it's using agility to get around the problems of a small economy. In contrast to the traditional system of each ministry operating independently, Barbados is focusing on creating flexible regulatory environments.

- **Regulatory Sandboxes:** Barbados has been a leader in using regulatory sandboxes; these are safe spaces for AI businesses to try out new developments - for example, AI-powered financial technology or "Blue Economy" tools - with oversight from regulators, but without the immediate burden of full compliance.
- **Human-Centric Policy:** Barbados's policy is designed around people, and in line with the AI Principles of the OECD, which focuses on "trust as a strategic capability". By giving more importance to openness and reporting when things go wrong, rather than punishing people, Barbados is able to draw in skilled people from around the world in digital industries and those who work remotely.
- **Dynamic vs Static Governance:** Belize's current regulatory structure is "static", being updated periodically. Barbados, however, is moving towards "continuous assurance", meaning it will be looking at AI systems in real time to identify dangers such as bias or drift as they develop.

Sector-Specific Applications: Agriculture and Healthcare

Artificial intelligence adoption in the Caribbean is becoming more and more focused on the "Blue Economy" and improving agricultural health. Belize has been developing the essential, broad-based horizontal infrastructure for this technology, but these efforts are often isolated. In contrast, other Caribbean nations are developing AI-supported vertical enhancements that are included within a comprehensive, nationwide research and development structure (Portulans Institute, 2025).

- **Belize (Explorer):** Belize is beginning to use precision agriculture, and the 2026 Drone Pilot Training for agricultural extension officers in Blue Creek, is an example of this. This program, which has the backing of the Inter-American Institute for Cooperation on Agriculture (IICA), will look at soil health and identify pests in real time. Importantly, it is going past merely gathering data to automatically determine and flag potential issues (Inter-American Institute for Cooperation on Agriculture, 2025).
- **Barbados (Emerging Adopter):** Barbados is the frontrunner in the region, with its AI Agronomic Advisor, a specialized platform for both the "Blue" and "Green Economies." Barbados is employing AI to decrease water consumption by 90%, and to improve fisheries management, by combining aquaponics with Internet of Things (IoT) and three-dimensional mapping of reefs (Global Ag Tech Initiative, 2025).
- **Trinidad & Tobago (Adopter):** Trinidad and Tobago is using AI tools in agriculture for automated yield forecasting, for establishing planting times, and for better control of pests and illnesses, in a direct effort to improve food security (AgriFocus Caribbean, 2025).

Healthcare in the region is changing from simply having records in electronic form (digitization) to using artificial intelligence to actively improve the process of medical decisions (digitalization).

- **Jamaica (Strategic Leader):** Jamaica, considered a strategic leader in this evolution, has integrated a five-pillar AI strategy in its Ministry of Health & Wellness' Vision for Health 2030 strategic plan. This strategy includes AI-based prediction models for non-communicable diseases (NCDs), and AI-powered mobile applications to help patients take their medicines as directed (Ministry of Health & Wellness, 2025).
- **Belize (Developing):** Belize, which is developing its systems, equipping 13 facilities with fully digitized records through the Health Systems Strengthening Program (HSSP). This will provide the Facilitating Condition (quality data) that is necessary for the future development of AI diagnostic tools (Portulans Institute, 2025).
- **Regional Trends:** Across the region, those who are adopting AI are progressing to "Learning Health Systems" - in these, AI is not merely an addition to current practices, but is built into the core of the system to automate administrative coordination and prior authorizations (Pan American Health Organization, 2025).

Talent, Education, and Labor Risks

Jamaica has made improving local AI literacy a priority, and has a plan to establish AI labs in both primary and secondary schools (OPM, 2025a). Belize, in contrast, is at present focusing on basic skills in using digital tools as outlined in their 2021-2025 Education Sector Plan. The DIA Lab Belize project, and other similar programs, are fairly recent and do not reach many people when compared to what's happening in neighboring countries (BCCI, 2022). Because Belize does not have a robust system for AI education, it could seriously hinder its development in the future. Without a steady supply of specialists in AI, Belize risks continued "brain drain", losing educated workers to larger regional hubs (Di Giorgio et al., 2024; Inter-American Development Bank, 2026). In addition, roughly 30 to 40 per cent of jobs throughout the region are susceptible to the effects of generative AI; as a result, the business process outsourcing industries in Belize and Jamaica are at a particular risk of being replaced by automated systems if appropriate governance is not in place (IMF, 2025).

Regional Synergy and Limitations

By 2026, Caribbean nations are moving away from each of their own individual digital programs and are instead adopting a common approach through CARICOM in order to gain 'digital sovereignty' (ICT Pulse, 2026). This collaboration turns the disadvantages of small size into an advantage for the entire region through harmonized governance and infrastructure (CTU, 2025). UNESCO and the IICA are helping to encourage this change. Jamaica's policy proposals for 2025, for instance, were developed by consulting with stakeholders from both the public and private sectors, with the intention to respond to particular cultural contexts (OPM, 2025b). Establishing shared databases and skills improvements, potentially by developing a CARICOM single ICT space to allow for regional data exchange and independently managed computing (CARICOM. 2017; CARICOM Secretariat, 2025), and by using regional centers for expertise such as the UWI Five Islands AI Conference to deal with technical gaps and skill shortages as a group (CAF-Development Bank of Latin America and the Caribbean [CAF], 2025; The University of the West Indies, 2025) will enable these goals.

However, significant gaps in the structure of the region's digital systems, including brain drain or the loss of skilled workers, insufficient investment, and inherent biases in algorithms, could widen the divide between regional Adopters and Explorers. A serious lack of specialist training and the emigration of experts to the Global North are hampering local innovation (ECLAC, 2025). Though the Caribbean accounts for 6.6% of the world's economic output, it only receives 1.12% of the world's investment in AI (ECLAC, 2025). Dependence on models created in Western countries causes misunderstandings of Caribbean social norms and languages, and subsequently a risk of social exclusion (Portulans Institute, 2025). Belize's main problem is the lack of primary data or frequent surveys of the workforce; this makes it hard for policymakers to accurately assess how AI is impacting employment (Statistical Institute of Belize, 2025; World Bank, 2025).

Limitations

Several limitations to this research should be noted:

- **Data Availability:** The study's dependence on government reports which are in the public domain, and reports in the media, potentially introduces some bias or gaps in the information.
- **Lack of Primary Data:** The lack of direct interviews or surveys of regional information technology professionals limits a more nuanced understanding of the difficulties of AI implementation at a local level in Belize.
- **Scope:** Concentrating on Barbados, Jamaica and Trinidad and Tobago means that the variation in AI acceptance throughout the broader Caribbean is not completely represented.

Conclusion

Belize's slower adoption of artificial intelligence compared to its regional counterparts - Jamaica, Trinidad and Tobago, and Barbados - is due to those nations having made AI a priority with specific institutions to oversee its use and specialized strategies for its application (ECLAC, 2025; MPAAI, 2025; UNDESA, 2024). In order to close this gap and mitigate risks like displacement and cultural erasure, Belize needs to do the following:

1. **Transition** from a broadly based digital agenda to a thorough, detailed Vertical AI Policy Roadmap (E-Governance and Digitalization Unit, 2022).
2. **Enact** an AI-specific ethical framework to work alongside the Data Protection Act of 2021.
3. **Invest** in AI research and development and encourage a business environment where new AI businesses can thrive (CAF, 2025).
4. **Expand** access to education and training in AI skills, leveraging relationships with other countries in the region and international cooperation (Aderibigbe et al., 2023).
5. **Collaborate** with regional partners to adapt AI to the specific requirements of vital areas of the economy such as medical care, agriculture and the Blue Economy (CTU, 2025; Portulans Institute, 2025; UNDP, 2025).

Belize does not have to become a leading nation in the region to be successful with artificial intelligence, but it should embrace the agile governance model Barbados has shown is effective (UNDESA, 2026). This will entail reorganizing Belize's E-Governance and Digitalization Unit into a "Hybrid Agile-Vertical" structure to:

1. **Establish an AI Oversight Committee:** This committee, existing as a specialized group within the Ministry, will operate beyond the horizontal mandate to manage the ethical audits and risk assessment of AI applications (World Economic Forum, 2026).
2. **Adopt "Governance as an Operating Model":** This means shifting from a fixed policy like the 2022-2025 Agenda to a dynamic, evolving system of governance which includes human review and automated bias detection (CTU, 2025).
3. **Focus on targeted "Value Chain" Pilots:** Instead of broad digitalization, the focus should be on high-growth verticals with strong development potential, for example, the "Orange Economy" or the high-value analytics of Business Process Outsourcing (GOB, 2025a). This will allow for improvements to the governance model and incentive frameworks before it is put in place nationally (GOB, 2025b; OPM, 2025a; IDB, 2025).

In the end, moving from an Explorer status to an Adopter status is not just about improving technology, but is a fundamental shift in national priority. Through agile governance that bridges the gap between the rapid advancement of technology and the slower pace of regulatory changes, Belize can go from merely having foundational infrastructure in place to a future of functional accountability. If Belize successfully addresses its AI Capacity Debt and develops the specialized areas of expertise that its Caribbean neighbors are building, it will be a firm part of the Caribbean's movement toward digital sovereignty, and can transform the possibility of quickly advancing with a "leapfrog" opportunity into a sustainable economic reality.

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