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The Impact Of Digital Identity Systems On Citizenship Rights

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Abstract

Digital identity systems are in fact becoming increasingly more common because of efficient service delivery and secure identity verification that are pushed for by governments and also private entities. However, these systems greatly concern certain people since they affect the people's citizenship rights. This paper critically examines digital identity infrastructures' implications for civil, political, and socio-economic rights.

Drawing on global case studies and legal frameworks, the paper analyzes how centralized identity systems based on biometrics create new forms of exclusion particularly for marginalized populations. Denial of important services, for example, healthcare, education, as well as welfare benefits, has indeed occurred when digital authentication fails, effectively rendering people invisible to the state.

The analysis identifies each of the dual roles as a digital identity. As per this analysis, it is both like an enabler and also like a gatekeeper. Poorly designed or implemented systems that can streamline access to public services may secure existing inequalities, encourage surveillance, as well as compromise data privacy. Democratic citizenship can be reinforced through transparent governance, through inclusive design, and through strong legal safeguards so that digital identity systems might not weaken it, as has been highlighted by the study's immediate necessity. Policymakers should have discussions on digital identity and consider it as being a social contract including rights-based obligations. They should consider it as no more than just a technological upgrade.

Introduction

The implementation of Digital Identity Systems (DIS) is an evolving place of trouble that has profound implications for the belief of citizenship rights in modern society. Governments international are increasingly more turning to the ones structures to enhance provider transport, improve governance, and streamline administrative strategies. At the coronary heart of these digital structures is the purpose of facilitating inexperienced and solid access to important offerings, which includes healthcare, education, and social advantages, via digital authentication. However, as with every technological development, the large adoption of virtual identification systems increases critical issues associated with residents' rights, specifically with respect to inclusion, privateness, statistics protection, and social justice. While the capacity benefits of those structures are large, their layout and implementation want to be cautiously controlled to ensure that they do now not undermine fundamental human rights or deepen existing social inequalities.

The implementation of Digital Identity Systems (DIS) is an evolving region of difficulty that has profound implications for the belief of citizenship rights in present day society. Governments worldwide are an increasing number of turning to the ones systems to enhance service delivery, decorate governance, and streamline administrative methods. At the coronary heart of these virtual structures is the aim of facilitating green and stable access to essential services, collectively with healthcare, training, and social benefits, through virtual authentication[1]. However, as with every technological improvement, the massive adoption of digital identification structures increases critical troubles related to citizens' rights, specially with appreciate to inclusion, privacy, statistics protection, and social justice. While the potential blessings of these systems are tremendous, their layout and implementation need to be carefully controlled to make certain that they do not undermine crucial human rights or deepen current social inequalities.

One of the maximum outstanding demanding situations that digital identity structures face is the want for inclusion—ensuring that every one individuals, regardless of their historical past, socioeconomic repute, or geographic area, have equal get admission to to the possibilities those structures offer. As digital identity systems grow to be included into authorities capabilities, it's far important to guarantee that they do not marginalize sure businesses. Marginalized populations along with the elderly, ladies, rural groups, refugees, and occasional-earnings individuals may be liable to exclusion, specially if the systems are designed in ways that neglect their particular needs. Theories of social justice, along with the Capability Approach by means of Amartya Sen, recommend for the removal of boundaries that prevent individuals from leading lives they cost. In the context of virtual identification structures, this entails designing systems which are handy and inclusive, ensuring that vulnerable populations can get right of entry to critical services like healthcare, education, and social welfare. It is also critical to deal with the virtual divide through making an investment in infrastructure and virtual literacy applications, if you want to empower people to have interaction with virtual systems and prevent in addition entrenchment of inequalities.[2]

A high instance of the impact of virtual identification structures on inclusion is India's Aadhaar system, which assigns a unique biometric-primarily based digital identity to all citizens. Aadhaar has greatly progressed get entry to to government offerings, specially for folks who lacked formal identity files. By linking citizens' identities to vital offerings, Aadhaar has helped facilitate the distribution of welfare benefits, together with

[1] European Commission, "eIDAS Regulation: Making Electronic Identification Work Across Borders," 2021, https://ec.europa.eu.

[2] World Bank. (2018). Principles on Identification for Sustainable Development: Toward the Digital Age. Washington, D.C.: The World Bank Group.

subsidies for food, healthcare, and education, reaching thousands and thousands of previously excluded individuals. However, the machine has also been criticized for its ability to exclude those unable to participate due to technological obstacles, together with people with out smartphones, reliable internet get right of entry to, or the vital literacy capabilities. This instance highlights the importance of making sure that virtual identity systems are designed to bridge the distance among distinctive socioeconomic corporations, for this reason enhancing their capability to access offerings without discrimination.[3]

Another crucial problem associated with virtual identification systems is privateness—especially the gathering, garage, and capability misuse of private records. Digital identity systems require the aggregation of touchy non-public statistics, together with biometric statistics, monetary information, and other private identifiers. This information collection creates substantial risks concerning the safety and privacy of people. Privacy is enshrined as a fundamental human right, as articulated in Article 12 of the Universal Declaration of Human Rights, which guarantees people' protection from arbitrary interference of their non-public lives.[4] However, as virtual identification structures frequently centralize widespread quantities of personal facts in government or corporate databases, they grow to be targets for cyberattacks, identification theft, and unauthorized surveillance. Michel Foucault's idea of the "Panopticon" is specifically applicable right here. Foucault's principle suggests that folks who are continuously monitored regulate their conduct because of the awareness of being determined. In the context of digital identity structures, the centralization of personal information in government-managed databases can result in a nation of continuous surveillance, where citizens' movements and sports are tracked and analyzed. This surveillance infrastructure poses a risk now not only to privacy but also to civil liberties, probably growing an surroundings wherein citizens are monitored and controlled through the state or other powerful entities.

To shield privateness, it's miles vital that virtual identity systems are designed with strong safeguards to save you misuse. For these systems to keep trust and ensure their effectiveness, they ought to adhere to concepts of informational privateness, which assert that people ought to have the proper to manipulate how their records is accrued, used, and shared. Strict rules have to be put in place to ensure that statistics is used solely for its meant reason and that individuals are supplied with the means to correct, delete, or control get admission to to their non-public records. Additionally, transparency is important—citizens should be absolutely informed about the nature of the information being accumulated, how it is going to be used, and who has get right of entry to to it. Governments have to enforce strong privacy protection laws and set up oversight mechanisms that prevent the misuse of personal facts for political or social control. In ensuring that citizens preserve autonomy over their

[3] K. S. Raghavan, "Digital Identity and Its Impact on Governance", Journal of Policy and Administration, Vol. 32, No. 4, 2021, pp. 185-200.

[4] Drummond Reed and Andy Tobin, The Inevitable Rise of Self-Sovereign Identity (Sovrin Foundation, 2017).

private data, digital identification structures can avoid the capacity for government surveillance and the erosion of democratic freedoms.[5]

In summary, even as digital identity structures provide great blessings, additionally they present extreme demanding situations that ought to be addressed in their layout and implementation. Governments need to make certain that those structures are inclusive, protecting the rights of all citizens, which includes susceptible organizations, and preventing discrimination. Privacy safety and data safety need to be prioritized, as the risks of unauthorized get admission to and misuse of personal statistics are massive. Additionally, digital identity structures must be designed in a manner that respects citizens' autonomy, ensuring that individuals can make informed selections approximately their participation in these systems and preserve control over their non-public records. By addressing these concerns, virtual identity systems can assist sell social justice and fairness, contributing to the conclusion of citizenship rights while heading off the ability pitfalls of exclusion, surveillance, and abuse of strength.[6]

Data Security in Digital Identity Systems

The protection of personal facts is any other important situation inside the context of digital identity structures. Theoretical frameworks in statistics security pressure the importance of confidentiality, integrity, and availability whilst managing sensitive personal information. Digital identity systems must use robust encryption protocols, biometric data safety mechanisms, and different safety features to prevent unauthorized get admission to, breaches, or misuse.

However, as publish-structuralist theories advise, there may be an inherent issue in ensuring the absolute protection of personal records. Even with superior technology like encryption, vulnerabilities can stay. Hackers, technical disasters, or insider threats can cause information breaches that divulge residents' private statistics. As visible with the Aadhaar information breach in 2018, wherein the private information of over 1 billion individuals had been compromised, the risks of centralized digital identification systems have to be carefully controlled. Digital identification structures need to undertake transparent and responsible safety protocols, even as also ensuring that residents are informed approximately how their records is being covered.[7]

Given the crucial role these structures play in individuals' lives, citizens must believe that their statistics will be stable and that there can be transparent strategies in region for addressing any breaches or misuse of statistics.

[5] Privacy International, A Deep Dive into Digital Identity Systems and Surveillance (London: Privacy International, 2020).

[6] Unique Identification Authority of India (UIDAI), "About Aadhaar," Government of India, 2023, https://uidai.gov.in.

[7] Privacy International. (2020). "Digital Identity in the Global South: A Threat to Privacy or a Tool for Empowerment?" Retrieved from https://privacyinternational.org.

Governments have to put money into modern protection technology and constantly replace their systems to mitigate rising dangers.

Benefits and Challenges of Digital Identity Systems

Benefits

1. **Improved Access to Services**: One of the most great benefits of virtual identification systems is their capability to offer citizens with smooth and stable get admission to to important offerings. For instance, the Aadhaar device in India has enabled hundreds of thousands of marginalized citizens to get admission to services like healthcare, education, and social welfare advantages, which have been previously tough to attain due to loss of documentation.

2. **Enhanced Security and Fraud Prevention**: Digital identity structures provide more desirable protection functions, including biometric verification, which help reduce fraud and identification robbery. By making use of stable authentication strategies, digital identities offer a more reliable and correct approach of verifying people' identities, thereby minimizing the threat of fraudulent activities.[8]

3. **Cost and Efficiency Benefits for Governments**: The implementation of digital identity structures can result in extensive value savings for governments. By replacing paper-primarily based approaches with digital systems, governments can reduce administrative overhead, increase efficiency, and improve the accuracy of facts. This lets in for higher allocation of public resources and ensures that offerings are added greater fast and efficiently.

4. **Fostering Inclusivity**: A nicely-designed virtual identity device can promote inclusivity by extending get right of entry to to folks who may not have formal identity documents. For instance, Estonia's e-Residency program lets in individuals international to get entry to digital offerings together with starting agencies and establishing bank accounts, fostering financial inclusion and enabling worldwide participation in the virtual financial system.[9]

The digital divide is a time period that refers back to the considerable hole between people, communities, or areas that have get right of entry to modern virtual technologies—such as reliable internet connectivity, smartphones, and computers—and people who do not. As governments an increasing number of pass closer to the adoption of virtual identification structures (DIS), it becomes vital to deal with the digital divide to make

[8] National Institute for Research in Digital Government, "Security and Privacy Risks in Digital Identity Systems", NIRDG, 2022, p. 34.

[9] Madianou, M. (2019). "The Biometric Assemblage: Surveillance, Experimentation, and the Malleable Body in Humanitarian Contexts." New Media & Society, 21(1), 6–23. https://doi.org/10.1177/1461444818786476

certain that those structures do no longer perpetuate or exacerbate present inequalities in society. Without taking energetic steps to bridge this divide, digital identity structures, which are designed to facilitate access to essential public offerings, should turn out to be excluding susceptible and marginalized populations, further entrenching social and economic disparities.

The virtual divide is prompted through more than one, intersecting factors, along with financial disparities, geographic place, age, disability, and training stage. These factors combine to create a situation in which sure groups of human beings are not able to fully take part inside the digital atmosphere, hence hindering their capability to get admission to the advantages of digital identification structures. When governments broaden and put into effect digital identification frameworks, they should apprehend and address those disparities to ensure that these structures are simply inclusive and reachable to all citizens, no matter their history or circumstances.

Economic Disparities: The Cost of Access

One of the primary factors contributing to the virtual divide is economic disparity. In many parts of the world, the cost of internet offerings and digital gadgets—which includes smartphones, computer systems, or drugs—remains prohibitively high for people and households with low earnings. Even in high-income nations, many decrease-profits agencies war to find the money for reliable internet get right of entry to, let alone the necessary gadgets to have interaction with digital structures.[10]

The gap in get entry to due to monetary inequality poses a tremendous project when it comes to virtual identification structures. These systems frequently rely on individuals being capable of get entry to on line platforms to authenticate their identification, get right of entry to government services, or observe for blessings which include unemployment or healthcare. Without get admission to to low cost net or devices, low-income residents are efficiently excluded from these possibilities, which could have far-attaining effects on their potential to navigate current society and improve their socio-economic status.

Governments must consequently put into effect policies that make sure equitable get right of entry to virtual gear. This can involve subsidizing internet get admission to for low-earnings households, presenting virtual devices at reduced expenses, or growing public get entry to points (which includes community facilities or

[10] Breckenridge, K. (2014). Biometric State: The Global Politics of Identification and Surveillance in South Africa, 1850 to the Present. Cambridge University Press.

libraries) in which humans can get admission to the net and necessary technology.[11] Only by making sure that digital technologies are accessible to all of us, irrespective of income, can governments make certain that virtual identity systems fulfill their capacity to serve the public.

Geographical Location: Rural and Remote Areas

The digital divide is not only an issue of income but also of geographical location. In many rural, remote, and underserved areas—whether in developed or developing nations—people lack access to high-speed internet. This issue can be especially acute in regions with poor infrastructure, such as isolated rural communities, where internet connectivity may be spotty or entirely absent. In such areas, the rollout of digital identity systems can be particularly challenging.

When governments implement digital identity systems that depend on internet access, they risk excluding entire communities that are already disadvantaged. Without reliable internet access, individuals in rural or remote areas may struggle to interact with digital systems, making it difficult for them to access essential services such as healthcare, education, social welfare programs, and government aid.[12]

Addressing this challenge requires comprehensive infrastructure investment aimed at expanding high-speed internet access to all regions. Governments could consider public-private partnerships or mobile broadband solutions, such as satellite or wireless internet networks, to reach underserved areas. Additionally, rural areas could benefit from community-based programs where access to technology and digital services is made available in local centers, reducing the geographic limitations of the digital divide.

Age: The Digital Generation Gap

Another critical factor in the digital divide is age. Older generations, particularly those over 60 or 70, may not be as familiar or comfortable with digital technologies as younger, more tech-savvy individuals. While younger people have grown up surrounded by smartphones, computers, and internet access, older adults may have limited experience with these technologies, which can create barriers to their participation in digital systems. This generation gap is a key challenge in the design of inclusive digital identity systems.

Older adults may find digital platforms for identity verification or accessing services overwhelming or difficult to navigate, particularly if the systems are not designed with them in mind. Moreover, for seniors with limited

[11] European Commission, "EU Digital Identity Framework", European Commission, 2021, p. 18.

[12] Ada Lovelace Institute. (2021). “Digital Identity Systems: Legal, Ethical, and Social Considerations.” Retrieved from https://www.adalovelaceinstitute.org.

digital literacy, accessing healthcare or government benefits online may become a frustrating or even impossible task.

To bridge this gap, governments must design digital identity systems that are senior-friendly. This could involve creating user interfaces that are simple, intuitive, and accommodating of those with limited digital skills. Furthermore, digital literacy programs tailored to older populations are essential. These programs could provide training on how to use smartphones, computers, and digital platforms in a supportive environment, thus helping older adults gain confidence in using digital tools. Additionally, ensuring that alternative offline solutions (such as phone services or in-person support) are available for seniors who may struggle with digital systems will be crucial for making digital identity systems truly inclusive.[13]

Disability: Accessibility Challenges in the Digital World

For individuals with disabilities, the digital divide presents unique and significant challenges. People with visual, auditory, motor, or cognitive disabilities may face obstacles in accessing digital identity systems that are not designed to accommodate their needs. For instance, a visually impaired person may have difficulty navigating a digital identity portal that is not compatible with screen readers, or a person with limited mobility may struggle to interact with a website that requires extensive mouse or keyboard use.

The adoption of digital identity systems must therefore prioritize accessibility from the outset. Governments need to ensure that digital identity platforms adhere to the highest standards of accessibility, including features such as voice recognition, screen reader compatibility, adjustable font sizes, and simple, easy-to-navigate interfaces. Additionally, developers must consider the unique needs of individuals with disabilities by providing multiple modes of interaction—such as voice commands, touchscreen interfaces, or keyboard alternatives. By creating accessible systems, governments will not only comply with legal standards but also ensure that all citizens, regardless of their physical or cognitive abilities, can fully participate in society.

Education Level: Digital Literacy and Skills Gap

Lastly, education level is a significant factor in the digital divide. People with lower levels of formal education may lack the foundational knowledge needed to navigate digital systems effectively. This lack of digital literacy can hinder their ability to create, manage, and use a digital identity. For example, individuals without strong educational backgrounds may find it challenging to understand the complex language or instructions often used in digital identity platforms, reducing their ability to access services or participate in digital governance.

[13] Gstrein, O. J. (2020). "The Right to Digital Identity – A Doctrinal Framework." Computer Law & Security Review, 36, 105394. https://doi.org/10.1016/j.clsr.2020.105394.

To overcome this barrier, governments must invest in digital literacy programs that are accessible to all citizens, regardless of their educational background. These programs should focus on teaching fundamental skills such as how to create and manage a digital identity, how to use online platforms securely, and how to protect personal information. Importantly, these programs should be offered in multiple languages and formats to accommodate individuals with varying educational levels and learning preferences.

Key Areas Impacted by the Digital Divide

1. Access to Technology and Infrastructure

For digital identity systems to function effectively, **universal access to technology** and **reliable infrastructure** is crucial. This includes **internet access**, the availability of **smartphones** and **computers**, and the proper **network infrastructure** that can support these systems. In many rural or remote areas, **internet penetration** remains low, and **mobile network coverage** is unreliable. In these regions, individuals may face difficulties in **verifying their identity**, **registering for services**, or **accessing digital government services**.[14]

For example, in **sub-Saharan Africa**, **rural populations** may lack access to the infrastructure needed to fully participate in digital governance systems. In such cases, **digital identity systems** would not be able to provide their intended benefits to these populations, leading to **social exclusion**.

2. Affordability of Devices

Even if **internet infrastructure** is available, the **cost of technology** remains a major barrier for many people, particularly those from **low-income backgrounds**. If digital identity systems require citizens to own smartphones or computers to access services, this could exclude a significant portion of the population who cannot afford these devices.

In such cases, governments must find ways to **subsidize access** to affordable devices. Alternatively, partnerships between the public and private sectors can help bring down the cost of technology, making it more accessible to marginalized groups. For example, governments can introduce **subsidized devices** for low-income families or provide **digital vouchers** to help them acquire the necessary technology.

[14]

3. **Digital Literacy and Education**

Another critical element of the virtual divide is the gap in digital literacy—the capacity to apply generation successfully. This is specifically pertinent for older adults, low-income corporations, and those who've now not had access to formal education in digital technology.

Many older people may additionally conflict with navigating on line structures for gaining access to critical services like healthcare, social protection, and training. A loss of familiarity with on line platforms can result in social exclusion and further marginalize these people. In rural regions, people won't have the opportunity to gather digital literacy skills, and the virtual divide deepens as a result.

Governments have to put in force virtual literacy programs particularly targeted at inclined organizations. These packages have to train residents the way to use digital platforms for critical offerings, ranging from filling out forms and accessing healthcare offerings on line, to managing personal facts and knowledge privateness risks in virtual environments.

4. Inaccessibility for Specific Vulnerable Groups

Certain prone agencies face unique challenges in using virtual identification systems due to their physical or social situations.[15]

- Elderly populations frequently face problems in interacting with on line structures. Many older adults aren't accustomed to the use of digital gadgets, and their low virtual literacy may additionally save you them from using government services that require a digital identification. Without offline options, they will omit out on important services like healthcare or social benefits.

- Rural residents, who won't have reliable net connectivity, regularly face geographical and infrastructural boundaries to gaining access to virtual structures, leaving them not able to have interaction with digital identity systems or avail of public services.

- People with disabilities, inclusive of those with visible, auditory, or cognitive impairments, regularly come upon virtual accessibility barriers. For example, biometric systems which include facial recognition or fingerprint scanning might not paintings correctly for individuals with physical disabilities, and on-line bureaucracy might not be handy for people with visual impairments.

[15] OECD, "The Future of Digital Government: A Report on Identity Management", OECD, 2020, p. 27.

Bridging the Digital Divide: Key Solutions

1. Investing in Infrastructure

Governments ought to prioritize investment in virtual infrastructure to make sure every day get right of entry to the internet and generation. This includes:

- Expanding broadband net get entry to, mainly in rural and underserved areas, to make certain that individuals in these regions can get admission to digital identification systems.
- Developing cellular network coverage in faraway regions in which internet connectivity is limited.
- Ensuring get right of entry to to low cost gadgets by providing subsidies or developing partnerships with personal businesses to reduce the price of essential generation for low-income individuals.

2. Promoting Digital Literacy

Digital literacy programs are important to help residents collect the skills had to use digital identity structures. Governments and NGOs must establish network-based digital literacy packages aimed at:

- Training older adults and different inclined groups in the use of on-line systems and virtual services.[16]
- Offering online and offline guides that target digital capabilities, which include filling out government service forms, the use of e mail, and navigating web sites correctly.
- Building trust in digital structures by way of educating the general public on a way to guard their personal records and avoid not unusual online scams.

3. Incorporating Accessibility Features

Digital identity systems should be designed with accessibility in thoughts, making sure that individuals with disabilities can use the structures correctly. This ought to include:

- Providing opportunity techniques for identity verification, which includes voice-primarily based structures for visually impaired users.
- Designing web sites and applications with display reader compatibility and different assistive technology.
- Offering offline offerings for folks who can't have interaction with virtual platforms.4. Ensuring Inclusive Policy DesignTo make sure that susceptible populations are not excluded, inclusive policy layout is important. Governments need to make certain that:

- Refugees and migrants are able to get right of entry to digital identification systems, even though they do now not have formal identification documents.

- Social offerings and welfare advantages are handy to all, together with those without net access, thru offline options like smartphone services or paper-based application processes.[17]

For digital identification systems to be truely inclusive, governments ought to spend money on each virtual infrastructure and virtual literacy programs, ensuring that all citizens, no matter their socioeconomic popularity, geographic location, or bodily capability, can take part fully within the digital surroundings. Addressing the digital divide isn't just about offering get admission to technology but additionally about making sure that those structures are designed inclusively and similarly available to all.

Only by way of addressing these challenges head-on can virtual identity structures fulfill their capacity to decorate public carrier delivery and financial inclusion, while additionally selling social justice and equity. By creating inclusive digital structures, governments can help foster a society where everyone, regardless of their heritage, can take part in and advantage from a digitally related world.

Impact on Citizenship Rights

The implementation of virtual identification systems can extensively impact numerous dimensions of citizenship rights, consisting of political, civil, and social rights:

1. Political Rights: Digital identification structures can beautify political participation by using facilitating steady and convenient get admission to vote casting platforms. For instance, Estonia's use of digital identities for e-vote casting has improved voter participation, in particular among expatriates and the aged. However, worries about the misuse of private records for political manipulation or surveillance remain.

2. Civil Rights: Digital identification systems can have an effect on civil rights, specifically in terms of privateers, freedom of expression, and equality before the law. The aggregation of private facts can cause privacy violations, discrimination, or wrongful denial of services. Biometric misidentification can also undermine civil liberties via exposing people to felony or social harm.

3. Social Rights: Digital identification systems can beautify get admission to social rights, along with healthcare, training, and welfare advantages, with the aid of linking individuals to authority's services. However, individuals without get admission to digital systems can be excluded from those important offerings, highlighting the want for inclusive guidelines and alternative access factors to make sure equitable carrier shipping.

Conclusion

Digital identity systems mark quite a change in the way that states interact with and recognize their citizens. Due to the fact that their influence grows, a critical reassessment needs to determine what their alignment is with democratic values and with human rights. Such systems, if governed poorly, may become instruments for exclusion instead of empowerment. The paper concludes that digital identity eases administrative efficiency and delivers a service, yet it also risks the creation of systemic barriers for the vulnerable. For people, fundamental

[16] Human Rights Wtch. (2021). "Kenya: Halt Biometric ID Plans Until Rights Safeguards in Place." Retrieved from https://www.hrw.org.

[17] U.S. Department of Homeland Security, "The Role of Digital Identity in National Security", DHS, 2021, p. 51.

rights denials occur due to biometric errors, data mismatches, or for a lack of digital access, as evidence from various jurisdictions shows.

Important concerns regarding surveillance, consent, and misuse also arise from centralization of identity data. Digital ID systems might prioritize control over care in the event accountability as well as ethical frameworks remain unclear, eroding trust within state institutions. Governments must indeed embed principles of equity, transparency, and participation in digital identity policy. Governments will then be able to harness all of the benefits without the compromising of rights. Digital identity systems must serve as inclusive tools for upholding citizenship. A rights-based approach is required to guarantee that they do not entirely obstruct it.

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