

# BANGLADESH



## case study

Good data exchange can confer an array of benefits, from improving the operational efficiency of governments and driving economic growth, to enabling access to essential services for people and building trust.

The factors that make up good data exchange are relatively well established and include effective laws and regulations, technology architecture, and accountability and oversight mechanisms. Far less research has been conducted on how these factors function in the real world as governments navigate their unique contexts to build, implement, and ensure buy-in and usage of their national data exchange efforts.

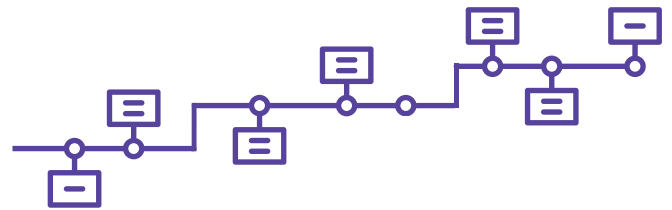
We know that there is no one-size-fits-all approach to national data exchange systems. Each country's progression and timeline are unique, and the process is seldom linear. Their trajectory is greatly influenced by the motivating drivers for establishing national data exchange systems and the methods by which they go about doing so.

The Digital Impact Alliance conducted research into these unique drivers and considerations to inform a greater understanding of how integrated national data exchange systems are being developed, and the ensuing implications for governments, the private sector, and people.<sup>1</sup>

### **This case study surfaces:**

- Essential insights and learnings for policymakers and government technology leaders as they undertake their own journeys to implement integrated national data exchange systems.
- Practical recommendations for funders and policymakers as they consider where and how to make strategic investments to support countries with their integrated national data exchange efforts, and beyond.

# PROGRESSION AND TIMELINE



In 2007, in advance of a critical election for the country, the Government of Bangladesh discovered 10 million “ghost voters” registered in their system. In considering how to solve this challenge, government leaders had to grapple with a broader problem: the country had no reliable system for civil registration. This included, but was not limited to, voter registration. In fact, prior to 2004, only 8% of citizen births in Bangladesh were registered. This meant that over 90% of the population had no legal identity or proof of existence.

After scrubbing the voter rolls of fake identities and duplicates, the government used the situation as an opportunity to think more broadly about data exchange and service delivery. They realized that fixing the civil registration systems and sharing data across different ministries was a start to solving this problem. Implementing a registration system that was integrated across the government and supported by more than 4,000 registration locations around the country helped

increase civil registration to over 90% in just 15 years. This served as a foundational step towards development progress in Bangladesh.

Since that time, Bangladesh has been on a journey to make its public services accessible to people in a seamless manner through harnessing data and digital technology. The ‘Union Digital Centers’ initiative has been at the core of this journey. The government recognized there was a widening digital divide, so the initiative aspired to put in place physical Digital Centers across the country that could provide access to digitized public services and information for people residing in the rural areas.

Today, there are 9,000 Digital Centers across 54 districts, which include the original 4,000 registration locations. The Digital Centers are managed by over 16,000 local entrepreneurs, with each center offering more than 300 essential services, such as land registration, life insurance, and access to exam results.

To assess the impact of these Digital Centers, the government uses a Time Cost Visit (TCV) Framework. As of January 2022, according to a UNDP report, Bangladesh's Digital Centers have helped reduce visits to a government agency or office by over 17%, reduced costs by 16%, and reduced time taken by 78%. For

entrepreneurs running these Digital Centers, average income has increased from USD \$7 to USD \$283 – in particular, for women entrepreneurs. And, at the time of publishing this case study, the citizen satisfaction rate was reported at 76%, rising from 50% in 2018.

## KEY MILESTONES

The success of Bangladesh's Digital Center model has been underpinned by over a decade of concerted efforts, focused on strengthening the country's data exchange systems, policies, and public-facing platforms.

### ***“Digital Bangladesh” Strategy***

An important milestone in the country's data exchange efforts was the “Digital Bangladesh” Strategy launched in 2009. The strategy aimed to use ICT as a lever to drive development and set out an ambitious plan to improve the country's digital infrastructure in the form of a national-level data center, enterprise architecture, and high-speed internet connection to all Upazillas (the administrative sub-units of a district/county). To date, these efforts have resulted in a 40% growth of the ICT sector annually,<sup>2</sup> anchored by specific private and public sector initiatives.

### ***Open Data Approach***

The next milestone of note was in 2016 when Bangladesh released its Open Government Data Strategy.<sup>3</sup> The main objectives were to:

1. Encourage development of innovative solutions for better public service delivery.
2. Enhance the scope of research to identify and develop innovative solutions.
3. Create opportunities for new jobs, more investment, and an improved economy.
4. Make government more transparent, accountable, and inclusive through citizens' participation.

The Open Government Data strategy opened the doors to develop the Open Data Portal,<sup>4</sup> which today includes open datasets from over 35 ministries and associated departments.

The portal facilitates tracking Bangladesh's progress against the Sustainable Development Goals (SDGs) – in particular, Goal 16 “to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.” The Open Data Portal is built on a collaboration between the Prime Minister's Office, Cabinet Division, Bangladesh Computer Council, Bangladesh Bureau of Statistics, and Statistics and Informatics Division along with technical support from A2i, another advisory and executive body.

The various open data efforts and initiatives undertaken by the government have received funding and support from The World Bank and the United Kingdom's, Foreign, Commonwealth and Development Office. As the World Bank highlighted, “returns on investing in data transparency are higher when a country's integration to the global economy deepens, as captured by trade and financial openness.”

### ***SDG Tracker***

Given the importance of the SDGs for Bangladesh, in 2017, the government launched the SDG tracker<sup>5</sup> to make relevant data available to support policymaking and allocation of developmental resources. The SDG tracker pulls together datasets in the Open Data Platform from government ministries and departments to report Bangladesh's performance against all prioritized SDGs.

While aspirations were to use the tool for policymaking and decisions around resourcing, to date, the SDG tracker remains a tool solely for reporting on the country's SDG progress.

### ***CRVS++***

Another foundational milestone in Bangladesh's data exchange story is the development of its CRVS++ model, which emerged from the Open Government Data Strategy and other institutional data efforts.

The Civil Registry and Vital Statistics (CRVS), an inter-ministerial government department, was tasked with overseeing the sharing and streamlining of data across relevant government departments, as well as developing a common public-facing service platform. Given the independence of this endeavor, a decision was made to take a whole-of-government approach, and the Cabinet Division was given the responsibility to lead the effort through the Civil Registry and Vital Statistics Steering Committee (CRVSSC). This was the first time an intergovernmental committee was set up in Bangladesh to facilitate data sharing and exchange to enable public services.

The CRVSSC established a robust and effective civil registry and vital statistics process, based on the country's unique ID system, and linked it with existing service delivery

processes. This entire model was named CRVS++ and set the stage for making digital services available to people. It included registering and sharing birth, death, marriage, divorce, adoption, and cause of death data. Enrollment in the education system and migration data were subsequently added.



## **Bangladesh National Portal and MyGov**

One of the last milestones in their data exchange journey was the development of the Bangladesh National Portal - a culmination of the CRVS++ model turned into a public-facing platform. Launched in 2015, the National Portal combines links to, and data from, over 40,000 websites and encapsulates various service delivery platforms like Integrated Service Delivery Platform (ISDP), MyGov, and others. The data exchange efforts to power the National Portal require notable collaboration and span 58 ministries and over 350 directories, along with nearly 500 Upazillas (the administrative sub-units of a district/county) and more than 4,550 Unions (the smallest administrative unit).

However, while the National Portal provides an entry point to respective websites and services, MyGov offers a more centralized experience.

Launched in 2020, over 300 curated services are hosted and accessible within MyGov. The website offers the option for users to register and verify their identity. MyGov also has a standardized approach to onboarding new ministries and services on the platform, making it easier to share data.

# IMPLEMENTATION OF GOOD NATIONAL DATA EXCHANGE SYSTEMS



## LAWS AND REGULATIONS

Since the early 2000s, the Government of Bangladesh has instituted crucial laws and regulations in support of Digital Centers as well as other key data exchange initiatives.

In 2009, the Ministry of Information passed the Right to Information Act and the independent Information Commission drafted the regulations. The Information Committee was given the responsibility to oversee the implementation of the Right to Information Act and convene civil society organizations and people to spread awareness.

To date, Bangladesh does not have a data protection law in place. However, in late 2022, Bangladesh published its Draft Data Protection Act.<sup>6</sup> Several notable features were present in this Draft Act around user consent, data-subject rights, local data storage laws, restrictions on cross border data transfers, and establishment of a data protection authority. The Draft Act states that all user-generated data should be localized and stored within Bangladesh. It also places restrictions on user data being transferred outside the country. However, the Draft Act did not specify the type of data that falls under these restrictions. Cross-industry trade



associations have mounted some resistance to these gaps.

A year later, a published revision of the Draft Data Protection Act included changes to some key aspects.<sup>7</sup> From a compliance standpoint, this version provides a transitional period of three years for entities to make the needed changes to their current data governance structures. It also lays out changes to the data localization rules in the earlier draft to include only 'sensitive data', which incorporates commercial data within that. Additionally, it states that sectoral

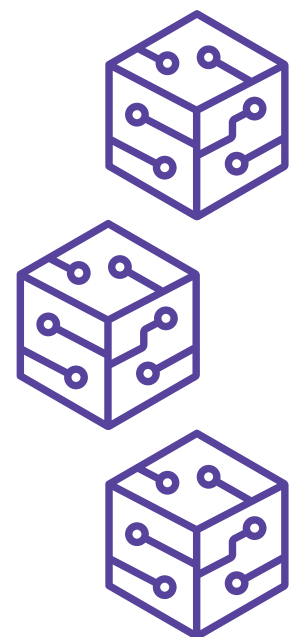
regulators, like banks and telecommunication companies, can define their own data rules.

At the same time, the updated version allows cross-border data sharing with the consent of the user. The section on cross-border data transfers highlights that Bangladesh will enter multilateral or bilateral cooperations with other countries for data sharing. However, revisions do not lay out any clear criteria or standards for categorizing data as sensitive or personally identifiable.

## TECHNOLOGY ARCHITECTURE

To achieve the vision of the "Digital Bangladesh," the government put in place the Bangladesh National Digital Architecture framework,<sup>8</sup> which outlines four key technology architecture principles:

1. Technology-independent architecture that is not tied to any type or form of technology solution.
2. Resilient infrastructure for fault tolerance and stability.
3. Digital security to protect features and data against any breaches.
4. Optimized infrastructure with policies like 'ask-once only.'



The country's approach to its digital public infrastructure (DPI)<sup>9</sup> differs slightly from neighboring countries in two important ways. The first is that public services were the use case around which their DPI approach is centered. This makes it more relatable and tangible for the government, as well as for the public to access and understand. The second key element is that Bangladesh's architecture has added an additional 'access layer' to the recognized layers of DPI, being digital ID, digital payments, and data exchange. This access layer includes physical locations, such as the Digital Centers, and call

centers to boost the accessibility of digitized services.

The official ID in Bangladesh, known as Porichoy, has achieved 95% coverage of adults across the country<sup>10</sup> and is coupled with birth registration. This makes it a unique ID, which is linked to various milestones of life, and today, helps ensure access to critical public services. Porichoy, along with their Know You Customer (e-KYC) system, underpins the payment infrastructure that facilitates government-to-people transactions – and vice versa – for over 30 million citizens.

## ROBUST AND RESOURCED INSTITUTIONS

Bangladesh has a very centralized approach to data collection and dissemination. The Statistical Act of 2013<sup>11</sup> mandates the Bangladesh Bureau of Statistics as the key agency responsible for generating official statistics. Prior to the 2013 Act, the Bangladesh Bureau of Statistics did not have any regulatory support, which impacted its work to collect and disseminate relevant data. Statistical data collection and reportage is also done by the National Institute of Population Research and Training (NIPORT),<sup>12</sup> as well as another advisory and executive body, A2i, plays a significant role in the digitization and packaging of data for public service

delivery. While there is some form of coordination between these entities, it remains mostly fragmented.

The Data Protection Act of 2009 called for the establishment of a Data Protection Authority within their Data Security Agency, which was set up in 2018. The Data Protection Act, however, did not confer any independent decision making or execution rights to the authority. It stated that the government can issue directions to the Data Protection Authority when it comes to matters of national security, sovereignty, and integrity, along with friendly relations with neighboring states.



## **Governance Architecture**

As part efforts towards realizing “Digital Bangladesh,” a body called the Digital Bangladesh Task Force (DBTF) was set up under the Prime Minister’s Office with the Prime Minister in charge. This task force also includes representation from the private sector, public, and civil society. A2i is housed within this task force to support the policy and e-services roadmap.

The Ministry of Posts, Telecommunication and Information Technology (MPTIT) oversees all the ICT-related activities. The Bangladesh Computer Council, an autonomous body under the MPTIT, is one

of the main implementing agencies for the promotion of ICT. One of the key projects that the Bangladesh Computer Council oversees is the BanglaGovNet, which aims to provide intranet connectivity to all the district and Upazilla headquarters under one network. Another project called the National E-Services Systems, which builds on the BanglaGovNet initiative, aims to provide e-services to people via a portal at the district and Upazilla levels.

This forms the policy and roadmap backbone for the Digital Centers, which remains in place today.

## **Governance of Digital Centers**

Governance of the Digital Centers model requires a complex and coordinated web of government bodies. Each has a specific role to play in the model’s implementation. One central tenet has been the goal to engage people across the country and support the entrepreneurs running the centers.

1. A2i provides many support functions that make the Digital Centers come alive. It offers counselling and planning services to support training and capacity building. The agency also helps identify the level of support that each entrepreneur requires to provide effective management of their center. Additionally, A2i assists with partnerships and coordination across government and private entities for the same purpose. And, to ensure people remain at the center of service delivery,
2. Within the ministry of Local Government, Rural Development & Cooperatives, the Local Government Division provides regulatory support to the Digital Centers. They also play a key role in negotiating with development partners for financing and other assistance. For example, they directed the Digital Center initiative to seek money for the set-up equipment from the Local Government Support Project Fund.
3. The Bangladesh Computer Council organizes trainings for government officials and entrepreneurs and provides technical support to the Digital Centers through their district ICT office.

A2i organizes empathy training for senior government officers.

4. The District Council plays a key role in the creation of new Digital Centers, overseeing recruitment of

entrepreneurs and helping to settle any disputes that may arise involving the entrepreneurs and local government.

## CAPACITY BUILDING AND SOCIETAL ENGAGEMENT

A key feature of the Digital Center model is its focus on building the capacity of government personnel and citizens to participate in the digital economy. Citizens are empowered to be entrepreneurs and run the Digital Centers, and as such, are trained by the government to do so.

For each Digital Center:

- There must always be a man and a woman hired, as building gender equity is a key part of the approach.
- They must be under 30 years of age, as providing pathways for youth employment is also considered important.
- They are expected to have basic computer literacy skills and have completed higher secondary education or above.
- They must be able to invest USD \$455 into their respective Digital Center.

These entrepreneurs provide a bridge between people and the government. They assist people with accessing public services and liaise between citizens and the government when any grievances arise. They are provided with basic equipment, as well as training and support to start and run the Digital Centers. Over the years, there has been a positive increase in the economic wellbeing of these entrepreneurs, which has highlighted a potential model for sustainable capacity building.

Another notable effort by the government is the training senior officers on empathy in service design. The officers are trained in understanding challenges and struggles people face in accessing public services through field visits and focus group discussions. The training has been recognized as a big contributor towards helping to make public services more citizen centric.

# IMPLEMENTATION INSIGHTS

While Bangladesh has put many elements of the good data exchange framework into place, additional implementation factors – including participatory processes and creative

funding models – offer lessons about how national governments can build trust with people and work towards addressing sustainability challenges.

## PARTICIPATORY PROCESSES

*Employing participatory processes have been a priority of the government in instituting its data initiatives, including the Digital Centers.*

Establishing trusted, participatory processes required an integrated approach to civil registration in Bangladesh – one that prioritized inter-ministerial coordination and actively included citizens. This years-long process also required significant planning and investment, and the creation of thousands of registration centers and subsequent Digital Centers.

Through this approach, the government has provided official identity to a huge segment of the population (and growing), as well as the ability to provide feedback and voice concerns. In doing so, it has also provided rights and recognition to citizens who were previously invisible in the system.<sup>13</sup>

### **These efforts offer important takeaways:**

- Building citizen trust through data initiatives requires a major investment of time and resources by the government.
- Prioritizing collective buy-in across the government, but also with citizens and the private sector, has led to better adoption of the initiatives.
- Investing in participatory processes has enabled a vehicle for continued local feedback and engagement.

# MEASURING AND DESIGNING DIGITAL SERVICES

*Using a Time Cost Visit (TCV) framework to measure the impact of digital transformation initiatives has brought many positive benefits.*

In the past, citizens have faced delays in accessing public services. This inadvertently increased the time and opportunity costs they had to forgo as it sometimes required multiple visits to government offices. As part of the process of digitizing public services, the

government uses a TCV framework to help track the time saved, costs reduced, and visits reduced in receiving the service. Ultimately, the TCV framework serves as a tool to understand and report on effectiveness.

## **This constraint offers important takeaways:**

- Employing a TCV framework has helped improve service delivery and inform policymaking. It also acts as a guiding framework to design public services.
- Using a recognized framework has increased the legitimacy of public institutions and services by making them more transparent and trackable.
- Ensuring a measurement approach with citizens at the center has reinforced the importance of a people-first approach to service and policy design.



# SUSTAINABILITY CHALLENGES

*Addressing financial sustainability remains a major concern for government-led data-sharing platforms.*

Bangladesh's sustainability of its data exchange efforts needs to be seen through an ecosystem lens. One key aspect of the ecosystem are platforms like Bangladesh National Portal and MyGov, which aggregate multiple digital services and websites from across the country enabled through data sharing. The National Portal is dependent on multiple other platforms hosted at the respective ministries, which raises sustainability concerns given its decentralized nature. On the other hand, the MyGov platform and app are supported by other actors, A2i and UNDP.

Another critical part of the ecosystem of the same is the sustainability of Digital Centers. Financing the scope and breadth of the Digital Centers has been – and continues to be – an ongoing challenge for the country.

Bangladesh has employed a unique public-private partnership model, which has provided several benefits, but has also presented challenges to the long-term viability of the approach.

■ **The government bears some of the key costs.** Equipment is one of the main expenses involved in the Digital Centers model and typically includes a laptop, desktop computer, photocopier, camera,

and printer. The government provides the required equipment for each Digital Center through its Local Government Support Project Fund.<sup>14</sup> There are also provisions for additional subsidies for buying additional equipment. The development of some products and software is funded by the district council, with additional support from A2i.

■ **The costs upfront can be high for the entrepreneur and the returns uncertain.** To open a Digital Center, each entrepreneur must make an investment of USD \$455 to cover the initial operating costs, which they expect to recoup and exceed. This investment is to ensure they have a stake in running the Digital Center, given the costs incurred by the government to train and provide them with equipment.



They also bear recurring expenses, like internet and electricity costs, and typically are responsible for any loss or damage of equipment.

The entrepreneurs who run the Digital Centers can earn revenue in several ways, but returns are not guaranteed. For example, they can earn money through internal services (services provided by the Union Parishad), external services (services provided by other government and private departments), and at times, additional services like computer training and computer services.

They are all channeled through the Union Parishad, which uses its own funds to establish the Digital Centers. However, none of these are mandatory funding sources, which leads to uncertainty in the sustainability of the model.

On top of financial challenges, there are several other key challenges, including infrastructure issues like the constant power breakdowns and low internet speeds due to connectivity. These issues continue to limit the number of transactions that an entrepreneur can process in a day, which in turn limits the revenue they can generate.

**The ongoing sustainability of the Digital Center model presents challenges.** The overall project expenses rely on multiple funds like the Local Government Support Fund and other sources like A2i, BCC, and UNDP.

### **This constraint offers important takeaways:**

1. Solving these financial sustainability challenges will require evolving funding models and, ideally, long-term investment.
2. Putting in place a common fund source and clarity on any outstanding ownership questions between the government and entrepreneurs may help with government planning and continue to incentivize entrepreneurs.
3. Investing in strengthening the infrastructure that enables digital service delivery will help ensure continued revenue generation.



# CONCLUSION

In Bangladesh, operationalizing digital services on a large scale has not only brought efficiency to the government, but also dramatically transformed the ability of people to access services. And, in thinking beyond the single use case of the discovery of “ghost voters,” the government has been able to implement a range of policies, data technologies, and institutions that have evolved into the successful Digital Centers model. This transformation has been powered by cross-ministerial institutions, strong data standards, and new delivery structures for managing and sharing data.

However, challenges remain, especially around the funding and sustainability of the Digital Centers model. Addressing these will be key to ensuring continuity, while strengthening the infrastructure that underpins digital service delivery will help ensure continued usage and adoption.

At the same time, the decentralized nature of the data exchange systems in Bangladesh have added to the sustainability and management concerns, as well as have impacted the online experience for citizens. There have, however, been notable examples of efforts to create cohesion, such as the MyGov platform. In future, these examples could provide a stepping stone towards a more coordinated approach to their national data exchange efforts.

Overall, Bangladesh’s data exchange journey holds many lessons for national governments looking to maximize data efficiency while also fostering a vibrant sector of entrepreneurs and building trust with people.

To learn more about the recommendations for policymakers and funders based on the wider body of research, read our insights paper on national data exchange systems.

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# ENDNOTES

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