Paving the Road to Smart Cities by Incentivizing Digitalization at the LGU Level

Digital Pilipinas

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Introduction

While the concept of a 'city' has been around ever since the dawn of civilization, the way that people organize and plan their cities had certainly evolved. Where in the past cities used to be dominated by horses and buggies, these have been completely replaced by cars, motorcycles, buses, and trains. Flat, spread-out settlements eventually gave way to towering skyscrapers. Cities that used to house just a few thousand people now house tens of millions— with congestion making it seem as if the city is ready to burst at the seams. Even today, cities are constantly evolving.

It is precisely because cities continue to evolve that technology has stepped in to help leaders and local governments figure out how to make them livable and progressive for everyone. Smart city technology, for example, leverages data and digital technology to improve everything in a city from the design of a crosswalk to decisions on zoning and reclassification of land use. For instance, data can be collected to understand which parts of a city are busiest at certain times. This can then be integrated into a digital system that will help optimize traffic lights and manage traffic flows. Smart city tech is so useful that cities around the world are already using it to detect crime, extend urban Wi-Fi access, manage energy use, and more.[1]

There are also numerous smart city initiatives in the Philippines. In 2021, the Department of Interior and Local Government expressed its commitment to finishing six smart city projects in Manila, Davao, and Cebu.[2] These projects aim to use technology to streamline government transactions, improve public transport, manage traffic, and increase surveillance in cities for the benefit of its residents and stakeholders.

Smart cities have great potential to improve the way people live their lives. What is crucial is that governments, businesses, regulatory bodies, and other stakeholders understand what can be gained from investing in smart city tech. It is best if stakeholders are urgently informed about and consulted on how smart city tech can provide citizens and stakeholders smart and digital cities utmost benefits.

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[1] Osborne, C. D. (2017, September 28). *The definitive list of smart cities projects changing the world.* IoT World Today. Retrieved February 5, 2023, from https://www.iotworldtoday.com/smart-cities/the-definitive-list-of-smart-cities-projects-taking-the-world-by-storm

[2] Philippine News Agency. (2021, September 1). *PH committed to completion of 6 'smart city' projects: DILG.* Philippine News Agency. Retrieved February 5, 2023, from https://www.pna.gov.ph/articles/1152236

Where local governments come in

Local government units (LGUs) are essential to promoting smart and digital city development because they are in charge of crafting, reinforcing, and amending policies and regulations which help determine how technology and innovation are used within their territorial jurisdiction. LGUs also directly control physical infrastructure, such as roads and public transportation, and can coordinate with private sector organizations to bring forth and implement innovative solutions for the public.

Working towards smart cities is not a novel concept for Philippine LGUs. A policy note from the Philippine Institute of Development Studies states that municipalities such as Mandaue City and Tagum City are already pursuing smart city initiatives such as traffic signalization systems and no-contact apprehension.[3] LGUs choose these initiatives first as they are seen as long-term solutions to pressing urban problems like increasing traffic.

Yet smart city tech is more than just improving roads and improving the flow of traffic. It is also important to integrate digital payments into an LGU's governance, collection, settlements, disbursement, accounting, and auditing processes. After all, payments feature in the vast majority of transactions–including permits and license fees- between LGUs and its citizens. Transactions such as tax collection, business licensing, procurement, payment of salaries, and consumer spending form the backbone of an LGU's economic activity. Digital payments streamline, and render efficient, these transactions and introduce an additional layer of protection against theft, fraud, and corruption by reducing the reliance on cash by stakeholders.

Fortunately, there are already ongoing initiatives to push for the adoption of digital payments in the government -E-Government policy and whole-of-government approach to digitalization. In 2020, the Anti-Red Tape Authority required all government agencies to accept digital payments for all permits, licensing, and other government fees as the agency sought to ease the burden of bureaucracy on both businesses and the general public.[4] According to Memorandum Circular No. 2020-06, all government agencies that provide services related to

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[3] Philippine Institute of Development Studies. (2022, April). *How far have Philippine LGUs come in developing into smart cities?* PIDS. Retrieved February 5, 2023, from https://pidswebs.pids.gov.ph/CDN/document/pidspn2207.pdf?fbclid=IwAR1Vhw9jFHPZU4UbpAeky4N3hDSQazqeMb2XTQZkPGtZnXPixJH9ezwpn50

[4] Canivel, R. S. C. (2020, September 8). *Gov't agencies directed to accept digital payments -*. Governance Indicators. Retrieved February 6, 2023, from https://governance.neda.gov.ph/govt-agencies-directed-to-accept-digital-payments/

business and non-business transactions must accept digital payments such as those done through online banking or through digital wallets like GCash and PayMaya.

Digital payments, however, do not have to be strictly limited to just payments between individual citizens, corporate entities/ businesses, and the government. Digital payment platforms can also be a stepping stone for local governments to raise funds and investments.

There are already several real-world examples of municipal and city governments partnering with private tech startups and companies to accelerate smart city development. For example, Cisco has partnered with the city of Amsterdam to create a smart city program that focuses on improving the city's sustainability, quality of life, and economic competitiveness.[5] The project included connecting citywide optical fiber to homes, a smart grid, and public telepresence capabilities. Ericsson has also built a water-quality monitoring project in Stockholm that is scoped to develop algorithms for the automatic detection of changes in water quality.[6]

The examples above underscore just what can be achieved when municipal and city governments leverage private capital for smart city development. Partnering with tech companies is a great way to find new sources of funding and technical expertise while helping ensure the long-term capability of any initiative. Philippine LGUs must be open to pursuing private sources of funding and grants in its development of smart cities.

Competition for smart cities

A great way to encourage smart city developments is to incentivize LGUs to digitalize. This can be done through a competition amongst LGUs and rewarding those who successfully adopt digital solutions such as online payments. The competition must emphasize the need to show successful use cases in integrating technology in running their cities and how it has helped its community.

The idea of a smart city challenge is nothing new. In 2015, mid-sized cities across America were challenged to develop ideas for an integrated, first-of-its-kind smart transportation system that would use data, applications, and technology to improve how people and goods are

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[5] Makower, J. (2014, April 14). *Cisco and Amsterdam's plan to make a green city smart*. Greenbiz. Retrieved February 6, 2023, from https://www.greenbiz.com/article/cisco-and-amsterdams-plan-make-green-city-smart
[6] Paska, D. (2018, November 21). *Using data for good: Digitalized water for smart cities.* Ericsson. Retrieved February 6, 2023, from https://www.ericsson.com/en/blog/2018/11/using-data-for-good-digitalized-water-for-smart-cities

moved. The 'Smart City Challenge' received responses from 78 applicant cities, with 7 finalists eventually working with the American Department of Transportation to implement their ideas.[7]

A similar competition among Philippine LGUs would require backing from government financial institutions such as the Development Bank of the Philippines and the Land Bank of the Philippines, subject to the mandates and governing laws of these financial institutions. This is because an inter-LGU competition will work best anchored with their financial and developmental support. After all, development banks are also another potent source of not just funds but technical expertise when implementing programs at the LGU level. Finally, participation by these banks can only lend credibility to the competition and make it more attractive for other LGUs to participate.

Conclusion

Smart cities may seem to entail futuristic, science-fiction technology but the truth is these technologies are real and accessible - ready to resolve many of today's urban development and property management pain points. Used correctly, smart city tech can improve the quality of life and access to resources and basic services, encourage greater investments, and boost the economic competitiveness of a city.

Many Philippine LGUs have already started their journey toward creating full-fledged smart cities. It is crucial they prioritize projects that will benefit a wide cross-section of their citizens such as traffic decongestion tech and digital payment solutions. LGUs must also be open in partnering with businesses eager to invest in smart city projects. Lastly, incentivizing LGUs to adopt smart city solutions through inter-LGU competitions and increased funding from stakeholders are strategic ways of spurring smart city tech adoption.

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[7] US Department of Transportation. (n.d.). *Smart City Challenge | US Department of Transportation*. US Department of Transportation. Retrieved February 6, 2023, from https://www.transportation.gov/smartcity