

Ctrl + Alt + Del: The Incomplete Promise of E-Government



Image Source: [Illustration](#) by macrovector on Freepik

President Trump began his second term with a sense of urgency backed by [decisive victories](#) in both the electoral college and, more notably, the popular vote. Perhaps it's no surprise that the website of the newly-established Department of Government Efficiency (DOGE) touts, "[The people voted for major reform.](#)" Created via executive order to "[implement the President's DOGE Agenda \[by\] modernizing Federal technology and software to maximize governmental efficiency and productivity,](#)" the group (who, despite its name, is not actually an executive department) has made its mark primarily via cuts to federal spending and mass workforce layoffs, working closely with the Office of Personnel Management and the Office of Management and Budget.

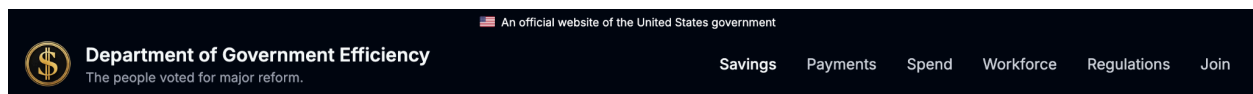


Figure 1: DOGE's website, screenshotted 4/27/2025.

Contrary to its stated mission, DOGE's extensive cuts have hit existing government technology agencies hard. DOGE eliminated 18F, an internal consulting agency within the General Services Administration's Technology Transformation Services that attracted "[talented technologists to the civil service](#)" and made it easier for Americans to digitally access government services. The newly appointed head of the TTS, a former Tesla engineer named Thomas Shedd, announced that there would be an "[at least 50%](#)" further reduction of the TTS office.

In February, the administration's [plan to reduce the size of the federal government while simultaneously modernizing it and maximizing its efficiency](#) ("technology and automation") [particularly AI was leaked to the press.](#) That same week, an anonymous US official told the

Washington Post that DOGE's ["end goal is replacing the human workforce with machines." and that "everything that can be machine-automated will be."](#)

The Trump administration's push to digitize federal government processes isn't baseless. Improving the government's technology capacity, reducing its reliance on external contractors, and removing procedural and personnel bloat are solid steps to take towards a more efficient government. But the recent blitz of changes goes about this process recklessly. **Without consideration for upgrading legal, administrative, and regulatory elements, US e-government services are likely to be error-ridden, unreliable, and unsafe. This will decrease citizen trust in e-government, and by extension, the government itself.**

The US is hardly the only country to consider integrating more technology into its governing process. In fact, it's become an increasingly widespread and intensive global phenomenon. Across the world, [citizens can visit government websites for information and file official forms online; civil servants use internal data systems, automate simple tasks, and use monitoring technologies to enforce laws and collect information.](#)

Terms used to refer to the use of these information and communications technologies in internal and citizen-facing processes have varied over time, just as the nature and scope of ICT use have. "[Digital government](#)", "[e-governance](#)," "[e-government](#)," and other terms refer to variations of this practice, but have often been used interchangeably. For the sake of brevity, "e-government" will refer to the use of ICTs in both internal governance processes and citizen-facing public services.

While governments have been using ICTs since the 1960s, interest in deploying citizen-facing technology applications took off around the turn of the millennium. This coincided with a paradigm-shifting reevaluation of public sector value. Taking inspiration from management practices in the private sector, governments were encouraged to view citizens as "customers." The value of the public sector would be measured not by internal efficiency, but by the value it created for its citizen-customers via public services, both as individuals and as a collective society. ICTs were seen as a way to improve the delivery of public services by increasing efficiency, transparency, and coordination between different government entities. They were also seen as a way to serve societal interests by enhancing citizen participation in governance.

By 2003, the UN had begun measuring global trends in e-government using the E-Government Development Index. A country's EGDI, which averages indicators of national and subnational online services provision, technology infrastructure, and human capital, reflects how it compares to other countries in these areas. Over the last two decades, [the world average EGDI has seen near-continuous growth.](#)

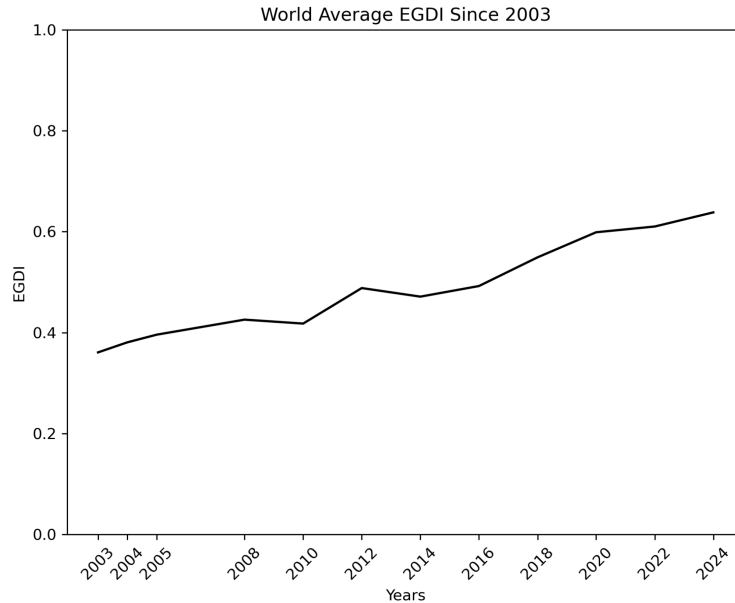


Figure 1: Near-Continuous Growth in World Average EGDl.
Data Source: [UN E-Government Database](#)

As citizens gain access to and make increasing use of internet services, they will expect their governments to meet them where they are. The global percentage of individuals using the internet grew from [16%](#) of the world's population in 2005 to [68%](#) in 2024, and is projected to reach [70%](#) by 2030.

In a world where instant commerce, banking, communication, and information retrieval are only a click, swipe, or a tap away, citizens are increasingly calling on their governments to deliver public services with similar efficiency. A 2024 study found that [38% of UK citizens expected their government to match companies like Uber, Netflix, and Amazon in speed, and that 85% wanted "fully digital public services" by 2026. However, 31% didn't trust that their government would be able to deliver.](#)

When citizens feel that digital public services aren't up to par with digital private ones, they could begin to lose trust in government competency. If a citizen runs into numerous difficulties, say, filing their taxes online or applying for a passport, they may revert back to traditional analog services, reducing the impact of e-government reforms. [Disappointing experiences with government services can make citizens less likely to engage in civic activities and less likely to trust in government institutions](#)— not great in a time when [trust in government competency is already low](#).

Only Business Seen as Both Competent and Ethical

(Competence score, net ethical score)

GLOBAL 20 excl. China, France, Saudi Arabia, S. Korea, Thailand, UAE

2025 Edelman Trust Barometer. The ethical scores are averages of nets based on [INS]_PER_DIM[1-4]. Media and NGOs were only asked of half the sample. The competence score is a net based on TRU_3D_[INS]1. Media and NGOs were only asked of half the sample. General population, 20+mt avg. Data not collected in China and Thailand; Due to a translation inconsistency in France, Saudi Arabia, S. Korea and UAE, they have been excluded from this analysis. For full details regarding how this data was calculated and plotted, please see the Technical Appendix. Respondents in Canada who took the survey in French were recontacted between December 12 and 17, 2024 to address a translation issue affecting this question. For more details, please see the Technical Appendix.

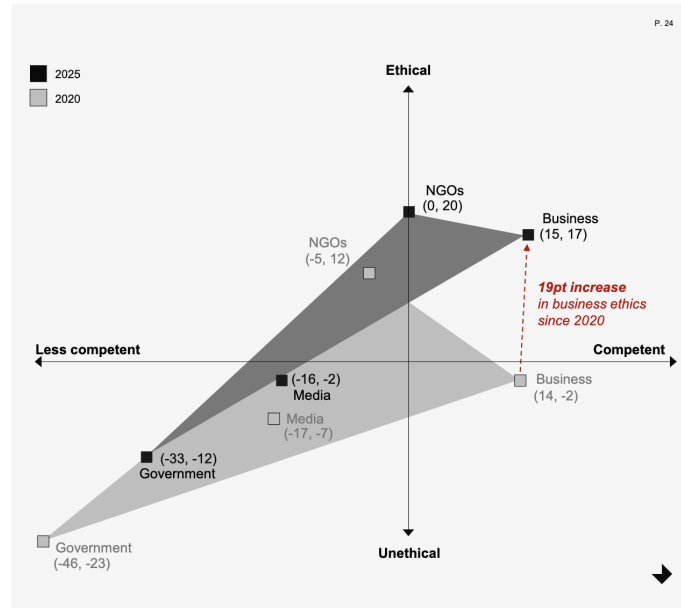


Figure II: Decline in Perceptions of Government Competence and Ethical Behavior. [Edelman Trust Barometer](#) (2025)

Government Distrusted in 17 of 28 Countries Measured

Percent trust in government

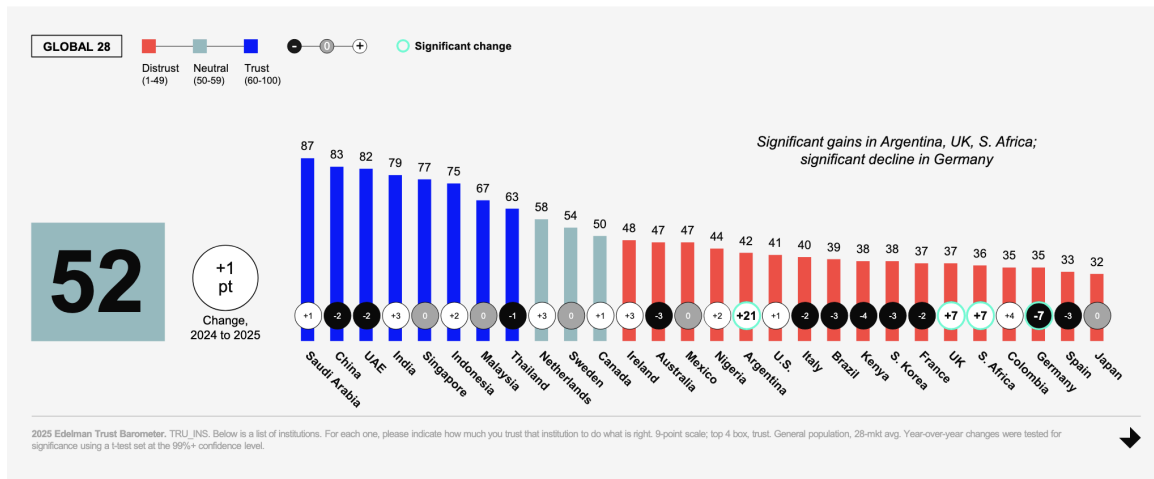


Figure III: Significant Global Distrust in Government. [Edelman Trust Barometer](#) (2025)

Governments have an incentive to invest in improving digital public service delivery. However, the e-government development process is “[neither inevitable nor unilinear.](#)” Digitizing the governing process is a complex, time-consuming, and expensive effort: without consistent government and societal support, e-government expansion efforts can easily flounder or grind to a halt. In particular, many developed countries with existing e-government systems are struggling to add new capabilities to legacy systems that are often outdated and backlogged. Developing and low-income countries’ e-government capabilities and adoption rates have

lagged behind that of high-income countries for decades, despite concerted efforts to invest in telecommunications infrastructure and online services.

A key element of e-government adoption issues faced by both developed and developing countries is that while technology can make government more efficient, transparent, and participatory, it isn't a silver bullet. E-government implementation is not a matter of technology modernization alone; it needs strong social, legal, administrative, and regulatory bases to be lasting, effective, and trustworthy. By overlooking the need for these foundations, governments risk creating systems that are inefficient, prone to failure, or not trusted by citizens.

Developing Countries and Barriers to Leapfrogging

Developing countries stand to benefit the most from e-government through the [leapfrog effect](#). While developed countries often had to invest massive amounts of time and resources into research and development, developing countries can bypass those intermediate stages of investment by assessing what has already been tried and tested. They can directly implement up-to-date technologies into the governing process and potentially skip stages in socioeconomic development. For example, instead of first developing traditional paper-based systems, countries like India seeking to improve their civil identification systems [have begun establishing unique digital identities for their citizens to be stored in digital civil registries](#). This can improve access to services like healthcare and banking, especially for women and those living in poverty. Indeed, the UN has found [high correlations](#) between a country's e-government strength and their attainment of the UN's Sustainable Development Goals.

General enthusiasm for e-government has been on the rise in developing countries. A 2022 [EY survey of thirteen countries](#), five of which were "emerging markets," found that citizens in emerging markets were "more optimistic than those in developed countries about how technology can improve how they interact with public services" and that many held out "strong hopes for improvements in public service from digital technology."

Government investment in technological infrastructure has in fact been a target for most developing countries, barring those facing civil unrest. Data from the UN E-Government Database [shows that the average Telecommunications Infrastructure Index \(TII\) score for least-developed, lower-middle-income, and low income countries increased by a staggering 206% from 2014 to 2024](#). However, their EGDI scores only increased by 58% over the same time period. Similarly, the proportion of these countries with TII scores above or equal to the world average increased by 267% from 7% in 2014 to 26% in 2024; however, the proportion of these countries with EGDI scores above or equal to the world average increased by a much smaller 58% from 14% to 23%. This suggests that, while much-needed investment in technology is improving, other elements remain under-addressed.

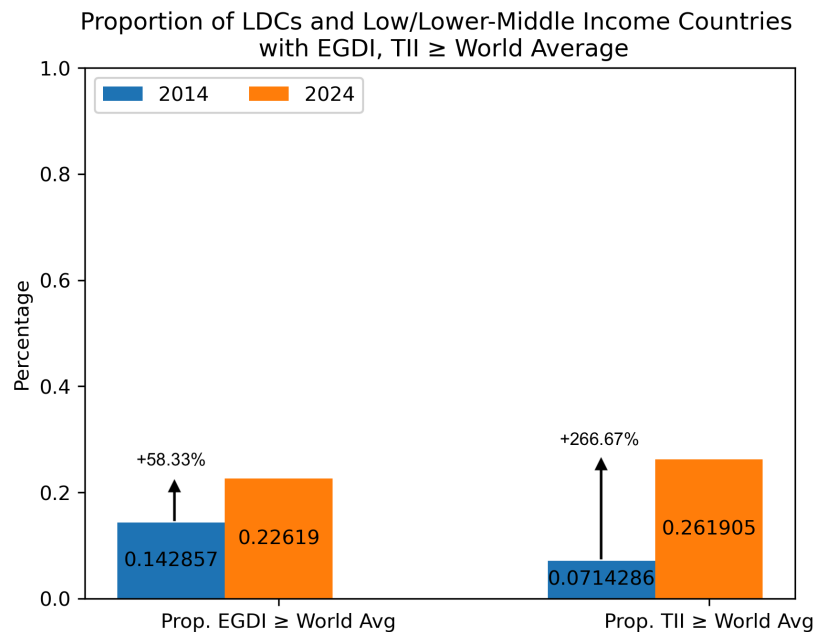
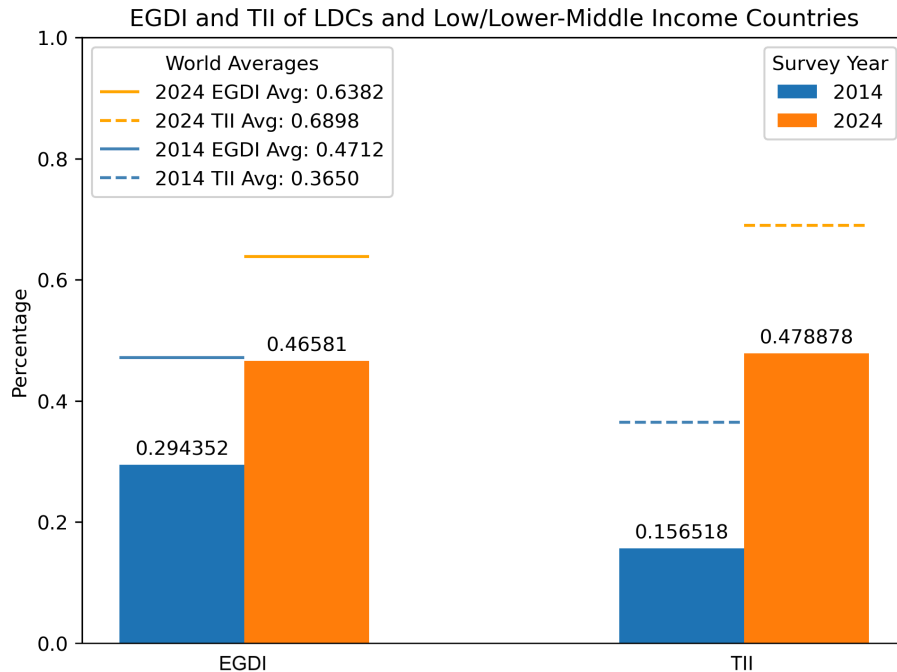


Figure IV: Comparisons of 2014 and 2024 EGDI and TII Data from LDCs, Low-Income, and Lower-Middle Income Countries.

Data Source: [UN E-Government Database](#).

E-government success is ultimately contingent on citizens' satisfaction with e-government services. This satisfaction depends on their ability to comfortably and securely access those services, as well as the government's ability to reliably provide services that are efficient, accurate, and secure. E-government adoption attempts in developing countries that performed poorly despite investment in technology infrastructure often ran into underlying gaps in digital

literacy that hindered access to *and* provision of e-government services. Even when services were provided, departmental silos that required citizens to file duplicate forms, slow turnaround times, missing or outdated information, and/or fears of data breaches and misuse often disincentivized citizens from engaging with e-government.

Thailand's 2004-2007 Smart ID Card project is an example of an e-government effort that failed despite [large amounts of investment in technology, as well as the development of a ICT strategy and a SWOT analysis regarding ICT development in Thailand](#). Intended to allow Thai citizens to use a singular card to access all government services, it was supposed to issue [64 million cards to every citizen in the country in three years](#). It ended up only issuing [12 million cards by 2006, and was paused by 2007](#).

[฿2 billion baht \(\\$46.7 million USD in 2003, or \\$81.3 million USD today\)](#) was granted to the Ministry of ICT and the Ministry of Interior for the purposes of card production and technology infrastructure development. However, other public agencies (like public hospitals) received much less funding, and were not able to adapt their services to the new card. A Thai researcher also noted that [public agencies were legally obligated to ask citizens to provide photocopies of their ID cards](#), and that [many public employees didn't even know what the ID cards were. There were also initially no card readers or kiosks for the Smart ID card](#). This rendered the smart ID card functionally useless, as the public services offered by the Thai government would be no more efficient or accessible than if a citizen were to use an old ID card. No laws and regulations existed that ensured public agencies would be able to accept these new cards.

[The citizen database that the cards were meant to access was also split into subsystems controlled by public agencies that had no communication with each other](#). Lack of organizational digital literacy, as well as the diffuse and decentralized structure of the Thai government, made database integration difficult. As a result, it was difficult for different public agencies to share information and provide services efficiently.

Thai citizens themselves didn't know much about the project, and often distrusted it if they did. There was little communication from the government explaining its scope and intended effect. One citizen interviewed at a Smart ID Card issuing station commented that they ["didn't know about the Smart ID Card,"](#) and ["\[didn't\] care very much"](#) about it. Other citizens didn't know ["whether it \[was\] good or better than the old version,"](#) and thought there was ["no difference between it and others such as the paper ID or magnetic card."](#) The card's [failure to meet security and storage management tests](#), as well as the [relative lack of laws protecting data privacy at the time](#), contributed to citizens' mistrust of the Smart ID Card project.

Solving issues like these requires a holistic approach that goes beyond investing in technological infrastructure. Increasing digital literacy for citizens and public servants may entail education policy revision, reforming public sector training programs, and rethinking how to incentivize technologists to enter the public sector. Maintaining secure, efficient e-government services that incentivize citizens to use them requires building government employee familiarity with ICT through training programs and ICT incorporation in day-to-day work. It may necessitate

restructuring how government departments collect and share data to increase transparency and protect citizens' personal information. E-government initiatives that overlook these elements risk benefitting only those who are digitally literate *and* have access to the Internet: those who tend to be educated, wealthy, and urban. Such initiatives would only exacerbate socioeconomic inequalities within developing countries *and* between developing and developed nations.

Developed Countries and Legacy Systems

Developed countries face many of the same issues as developing countries. The UK government, for example, also struggles with a highly fragmented technology landscape. Its “[appetite](#)” for constantly creating new systems atop existing ones stems from “[a combination of technical limitations, risk-averse cultures, unclear regulations, and different governance standards.](#)” [In 2021, it was using 190 unique authorization services and 44 accounts.](#) A patient managing a chronic condition would have to interact with “[more than 40 services across nine different organizations.](#)”

In addition, developed countries, which have typically had e-government systems in place longer than developing countries, must also face the additional challenge of managing pre-existing technological, administrative, and regulatory systems while adding new capabilities. In her book *Recoding America*, Jennifer Pahlka illustrates how suggested improvements to US e-government capabilities were often shot down due to mandated adherence to policies enacted decades ago — policies that “[always \[accrue\] but \[are\] rarely reduced or reconciled.](#)” She calls this phenomena “[waterfall culture](#)”: where the process of implementing a law is one-way, such that people further down the chain can’t (or don’t) question their superiors higher up in the process.

Pahlka uses her work with the California Employment Development Department during the COVID pandemic as an illustration of this phenomenon. Hired to help manage the overwhelming number of claims the EDD was receiving, her team dug into decades’ worth of technological and policy layers. Layers of macros, haphazardly connected application systems, workflows, and automated notifications had piled upon each other, often in different coding languages. The amalgamation of regulations and directions from federal agencies, the state legislature, and independent state departments had created a policy environment so complex that a claims processor with seventeen years of experience still considered himself as “[the new guy.](#)” However, many of the government employees working there were initially reluctant to accept the new suggestions of Pahlka’s team. They knew that they were more likely to get sued for procedural issues rather than substantive ones — so they stuck to procedure, regardless of the outcome.

The increasing amount of expertise needed to understand this sedimentary environment of policy implementation has contributed to a disconnect between lawmakers and those who *implement* policy. A lawmaker might, for example, decriminalize burglaries of property under \$950, expecting it to be easy for technology to automatically expunge the records of everyone who previously committed that crime. They might not know that this work has to be mostly

manually done, or that it can take years. Similarly, the newly-elected president might have mandated immediate digital transformation across federal agencies, but he probably didn't recognize the extent to which those agencies were running on the framework equivalent of a house of cards. If this disconnect widens, public services will be provided less efficiently, and at a higher cost.

New technology alone will not remedy this. In fact, inserting new technology like AI into such an environment without reforming administrative and regulatory issues like these would only further complicate policy implementation and add to the backlog. Or, in Pahlka's words, "[we were bad at technology before AI, and now we're going to be bad at it with AI for all the same reasons](#)." In the best case scenario, AI would be able to help government employees navigate the current tangle of policies and technologies from different time periods and administrations. However, overreliance on AI without reforming the underlying policy environment could lead to a future where humans lose their understanding of how the system works entirely. If that happens, the system might continually grow in complexity as legislators pass new laws, without ever being simplified.

We are already seeing the effects of myopic digitization efforts. In recent weeks, the Social Security Administration website has crashed frequently, leaving many unable to access their benefits. Current and former officials told the Washington Post that [these crashes were likely caused by DOGE's expansion of the fraud check system](#). Millions of Americans access the website each day, and [there has been a rush in recent weeks](#) in light of new uncertainty over whether people's benefits will still be accessible. It seems the [DOGE team did not test the new software to see if it would be able to handle the high volume](#).

While these outages persist, [DOGE has been planning to migrate the SSA off of COBOL within a few months](#). To achieve this constricted timeline, SSA technologists told WIRED that [DOGE would likely have to rely on AI](#). In an environment where "minor changes" could already set off a chain reaction of failures, a rushed schedule and reliance on a technology that [has been shown to hallucinate](#) could result in extended delays and missed benefits.

Meanwhile, the public has been in outrage over politically appointed DOGE staffers' access to sensitive personal information. These staffers have [violated existing security protocols by accessing data from unsecured locations, and have neglected to explain why they need this access in the first place](#). While a federal judge issued a [preliminary injunction](#) on DOGE staffers' access, the ban is only [temporary](#).

[Wait times have stretched into the triple digits](#). Frustration is through the roof. And if this trend continues, Americans may lose faith not just in digital government services but in the government's ability to deliver services at all.

Reflection

The Trump administration's support of DOGE's efforts reflects a broader global drive towards modernizing government using technology. However, without addressing the underlying regulatory complexity and administrative barriers, these efforts risk creating more problems than they solve. Successful e-government requires updating legal and regulatory frameworks to support digital services. It requires investment in digital literacy initiatives for both citizens and government employees. In some cases, it may entail rethinking how government hierarchies are structured. Both developing and developed countries must undertake this work, albeit from different angles.

Achieving true government efficiency requires investment not just in new technology, but also in the systems in which that technology must function. E-government has immense potential to improve accessibility, reduce costs, and enhance public trust. However, in order to fulfill that potential, governments must realize that technology is but one component of a complex system, not a silver bullet.

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