Closing the digital gap through participatory platforms at local government level

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Abstract

This paper evaluates the role and impact of adopting digital participatory platforms in closing the digital gap at local government level. Digital participatory platforms are critical for increasing community engagement in decision-making processes and improving participation. The advancement of information and communication technology has prompted governments at various levels to adopt participatory platforms to complement offline community-civic engagement. These platforms allow communities to engage in decision-making processes by bridging the gap between offline and online techniques. These platforms increase transparency about government actions, policies, and decisions, promoting trust between the government and the people. In countries where digital platforms have been adopted, the digital divide and

inequality were minimised, and inputs were increased. The paper uses two case studies from Cape Town and Durban to gauge the feasibility of employing digital participatory platforms.

It is argued that although digital platforms are meant to close the digital divide, they are often not accessible and not utilised by communities in rural and remote areas. In the case of Durban and Cape Town, the use of these platforms is limited to reporting faults, and they lag in terms of constructive engagement. The adoption of digital platforms is more inclusive compared to traditional participatory platforms. Among the obstacles of digital platforms are privacy and security concerns, digital literacy, misinformation, and trust issues. There are no comprehensive studies that focus on the effectiveness of digital platforms adopted at the local government level. The deliberative democracy theory, network society theory, and social capital theory were adopted as theoretical frameworks.

Keywords: 1; artificial intelligence 2; digital gap 3; digital participation 4; local government 5 traditional platforms

Introduction

Information and communication technology (ICT) has seen the emergence of digital participatory platforms for civic engagement between the state and citizens (Birkinshaw and Taraporevala 2023). Thus, digital participation platforms (DPP) serve as a key instrument for civic engagement at the local level (Mawela 2017; De Filippi et al. 2022). DPPs are websites established by local governments that citizens can use to respond to or post ideas for their particular city (Lago et al, 2021). DPPs utilise ICT to share information with their constituents, advance their operational efficacy, and ultimately deliver a higher quality of government services to citizens (Du Toit and Stimie 2023). The past 30 years have seen increasingly rapid advances in the field of DPP (Chen et al. 2021), and recent developments in digital participation initiatives in South Africa have led to a renewed interest in the reciprocal relationship between public participation and social and human capital (Jakoet-Salie and Ramolobe 2023). DPP are considered a tool to enhance civic engagement through dialogue and interaction with the public administration and to reduce the digital divide (De Filippi et al. 2022, p. 218). According to Falco and Kleinhans (2019), DPPs are technology platforms that promote public interaction and cooperation with governments. These platforms attempt to strengthen participatory democracy by facilitating different types of civic participation, such as community and stakeholder involvement, collective discussion, public communication, project monitoring, and

internal coordination. In the view of Falco and Kleinhans (2019) DPP are civic technologies designed for interaction, collaboration, and user-generated content.

DPPs comprise a variety of components, including the importing and exporting of data, analytics, geographically located feedback, and crowd-sourcing information. In the general sense, DPPs are reliant on three elements: the advancement of e-democracy, the development of ICTs, and the growth of e-government, with the advancement of ICTs being the most prominent catalyst of DPP (Quental and Gouveia 2022). Gil et al. (2019) add that DPPs, at their core, are designed to engage participants above traditional one-sided participation. It is the transition beyond in-person processes, that are often time-consuming and ineffective. DPPs permit collaborative activities such as e-voting on public budgets, input on policies and legislation, and deliberation on future projects, among others (Le Blanc, 2020). These platforms allow local governments to reach more of their constituents, lower the cost associated with traditional outreach efforts, and be more transparent – and the electronic analysis of resident feedback also receives a much quicker response (De Filippi et al. 2022). Kayode et al. (2024) note that digital technologies are important for strengthening deliberation and facilitating a more collaborative action-oriented planning process. The processes of information sharing, local networking, and community action and learning through the use of digital tools, online platforms, digital interfaces, and social media empower a citizen-centric focus that could potentially democratise public decision-making practices (Hovik and Giannoumis 2022; Fashoro, & Barnard, 2021). The digital revolution and the evolution of ICT reshaped planning and participation practices globally. According to Demir (2022), the primary function of DPP is to create and encourage digital citizenship. This is achieved through developing digital literacy, critical thinking, and public participation competencies (Luz et al. 2024). DPPs are thought to advance transparency, trust, and accountability in government and public institutions, and provide citizens with ease of access to information, policies, and decision-making processes (De Filippi et al. 2022).

This paper is underpinned by three theories: participatory democracy, networked governance theory, and social capital theory. These theories emphasise public engagement in democratic processes as critical to legitimacy and accountability. According to these theories, public participation is vital for democratic legitimacy and accountability (Zakhour 2020). In the context of eThekwini's DDP, these theories demonstrate how increasing public participation via digital platforms improves democratic processes by allowing various voices to influence municipal governance choices.

Networked governance theory proposes that collaboration among many stakeholders via digital methods improves governance results (Kapucu and Hu 2020). Implementing a DDP, according to eThekwini, coincides with this idea since it facilitates collaborations among government bodies, civil society organisations, and people themselves, resulting in a networked approach that enhances policy development and execution.

Social capital theory, as articulated by researchers such as Pierre Bourdieu and Robert Putnam, refers to the networks of interactions that allow a society to function successfully (Bianchi and Vieta 2020). It emphasises the importance of social networks, as well as the reciprocal standards and trustworthiness that they foster. Khedir and Khedir (2020) hold that according to this idea, social networks allow individual collaboration for mutual benefit; consequently, digital engagement generates social capital inside communities. In the context of DPP, social capital may be defined as the collective value generated by online interactions that promote civic involvement, cooperation, and community development.

This study concludes that digital participation promotes public interaction and cooperation with governments and organisations. These platforms use digital technology to increase public involvement in decision-making, policy formation, and community development

Materials and methods

This chapter utilised a qualitative approach to close the digital gap through participatory platforms at the local government level. Lim (2024) asserts that qualitative research is a naturalistic investigation that seeks a thorough knowledge of social phenomena in their natural environment. The chapter was conducted using a desktop research approach, which included a systematic examination of current literature and data sources. According to Chong and Plonsky (2024), desktop research is the utilisation of existing sources of information to collect data and insights about a topic of interest. This technique allowed for a thorough investigation of the digital gap through participatory platforms at the local government level without necessitating direct interaction with individuals. The data was collected through a thorough assessment of academic literature from Google Scholar and JSTOR. The data obtained was analysed using a thematic approach. According to Naeem et al. (2023), thematic analysis is a qualitative analytical technique used in the social sciences to detect and portray repeating patterns or themes in data. The themes were discovered and classified, enabling a thorough analysis of the study goals.

Results

Digital participation platforms at Cape Town Municipality

In 2016 Cape Town was awarded the moniker of 'smartest city' in Africa by The Smart City Playbook (2016), and boasts impressive e-government services, city-wide broadband infrastructure, and a burgeoning digital economy. Smart-grid technologies are employed at the municipal level, and the city's open data portal is the first of its type on the continent (Smit 2023). Notwithstanding this impressive feat, the City of Cape Town suffers from extensive socio-economic disparities. As indicated by Smit (2023), intra-urban inequality is a worldwide growing concern, with the main aspects of inequality being high levels of poverty and unemployment. Cape Town is archetypical of this, with the city's unemployment rate skyrocketing to 29% in 2021, increased from 18.3% in 2011. Much of the city's infrastructure reflects urban planning reminiscent of the apartheid era, alongside an estimated 185,000 households consisting of informal settlements (City of Cape Town 2022a).

Like other South African cities, Cape Town must contend with the growing demand for resources and ever-increasing distrust in government processes. The City of Cape Town (2022b) aims to address these concerns through its Integrated Development Plan (IDP), first introduced in 2001. The 2011–2027 IDP intends to be 'a city of hope for all', striving towards an inclusive city where "people have more equitable access to economic opportunities and social amenities, and the barriers to inclusion and well-being are reduced". One of the strategies to achieve these objectives is through DPP (City of Cape Town 2022b). However, achieving these objectives are not without their challenges. Digital illiteracy, socio-spatial divisions such as rural and informal settlements, and weak ICT infrastructure are only a few of the challenges that face South African municipalities attempting to digitise democratic processes (Mawela 2017). Moreover, South Africa has also failed at launching a National Welfare Agency project, which six years post-rollout reached only 40% of its goals, with expenditures being much higher than expected. Another digital participation initiative was the 'Golaganang project' which promised to equip government employees with digital literacy and cost-effective ICT resources – this never materialised. Mawela (2017) notes that these failures are especially disappointing for the marginalised, who are dependent on government to provide resources in an efficient fashion. According to a study conducted by Katzef et al. (2022) Cape Town in particular experienced challenges with the GovChat application, citing inadequacy of service delivery as the reason for low citizen participation. The GovChat application disseminates crucial information on the services offered by the government to the citizens, such as

information on social grants, schools, and their local municipalities, among others (City of Cape Town 2022b).

Digital participation platforms at eThekwini Municipality

eThekwini Municipality is one of the country's major municipalities, with a significant role in regional government. Nene (2019) argues that the municipality recognises the need to use technology in its governance structure to improve service delivery and public participation. Kariuki, Ofusori, and Goyayi (2019) highlight that the history of DPP in eThekwini includes measures designed to increase openness, accountability, and responsiveness through digital methods. This involves creating platforms that enable citizens to report concerns, participate in local governance conversations, and obtain municipal services online.

The deployment of DPP in eThekwini has resulted in some favourable results. Manqele (2021) states that in eThekwini citizen participation has increased as more citizens use these platforms to contact local officials. Furthermore, real-time feedback systems have resulted in a significant increase in service delivery times, allowing municipal officials to resolve concerns more quickly. Surveys of users show that using digital platforms results in better levels of satisfaction with municipal responses than conventional approaches.

eThekwini Municipality, like many other cities across the world, is progressively embracing digital tools to improve public engagement in governance (Kariuki and Ofusori 2018). According to Manqele (2021), the DPP at eThekwini is a prime illustration of this trend. This platform is part of a larger effort to incorporate ICT into government to improve service delivery, transparency, and community involvement. The major goal of the DPP is to create a more accessible and engaging platform for citizens to connect with the municipality. According to Dlamini (2023), it aims to bridge the gap between the government and residents. Reddy and Govender (2019) highlight that this is consistent with the municipality's aims of enhancing service delivery and ensuring that the opinions of all people, particularly marginalised groups, are heard and considered in decision-making processes.

However, the implementation of DPP has not been without obstacles. According to studies, important impediments to full involvement include challenges with digital literacy, access to technology, and faith in the system. Furthermore, Diga (2017) highlights that there are worries about data privacy and the digital gap, which may worsen existing disparities. However, the platform enables more inclusive and participatory governance, where citizens are active participants in decision-making rather than passive users of services. The impact of the DPP in

eThekwini is still being evaluated, but it has been noted that it has improved public involvement. Future advances will likely focus on improving the platform's usability, connecting it with other municipal systems, and increasing its reach to enable greater involvement across diverse demographics.

Role of digital participatory platforms in eThekwini and Cape Town

eThekwini

DPPs have become effective methods for developing and administering invited places in the digital era. Sibiya (2022) asserts that in eThekwini Municipality these platforms perform numerous vital roles. Digital platforms enable a broader spectrum of residents to engage in municipal decision-making processes, eliminating geographic and temporal barriers (Thakur et al., 2023). These systems enable real-time contact between residents and municipal officials of eThekwini, resulting in a more dynamic and responsive government (Mbatha 2016). Digital platforms efficiently gather and analyse public input, giving vital insights for policymaking and urban planning. Digital platforms improve openness in municipal administration by increasing online access to information and decision-making processes.

DPPs mark a substantial shift in the idea of invited venues for community development. In the context of eThekwini Municipality, these platforms provide great prospects to increase public involvement, improve urban government, and handle complex metropolitan concerns (Mnguni 2019). However, successful implementation necessitates a comprehensive examination of local circumstances, existing disparities, and technical infrastructure. By resolving the issues and implementing the recommended activation methods, eThekwini Municipality may realise the full potential of DPP to promote more inclusive, responsive, and effective urban administration.

Cape Town

Currently the City of Cape Town employs websites and applications such as ‘Have your Say’, ‘MyCiTi’ and ‘Flui.City’ (among others employed by the city), which are social media-styled platforms designed to enhance digital engagement and encourage discussions. Traditionally the city has engaged with the public through physical settings such as public meetings, focus group sessions, and workshops, a common practice throughout South Africa (City of Cape Town 2024b; Katzef et al. 2022). These platforms utilise artificial intelligence support to aggregate comments, speed up the reporting process, provide a customisable archive where previous processes are stored, offer direct feedback to the public, create a database for easy

communication and updates for target communities, publish newsletters and articles for marketing and process status updates, and implement a voting system (City of Cape Town 2024b; Katzef et al. 2022). These platforms are said to enrich engagement by allowing public access to all comments made directly on the platform. Users can comment, view, respond to, and react to others' comments using emoji reactions, promoting transparency and feedback (City of Cape Town, 2024b).

Kayode et al. (2024) note that these types of DPP are important for strengthening deliberation and facilitating a more collaborative action-oriented planning process. The processes of information sharing, local networking, and community action and learning through the use of digital tools, online platforms, digital interfaces, and social media empower a citizen-centric focus that could potentially democratise public decision-making practices (Hovik and Giannoumis 2022). The digital revolution and the evolution of ICT reshaped planning and participation practices globally. According to Demir (2022), the primary function of DPP is to create and encourage digital citizenship.

Relevance of digital participatory platforms in Cape and eThekwini Municipalities

The establishment of DPP in eThekwini Municipality is particularly essential for various reasons, and well suited to their smart city objectives. As one of South Africa's fastest-growing metropolitan districts, eThekwini presents complicated urban planning concerns that necessitate broad citizen participation (Stats SA 2019). Despite acknowledging existing digital gaps, these platforms offer the ability to involve younger, tech-savvy groups that might otherwise be excluded from traditional participation approaches (Padayachee 2017). The worldwide COVID-19 pandemic has heightened the demand for distant participation alternatives, making digital platforms more significant (Madumo, 2020). According to Hovik and Giannoumis (2022), DPP can promote genuine interaction between the municipality and its residents. By offering a forum for discussion, the municipality may promote openness and accountability, creating trust and confidence among citizens. Hong and Lee (2023) posit that DPP can assist, detect, and handle service delivery issues more efficiently. These platforms allow citizens to report complaints, offer comments on current services, and make changes. This can result in more responsive and efficient service delivery.

Cape Town

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information sharing, local networking, and community action and learning through the use of digital tools, online platforms, digital interfaces, and social media empower a citizen-centric focus that could potentially democratise public decision-making practices (Hovik and Giannoumis 2022). The digital revolution and the evolution of ICT reshaped planning and participation practices globally. According to Demir (2022), the primary function of DPP is to create and encourage digital citizenship. This is achieved through developing digital literacy, critical thinking, and public participation competencies (Luz et al. 2024). DPPs are thought to advance transparency, trust, and accountability in government and public institutions, and provide citizens with ease of access to information, policies, and decision-making processes (De Filippi et al., 2022; Dwivedi, et al. 2022). It is important to note, however, that for DPP to be deemed a success, meaningful, widespread citizen participation would need to take place. This would necessitate a comprehensive dissemination of the internet and ICTs to reach all of the city's citizens (Reichborn-Kjennerud et al. 2022). However, socio-economic and socio-spatial inequalities persist in the City of Cape Town (Smit 2023), thus accentuating the matter of the 'digital divide'.

Challenges of implementing digital participatory platforms in eThekwini and Cape Town

eThekwini

Despite their promise, DPP in eThekwini confronts several challenges. Unequal access to technology and internet connectivity can worsen existing participation disparities (Moodley 2019). The availability of adequate technical infrastructure is a major problem. In many parts of Ethekwini, particularly in informal settlements, access to dependable internet and digital devices is restricted. According to Mahlangu et al. (2021), low connection limits citizens' capacity to actively participate in digital platforms. The digital gap has the potential to worsen existing inequities and disenfranchise marginalised populations.

Another key impediment is the general population's degree of digital literacy. Citizens' digital literacy skills can have an impact on the efficacy of these platforms (Kariuki and Ofusori 2018). Many residents may lack the ability to traverse internet sites successfully. Data security and privacy-protecting citizen data while respecting privacy – is a serious concern (Naidoo 2017). Aligning digital platforms with current municipal procedures and legacy systems can be challenging (Mbatha 2016). Maintaining citizen interest and engagement over time requires constant work and resources.

Existing DPP projects in eThekwini include mobile apps that enable citizens to report service delivery concerns or engage in online community forums (Kariuki and Ofusori 2021). DPP frequently uses a variety of interaction tools, including polls, forums, social media integration, and interactive maps. These platforms are used not just to report issues, but to gather feedback on local development projects. However, issues such as ensuring fair access persist; hence, continued efforts are required to resolve these inequities. These technologies enable residents to submit feedback on municipal services (Reddy and Govender, 2019), report concerns such as potholes or waste management difficulties, and propose changes for their communities.

Cape Town

The notion of the 'digital divide' was first introduced in a report by the United States of America's Department of Commerce in 1995. This term refers to the gap between individuals who do or do not have access to technological advancements. Initially, this divide was thought to refer only to physical access; however, it was later amended to include digital literacy and internet competencies (Chun et al. 2021). Devisakti and Muftahu (2024) posit that the digital divide will proliferate as technologies mature. This is supported by preceding studies which evidenced that the digital divide exacerbated the gap between urban and rural areas in developing countries, where technologies are viewed as an important tool for socio-economic growth (Afzalan, Sanchez & Evans-Cowley, 2017, p.21-30). Saha et al (2021) go as far as citing the digital divide as a new type of socio-economic inequality. The digital divide theory can be adopted to ascertain the success of DPP by evaluating whether the use, empowerment, and accessibility gaps have been bridged.

The digital divide affects physical access to affordable devices, the internet, and the availability of other digital infrastructure (Afzal et al. 2023). Juxtaposed to physical access, individuals who do have access to devices and the internet might not be able to use these tools accurately or adequately because they do not possess the digital literacy skills required to do so (Purmayanti 2022). Digital illiteracy may be caused by socio-economic factors, culture, or even an individual's age (Njenga, 2018). Consequently, the digital divide causes an empowerment divide as digital technologies can positively influence an individual's social and employment mobility. In this instance, the digital divide negatively affects an individual's ability to leverage technological skills for advancement (Sanders and Scanlon, 2021).

Mechanisms to Activate Digital Participatory Platforms

eThekwini

In the instance of Ethekwini Municipality, engaging DPP entails identifying the processes that might improve service delivery and local administration. To successfully engage and utilise DPP, eThekwini Municipality may explore the following mechanisms.

DPP may have a substantial influence on service delivery since they allow citizens to report concerns directly connected to municipal services. Real-time feedback allows communities to respond more swiftly to service delivery difficulties, enhancing overall efficiency. Padayachee (2017) suggests implementing digital literacy initiatives to ensure individuals can use these platforms efficiently. Kariuki and Ofusori (2018) argue for the creation of systems that prioritise user experience and accessibility to encourage wider adoption. In the instance of eThekwini Municipality, engaging DPP entails identifying the processes that might improve service delivery and local administration. Hosting seminars or online forums for locals to discuss service needs fosters civic ownership, ensuring customised services that meet community requirements and are effective.

In terms of local government, DPPs encourage participatory democracy by allowing residents to communicate directly with decision-makers. This instils in locals a sense of ownership over local policies and actions, ultimately leading to more responsive governance. Explicit procedures must be established to inform individuals about how their involvement affects decision-making (Naidoo 2017). Establishing channels for continual feedback enables citizens to observe how their contribution affects decision-making processes. This might include providing frequent updates on initiatives launched in response to community proposals conducting polls to measure satisfaction with implemented modifications, and working with local technology businesses, colleges, and civil society organisations to improve platform development and public involvement (eThekwini Municipality 2021). A comprehensive policy framework should be created to oversee the development and use of DPP (Madumo 2020).

Cape Town

The City of Cape Town is committed to digitising governing processes, which earned the city the above-mentioned moniker of ‘smartest city in Africa’; it was also the first municipality in South Africa to introduce the GovChat application for citizen use (Katzef et al. 2022; The Smart City Playbook 2016). The city has also committed to closing its socio-economic and socio-spatial gaps, and to be inclusive to all its citizens in its governing endeavours. At present, the City of Cape Town uses multiple DPP to fulfil its commitment to digitising governing processes, furthering its obligation to close its socio-economic and socio-spatial gaps and to be

inclusive to all its citizens in its governing endeavours. The city has also set up public Wi-Fi zones where citizens can access and use Wi-Fi for free. This includes their 'SmartCape' initiative, which provides free devices and internet for use in public libraries (City of Cape Town, 2022a).

Discussion of research findings

Key findings show that while establishing a DDP in eThekwini has considerable benefits, such as increased public participation and improved service delivery, there are major challenges to overcome. The digital gap remains a key problem that may impede equal engagement among diverse groups in the municipality. Furthermore, successful implementation necessitates not just technology solutions, but also cultural transformations among government institutions and communities that value participatory approaches. To summarise, while DPPs hold great promise for improving local governance in eThekwini Municipality through increased citizen engagement and improved service delivery mechanisms, overcoming barriers such as access inequality and resistance from traditional governance structures will be critical to their success.

Key findings suggest that while establishing DDPs in eThekwini has considerable opportunities, there are severe impediments that must be overcome. The digital gap is critical, and focused measures must provide fair access across populations. Resistance to established governing systems creates obstacles, and cultural adjustments toward valuing participative alternatives are required. Continuous capacity building is critical not only for authorities but also for individuals who may be unfamiliar with digital technologies. Feedback systems must be robust enough to ensure that citizen feedback leads to actionable improvements in municipal operations. Successful implementation necessitates continuing assessment techniques that monitor both user satisfaction levels and observable implications for service delivery results.

Key findings from research on DPP implementation show that successful engagement is strongly reliant on accessibility and user experience. Furthermore, continuing review is required to continuously alter these platforms to meet the demands of users. Data acquired via these platforms should be analysed not just for urgent reactions, but also for long-term planning within municipalities.

Cape Town

The assumption that digitising government processes will prevail over historical shortcomings in public participation, such as the exclusion of marginalised groups and the omission of citizen

influence on policy decisions, remains to be seen. According to Hovik and Giannoumis (2022, p. 3), "Digital participation is often subject to the weaknesses or challenges of conventional participation". The absence of access to digital skills, digital resources, or technology might reinforce the exclusion of already marginalised groups – exacerbating existing socio-spatial inequalities, while also creating new systems of exclusion (Luz et al. 2024; Hjelholt and Schou, 2017). This seems to be quintessential of the City of Cape Town.

Citizen trust in this process is also cited as a concern for the successful implementation of DPP for civic engagement (Zhao et al. 2023). This brings to the fore the notion that the digital divide is not simply an issue of lacking physical access. Rather, marginalised groups experience a sense of hopelessness and despondence toward the government and therefore do not trust that this initiative could really contribute to the betterment of their lives (Jakoet-Salie and Ramolobe 2023).

Congruent with the paper's argument – yes, DPPs are certainly feasible in the City of Cape Town, but feasible for whom? The modern-day effects of racial segregation and forced removals caused by the Apartheid era have resulted in impoverished townships such as Gugulethu and Khayelitsha, which stand in stark contrast to affluent enclaves such as Bishopscourt and Constantia. The endemic inequality of substandard housing conditions, pervasive poverty and limited access to basic services, juxtaposed with exclusive amenities, upscale properties, and well-maintained infrastructure, further illustrate both on- and offline disparities when it comes to public participation. The assertion that adoption of digital platforms is more inclusive compared to traditional participatory platforms can also be challenged. Inclusivity requires a lot more than just having digital platforms available, and access to these platforms for those on the periphery should be the primary concern.

This also negatively impacts the city's ability to create a semblance of human capital from within its citizens. This coupled with the digital divide creates more of the same inequalities that these platforms were supposed to rectify in the first place. Even with DPP and other city-wide initiatives to combat inequality, the wealthy continue to consolidate their resources, while the poor face increasingly limited opportunities.

Factors such as education levels, socio-economic status, and geographic location heavily influence access to digital devices, reliable internet access, and digital literacy levels. This ultimately affects economic mobility, educational opportunities, and job-market readiness –

wreaking havoc on any human capital potential that might have benefitted the City of Cape Town and South Africa in due course.

Conclusions

DPPs are essential instruments for increasing civic involvement and participatory democracy. Understanding their capabilities, significance, and constraints allows institutions to better use these platforms to build more inclusive, transparent, and accountable governance processes. Despite the limitations of implementation, the benefits of increased public engagement, improved resource efficiency, and improved decision-making processes make DPP a significant asset for governments and communities across the world. Communities may overcome hurdles to DPP integration by utilising resources such as thorough guidelines, ratings, and open-source platforms.

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