

TOWARDS A MORE EQUAL CITY

Kampala: Rebuilding Public Sector Legitimacy with a New Approach to Sanitation Services

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EXECUTIVE SUMMARY

Highlights

- ▶ In the late 1990s, declining sanitation services and limited capacity to manage Kampala's rapid population growth caused the city's water and sanitation utility and its local government to suffer a crisis of legitimacy.
- ▶ In response, both institutions embarked on a reform process that involved adopting pro-poor intermediate solutions, transforming the city's approach to sanitation.
- ▶ Over the last 20 years, the local government and city utility have established partnerships with each other, nonprofits, community groups, and small businesses to improve access to sanitation services. For local institutions, this involved taking a more flexible approach that embraced innovative technology for fecal sludge collection.
- ▶ Between 2003 and 2015, the national utility increased the amount of human waste treated by more than 30 times, despite barely increasing sewer connections.
- ▶ Kampala's expanded approach to sanitation is being reflected in other sectors and services as the city becomes increasingly open to alternative ideas, technologies, and partnerships that target under-served communities.



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By 1998, Kampala, Uganda's largest city, was faced with an overwhelming backlog in service provision. Public trust plummeted, challenging the legitimacy of both the city administration, the Kampala City Corporation Administration (KCCA), and the utility, the National Water and Sewerage Corporation (NWSC). As the city grew, there was less and less space for new latrines, and financial resources were relatively limited. Furthermore, over 60 percent of the urban population is poor, so sewerage connections could not be provided on a fee-for-service basis.¹

This case study examines Kampala's messy but consistent progress towards providing expanded sanitation services. This progress stems from the fact that both the city administration and the national utility have redefined their approach to service provision, moving away from expanded sewer connections and towards other kinds of improved sanitation options. The result is an experimental, innovative, and pro-poor approach to providing intermediate solutions that better serve different neighborhoods and household incomes. The case study relies on evidence from existing research, government-produced data, and semistructured interviews with a variety of key informants. We identify critical triggers of change, explore the roles of key enabling and inhibiting factors, and discuss progress towards institutionalization.

The introduction of multiparty politics and decentralization put pressure on the KCCA and the NWSC to find innovative solutions to sanitation service provision. The KCCA began working with the NWSC to redefine service provision. The NWSC recognized that informal areas had many potential customers that were not being served, but were difficult to serve with traditional sewer connections. Over time they instituted mechanisms that encouraged alternative technologies, such as the Gulper, a latrine-emptying service. These technologies were made possible by establishing a pro-poor unit at the utility, enacting performance-based incentives for city and utility

staff, redefining sanitation standards, and implementing new stakeholder coordination mechanisms. Donors' financial support had a complicated impact: on the one hand, it allowed new ideas to be put forward, but on the other, such support proved to be inconsistent, conditional, and focused on short-term planning outcomes.

Several conditions have enabled new approaches to service provision in Kampala. One of the most important was the emergence of a results-driven culture within the KCCA and the NWSC, which created continuous internal pressure to expand services and adopt new technology. This cultural shift was made possible by leadership in both organizations that encouraged outside-the-box thinking. Support from strong leaders promoted incentives to change the city's approach to planning. Finally, community participation mechanisms helped tailor sanitation solutions to the community, ratcheting up support for intermediate solutions. This made communities willing to accept new solutions and reduced the influence of politics over the process.

As is so often the case, the unfolding change and associated long-term outcomes remain vulnerable to several inhibiting factors. The first is a mentality of projectization, whereby utility and city staff implement new approaches that only fit within the context of one specific project. This mentality inhibits long-term thinking and policy learning because funding and ownership are highly fragmented. In the past this has slowed the transformation process, and this issue will likely continue as funding dries up for various projects. Second, this issue is compounded by a small and fragmented private sector that does not offer long-term investment or operations support, making funding volatile. Finally, information sharing is limited between stakeholders, which leads to duplicated and costly efforts and further exacerbates the ongoing issues with projectization and limited private sector involvement.

Kampala’s approach to sanitation has increased households’ coverage, affordability, and access to decent sanitation options.

We find that expanding sanitation coverage to poor areas has the potential to improve the whole city’s health and well-being. There are now partnerships, innovative collaborations, technologies, and experiments that transcend the usual urban management approaches. The beginning of a multisector transformation seems to be under way; projects ranging from planting trees to widening roads are being undertaken in consultation with communities. Furthermore, the environmental benefits of Kampala’s pro-poor approach are just beginning to emerge. Kampala’s transformation offers hope to other cities facing service backlogs, particularly regarding sanitation.

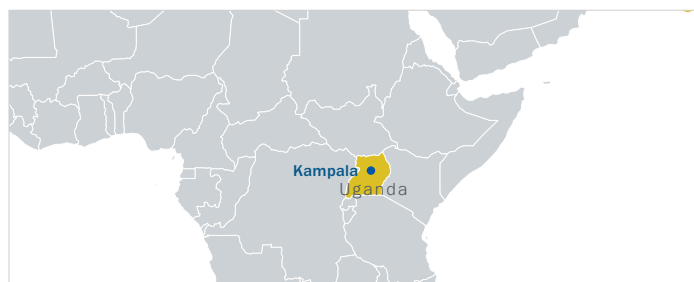
About This Paper

This case study is part of the larger World Resources Report (WRR) *Towards a More Equal City*, which views sustainability as composed of three interrelated issues: equity, the economy, and the environment. The WRR uses equitable access to core urban services as an entry point for examining whether meeting the needs of the under-served can improve the other two dimensions of sustainability. The city case studies examine transformative urban change defined as that which affects multiple sectors and institutional practices, continues across more than one political administration, and is sustained for more than 10 years, resulting in more equitable access to core services and a more equal city overall. The goal of the WRR case studies is to inform urban change agents—including policymakers at all levels of government, civil society organizations, the private sector, and citizens—about how transformative change happens, the various forms it takes, and how they can support transformation towards more equal cities.

Box 1 | Abbreviations

ADF	Allied Democratic Forces
AFD	French Development Agency
AfDB	African Development Bank
BTC	Belgian Technical Cooperation
EC	European Commission
EIB	European Investment Bank
FSM	fecal sludge management
GIS	geographic information system
GIZ	German Development Cooperation
HSM	Holy Spirit Movement
IDRC	International Development Research Centre
JICA	Japan International Cooperation Agency
KCCA	Kampala City Corporation Administration
KIEMP	Kampala City Council Environmental Planning and Management Project
LRA	Lord’s Resistance Army
NGO	nongovernmental organization
NRM	National Resistance Movement
NWSC	National Water and Sewerage Corporation
PAPSCA	Program for Alleviation of Poverty and Social Costs of Adjustment
SIDA	Swedish International Development Cooperation Agency
SME	small and medium enterprise
UPDA	Uganda People’s Democratic Army
WRR	World Resources Report

Figure 1 | **Kampala at a glance**



Type of jurisdiction	City
Population in: ^a	
	1950 342,239
	2000 1,189,246
	2016 1,555,600
Total land area (in sq km) ^b	189
GDP per capita, Kampala ^c	\$697
Human Development Index, Kampala	N/A
Human Development Index, Uganda ^d	0.49
Gini coefficient, Kampala ^e	0.34
Population living below the poverty line (%)	N/A

Population living in informal dwellings (%) ^f	87
Access to electricity (% households) ^g	78
Access to piped water on premises (% households) ^h	17
Access to flush toilet (% households) ⁱ	10
Trips by mode (%) ^j	
Walking and cycling	49
Public transport (bus and metro)	30
Private cars and two-wheelers	19
Informal transport, other	2
Average trip length (km) ^k	4.1
Average prices of urban services:	
Electricity (per kWh) ^l	\$0.23
Water (per m ³) ^m	\$0.62
Sewage treatment (per m ³) ⁿ	\$0.47
Public transport ride (bus) ^o	\$0.14
Informal transport ride (taxi, motorcycle) ^p	\$0.28; \$0.42
Average price of gasoline (price per liter) ^q	\$1.01
Primary decision-making level for cities:	KCCA
Type of city leader, term years, and term limits:	Mayor, 5 years, 2 terms Executive Director, 4 years, contractual

Notes: All prices are reported in US\$ using market exchange rates for the source's corresponding year.

Source: a. UBOS, 2002; UBOS, n.d; b. KCCA, 2012; c. UBOS, 2014; d. UNDP, 2016; e-h. UBOS, 2014; i. Based on the authors' personal communication with representatives from the NWSC, KCCA, and ACTogether in Kampala, July 2017; j-k. KCCA, 2012; l-n. NWSC, 2017; o-p. Based on the authors' personal communications with respective transportation users, Kampala, 2017; q. Based on market price in Kampala, November 2017.

1. INTRODUCTION

Kampala, Uganda's major urban center, is facing many of the same issues as cities across the globe, including rapid population growth, urban expansion, and service backlogs. In 2012 Kampala had 1.5 million residents, about a third of the national urban population.² The city's population growth rates have varied between 4 percent and 5 percent per year since 1991, resulting in densification and expansion.³ Given that the city's population almost doubled between 1991 and 2014, its spatial footprint grew even more rapidly.⁴ In 1972 Kampala's spatial footprint was 195 sq km; by 2012 its wider metropolitan area had expanded to 839 sq km.⁵

Matching infrastructure provision with the pace of urban growth has posed challenges that have had no easy or clear solutions. Despite many efforts, urban growth overwhelmed infrastructure expansion, creating a huge investment backlog that resulted in more than half the city's residents living in neighborhoods categorized as slums.⁶ Although road conditions have improved over time, street lighting remains scant, most households do not have a piped water connection, formal solid waste collection is limited, and pit latrines dominate the sanitation system.

Kampala's financial position during this period of rapid growth led to inadequate long-term investment planning and inconsistent strategic direction. Shifting political and management approaches further compounded the challenges and created constant crises. Since reforms in 2011, Kampala

has been led by the Kampala Capital City Authority (KCCA), a corporate body administered by an Executive Director who is appointed by the president and overseen by ministers at the state and cabinet levels. A democratically elected mayor sits on the KCCA leadership council, along with elected division mayors from across the city. This arrangement is unique in the Ugandan context and results in a hybrid governance status for which both national and local decision-making norms apply. Since the new structure in 2011, the KCCA has consistently improved its financial position but is still dependent on funding from donors and other outside sources. Donor projects first started in 1990 and have ranged from single-sector projects to general technical assistance aimed at improving Kampala's urban management capacity. These efforts created a mindset of projectization, whereby institutional aims are based on the terms of a project rather than the overall mission to improve services and respond to citizens' needs.

Kampala's residents have heavily relied on on-site sanitation, which can have significant health and environmental risks if not safely managed. Currently, only 10 percent of the population has a sewer connection; the majority rely on on-site pit latrines and septic tanks.⁷ This is problematic, considering that 30 percent of latrines in informal settlements are unsafely emptied directly into the environment, sending untreated sludge into natural waterways and impacting the city's main source of clean drinking water.⁸ Without affordable pumping and treatment solutions, households open their latrines during the rainy season to flood them out. Cholera outbreaks, such as the ones that occurred in 1997, 2007, and 2015, are one direct result of the fact that 48 percent of Kampala's residents rely on unimproved facilities for their sanitation.⁹

In response, the KCCA and the national parastatal utility, the National Water and Sewerage Corporation (NWSC), are expanding the types of sanitation services offered to Kampala residents. The KCCA is responsible for on-site sanitation, or latrines, because the national utility only owns the sewer connections. Yet over the last 20 years, the city and the utility have started to work together to improve sanitation services. Between 2003 and 2015, the NWSC increased the amount of human waste treated from 2,460 m³ to 80,927 m³ despite a negligible increase in sewer connections.¹⁰ The increase in human waste treatment shows the impact that cooperation and a new approach have had on service provision in the city. For local institutions, this involved taking a more flexible approach that embraced innovative technology for fecal sludge collection.

The introduction of alternative technologies demonstrates how much has changed in Kampala. In particular, the successful use of the Gulper—a portable vacuum pump that empties sludge from latrines into drums that are transported on three-wheeled vehicles and then transferred to larger tankers for disposal at sewerage treatment plants—has been transformative. The Gulper was introduced in Kampala by Water for People, a Denver-based nongovernmental organization (NGO), after testing in Dar es Salaam, Tanzania, and Blantyre, Malawi.¹¹ A British engineer invented the Gulper in 2003 during the course of research at the London School of Hygiene and Tropical Medicine. Water for People contracts local manufacturers to make the Gulpers, which are freely licensed and adopted. With the support of the KCCA, Water for People and local manufacturers adapted the Gulper to make it easier to transfer latrine sludge to the tanker. The Gulper is not the first attempt to offer a small cesspool emptier service, but it demonstrates an evolved approach and expanding network of stakeholders involved in service provision. Figure 2 illustrates the major actors and projects involved in the reform process.

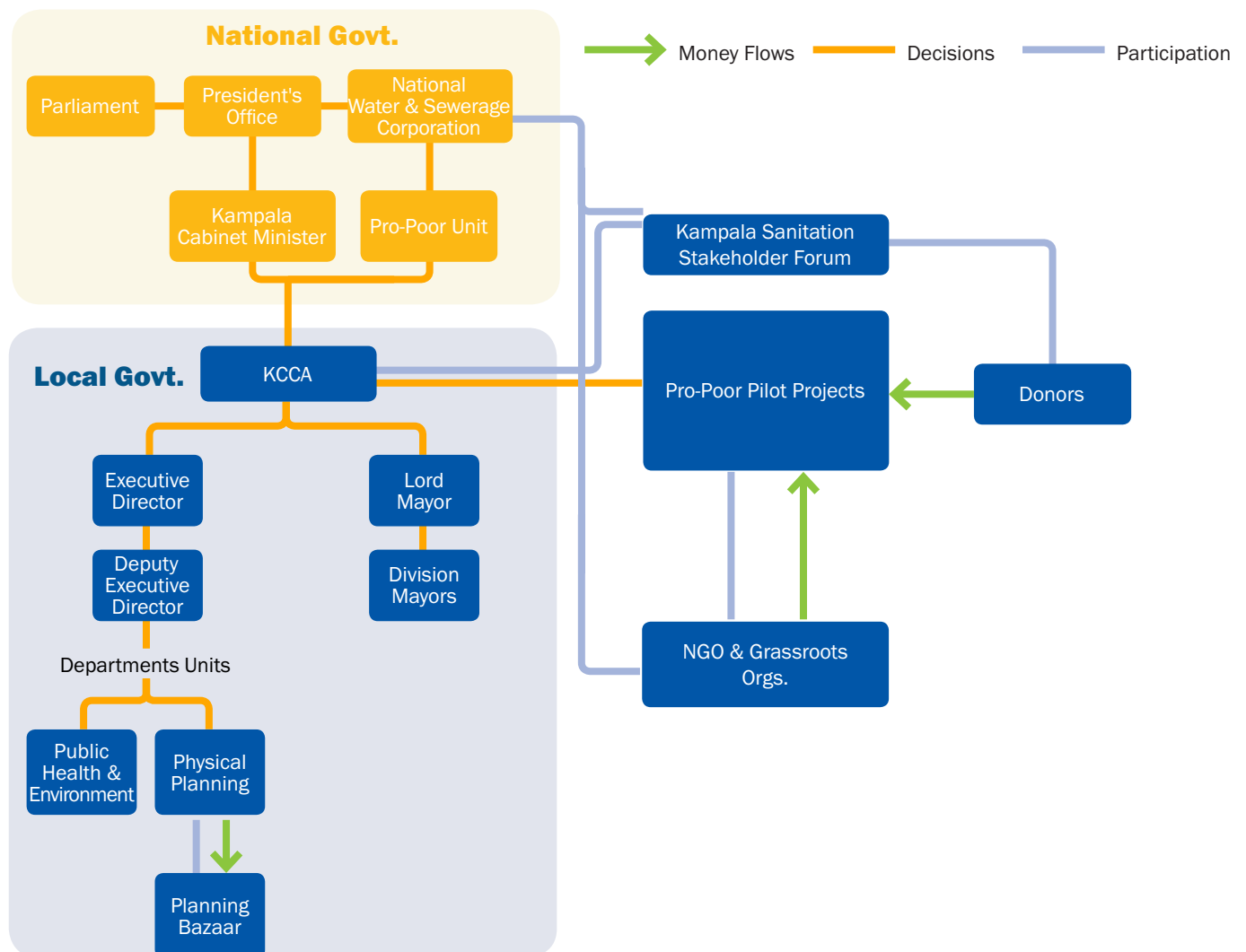
Along with new approaches to planning and engagement, the Gulper benefited from a multistakeholder group, represented by the Kampala Sanitation Stakeholder Forum. Financial and policy support from donors, nonprofit organizations, and community groups was also critical to making these innovations a reality. The donor-supported Local Government Development Program was a major conduit of financial support that created the opportunity for innovation. The national government plays a strong role in both the KCCA and the NWSC, but both groups are also local government bodies that provide local representation and utility services. The introduction of the Gulper in 2014 was only possible because the KCCA and the NWSC changed their focus from expanding sewer networks in formal neighborhoods towards providing intermediate solutions that are pro-poor, innovative, and experimental. The Gulper also symbolizes the precarious nature of this transformation: current fees are still too high for many households, and the need to make a profit is pushing the service towards wealthier neighborhoods.¹²

In this case study, we describe the process that enabled the Gulper to be accepted as a formal sanitation solution. The paper draws on the World Resources Institute's definition of *transformative urban change* as change that affects multiple sectors and institutional practices, continues across political administrations, and is sustained for more than 10 years. Sanitation is the seminal problem around which citywide change is occurring. The case study synthesizes governance and business approaches aimed at increasing coverage of decent sanitation with improved latrines in Kampala. This allowed

us to assess how institutions were mainstreaming the new approaches and technology into routine planning processes to increase service coverage. We see the trigger for change occurring shortly after Uganda’s civil war, when the national utility and the local government struggled to collect taxes and fees due to very poor service quality. We first describe large-scale institutional reforms that set the stage for specific actions to alter the KCCA’s and the NWSC’s approach to sanitation. We then show that the change was the result of the introduction of a pro-poor unit, performance-based incentives for municipal staff, partnerships between national and local agencies, and standards reforms. Finally, we explore several factors that have enabled and inhibited the process of transformation, and we conclude by synthesizing how changes in the sanitation sector are influencing other sectors in the city.

Kampala’s transformation is remarkable because sanitation services are among the most difficult for a city government to provide. Sanitation systems traditionally rely on sewers that require large and lumpy investments and that are expensive and complicated to maintain. Many cities find it politically difficult to offer varied service levels because the quality is so dramatically different between in-house sewerage connections and detached pit latrines. Thus, many cities turn a blind eye to sections of the city that lack sewers. Kampala’s acceptance of intermediate solutions like the Gulper represents a new path, one that other cities might follow. The approach allows the city to improve pit latrines while also positioning sanitation as an opportunity for small businesses to offer new technologies and community involvement to prioritize their needs, such as affordability. Kampala’s transformation unfolded over nearly

Figure 2 | **Landscape of urban change agents in Kampala**



Source: Authors.

30 years, but hopefully other cities can adopt similar positions much more quickly. Providing less than piped sewerage will continue to be a politically charged proposition, but Kampala shows that offering a service from which the whole city can benefit is a worthwhile political gamble.

Data and methods used

This case study is part of the larger World Resources Report (WRR) *Towards a More Equal City*, which focuses on equitable access to core services. The WRR is a series of working papers on housing, energy, the informal economy, urban expansion, water, sanitation, and transportation that analyze sectors and themes across *struggling and emerging* cities in the global South.¹³ The WRR also features a series of city-level case studies on urban transformation, of which this case study is a part.

In the WRR, by definition, transformative urban change addresses a seminal problem that negatively affects many people's lives and involves multiple sectors and institutional practices. It continues across more than one political administration and is sustained for more than 10 years. Experience suggests that when cities solve a problem that impacts many people, it creates momentum for change that has the potential to positively affect other spheres in a broad, virtuous cycle. Each of the WRR city-level case studies examines how approaches to addressing seminal problems have (or have not) triggered broader cross-sectoral, institutional, citywide transformation and explores how transformative urban change occurs. It is important to note that every case has progressive and regressive elements, and every city experiences difficulties, conflicts, setbacks, and false starts. This case study explores these questions with respect to challenges involving sanitation in Kampala.

The methodological approach to this case study combined key informant interviews, site visits, and a review of secondary literature. Interviews and site visits were conducted in Kampala between May 3 and June 30, 2017. The key informants were purposively selected from institutional actors at public agencies, including the KCCA, the NWSC, and community groups such as ACTogether and Water for People. We spoke with the small-business owners who operate the Gulper, but larger-scale private investors are not yet involved in the sector. Seven individuals from key institutions were interviewed for this case study. We also conducted focus groups at the KCCA, the NWSC, and with community users at a communal sanitation block. Finally, the primary researcher hosted a workshop on innovations in water and sanitation that complemented the other primary data

collection methods. Throughout our research and interviews we focused on the sanitation sector and how its transformation relates to other sectors.

The paper's first author, Shuaib Lwasa, has been working on the intersection of urban development and environmental change in Kampala for over 15 years; thus, the case study also draws on his previous work, interviews, and data collection. He also leads the Urban Action Innovation Lab at Makerere University in Kampala, which provided additional information about the actors and technologies implemented in the city. Site visits to the KCCA, ACTogether, and various communities documented the presence of communal sanitation blocks and use of the Gulper. We also drew on secondary data from online databases, newspaper archives, project documents, strategic plans, and government policy. We collected reports and policy documents from the World Bank, UN-Habitat's Global Urban Observatory, and other donor websites to get insight into the history of project activities, the philosophy of change, and progress on improving sanitation in Kampala.

2. POLITICAL AND INSTITUTIONAL TRIGGERS: SEEDS OF TRANSFORMATION IN KAMPALA

The infrastructure backlog in Kampala contributed to pivotal moments of reform in the late 1990s, when local and national government agencies faced a crisis of legitimacy. Legitimacy is achieved when citizens willingly comply with the government's rules, including paying taxes and fees, and expect the government to provide public goods. In Kampala, constantly declining levels of service through the 1980s and 1990s led citizens to perceive the city administration and the utility as incapable of improving quality of life.¹⁴ Citizens could not depend on the government for their sanitation solutions, so they provided themselves with pit latrines and septic tanks. The city did not offer any centralized service for safely and affordably emptying latrines. Most city residents felt disenfranchised, making it difficult to collect taxes and implement plans, a problem that has plagued the city administration for a long time.

This began to change in the late 1990s as the national government, led by President Yoweri Museveni's National Resistance Movement (NRM), explicitly pursued decentralization. The NRM's goals were to gain political support and improve service provision. This approach culminated in the Local Government Act of 1997, which formally decentralized service delivery to local governments. In Kampala, the new

responsibility at the local level was accompanied by political contestation within the city administration that pitted local politicians against the NRM. There were widespread accusations of corruption, and local administrators were overwhelmed by new demands for service provision. This led to delays and poor performance in donor-funded infrastructure investment programs. The result was overwhelming pressure to reform the city's administration, which led to the 1998 Strategic Framework for Reform.¹⁵

A year earlier, a similarly ambitious strategy for action was detailed in the Kampala Declaration on Sanitation at the first meeting of the National Sanitation Forum that recognized the unacceptable situation.¹⁶ The reform process and strategy for action were stalled by a patchwork approach to reform that relied on short-term project investments rather than full strategic planning and development. A string of projects aimed to expand critical infrastructure and improve institutional transparency, but the project-based approach was susceptible to changing donor priorities.¹⁷ This approach did not provide adequate human or financial resources to fully implement the Strategic Framework for Reform. Marginal improvements in infrastructure did not overcome the infrastructure backlog or the distrust between citizens and the city administration.

The NWSC faced a similar crisis of legitimacy. The Local Government Act of 1997 did not devolve water and sanitation to the local level, so the NWSC maintained responsibility. However, because the local governments controlled the budgets in their jurisdictions, the NWSC had to partner with them to execute projects that improved sanitation and water services. The financial, technical, and capacity challenges at the NWSC resulted in very limited services for only three to six hours a day.¹⁸ The NWSC's reputation was so diminished that the World Bank's 1994 Small Towns Water and Sanitation Project partnered with the Directorate of Water Development for project implementation in all the small towns rather than with the NWSC¹⁹ (though the NWSC did support the project in Jinja, Uganda's second-largest city). Part of the issue was that the NWSC's approach to service provision did not have solutions that would overcome the widening gap in service between neighborhoods.²⁰

As these challenges mounted, the NWSC began an incremental reform process, expanding their approach to service provision to include solutions for the urban poor in Kampala. Prior to reform, the urban poor were not seen as potential customers because they could not afford to pay for services, and the

unplanned neighborhoods in which they lived were difficult to service due to poor roads. In the absence of formal service, informal water suppliers filled the void by drawing water from the NWSC network and reselling it at higher prices. These informal suppliers' illegal connections made maintenance even more difficult for the NWSC because of leakages and lost water.²¹ For example, in some towns network leakages and illegal connections caused the NWSC to lose more water than it provided to users.²² As the NWSC failed to meet its intended coverage outcomes, illegal provision increased, further adding to leakage and revenue issues. The situation was even worse in the sanitation sector because the NWSC was not increasing coverage at all, and latrines contributed to environmental problems. Throughout this process the NWSC became irrelevant to the lives of most city dwellers.

This triggered a reform process, one that relied heavily on the NWSC's leadership setting goals, the provision of individual incentives, and the semiautonomous nature of the institution. Dr. William Tsimwa Muhairwe was appointed CEO of the NWSC in 1998; he implemented a 100-day program to reform financial and operational issues. Then, through the Stretch Out program, the NWSC set short-term team goals for improved service and revenue collection outside of any donor's traditional project structure. The challenge was that as the NWSC began reconsidering coverage, it did not have the tools to meet the service delivery needs of much of the informally developed city. For instance, the only sewerage treatment plant in Kampala could not process sludge from latrines. So over the next 10 years, the NWSC constructed a new treatment plant in Lubigi that could process sludge. At the same time, the NWSC formed partnerships with the KCCA to collect sludge and improve the quality of on-site sanitation. The NWSC does not view sludge management as the ultimate solution but rather as an intermediate fix as it works to expand higher-quality sewers and community septic tanks. By changing its approach to service provision, the NWSC became known as one of the best water and sewerage utilities in East Africa, and it is internationally recognized as an efficient and innovative utility provider.²³ One indicator of this change is the increase in national customer satisfaction surveys, which were first reported in 2009 at 61 percent but increased to 84 percent in 2017.²⁴

Despite the reforms at the national level, it was not until 2011 that the Kampala government embarked on a full-fledged reform program. Kampala's restructuring has a complicated link to national political dynamics. Since 1999, mayors from opposition parties have controlled Kampala (see Box 2 for more detail). This

has caused political tensions, as city administrators from the opposition party have attempted to provide services and manage the city. A 2005 referendum officially endorsed multiparty politics and led to political clashes, increased violence, and opposition to the NRM in Kampala.²⁵ Tensions came to a head when an independent candidate, Mayor Erias Lukwago, was democratically elected in 2011 but soon faced a variety of legal issues.²⁶ This scandal, coupled with the anemic reform process, created a new window of opportunity to dramatically reform Kampala's urban management. The local media has suggested that the NRM wanted to take back control of the city, so they restructured it to ensure that they controlled the city's finances. A 2011 act of Parliament established the KCCA with a corporate structure that gives operational oversight to the President's Office (see Figure 2).²⁷ The political fallout from this reform

has not been without controversy and pushback. The minister regards the role of the democratically elected Lord Mayor as ceremonial, but the language in the act recognizes a political head of the authority supported by a council of elected officials and the Executive Director. The result of the restructuring is that the city's financial management is the responsibility of the Executive Director rather than the elected mayor and city council members.

More important for improving sanitation and other services, the 2011 act gave the KCCA a clear mandate to maintain a clean and sanitary city. The KCCA was made responsible for improving service conditions for households not served by the NWSC's sewer network. This reoriented the strategic planning and investments of each department in the KCCA and supports

Box 2 | Uganda Emerges from Civil War

Since independence in 1962, Uganda has experienced disconnected episodes of unrest and armed conflict. In 1966 Prime Minister Milton Obote attempted to arrest the king of Buganda (a subnational, self-governed kingdom within Uganda), Edward Muteesa, which led to a short-lived episode of unrest known as the Buganda crisis. This triggered regional-ethnic tensions that would later shape the guerrilla war in the 1980s. In 1971, after a coup, Idi Amin took power and ushered in a nine-year regime characterized by unrest, extrajudicial killings, and the disappearance of individuals. In 1979 Tanzania-supported rebel groups took power from Amin, bringing short-lived optimism for the return of democracy. A turbulent period followed that featured a presidential power struggle with three presidents in two years, enabling Obote to again become president in the disputed 1980 election. Following that election, the National Resistance Movement (NRM) launched a protracted guerrilla war that ravaged the country's infrastructure and economy.

The NRM took power in 1986, but unrest continued as militant groups waged a civil war largely in the north that would last for over 20 years, killing many and displacing an estimated 400,000 people. The northern war was initially a popular revolt by Lutwa Okello's troops. Okello had been president for just six months when the NRM deposed him. The troops and their numerous civilian supporters formed the Uganda People's Democratic Army (UPDA), which eventually merged with other rebel groups to form the Holy Spirit Movement (HSM) led by Alice Auma "Lakwena." The rebellion in northern Uganda entered a new chapter in 1987 when Joseph Kony and the Lord's Resistance Army (LRA) took control and escalated the conflict. The grievances of the original war remained unaddressed, and Kony's LRA did not represent the northern people.

Although the armed conflict was outside of Kampala, the city continued to receive many migrants from war-ravaged areas, which put pressure on infrastructure and local politics. Political

violence increased and was allegedly fueled by the opposition party, the Allied Democratic Forces (ADF). In late 1996, as the conflict with armed insurgent groups intensified, the Ugandan military encouraged people in affected areas to move into protective camps, but many migrated to cities, including Kampala. Since the election of an opposition mayor in 1999, Kampala has been led by opposition parties. The NRM used "strategies of subversion" to weaken the opposition party controlling Kampala by reducing financial resources and undoing policy decisions. These actions were meant to undermine the Kampala city government, and Kampala residents protested the low quality of services provided by the city. Tensions eventually boiled over in September 2009 when the king of Buganda was prohibited from visiting a county within his own territory. This led to rioting, which the NRM-controlled central government seized upon to take over management of the city and create the Kampala Capital City Authority (KCCA) in 2011.

Source: Siyard, 1987; Wasswa, 2005; Goodfellow and Titeca, 2012; Lambright, 2014.

higher integration across departments. To fulfill this mandate, the KCCA adopted a performance-based management approach, informed by the NWSC's work. An updated strategic plan in 2012 solidified the city's orientation towards improving services across the entire city. The new approach in Kampala demonstrates learning across institutions about how to support a reform process across multiple departments.

3. OPERATIONAL REFORM SUPPORTS INNOVATIVE SOLUTIONS

The parallel reform processes under way at the NWSC and the KCCA since 1998 allowed for several innovations in the sanitation sector. Prior to the reforms, the sectoral focus was on providing sewer service to a few high-income neighborhoods. After the reforms, however, an institutional arrangement emerged that accepts intermediate solutions, experiments with new technology, and partners with nongovernment stakeholders to deliver services across a wider range of neighborhoods. Figure 3 presents key events, actors, and structural factors that have influenced change in Kampala.

A suite of operational reforms in the late 1990s increased the city's revenue base, improved waste management, and reformed public procurement. These reforms were combined with strategic investments to change the city's ability to offer sanitation services beyond the wealthiest neighborhoods. We found that most important among these reforms was the establishment of a pro-poor unit, the use of performance incentives, the imposition of minimum sanitation standards, and a partnership between national and local agencies. The combination of these changes enabled the introduction of pro-poor technologies such as UgaVac, EcoSan toilets, the Gulper, and the Lubigi treatment plant, which increased coverage of sanitation services, offered safer removal of fecal sludge, and cleaned up neighborhoods.

Similar improvements are unfolding in other urban sectors in Kampala, including in urban planning, drainage infrastructure, roads, and solid waste collection, all of which demonstrate the KCCA's increasing legitimacy. The experience is also facilitating transformation in other units. For example, the KCCA now has an urban agriculture resource center that supports urban farmers in Kampala with information and new techniques targeted at low-income households. The planning department created urban-planning bazaars that are held across the city to raise awareness about spatial planning and increase community

buy-in for projects. Planning bazaars are an opportunity for the KCCA to discuss its plans with communities, get feedback, and understand potential community issues. The openness with which communities discuss plans with local government is a change from the past, when planning department staff were chased out of neighborhoods or attacked.²⁸ The bazaars are a step towards institutionalized community participation, but they do not represent full incorporation of community needs. The directorate of gender and community welfare also created a community skill resource center to train youths in various skill sets and enable their integration into the urban economy.²⁹

The pro-poor unit

A pro-poor unit was established at the NWSC in 2006 after internal reviews indicated that the urban poor were paying higher rates for water and sanitation service than the non-poor.³⁰ The pro-poor unit encouraged the NWSC to reexamine the technological mix of solutions it was providing to citizens to increase coverage and reduce the cost of services. The new approach became viable when the NWSC introduced smaller zones for collecting revenue and managing sanitation and water connections, known locally as the Internally Designated Area Management system. With the influence of the pro-poor unit, the NWSC developed strategies to improve water service in informal neighborhoods. The unit helped the NWSC shift towards service provision as a ladder of options that differentiate solutions to provide a better fit for neighborhood type and household income level.

The pro-poor unit piloted new technologies in partnership with the KCCA. For instance, the NWSC piloted a prepaid water metering system in combination with sanitation blocks in Kampala's Kisenyi neighborhood. A community-led selection process included the city administration in an effort to conduct an institutional analysis and map of service providers in Kisenyi. Landlords offered land for 35 toilet blocks with prepaid water meter standpipes attached in the pilot settlements of Bwaise and Katwe.³¹ The NWSC then offered everyone in these two communities a token chip for accessing water that had a 5,000 shilling (US\$2.88) credit.³² A consortium of donors, including the World Bank, the Belgian Technical Cooperation (BTC), and the KfW Development Bank, provided funding and technical support through the Kampala City Council Environmental Planning and Management Project (KIEMP).³³ These pilot sanitation blocks were a departure from the traditional model because they were communal and not connected to the sewerage network.

The blocks consisted of emptiable latrines that connected to a prepaid metered water standpipe, offering significant cost savings over the previous method of obtaining water from private water sellers.

Other pilots were not as successful, but the experiences did not detract from the long-term change in approach. One example is ecological sanitation toilets that reduce water usage and turn excrement into fertilizer or gas. The EcoSan toilet was first piloted in Kampala in 2002 with support from the Swedish International Development Cooperation Agency (SIDA). The project largely failed and very few toilets were constructed.³⁴ The technology has not scaled across the city or country, but a few schools use the technology and nonprofit organizations continue to test it. Another pilot attempt was the 2008 UgaVac pilot that supported the introduction of small cesspool emptiers through a private cesspool emptier network. The NWSC offered a subsidized disposal fee for six specially designed trucks. The pilot was part of the community-integrated development initiative with involvement from the African Development Bank (AfDB) and the Africa Water Facility. It was not scaled up, however, because UgaVacs were deemed too expensive and households had to wait too long to get service. The outcome was that community septic tanks were thought to have more potential to serve neighborhoods.

The combination of these technologies offers a sanitation option that is accessible to poor households, does not require the expensive up-front or service costs of a sewer, and reduces the cost of access to clean water. Both the successful and unsuccessful pilots provided evidence that alternative approaches were available. These pilots created political pressure to scale alternatives to sewerage connections across the city and country. This in turn paved the way for other solutions, such as the Gulper. In the process, a national pro-poor water and sanitation strategy was born.

Since the Kisenyi pilot, the NWSC's approach has expanded to include a decentralized sewerage system that relies on four sub-city level treatment facilities as well as wetlands to partially treat sewage. The treatment plants have been slow to come online due to the high investment requirements and limited financial capacity of the NWSC and the KCCA, but according to interviews with NWSC officials, once all the facilities are online they will cover an additional 30 percent of households in Kampala.³⁵ Small businesses will be allowed to dispose of sludge at these facilities for a fee. Shifting to a decentralized system will allow the NWSC to increase coverage and leverage diverse ecological services.

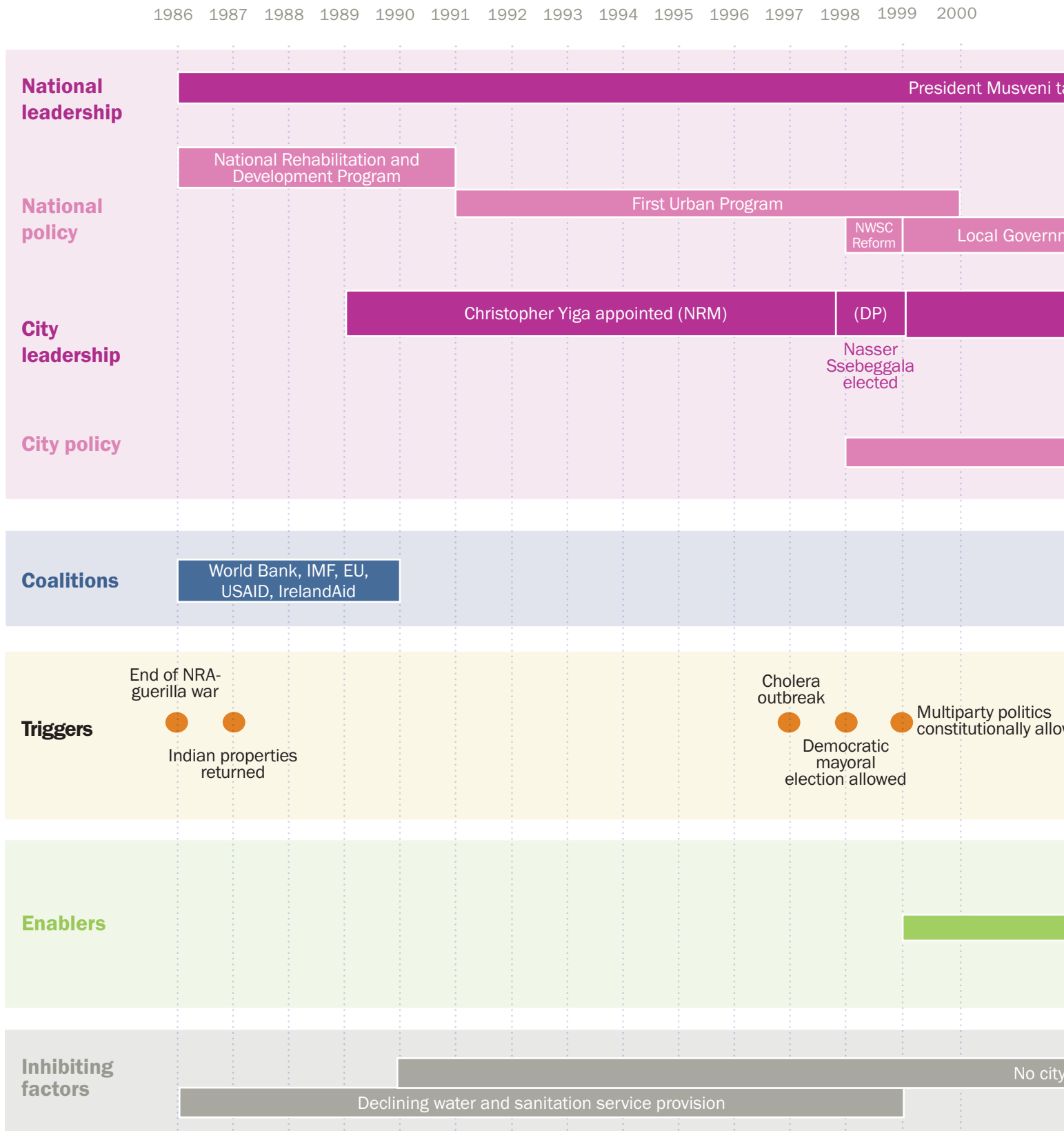
The most important pilot introduced by the pro-poor unit was the Gulper vacuum technology. It created new service partnerships for the KCCA and the NWSC with small businesses and community groups. The Gulper vacuum technology is attached to small three-wheeled collection vehicles that are outfitted with a mobile pump that can reach from door-to-door. Collection is done via small-scale businesses run by young people who operate the three-wheel vehicle for household collection and transfer fecal sludge to larger tankers to be transported to treatment facilities. The KCCA remodeled a stationary cesspool tank to serve as a larger mobile transfer tank.³⁶

With the Gulper vacuum technology, household pumping for sludge removal became a viable small business opportunity in parts of the city that could not be accessed by large traditional tankers. The KCCA works with neighborhood leaders to announce the mobile transfer tank schedule; Water for People manages and maintains the transfer tank; and the Gulper operators work for small companies. The KCCA expects to roll out more mobile transfer tanks that will eventually bring prices down.

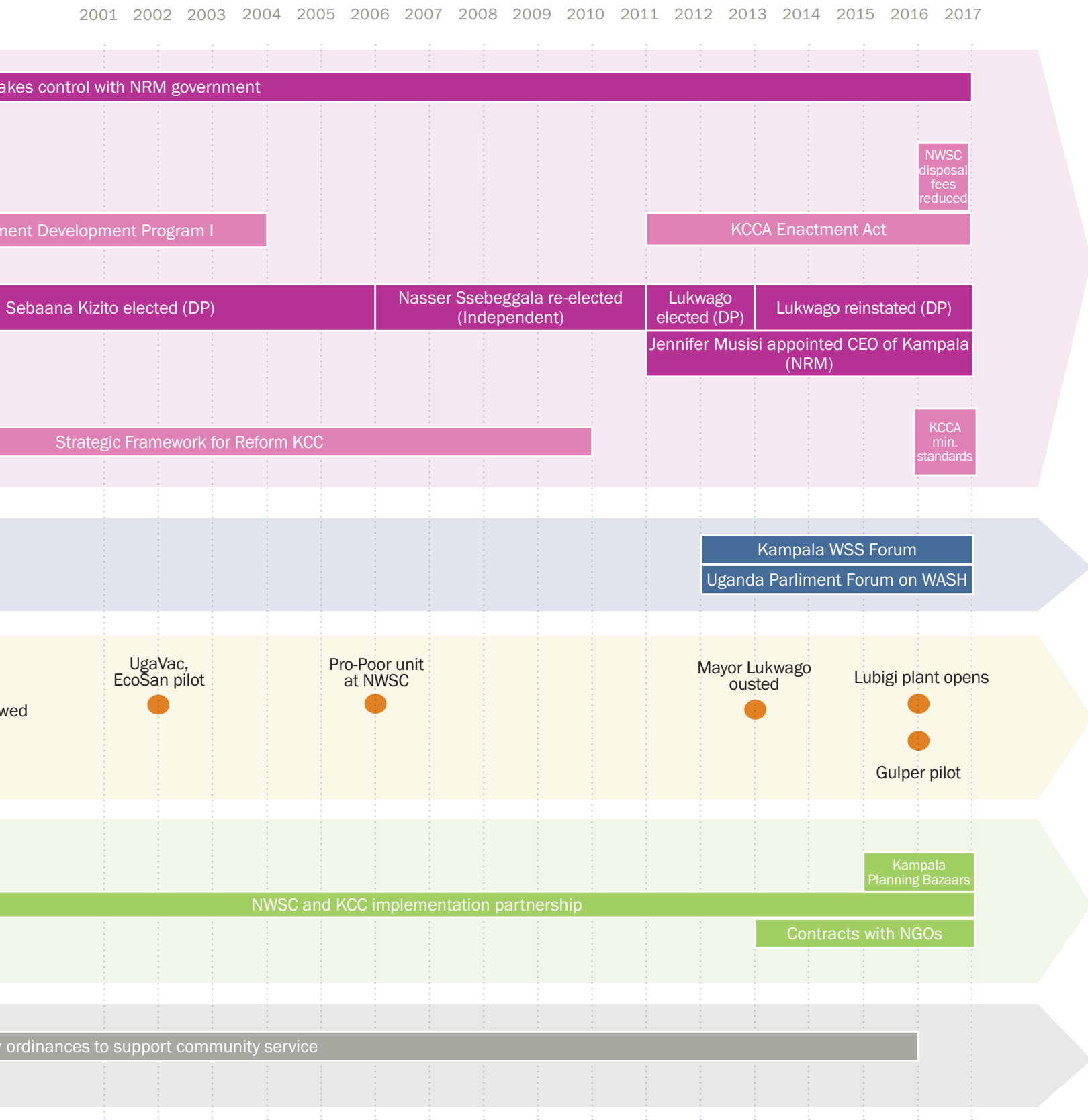
The initial results have demonstrated demand as well as the importance of partnerships between community groups, small businesses, and the government to create a truly pro-poor sanitation system. The partnerships supporting the Gulper's success allow the government to embrace nontraditional technologies and actors that operate at a small scale, leading to the need for municipal institutions to accept the responsibility of fecal sludge management. By rescaling and accepting that sludge needs to be collected, nonprofit organizations and community groups have advocated for rethinking fecal sludge collection as a business opportunity. To facilitate this change, the NWSC allows private third-party pumping companies to empty tanks at the sewerage treatment plants for 75,000 shillings (\$21) per tank.³⁷

The technology is not a magic bullet, however; it has several drawbacks, including its reliance on functioning sewerage treatment plants provided by the NWSC. Moreover, the process is still ongoing because the cost of pumping is still too high for many households to afford the service. Yet compared to the pre-reform era, there are active conversations about how the Kampala government can work with small businesses, community groups, and the NWSC to reduce the cost of pumping. In addition, the initial experience is spurring more institutional partnerships and projects supported by the German Development Cooperation (GIZ) and the European Union.

Figure 3 | **Timeline of Kampala**



Source: Based on the authors' research.



Minimum standards for sanitation

The KCCA developed a minimum set of sanitation facility standards that spell out the design, construction, and materials for pit latrines that are cleanable, reusable, and emptyable. Meeting this tripartite requirement allows for technological flexibility while ensuring decent and sanitary solutions.

The new standards aim to reduce households' fecal sludge removal costs. The standards allow the KCCA to support new sludge collection models that do not rely on the traditional and expensive fixed infrastructure of piped sewerage networks. To determine the applicability of the standards, the KCCA is mapping all sanitation units in the city to understand exactly what types of solutions exist and to inform the roll out of the minimum standards. This effort will also help the KCCA identify and prioritize investment programs because it will be able to determine what type of alternative sanitation technology best fits the context. To further bolster communication with households and increase responsiveness, the KCCA established a toll-free line to report or inquire about sanitation issues. In the process, collecting this information built confidence that the KCCA is making a real effort to understand the issues facing households. Changing the city's standards, monitoring, and feedback options allowed new ideas to enter the system while creating a stronger, more transparent connection with residents.

Stakeholder coordination

National and local coordination platforms created collaborative opportunities to deliver improved and distributed service models that feature new technology, such as the Gulper. On the national level, the Ugandan government started a sector-wide review that was tied to the budgeting process and encouraged cooperation among a wide range of stakeholders. Parliamentary committees are also dedicated to reviewing annual sector progress, investment, and strategy. As part of this process, the committees bring together ministries, implementing agencies, civil society organizations, and donors in a national forum on a specific sectoral topic, including water and sanitation. These forums help build coalitions for change and coordinate action. The aim is to align investment and budgeting decisions with the results-based performance framework adopted by Parliament. Through the forums, donors explain the financial resources available over the coming year for investment in specific sectors. This is then matched with stakeholder priorities. Through this process, all stakeholders explore the technical, financial, and political possibility of implementing innovations. Outcomes

include financial transparency, clarity regarding priorities, and the identification of opportunities for innovation.

Given the success of national sectoral forums, the format was replicated at the city level, which facilitated greater stakeholder collaboration. The Kampala Sanitation Forum comprises donors, the KCCA, the NWSC, and civil society organizations. The forum coordinated the mapping process and agreed to establish the toll-free line mentioned earlier. It also agreed to launch a sanitation education and awareness program delivered through household visits. The forum has also become a platform for strategic planning, where alternative models that increase coverage and affordability are identified. These coordination mechanisms support an already emerging partnership between the NWSC and the city administration, and have allowed the cooperative model to expand to other partners. For instance, the World Bank's 2001 Local Government Development Program required cooperation between the NWSC and the city administration to extend the sanitation network to poor neighborhoods.³⁸ The KIEMP pilot described earlier extended this partnership.

Performance incentives

The NWSC radically adjusted its delivery mechanism to a corporate, performance-based approach to water and sewerage, a process also under way at the KCCA. Based on interviews with NWSC staff, flexible leadership supported innovation by allowing staff to experiment with new ideas for improving connections and reliability. The new "one-minute management" strategy held individuals within the NWSC personally responsible for having a clear vision and mission to deliver on connections, collect revenue, and reduce water loss. The goal of the "one-minute" approach was to reduce the transaction time for requesting service, and it shifted the onus to local NWSC zonal office staff by requiring them to respond within five working days. The NWSC used performance agreements with local water operators from its own Kampala zonal office staff.³⁹ Outside of Kampala, performance-based payment shifted incentives to reduce nonrevenue water or water loss. After switching to a performance-based contracting model, the NWSC reduced its number of employees, decreased the time needed to provide new connections, increased revenue collection, and reduced water loss.⁴⁰ As the NWSC became financially solvent and the delivery mechanisms changed, it phased out personal and regional performance incentives.⁴¹

The KCCA continues to pursue a results-based approach, putting staff on contract terms and regularly setting performance

targets. For end users, the results-based performance management strategy made the service connection procedures more transparent and accessible by eliminating unnecessary steps previously required by the NWSC. This eliminated the brokerage and corruption that had characterized the city's water supply and sanitation systems. After the change, many individual homes and commercial entities legally connected to Kampala's water supply system.⁴² Expanded delivery mechanisms allowed the introduction of alternative technologies, such as the Gulper, to become possible.

4. ENABLING CONDITIONS FOR IMPROVED SANITATION COVERAGE IN KAMPALA

Kampala's urban transformation was driven by national and local entities cooperating to reorient the government's approach to service provision. These efforts recast the NWSC as a competent and agile utility and the KCCA as a more open and people-centered government body. Progress was messy and not always direct, with new crises constantly emerging in city sanitation service management. Several factors held back more rapid change, while others—such as a results-driven working culture mediated by support for innovation, dynamic leadership, and community engagement—served as enablers.

Results-driven working culture

The results-driven working culture—from the Parliament, to the NWSC, to the KCCA—enabled the adoption of the pro-poor approach that expanded formal sanitation solutions beyond sewer connections. At the national level, there is a citizen scorecard on performing entities, including the KCCA. All of these focused the KCCA on improving service delivery.⁴³ According to one KCCA official, perhaps the most visible indicator of a corporate structure and results-driven culture is the annual Kampala city carnival and marathon, “two events that have come to define the city administration and the residents of the city.”⁴⁴ These community events create a sense of civic pride and social cohesion, offer a larger-scale opportunity for participation, and create a broader identity for the KCCA. They demonstrate how the city's approach to engaging with citizens and building its reputation has changed to reflect a cohesive corporate image, working with private companies to sponsor public events.

The results-driven culture forced the planning department to rethink how it was communicating about its efforts to increase community buy-in and enable more rapid implementation of

plans. Planners were not able to enter communities to gather information because of peoples' very negative perception of local government planning and supervision. To deal with this problem, the planning department began offering a series of neighborhood-level planning bazaars where various plans were discussed. One such plan was a citywide road-widening effort in which landlords agreed to give back land without being compensated for it. The landlords willingly provided strips of land that enabled the roads to be widened because they realized they would benefit from better access. The KCCA has also rolled out a tree-planting campaign that aims to encourage homeowners to care for 500,000 trees it will plant over the next five years.⁴⁵ Residents have accepted these initiatives, which are helping turn the KCCA into a responsive and legitimate institution.

Leadership supports innovation

The KCCA has also become a testing ground for new ideas. Leaders at both the KCCA and the NWSC encouraged staff to experiment with new ways to expand coverage to poor areas even if there was no precedent for doing so. According to a KCCA official from the public health department, the Executive Director supported the idea to redesign the cesspool emptier that now works as a transfer tank for fecal sludge.⁴⁶ The Gulper pilot gained support from the highest level of KCCA leadership, and it went forward even though the small cesspool emptier model had not succeeded with the UgaVac pilot. The KCCA was willing to try again with new partners, different technology, and a new contracting model.

Meanwhile, at the NWSC, the leadership provides nonmonetary incentives to staff. Staff are encouraged to pursue PhDs and master's degrees that allow them to focus on how decentralized sanitation management can be designed, measured, and implemented. Staff who do so are ensured the ability to return to higher-level positions at the NWSC. This has supported the emergence of a culture of research and experimentation, an approach that is now being embraced at the KCCA. In fact, the KCCA Executive Director indicated she is committed to supporting staff and would like to recruit PhD holders, which she thinks could help the KCCA develop more innovative and creative solutions to urban management problems and adopt knowledge-based decision-making processes.⁴⁷

Participatory community engagement

A key element in Kampala's emerging transformation has been its ability to engage communities in the urban management and development process. Although community engagement has a long history in Kampala, the KCCA's engagement and overall

approach are different. New engagement methods include community-planning bazaars and budget-framework meetings that promote transparency. Planning bazaars offer communities an opportunity to comment on, understand, and prepare for new planning projects. The shift from a top-down approach (in which infrastructure projects were announced) to a collaborative approach (which features meetings to discuss issues) has enabled the changed relationship between the KCCA and city residents, resulting in successful efforts like the road-widening project, the tree-planting initiative, and more. These efforts reflect a greater focus on responsiveness and livability. There seems to be a growing sense of ownership and responsibility not just on the part of residents but also for commercial entities.⁴⁸ The KCCA mobilizes corporate support for primary schools, water- and sanitation-improvement projects, and the annual marathon and carnival. While these corporate relationships are still new, they demonstrate increasing legitimacy and cooperation with the KCCA.

5. FACTORS INHIBITING SANITATION COVERAGE IN KAMPALA

There are also inhibiting factors that have slowed the transformation process and even threaten its long-term impact. Some inhibitors include the continuing influence of a project-based approach, a small and fragmented private sector, and a lack of transparency.

Projectization versus strategic planning

Dependence on donor financing creates a cycle of “project” thinking and practice. The scale of donor funding is depicted in Figure 4, which shows that Kampala received more than a billion dollars across 36 projects between 1986 and 2016. Figure 4 also shows that bilateral donors have increasingly provided individual project support to Kampala. The Kampala administration attracted donor support for infrastructure development as a way to overcome the infrastructure backlog that had accumulated during the civil war and to regain the legitimacy it lost.⁴⁹ A number of projects focused on improving water, distributing electricity, managing solid waste, maintaining roads, and facilitating stormwater drainage. Infrastructure investments have continued over the last 30 years largely with donor financing and, increasingly, central government support.⁵⁰

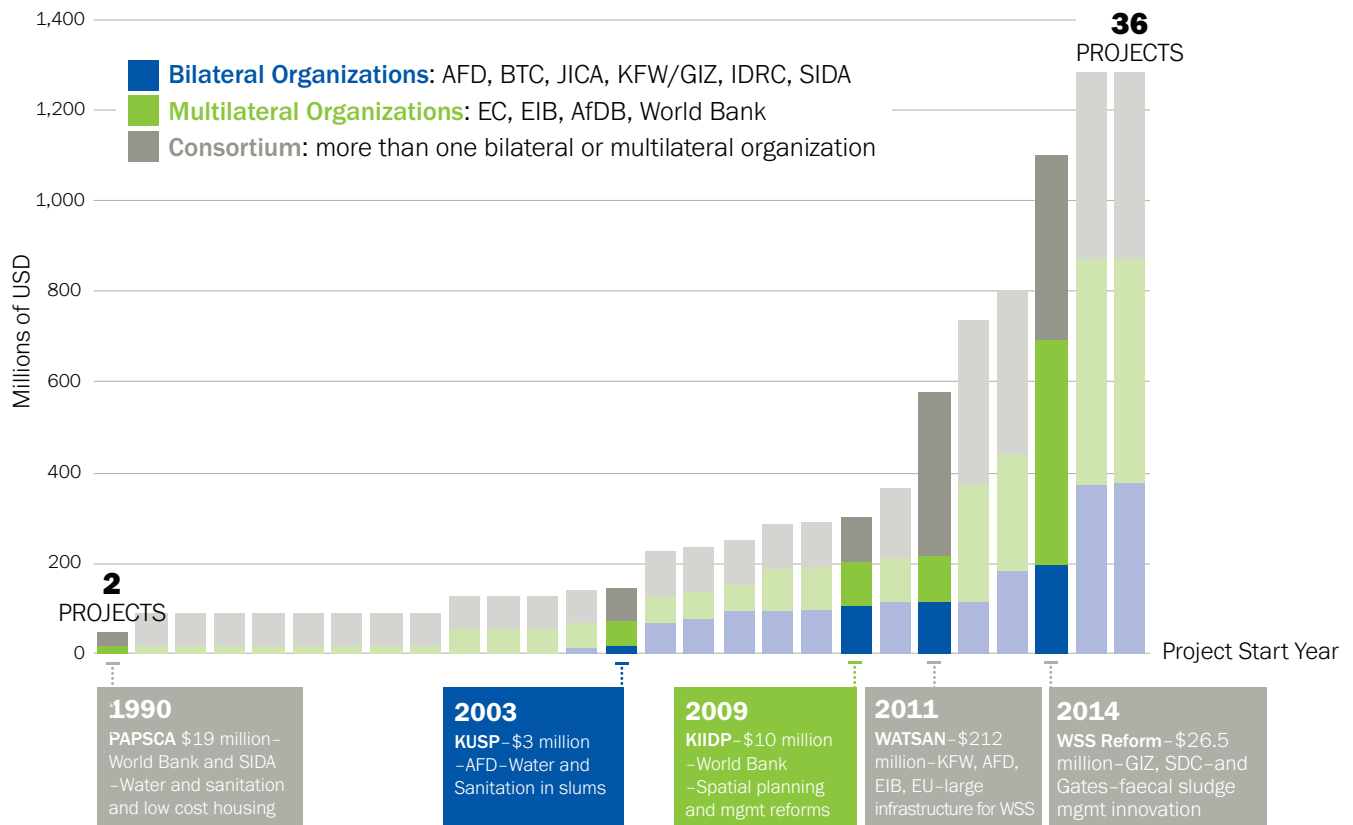
Despite the problems surrounding projectization, the successes in infrastructure provide a building block for more citywide, equitable infrastructure provision. This will, however, require

strong and sustained city leadership, transformative planning, and innovative funding solutions.⁵¹ The business-as-usual approach must change if successful projects are to provide the basis for transformation. As noted by a public health official, “KCCA will have to transform the physical planning culture to accommodate more realistic standards in development control, such as the sanitation minimum standards.”⁵²

The donor programs and their standards helped improve Kampala’s institutional capacity for service provision and urban management. In 1990 the World Bank’s First Urban Project, and particularly its Program for Alleviation of Poverty and Social Costs of Adjustment (PAPSCA), provided the Kampala City Council a grant of \$1.4 million to invest in waste infrastructure, water, and sanitation.⁵³ PAPSCA provided a wide-ranging emergency recovery program and was the first postwar donor project to have an urban component. PAPSCA’s sanitation investment component exceeded expectations in terms of outputs (number of toilet blocks constructed), but it did not improve the city administration’s ability to keep pace with demands for sanitation provision driven by rapid population growth. Still, these types of donor projects have clearly catalyzed transformation by introducing new ideas and offering additional investment capital.

However, donor projects are limited in that when donor priorities change, there is limited follow-up or effort to build on previous investments and pilot projects, which reinforces existing service provision failures. As a result of donor-supported projects, the city ends up with pockets of serviced areas while larger parts remain under-serviced, or not serviced at all. Projects in the sanitation sector focus on providing new infrastructure more than on improving, cleaning, and maintaining the existing system.⁵⁴ The coordination forums described earlier help mitigate the results of projectization and allow for better coordination and longer-term thinking. For example, through the KIEMP project, the BTC funded improved sanitation and prepaid meters in 2009, but this ended at the pilot phase. Though some successes were registered, the lessons have not been expanded to other areas, and the project-management processes were never engrained in larger KCCA management techniques. As a result of such engagement, the language, strategy, and dominance of the “project” is ingrained in daily usage, as well as in the KCCA’s medium-term planning. Nearly all infrastructure investments are now done in the form of a project rather than through a long-term budget allocation and decision-making process. This projectization has dominated public sector management at the expense of strategic thinking and planning

Figure 4 | **Cumulative Donor Commitments across Sectors in Kampala, 1990–2016**



Source: Authors' analysis of various sources, including project documents from the World Bank, African Development Bank, European Investment Bank, European Commission, International Finance Corporation, and Water and Sanitation Program, 1990–2016.

and is often orchestrated by annual plans, which are no less than monitoring schedules for the projects.

It is not just the local government that suffers from project thinking but also community groups. Consider ACTogether, a local NGO associated with Slum Dwellers International. Their Tugende project (translated as “moving forward” to transform Kampala) provided a strategic combination of sanitation units, micro loans, and mapping in slums across the city that improved service through additional sanitation units. In addition, by providing detailed information about households, neighborhood amenities, and housing units, it helped overcome the information gap that makes long-term planning difficult. Furthermore, the micro loans help to ensure community investment in sanitation. The project stalled when the donor stopped providing funding, demonstrating the dependence of community-driven projects on project funding and cycles. So, despite the effort to create a strategic bundle of

services, ACTogether's project ended up being a pilot rather than a transformative action. Many community groups and NGO sanitation projects suffer a similar fate where they are unable to continue without financial support from donors.⁵⁵

As was reflected in all of our interviews with NWSC officials, KCCA officials, and NGOs, the project approach is so dominant that there seems to be almost no space for programmatic thinking that allows for a more strategic approach that values long-term results. Projectization shortens the time frame for evaluating success or failure, which compresses expectations for results at the expense of important public goods that can only be provided when long-term returns are prioritized. The result is that Kampala does not have tools to deal with improving living conditions in informal areas. New instruments are needed to allow longer-term thinking. One way to do this might be through an infrastructure fund at the city level. It could be structured to manage expansion of services through a variety of technologies

over a longer term than is possible with project funding cycles. Another change might be to better link budgeting and planning processes by attaching funding decisions to the planning bazaars. Finally, a pro-poor unit within the KCCA could be tasked with following up on all pilots and tracking the longer-term impact of various experimental projects.

Service expansion projects in the KCCA assume that seed funding is necessary to start a virtuous cycle of increasing revenue that is reinvested in more service improvements. While tax collection has dramatically increased, there is no evidence that it is reinvested in service expansion.⁵⁶ Even with the most consistent funding from the World Bank, experience shows that investment per capita has only increased in terms of dollars but not in terms of service expansion for coverage and affordability. Projects allow the Kampala city government to respond to crises in the existing systems, but they have not created a system where fee-for-service programs allow utilities to operate without subsidies from donors. We found that the NWSC reforms offer an antidote to the city's traditional project approach to service provision; they create longer-term programmatic approaches and incentives that improve access to services and increase the quality of life in informal areas.

Small and fragmented private sector

Kampala's private sector is still relatively small and fragmented; there is limited coordinated investment in urban infrastructure, particularly sanitation. Large corporations have made small contributions to high-visibility events rather than large-scale investments in infrastructure. Meanwhile, wealthy individuals seem to limit their investment to private real estate projects. In general, there has been limited overt support from private entities in the sanitation sector, especially compared to the water sector, where corporations have financially supported the extension of the water supply network. In contrast, corporations have supported a few school sanitation blocks through the KCCA.⁵⁷ However, the KCCA has recently started to partner with nonprofit organizations that are working to provide sanitation solutions to the poor, and could be profitable

as small businesses. Such partnerships offer the potential for small and medium enterprises (SMEs) to scale up alternatives, like the Gulper, to further increase coverage. The Gulper demonstrates that fecal sludge management can be supported by nongovernment institutions and may even represent an opportunity to make profits. The risk is that fully relying on the private sector could undermine the current pro-poor approach.

Lack of information sharing

Programming decisions require data, but there is not enough sharing or collecting of sanitation-related data in Kampala, both between and within agencies. Although the KCCA and the NWSC are getting better at sharing data, the data collected and owned by the private sector, civil society organizations, and academia has yet to be tapped for monitoring and improving sanitation. The NWSC holds detailed data on houses, water usage, and sanitation options. Private telecommunication companies hold big data about customer activities. Meanwhile, academia has conducted important baseline studies. Yet no agreements exist to ensure the data is shared, which would inform decisions and programming regarding city infrastructure. Lack of transparency means that NWSC data is not shared or meaningfully analyzed to inform decisions at the KCCA; meanwhile, the spatial data held at the KCCA is not shared to improve sewer network planning or alternative sanitation systems. Community-based organizations and NGOs fill in the data gaps. Through slum enumerations and profiling, ACTogether has digitally mapped all slums, latrines, waste infrastructure, roads, and housing units in informal neighborhoods. ACTogether then uses this data for advocacy around improved sanitation services. This data is open in theory, but ACTogether recognizes that "knowledge is power" and thus does not make the data completely open source.

The lack of data and information transparency also hinders cooperation within and across agencies. For example, in the KCCA there is a geographic information system (GIS) unit responsible for mapping all city infrastructure, land use, housing, properties, and sociodemographics. However, the Public Health Directorate in the KCCA is also mapping all sanitation units to monitor usage of the Gulper technology as well as the sanitation unit's minimum standards. When

internal units do not share data, it implies a departure from the transformative, open, and innovative institution that the KCCA strives for. This problem relates to the dominant notion of “project” and usage that underpins most public service delivery business processes because the public health mapping is funded by the Bill and Melinda Gates Foundation as a separate project from the GIS unit.

These inhibiting factors slow implementation and undermine the gains from pilot projects that do not adhere to a strategic framework. In view of Kampala’s fast-paced urbanization and growing demand for services, a mix of solutions seems necessary, but the inhibiting conditions need to be addressed.

6. SUSTAINING TRANSFORMATIVE URBAN CHANGE

Though the city has not institutionalized a framework for safe fecal sludge management, the new minimum sanitation standards signal the institutionalization of innovative ideas and reflect the realization that coverage will improve by adopting a mix of options. According to KCCA officials, funds are being mobilized to increase the number of mobile transfer tanks since the current one seems to be working.⁵⁸ This is expected to increase fecal sludge removal and safe disposal and to expand the market for alternative technologies such as the Gulper. Coupled with the strategy of increasing mobile transfer tanks is the establishment of flexible minimum standards, which will hopefully be adopted and followed when building permits are approved.

It is necessary to validate various sanitation technologies and approaches like the Gulper if deep change and scaling up are to increase coverage. Figure 3 outlines the time required for urban change to take root; early attempts in Kampala started in 1986, but they only really began to be realized in 2011. Capacity building and shifting management techniques were important, but pro-poor policy reform that promoted service delivery was a necessary prerequisite that took many iterations to become engrained in the operational model of the NWSC and the KCCA. Through the reform process, service delivery models were reexamined. The Gulper is one attempt that built on past efforts, though it continues to be refined to meet the needs of the poor. The current short-term approach characterized by interventions, along with the tendency to respond to emergencies, has failed to achieve the envisaged outcomes in view of the dynamics of the

urban population. The failure is partly caused by an inadequate assessment of urban sanitation needs and, where such needs are identified, implementation strategies that have not achieved the outcomes even with clear outputs. For example, the projects undertaken by PAPSCA and KIEMP were well intentioned and aimed to improve sanitation, but none had the envisioned outcomes.

It is also important to point out that city administrations and utilities will always need to respond to emergencies. However, such responses need to be framed in foresighted strategic plans so that they contribute to systematic but fast-paced progress in addressing the urban poor’s sanitation service needs.⁵⁹ It is also important to highlight that strategic planning is not a new approach and will not be a panacea for urban service delivery. Indeed, strategic plans do exist and have existed before, but tend to go off track in their implementation because emergencies in other areas reprioritize investment and policy. On the basis of the emerging issues and the intricacies of the urban poor’s service needs, the following policy recommendations should be considered to sustain desired change and improve the urban poor’s quality of life.

SMEs and community contracting need to be further explored for their potential to expand service and improve quality. SMEs undertake the type of work that is less appealing to large corporations because demand is often intermittent, fees are modest, and interventions need to be adapted to each neighborhood. SMEs that provide fecal sludge management services are expanding, but operational challenges remain. One way to reduce operational costs is through community contracting, which ACTogether has been testing throughout Uganda. With community contracting, savings groups receive funding through the Kampala Municipal Development Forum for neighborhood projects, instead of hiring external contractors, with large cost savings. Community leaders are traditionally hired as supervisors, but this only pays lip service to community involvement. Community contracting directly benefits communities by offering employment opportunities, capacity building, and improved access to services. There is a range of activities for which community members can be hired, including designing, costing, and building sanitation units on the basis of the minimum standards. This ensures that the community members benefit as opposed to profits leaving the community.

Community contracting is provided for by the Public Procurement and Disposal Act of Uganda and is advanced as a more efficient, appropriate alternative to expensive, top-down, private sector-led urban service delivery implementation. Community contracting requires more oversight and preparation time, making it less efficient for many larger project agendas. Promoting community contracting in more situations would require more robust monitoring and evaluation mechanisms such that lessons can be drawn, mistakes corrected, and good practices promoted. Thus, linking to the earlier policy recommendation on moving from projects to programs, community contracting could be used to further develop and institutionalize sustainable and feasible sanitation technologies.⁶⁰ Experimentation, piloting, and innovation will be key to transformative urban management in Kampala.

7. CONCLUSIONS

The shifting approaches of the NWSC and the KCCA documented in this paper illustrate an evolving, innovative culture interested in improving service provision and increasing institutional legitimacy. There are many events that together triggered change in Kampala and allowed the Gulper pilot to be embraced. As the city grew, there was less and less space for new pit latrines, and financial resources were relatively limited. This combined to put pressure on the KCCA and the NWSC to find innovative solutions to sanitation service provision. At the same time, nonbinding sanitation regulations created space for innovation and experimentation. The quest to change the performance of public agencies ushered in a gradual transformation of the sanitation sector that is trending towards increased coverage, affordability, and access to decent sanitation options. Over 60 percent of the urban population is poor, so solutions must be appropriate and affordable if the city is to continue to modernize.⁶¹ This explains the evolution of innovative partnerships, collaborations, technologies, and experiments that transcend the usual urban management approaches. From fecal sludge businesses, to minimum standards, to decentralized sewerage systems, to the establishment of call centers and education on sanitation, the evidence shows that Kampala's sanitation sector is on the path to change. These changes have strong links to other urban development sectors that will improve quality of life for the under-served and the city as a whole. In short, a multisector transformation has begun.

The urban change under way in Kampala has the potential to create a more equitable, sustainable, and economically productive city. We find that focusing on expanding sanitation coverage to poor areas has the potential to meet needs and improve the whole city's health and well-being. After long-term struggles with opposition politics, Kampala seems to be finding its way towards focusing on the government's goal of improving participation and service delivery. This is not to brush over the many outstanding issues and weaknesses in the KCCA as a centrally controlled institution that disrupts the power dynamic of local democratic elections. Rather, we focus on progress towards rebuilding the legitimacy of local institutions by finding new approaches and building coalitions for service delivery, despite political and financial challenges. The coordinated action of donors, central government agencies, and local actors bodes well for ensuring that the process expands access to services for all of Kampala's citizens.

Kampala's approach should be studied to inform other cities in the region, and even across the globe. The solutions emerging in Kampala reflect a deeply ingrained approach to inclusion and poverty alleviation. In fact, multilayered collaboration and focus seem to offer a sustainable and scalable means to ensure participation. Furthermore, the potential environmental benefits of Kampala's pro-poor approach to service delivery have only emerged as a city-level priority in the last couple of years, so it is hard to know how much they have played a role in motivating change. Nonetheless, the benefits are clear, and the long-term gains of the citywide adaptation approach are being institutionalized.

As is so often the case, the unfolding change remains vulnerable to shifting fiscal priorities and local political instabilities. However, with continued support from all stakeholders, it seems likely that the urban change will be sustained. Kampala still needs to overcome the "project" practice that limits longer-term strategic and fiscal planning. For instance, the Gulper sits within specific NGO and donor projects that risk being abandoned with shifting priorities. The Gulper needs to be seen as an iteration of providing service to low-income neighborhoods that is an intermediary, project-based solution. To do this, the city needs to share information better and continue to support cooperation between local communities and small investors.

A critical next step is to move from project pilots to a medium-term, citywide fecal sludge management plan for alternative service provision that ensures that fecal sludge can be safely and affordably treated. The city could help facilitate alternative service provision and effective measures that match the constraints of the local context. A citywide fecal sludge management plan would harness Kampala's innovative partnerships and technologies to create a safe and affordable system for regulating the emptying, transport, treatment, and reuse/disposal of fecal sludge. A medium-term plan can also ensure that the city's new treatment facilities can manage fecal sludge. The KCCA can use the Planning Bazaar platform to work with communities to develop plans that meet their local needs while also folding into a larger network plan that improves the city's entire environmental situation. This approach could help reverse the legitimacy problem that has undermined the local administration.

A citywide plan of this nature can be financed in parts as resources become available and new partners engage. It is still difficult to imagine that the city will be able to fully overcome its infrastructure and service issues without large-scale financial support from a wide range of sources. To tap into these sources, it will be critical to nurture and include the local formal and informal private sector. The citywide plan must incorporate existing networks for more broad-based, safe, and affordable fecal sludge management. The new regulations are an important first step, but a medium-term plan must provide more incentives to require a larger share of businesses and households to safely manage their waste. The KCCA, NWSC, and donor community could also plan long-term programs that support alternative waste collection.

Finally, Kampala must create a longer-term strategy that moves beyond on-site sanitation systems. The plan need not rely on converting the whole city to a sewerage system, but it needs to show how increasingly dense cities can lay the foundation for safer, off-site sanitation solutions. Combining medium- and long-term strategies with political commitment to implementation would help the city overcome projectization while continuing to foster the culture of experimentation, innovation, and accountability that has emerged over the last 20 years. In all, Kampala has made critical first steps towards providing a more inclusive, accessible, and environmentally sustainable city.

APPENDIX A: DESCRIPTION OF INTERVIEWEES

INTERVIEW NUMBER	DATE	POSITION
1	May 17, 2017	KCCA Projects Manager and Supervisor (minimum standards for on-site sanitation and FSM)
2	May 17, 2017	KCCA Manager, Planning Department (urban planning and bazaars)
3	May 17, 2017	KCAA Supervisor (urban planning)
4	May 17, 2017	KCCA Supervisor (urban planning)
5	May 23, 2017	NWSC Pro-Poor Unit Manager (pro-poor sanitation)
6	May 23, 2017	NWSC Pro-Poor Unit Officer (pro-poor sanitation and water)
7	May 30, 2017	UWASNET Program Officer (water and sanitation)
8	May 30, 2017	NWSC Manager (Services Department)
9	May 18, 2017	Water for People (Sanitation Engineer)
10	May 22, 2017	Gulper Technology Operator (fecal sludge management)
11	May 18, 2017	KCCA Officer (community outreach on sanitation)
12	May 18, 2017	Head teacher, KCCA Primary School (bio-toilet operator)
13	May 18, 2017	Sanitation facility manager (KCCA bio-toilet)

ENDNOTES

1. Interview 6; UN-Habitat, 2007.
2. UBOS, 2016: 12.
3. Angel et al., 2016.
4. UBOS, 2016.
5. World Bank, 2012.
6. UN-Habitat, 2007.
7. Based on authors' personal communication with representatives from the NWSC, the KCCA, and ACTogether in Kampala, July 2017.
8. KCCA, 2016.
9. Matagi, 2002: 127–29; UN-Habitat, 2007.
10. NWSC, 2005, 2016.
11. For more information about Water for People in Uganda, see <https://www.waterforpeople.org/country-pages/Uganda>.
12. Nkurunziza et al., 2017.
13. Beard et al., 2016.
14. Goodfellow and Titeca, 2012.
15. World Bank, 2000.
16. National Sanitation Forum, 1997.
17. Buyana et al., 2014.
18. Muhairwe, 2007.
19. Kayaga and Sansom, 2003.
20. World Bank, 2000.
21. NWSC, 2015: 18–23.
22. NWSC, 2015.
23. NWSC, 2017: 18–23.
24. NWSC, 2011, 2017.
25. Goodfellow and Titeca, 2012: 265–67.
26. BBC News, 2013.
27. GOU, 2010: 11.
28. Interview 2.
29. Sabiiti et al., 2014: 14–28.
30. Interview 5.
31. Interview 5.
32. Interview 5. For US\$ figures, the market exchange rate for 2006 of 1,735 was used for calculations.
33. Mukiiibi, 2012: 38–39.
34. National Sanitation Forum, 1997; Carlesen et al., 2008.
35. Interviews 5 and 6.
36. Jenkins et al., 2015: 2594–607; Keatman, 2017; Radford et al., 2015.
37. Interview 9. For US\$ figures, the market exchange rate for 2017 of 3,559 was used for calculations.
38. Lwasa, 2015: 32–33.
39. Lwasa, 2015.
40. Muhairwe, 2003.
41. Mugisha and Berg, 2016.
42. Mugisha, 2007: 227–29; Whittington et al., 1998.
43. Humphreys and Weinstein, 2012: 17–19; Ssemakula et al., 2011: 34–37; Tumushabe et al., 2013: 41–43.
44. Interview 1.
45. KCCA, n.d.: 129.
46. Based on personal communication with a KCCA official from public health in Kampala, May 2017.
47. Interview 1.
48. Lwasa, 2013: 45.
49. Beall et al., 2011: 9–12.
50. World Bank, 1990.
51. KCCA, 2012: 254–70.
52. Interview 1.
53. World Bank, 2000.
54. Kwiringira et al., 2014.
55. ACTogether Uganda, 2017.
56. Lwasa, 2015.
57. Kariuki et al., 2014.
58. Interview 1.
59. Buyana and Lwasa, 2016: 351–32.
60. Lwasa and Kadilo, 2010.
61. Interview 6; UN-Habitat, 2007.

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