Research Paper

A Systematic Review of Alternative Service Delivery in Africa for Taming Wicked Risks

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Abstract

This research considers the role that alternative service delivery can play in addressing wicked problems. The aim of this research is, firstly, to determine which evidence and knowledge are available on alternative service delivery arrangements relevant to African countries to inform decisions about addressing wicked problems on the continent. Second, this research determines suitable mechanisms for an alternative service delivery model for mitigating wicked risks in Africa. This research is based on a systematic literature review. This systematic literature review reveals that most work on alternative service delivery has been done in developed countries, with developing African countries being left behind in research on alternative service delivery. Furthermore, most of the alternative service delivery efforts have not focused on addressing wicked problems. A large number of articles on alternative service delivery models show that alternative delivery is not a preferred approach in Africa. This research recommends an alternative service delivery model that is based on digital governance, service delivery innovation and partnerships. Robust governance responses are needed to mitigate these wicked risks, and alternative service delivery presents robust features to mitigate these risks given that it is more flexible, agile, adaptable, and decentralized in nature than simply relying on traditional government responses. Lastly, risk-informed decision-making should be placed at the center of the reform agenda for a smart and sustainable society.

Keywords: *Wicked Problems; Wicked Risks; Alternative Service Delivery; Service Delivery Innovation; Partnering; Digital Governance*

INTRODUCTION

Public service delivery is inherently linked to wicked problems. The features of complexity, ambiguity, conflict, and power imbalances among stakeholders are shared by wicked problems and service delivery. In a socially and technologically complex developmental setting, traditional approaches to problem solving for service delivery are insufficient. Instead, the use of networks, innovations and integrated leadership can lead to better service delivery outcomes and impacts (Govender, 2016). Wicked problems are inherently complex; they have countless root causes connected to numerous social contexts, stakeholders, and actors and exhibit unpredictable behaviors and consequences (Cleland et al., 2018, p. 1228). "Wicked problems" are considered a blight because they inflict immense harm upon societies and contribute to social, political, and economic instability (Carayannopoulos & McConnell, 2018).

Rittel and Webber (1973) developed the idea of wicked problems in their work "Dilemmas in a general theory of planning". In this seminal work, they outline ten defining characteristics of wicked problems that guide our understanding of these complex challenges: (1) There is no definitive formulation of a wicked problem, (2) Wicked problems have no stopping rule, (3) Solutions to wicked problems are good and bad rather than true and false, (4) There is no immediate or ultimate test of a solution to a wicked problem, (5) Every solution to a wicked problem is "one shot"; i.e., it cannot be undone, (6) Wicked problems do not have an exhaustive set of potential solutions, (7) Every wicked problem is unique, (8) Every wicked problem is a symptom of another problem, (9) The existence of discrepancies in wicked problems can be explained in numerous ways, (10) The policy planner has no right to be wrong (Rittel & Webber, 1973, p. 160).

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Wicked problems are linked to institutional complexity, social diversity, and scientific uncertainty (Head & Alford, 2015, p. 217). Wicked problems are complex and highly uncertain. While simple problems can be relatively easily addressed through research and appropriate policy measures, wicked problems defy the linearity of such approaches (Davison et al., 2016). In practice, governments are better equipped to implement policies and deliver services that are relatively routine and standardized; however, they are less equipped to deal with problems that are non-linear, non-routine and non-standardized (Head & Alford, 2015), which are typically considered wicked problems.

The vast majority of research on wicked problems, if not all, implicitly or explicitly departs from the premise that this kind of policy problem cannot be resolved in the conventional sense (Daviter, 2017, p. 574). The most prominent response to wicked problems has been in the form of a collaborative or networked type of governance (Daviter, 2017), which makes alternative service delivery an ideal instrument for addressing wicked problems.

Some wicked problems are so severe that they can be termed "super wicked problems". Super-wicked problems differ from the classical conception of wicked problems. Climate change is considered a super wicked problem because of its intensifying features (Lazarus, 2010). Levin et al. (2012, p. 123) define a super wicked problem as a "problem comprising four key features: time is running out; those who cause the problem also seek to provide a solution; the central authority needed to address it is weak or non-existent; and, partly as a result, policy responses discount the future irrationally".

Furthermore, Levin et al. (2012) argued that these "features combine to create a policy-making 'tragedy' where traditional analytical techniques are ill equipped to identify solutions, even when it is well recognized that actions must take place soon to avoid catastrophic future impacts". Both classical and super wicked problems pose several risks for society; some of which, if left unmitigated, can escalate into more severe forms of risk, namely existential and systemic risks. A systemic risk results from a system collapse, where the extreme is existential risks. Existential risk is the result of anthropogenic risks or risks caused by humans that can lead to global catastrophe, such as environmental degradation, climate change, and risks from disruptive technologies such as artificial intelligence (Beard et al., 2003). These problems are disruptive in an era of turbulence (Cristofoli et al., 2022, p. 1).

These risks are overlapping, unstructured, and multifaceted, which I term "wicked risks". In my research, I have characterized these wicked risks as both wild and rebellious. Their wild nature is based on the uncontrollable and unrestrained nature of these risks. Therefore, this paper focuses on mitigating wicked risks because no single solution exists for such risks. Furthermore, these risks are due to rebellion against an established government. Conventional governance is not sufficient to mitigate these risks, and the government alone cannot have the capacity to mitigate these risks. For this reason, alternative service delivery approaches and mechanisms should be considered and multiple actors should be included in response to wicked risks.

Notably, the concept of wicked problems is still rarely applied in research on Africa today, and when it is, it is typically done by academics with Western or Anglophone backgrounds (Niskanen et al., 2021). This study focuses on addressing wicked risks in the African context. Specifically, this research is guided by two research objectives: first, to describe available evidence from a mapping and systematic review of alternative service delivery arrangements relevant to African countries to inform decisions about addressing wicked problems; and, secondly, to determine which mechanisms are suitable for an alternative service delivery model for mitigating wicked risks in Africa.

LITERATURE REVIEW

Public service provision is multifaceted and encompasses several stakeholders who participate in the process (Lamothe & Lamothe, 2023). The multifaceted nature of service delivery is linked to complexity and uncertainty. Hence, risk management in public service delivery is essential. Bjørnsen and Aven (2025) explained that risk "captures consequences and related uncertainties, and different ways of characterizing these uncertainties can be used". Policymaking must ensure that risks are identified and mitigation strategies are developed (Bleda & Krupnik, 2024).

Risk management is an integral component of sustainable development in society. Risk analysis provides a mechanism to identify wicked risks. By incorporating risk analysis and risk management into policy planning, governments can achieve better planning and strategizing toward achieving the Sustainable Development Goals (SDGs) (United Nations, 2015).

Risk originates from uncertainty of daily living, entailing decisions about whether or not to perform specific activities. The term "risk" stems from the early Italian word *"risicare," which* means "to dare" (Bernstein, 1996, p. 8). Daring is to take the courage to something, which implies a positive aspect. The Chinese ideogram for risk, however, combines two symbols, danger and opportunity (Cleary & Malleret, 2006, p. 12). The upside of risk is opportunity, and the downside is loss. Governments can become more efficient by taking risks and capitalizing on the opportunities presented in investing in alternative service delivery. There is a need for governments to make larger investments in managing wicked risks.

Figure 1. Chinese ideogram for risk

Source: Wells (2020)

Risk is a nominal concept and is therefore difficult to operationalize. The concept of risk requires contextual and dimensional clarification; for example, financial, country, political, contract, social, or environmental risk, to name a few (Nel, 2014). Some researchers consider risk from an economic, financial, social, or philosophical viewpoint (Spikin, 2013). A key factor in wicked risks is the manifestation of consequential risks. Consequential risks are those that have a further impact, due to not successfully mitigating the initial risk (Department of Education, 2021). To consolidate the term "risk" with Rittel and Webber's (1973) formulation of wicked problems, one can base it on the following:

1. $WP = \sum_{i=1}^{i=n} Pid + \sum_{i=n+1}^{\infty} P\infty ind \ldots (1)$

Where:
WP= wicked problem
Pid = identifiable problems
Pind= nonidentifiable problems

n -> ∞ = number of problems

The above formula indicates that *P* (problem) has no solution.

2. $WR\sum_{i=1}^{i=n} Rid + \sum_{i=n+1}^{\infty} Rnid - \sum_{i=1}^{m} Ride$...(2)

Where:
WR = wicked risk
Rid = identified risks
Rind=Non-identifiable risks
Ride = Identified risks removed
N -> ∞ = total number of risks
Furthermore, m≤n

In this case, i = 1 indicates an identifiable solution, and n = 1 indicates a nonidentifiable solution. Subtracting one from *R* (risk) yields WP (wicked problem).

In mitigating wicked risks, the magnitude of the risks; i.e., the probability and likelihood of the risk occurring) is factored in. Thus, one would have to consider the impact and likelihood of the total risk (TR) risk occurring, thus the risk exposure (RE) and the remaining residual and consequential risks, which are controlled or removed using the following formula:

3. WPTR = (known) RE + Consequential risk – Controlled/ Removed Risk = Residual Risk ...(3)

My research focuses on the intersection of multiple disciplines and implications for policymaking, going beyond purely technical risk. I approach risk analysis and management from a general systems theory perspective. General systems theory is well suited to analyzing wicked risks. The systems theory provides a framework to analyze wholes, interdependence and complexity (Montuori, 2011, p. 414), which is the very nature of wicked risks. I use systems theory (see Figure 2) to analyze non-traditional alternative service delivery systems and approaches to address complex public service challenges.

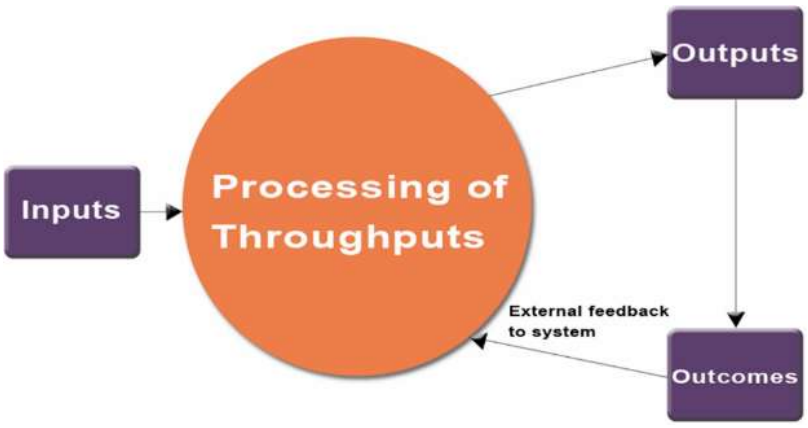

Figure 2. Systems theory as a theoretical framework for analyzing wicked risks
Source: Author's own construction.

As mentioned earlier, public service delivery is characterized by complex interactions between different role players, which creates an interdependence between service delivery and the social, environmental, technological, economic, political and institutional environments in local

municipalities (Govender, 2016). This research focuses on a specific type of service delivery, namely, alternative service delivery.

Alternative service delivery refers to methods other than conventional hierarchical bureaucracy for the delivery of public services. Alternative service delivery options include partnerships between the public, commercial, and/or non-profit sectors, and within and outside the public sector. The goal of alternative service delivery is to draw attention to innovative alternatives (Russell & Bvuma, 2001, p. 250). Alternative service delivery represents government reforms intended to improve efficiency, innovation, and performance (Furlong & Bakker, 2010).

Before 1990, the state led the provision of services, which was referred to as the "age of big government" (Evans, 2012). With the spread of globalization during the 1980s and 1990s, sovereign nation-states are becoming increasingly irrelevant and are being replaced by multilateral institutions and global governance bodies (Evans, 2012). This has led to a phenomenon called the "hollowing out of the state", with government reform characterized by more privatization, public-private partnerships (PPPs), limited public sector intervention and other alternative service delivery mechanisms or systems (Rhodes, 1994); thus involving alternative actors and approaches such as non-governmental organizations (NGOs), communities and businesses in the process of governance (Evans, 2012). These government reforms have made way for new doctrines that focus on value for money, including New Public Management (NPM), market-based governance, network governance, and collaborative governance. This shift from "government to governance" (Evans, 2012) marked a shift in public administration and management. This is particularly evident in the environmental governance arena. Originally, the environment was governed by local and national organizations, but now multiple actors, including businesses, communities, and NGOs, are involved in the governance of the environment (Benson & Jordan, 2017).

Particularly during the 2000s, government-led environmental protection toward more governance-based reform continued, with governments being less and less able to deliver on their own sustainable development mandates (Benson & Jordan, 2017). PPPs have remained a central feature in development interventions since the 1990s (Türkelli, 2021).

Since alternative service delivery entails the development and encouragement of innovative solutions by those directly in charge of customer service innovation, it is developmental in nature (Russell & Bvuma, 2001, p. 250).

Examples of alternative service delivery include, among others, PPPs, multi-stakeholder partnerships, service delivery innovation, information technology modernization, electronic service delivery, contracting out, digital governance and shared services.

RESEARCH METHOD

This research was based on secondary data and authoritative literature. Two methods were used to address the first research objective, namely, to identify current evidence and knowledge on alternative service delivery and wicked risks in Africa. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was used to guide the systematic literature review because it provides a framework based on an evidence-based minimum set of reporting items. The PRISMA guidelines provide a framework to report results clearly, transparently, and with sufficient detail to enable reproducibility (Rethlefsen & Page, 2022).

The first phase of the analysis is based on a systematic literature review that aims to determine current evidence on alternative service delivery models that focus on addressing wicked risks in the African context. The second phase of the analysis is based on a mapping study to describe current knowledge on alternative service delivery. The mapping study was based on Scopus results. The mapping study was completed using VOSviewer (version 1.6.20).

Scopus was selected for the mapping study to conduct citation analysis, whereas Google

Scholar offers inconsistent accuracy and inadequate and less frequently updated citation information. The results from PubMed were limited because it remains an optimal tool for biomedical electronic research. Web of Science was excluded because Scopus covers a wider range of journals and offers approximately 20% more coverage (Falagas et al., 2008). Scientific Publishing Consulting (2023) confirmed that Scopus provides higher quality and credibility than Google Scholar. Scopus was also selected because Google Scholar indexes different versions of an article, leading to duplicate citation counts (Moed et al., 2016).

The final phase forms the basis of the findings and is based on a critical review (n=102) of strategies to overcome wicked risks in Africa. Critical reviews aim to extensively explore research literature constructs, going beyond mere description, and typically result in analysis and conceptual models (Grant & Booth, 2009). The critical review for this study addressed the second research objective, that is, to determine an alternative service delivery model for African countries to address wicked risks. Figure 3 provides an overview of the databases and registers included in this review.

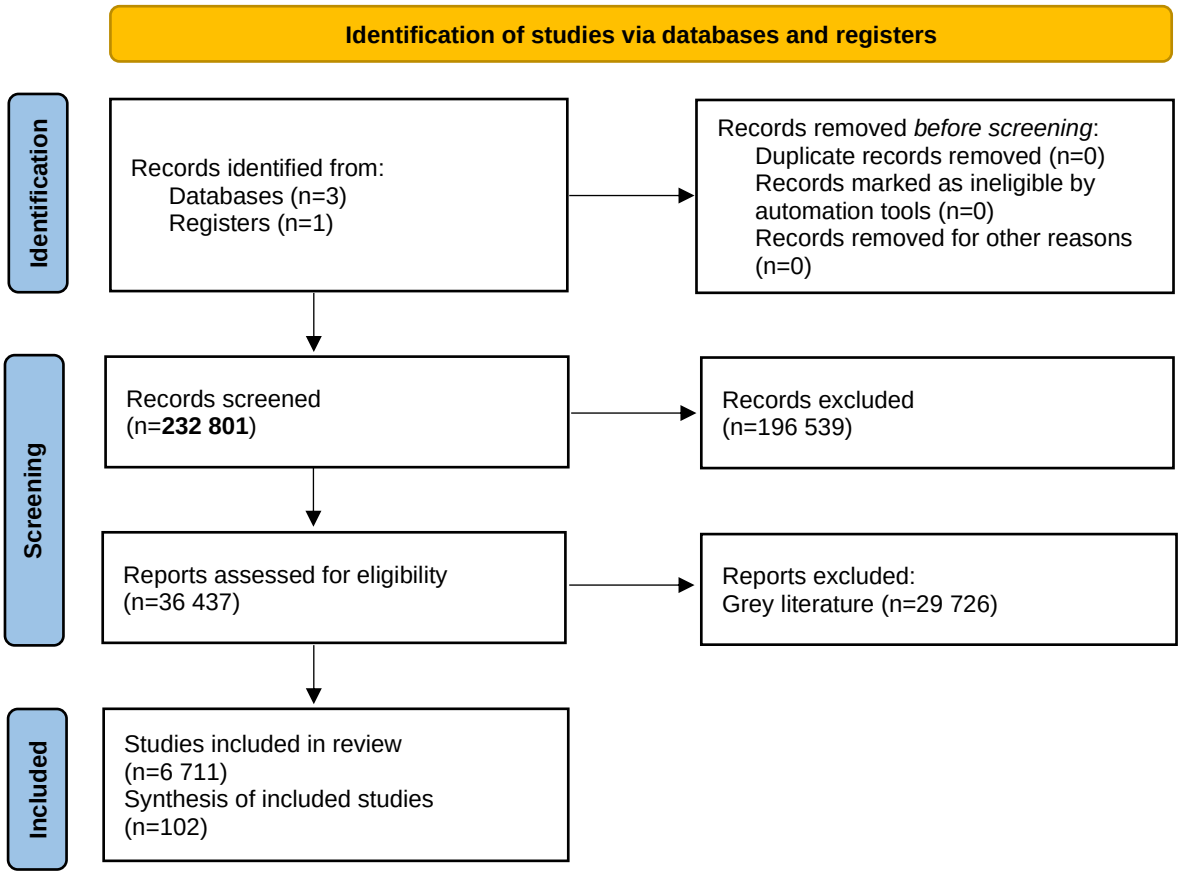

Figure 3. PRISMA flowchart

Table 1 provides an outline of the key concepts used to filter or screen the records. These concepts served as keywords for the review: alternative service delivery, government, wicked problems, wicked risk and Africa.

Table 1. Concepts for record screening

Database	Type of source	No. of articles	Filtered by key concept/ title	Total no. of relevant documents
Scopus	Books, chapters, and articles	10 388	ASD, government	492
Scopus	Books, chapters, and articles	18	ASD, wicked problems	11
Google	Registers	118 000	ASD, government	10 500
Google	Registers	83 600	ASD, government, Africa	18 800
Google	Registers	11 000	ASD, Africa, wicked problems	426
Google Scholar	Articles	5 280	ASD, government	4 490
Google Scholar	Articles	4 490	ASD, Africa, wicked problems	1 715
PubMed	Articles	25	ASD, government	3
PubMed	Articles	0	ASD, wicked problems	0
Total	**-**	**232 801**	**-**	**36 437**

ASD = Alternative service delivery

The inclusion criteria are listed in Table 2. Many of the results were based on medical studies or clinical trials, medical service models, patient models, etc.; hence, they formed the basis for the exclusion criteria.

Table 2. Inclusion Criteria

Concept/title	Criteria
Language	English
Date	2014-2024
Theme	ASD
Theme	Government
Theme	Governance
Theme	Wicked problems
Theme	Africa

FINDINGS AND DISCUSSION

Figure 4 shows that the results from Google Scholar publications indicate that 4 490 relevant records, which were based on alternative service delivery and focused on wicked problems. Of these records, only 1,715 were relevant to the African continent and resulted from research conducted by authors from the continent.

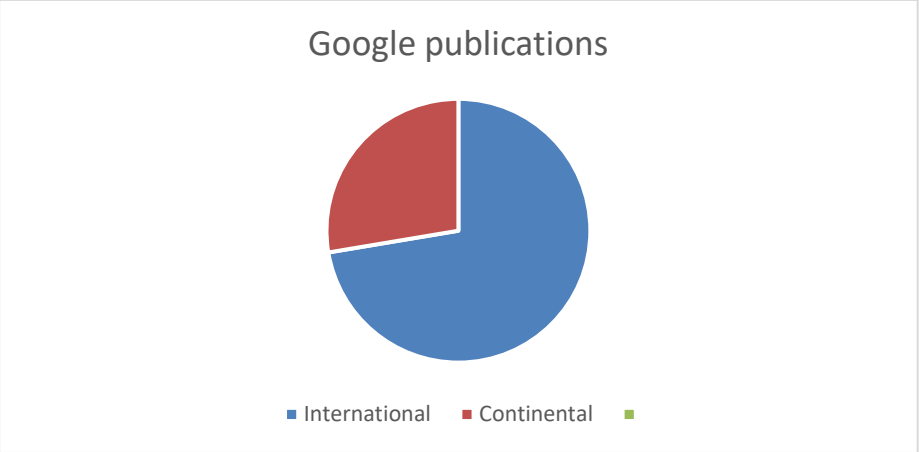

Figure 4. Google Scholar

The search for records on PubMed did not yield significant results. Only five records were relevant to the African continent, and 0 records focused on wicked problems.

Table 3. PubMed results

Theme	**Sum of no. of articles**
ASD	25
ASD: government, governance, state, public, administration, management	5
Wicked problems	0
Grand total	**30**

The second phase of the analysis was based on Scopus records. Figure 5 indicates that the majority of the records emanated from the United States of America, while only 28 documents emanated from Africa, specifically South Africa.

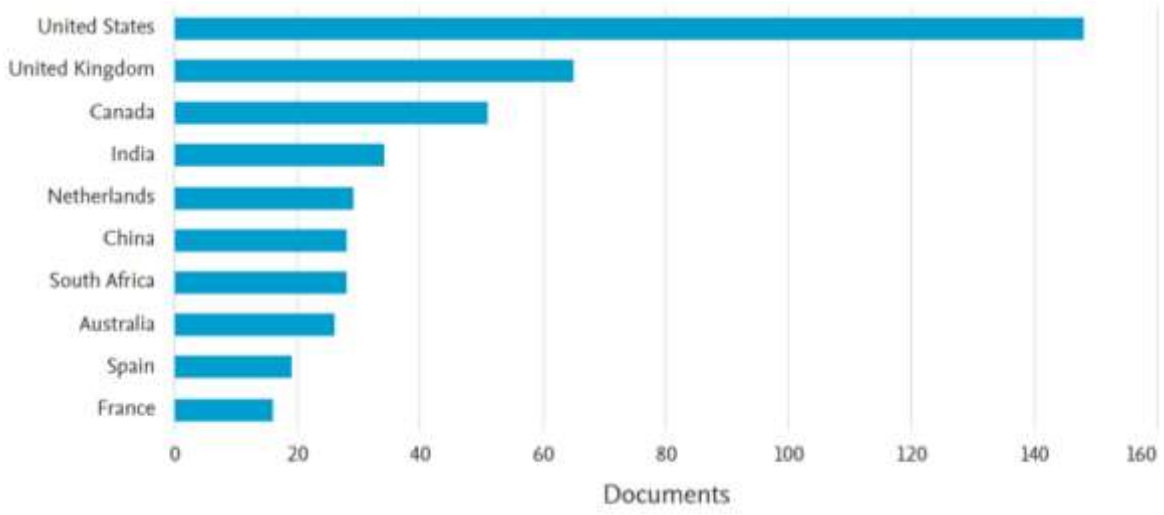

Figure 5. Scopus documents by country

Figure 6 indicates that the majority of records emanated from the social sciences, business, management, and accounting fields.

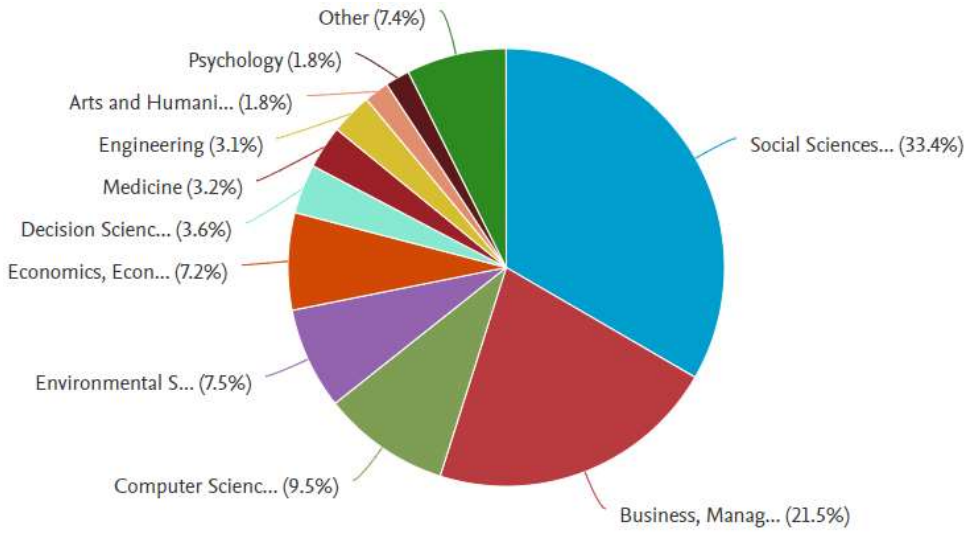

Figure 6. Documents by subject area

The second phase of the analysis was based on Scopus records. A map based on the text data was constructed, including the title and abstract of the records. The threshold of occurrence was set to 10. The 60% relevance of terms was selected. Figure 7 illustrates a density map of the most relevant terms, where the term that occurred the most was "local government".

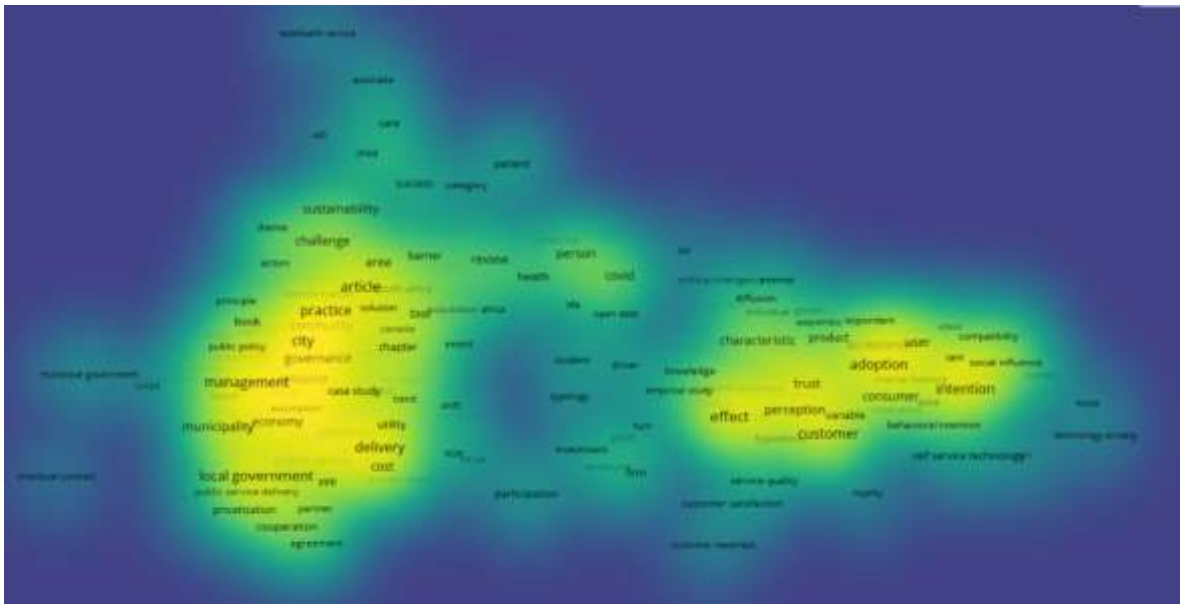

Figure 7. Density map of relevant terms

Further analysis of bibliographic data revealed that the co-occurrence of the term "local government" was the highest, while "public-private partnerships" was the second highest co-occurring term, as shown in Figure 8.

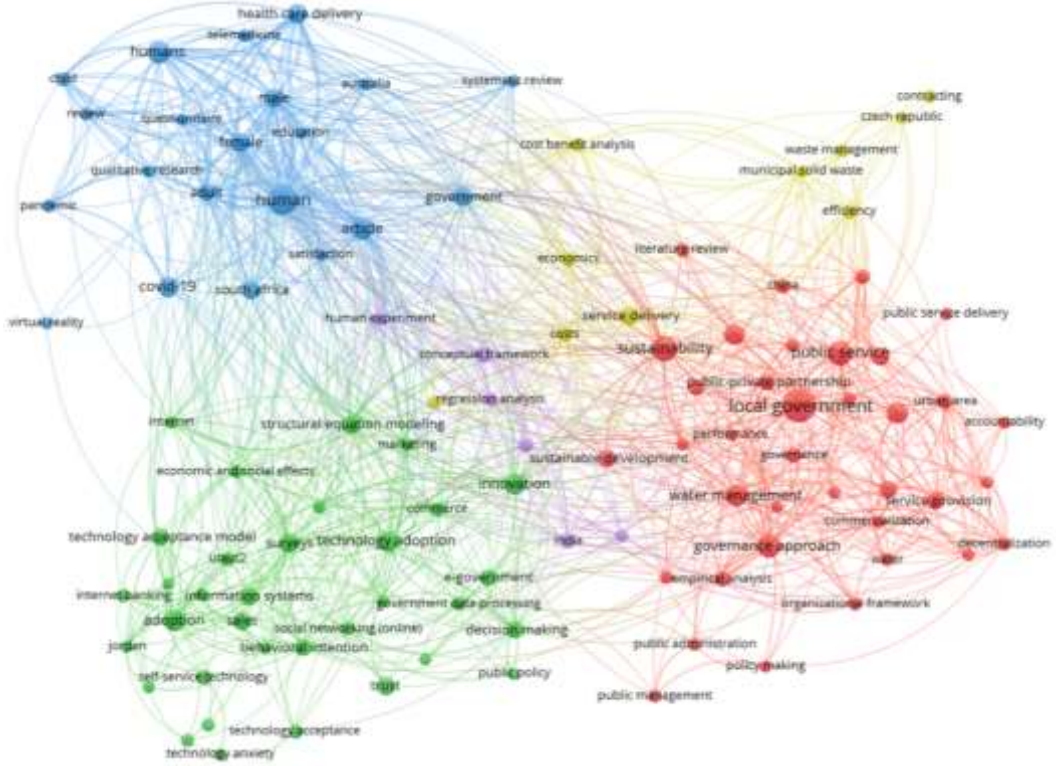

Figure 8. Network map of the co-occurrence of terms

The findings of this critical review of literature reveal that three alternative service delivery approaches, namely partnering, digital governance and service delivery innovation, are needed to overcome the wicked risks in turbulent times. As mentioned earlier, the main characteristics of wicked risks include that they are complex, non-linear, non-routine, and non-standardized in nature. First, digital governance can respond to this complexity by providing adaptive responses because digital governance can be leveraged to realize scalability and flexibility in government transactions (Van der Waldt, 2023). Second, by pooling resources and knowledge, partnering can adapt to nonlinearity. Lastly, by promoting creativity, service delivery innovation can address the non-routine nature of wicked risks. Innovation in service delivery can help address the nonstandard nature of wicked risks by promoting creativity and problem-solving skills.

Digital Governance in a Digitally Transformed Society

The single most crucial aspect to mitigate wicked risks is digital governance. The expanded use of information and communication technology as an enabling technique for enhancing organizational performance through the application of cutting-edge analytical tools is known as smart digital governance. Governments with a focus on the needs of their constituents and a clear mission make more use of social media and the Internet to connect citizens with public service providers. Provide more responsible, capable, and responsive services reduce transaction costs and streamlines procedures. Governments can use technology-assisted digital governance as a tactic to meet citizen expectations, cut expenses, and accomplish economic recovery goals. Although slowly, many public organizations are implementing standardized practices to match the high standards for customer service set by the digital revolution (Milakovich, 2021, p. xiv).

New types of organizations have been made possible by the swift growth of digital technology and increased data and knowledge sharing between individuals and organizations. However, this presents significant additional difficulties in creating efficient governance frameworks (Hanisch et

al., 2023). Digital governance is becoming increasingly important in the transition from the Fourth Industrial Revolution to the Fifth Industrial Revolution. The Fifth Industrial Revolution, or more commonly referred to as the "super smart society," aimed to bridge the gap between humans and technology (Nel-Sanders, 2023).

Ongoing digital transformation results in automated forms of government and policy design, sometimes replacing and supplementing analog forms. In this context, the term "analog government" describes situations in which bureaucratic incentives, bilateral task coordination, actor-based relational trust, and centralized control systems predominate. On the other hand, automated government means that algorithmic system trust, omnilateral coordination, automatic and cybernetic incentives, and decentralized control are the main pillars of governance. Given these two extremes, augmented government, where actors and algorithms interact, is an intermediary mode. Distributed control and trust, programmatic incentive systems, and multilateral coordination are all components of augmented governance (Hanisch et al., 2023).

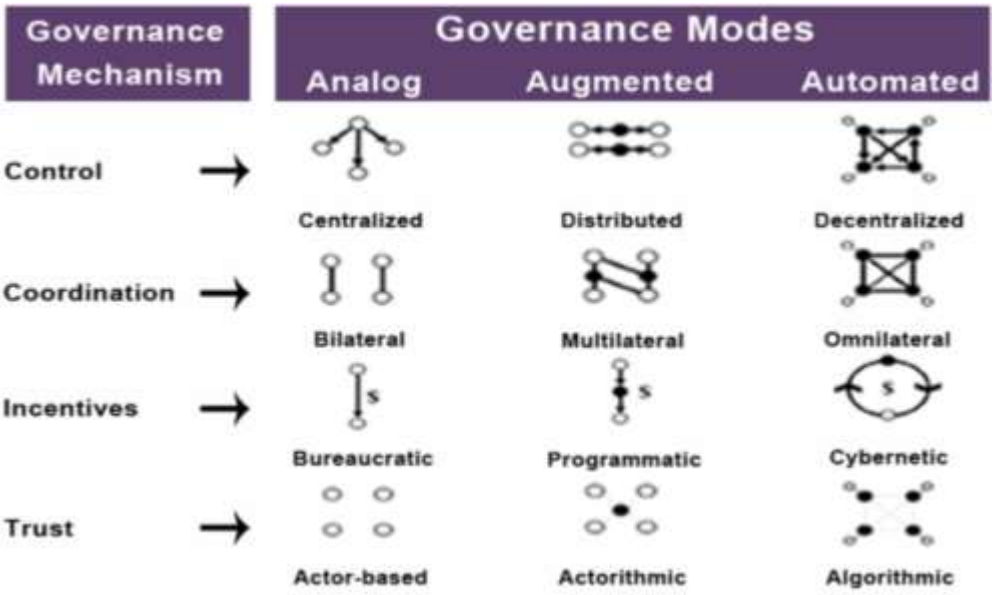

Figure 9. Digital governance in a digitally transformed society
Source: Hanisch et al. (2023)

Figure 9 indicates that an augmented governance approach is most suitable for a super smart society, where there is a focus on collaboration between technology and humans. Figure 10 indicates that several principles should guide the design of policies for digital governance. First, basic services should be freely available in a digital world. Offering digital service displaces expensive offline channels and resources, which reduces government expenditure and tax savings. Second, existing digital information should be used by ensuring that open data, big data, real-time data, and analytical data are fully utilized. Furthermore, governments should execute tasks once by constructing different online products from the same base components, and modules should be written with multiple applications across government. In addition, scalable services should be expanded despite competition by introducing incremental innovation. Lastly, an isocratic government should be established in which citizens are empowered to solve their own problems. In essence, digital technology can enable the co-production and co-creation of a great magnitude (Dunleavy & Margetts, 2015, pp. 2-16).

Figure 10. Design principles for digital governance
Source: Author's own construction (ideas extrapolated from Dunleavy & Margetts, 2015, pp. 2-16)

Partnering to Enhance Capacity for Service Delivery

Partnerships are increasingly important for governments achieving SDGs. As a result, partnerships have played an important supporting role in helping governments deliver services in an efficient and reliable manner. Partnerships are important instruments for delivering services at local, subnational and national levels (Fenwick et al., 2012). Governments embark on PPPs for the following reasons: they entail projects that cannot be implemented by the public sector alone, cannot be effectively performed by the public sector alone, and are desirable due to their social significance (Vinogradov et al., 2014).

Governments operate in a complex network of multiple governance nodes (Fenwick et al., 2012). Partnerships and co-governance mechanisms can provide pragmatic solutions to wicked policy issues (Fenwick et al., 2012). Governments opt for PPPs when projects are complex, politically contentious, difficult to execute, or require significant financial commitments.

PPPs are a form of networked governance and have been used since the 1980s as part of NPM to increase governance effectiveness (Mert & Pattberg, 2015). The "public-private partnerships" label was originally conceived in the NPM era before 1990; however, PPPs broke away from the NPM agenda a decade ago to align more with the recent New Public Governance agenda (Casady et al., 2020).

NPM initially increased public sector efficiency through competition, transaction costs, and principal-agent relationships. However, New Public Governance focuses more on achieving mutual goals in an integrative manner to address problems through collaborative relationships (Velotti et al., 2012).

After the 2002 Johannesburg World Summit on Sustainable Development, there was a noticeable increase in partnerships, with over 300 partnerships recognized by the United Nations Commission on Sustainable Development (Mert & Pattberg, 2015). Third-sector organizations, such as community-based organizations, NGOs, and nonprofit organizations, also play an important role in addressing the gaps in government service delivery (Henderson, 2002). A specific subset of transnational partnerships operating in the field of sustainable development was identified as multi-stakeholder partnerships, which originally set out to implement the Millennium Development Goals (MDGs) and were mostly voluntary in nature (Mert & Pattberg, 2015).

Within a global context of finite resources and ever-changing conditions, multi-stakeholder partnerships might offer strategic advantages in creating public value. The public and private sector

have historically depended on each other to some extent to accomplish their goals; the concept of generating public value through partnerships is thus not new. Contracting, network governance, and principal-agency approaches are examples of governance processes that demonstrate these. Multi-stakeholder partnerships are important for co-creating and enhancing public value (Nel, 2017).

Nel (2018) defined hybrid PPPs as the "collaboration of the public and private sector with state-owned enterprises to address a service delivery challenge". Hybrid PPPs represent an innovative approach to public-private procurement for energy partnerships. The hybrid PPP model serves public interest and is crucial to the country's energy transition (Nel, 2018).

Current public management and governance reforms suggest that PPPs are key instruments of network and collaborative governance. Network and collaborative governance is a doctrine in which autonomous stakeholders work together to achieve a mutual goal (Evans, 2012). PPPs strengthen government capabilities by collaborating with the private sector to deliver a certain service, which is typically too sophisticated and complex for the government to execute on its own. Network governance, rooted in network theory, where networks are defined as interconnections between three or more entities, results in policy networks through communication and the exchange of resources (Mert & Pattberg, 2015). These policy networks are polycentric governance configurations that integrate conflicting actor interests within a horizontal structure (Mert & Pattberg, 2015, p. 232).

Traditionally, PPPs have been leveraged for hard service development, such as infrastructure development. Digital technologies such as blockchain and smart contracting can enhance the efficiency of partnerships. While PPPs have traditionally focused on hard services, it is important to recognize their potential for soft service delivery. This research recommends enhancing service delivery through blockchain and smart contracts. The use of smart contracts can facilitate smart partnering, which can improve the efficiency of PPPs and potentially lead to more efficient risk allocation, automated contract administration, and clear agreements (Nel, 2020).

Building Blocks for Service Delivery Innovation

Digital transformation is key to service delivery innovation. Services in the public sector often consist of people, processes, materials, and skills that need to be properly integrated to produce "planned" or "designed" services. These components are frequently not physical objects (Martins & Ledimo, 2015, p. 575). Organizations employ innovation because they want to provide greater value to their clients and customers, deliver services and products in an economical manner, and enhance their methods of providing services to cut expenses and boost profitability (Martins & Ledimo, 2015, p. 575).

A number of building blocks should guide service delivery innovation, as illustrated in Figure 12. To address some of the primary issues that define government bureaucracies and frequently impede the advancement of relationships with public service users, innovation requires an institutional basis (Farias et al., 2017, p. 19). Another aspect should be to strengthen the capacities of all spheres and levels of government.

Governments should provide a more responsive, seamless, and whole-of-government service (Farias et al., 2017, p. 63). Re-engineering is necessary to ensure seamless services. Re-engineering is the process of drastically rethinking and rearranging business processes to achieve noticeably higher performance levels (Nzimakwe, 2015, p. 63). Total quality management can contribute to a whole-of-government service, where the focus is customer satisfaction. Benchmarking can ensure responsive government services. Identifying, modifying, and putting best practices into practice are part of benchmarking (Nzimakwe, 2015, p. 64).

Governments must pass antiquated departmental silos to oversee the public sector. Involving citizens is essential. Leadership in the areas of governance, risk management, human resources, legal authority, policy and programs, and quality management is necessary for service delivery innovation. Senior management needs to make room for employees to innovate and keep changing (Farias et al., 2017, p. 63).

Figure 11. Building blocks of service delivery innovation
Source: Author's own construction.

The open governance approach has been successful in encouraging service delivery innovation and co-creation (Nel-Sanders & Masilela, 2020). Open governance focuses on establishing a culture of governance based on innovative and sustainable public policies and practices inspired by the principles of transparency, accountability and participation that foster democracy and inclusive growth (Organization for Economic Co-operation and Development, 2016, p. 3). The continued development of open governance initiatives can facilitate service delivery innovation, build multi-stakeholder partnerships and enhance transparency, accountability and citizen participation (Nel-Sanders & Masilela, 2020, p. 43).

Progress in Alternative Service Delivery in Africa

African countries cannot fully address wicked risks amidst system-wide corruption, weakened state capacity, failure to adequately deliver basic services, economic decline, and economic inequality. In order to mitigate wicked risks and meet SDGs, the continent must achieve more inclusive and sustainable outcomes. Infrastructure, jobs, income, employment opportunities, access to electricity, basic services, and initiatives to close the digital gap all require improvement. Drastic efforts are required to address the system-wide challenges presented by wicked risks to develop more resilient systems. The ability of individuals and governments to endure different shocks and strains is known as resilience. Systems should be built with resilience so that they can adjust, manage change, and eventually thrive. Analyzing the entire risk landscape is necessary to measure resilience (Nel-Sanders & Thomas, 2021).

For instance, in South Africa, exhibits risks that can delay progress for mitigating wicked risks and service delivery, these includes: economic stagflation, high unemployment, livelihood crises, public infrastructure decay, and low income growth (Mathebula, 2024). Systemic corruption also stifles the development and capacity of governments to deal with risks. Corruption in South Africa has contributed to a net loss of billions of taxpayer money to finance corrupt public officials and their counterparts in the business sector (Masenya & Mthombeni, 2023). The South African

government cannot fully address wicked risks amidst system-wide corruption, weakened state capacity, failure to adequately deliver on basic services, economic decline, and economic inequality. To mitigate wicked risks and meet sustainable development goals, South Africa must achieve more inclusive and sustainable outcomes. Infrastructure, jobs, income, employment opportunities, access to electricity, basic services, and initiatives to close the digital gap all require improvement. Drastic efforts are needed in South Africa to address the system-wide challenges presented by wicked risks to develop more resilient systems. The ability of individuals and governments to endure different shocks and strains is known as resilience. Systems should be built with resilience so that they can adjust, manage change, and eventually thrive. Analyzing the entire risk landscape is necessary to measure resilience.

Systems Approach to Wicked Risks

A system approach was used to analyze current evidence and knowledge on alternative service delivery in Africa. Figure 13 shows a model based on the findings of a critical review of the literature. Because there are no immediate solutions to wicked risks, they can easily fall out of control and create turbulence. In summary, robust governance responses are needed to mitigate these wicked risks, and alternative service delivery presents robust features to mitigate these risks given that it is more flexible, agile, adaptable, and decentralized in nature than simply relying on traditional government responses. Lastly, risk-informed decision-making should be placed at the center of the reform agenda for a smart and sustainable society.

Figure 13. An alternative service delivery model for African countries
Source: Author's own construction.

Systemic improvement in governance reform is necessary to mitigate wicked risks, which should be guided by risk-informed decision making. Risk-informed decision making goes beyond quantitative risk assessment approaches. Only one aspect of the decision-making process is the quantitative results of risk assessment; other factors, including societal preferences, political concerns, and financial limitations, are also considered. The link between risk assessment and decision-making should be advantageous for policy formation. This should be motivated by a greater understanding that decisions need to take into account a number of factors and that the results of risk assessment processes frequently contain a large amount of uncertainty, making them unsuitable for use in a mechanical manner to arrive at a well-informed conclusion (Zio & Pedroni, 2012). Risk management plans should be relevant to different contexts and should foster trust and confidence (Zamoras et al., 2024).

Within the realm of alternative service delivery options, it is imperative to incorporate three design principles, robustness, resilience, and adaptivity, which serve as the cornerstone of mitigating complexity and navigating uncertainty. Robustness will improve the ability to withstand shocks and not crumble under duress (Van der Steen & Van Twist, 2020).

This necessitates robust governance, which should be designed to be agile and flexible to mitigate risks during turbulent times. Robust governance is characterized by competent public administration, analytical ability, collaborative ability, organizational management, and aptitude for contingency planning (Salvador & Sancho, 2023).

CONCLUSIONS

This research considers the role that alternative service delivery can play in addressing wicked problems. These findings suggest that alternative service delivery is more suitable for mitigating wicked risks than traditional service delivery approaches. In addition, this research aimed to determine which evidence and knowledge are available on alternative service delivery arrangements relevant to African countries. The review highlighted that most research on alternative service delivery in developed countries is conducted in developed countries, leaving developing African countries behind. Finally, this research aimed to determine suitable mechanisms for an alternative service delivery model for mitigating wicked risks in Africa. The findings suggest that digital governance, service delivery innovation and partnering can inform decisions about addressing wicked problems on the continent. Overall, the study recommends a model based on digital governance, innovation and partnerships to mitigate wicked risks in Africa. This suggests that robust governance responses, such as alternative service delivery, are needed to prevent turbulence and create a super smart society.

LIMITATION & FURTHER RESEARCH

A limitation of this study is that it used secondary sources of information. Therefore, future research should include primary sources of information. Future research should focus on case studies of specific wicked risks and how alternative service delivery can be used to mitigate such risks on the African continent using country-specific data. In addition, consideration should be given to case studies on specific types of alternative service delivery.

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