Leveraging Technology to Advance Urban Governance:

The eGovernments Foundation (eGov)

OVERVIEW: The eGovernments Foundation (eGov) is a nonprofit organization that aims to transform urban governance in India through DIGIT, its flagship technology platform. DIGIT helps urban local bodies (ULBs) more efficiently manage operations, track finances, and provide municipal services to citizens.

ESTABLISHED: 2003

QUICK FACTS

PRIMARY PHILANTHROPISTS/ FUNDERS: Nandan Nilekani, Omidyar Network, Tata Trusts, and Google

GRANT AMOUNT: **INR 52 crores**[1] (USD 7.8 million) to date

PRIMARY FOCUS: Urban governance

ARCHETYPE: Build a field
eGov's DIGIT platform strengthens municipal service agencies and improves urban Indians' quality of life.

KEY PARTNERS:
- Vassar Labs
- Karvy
- National Institute of Urban Affairs

WHY BOLD?

By incorporating both government-focused and citizen-focused technology solutions in DIGIT, eGov has developed a 360-degree solution to India's urban governance problem. In addition, DIGIT's open-source technology allows for the rapid creation of new modules, in partnership with a wide array of software developers. To date, DIGIT has been deployed in five states—Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, and Uttar Pradesh— delivering enhanced services to 40 million urban citizens.

KEY LEARNINGS

- Establish a scalable model to enable widespread adoption
- Partner with government officials who are commited to mobilizing change
- Invest in efforts to increase public awareness and adoption
- Build solutions that address the needs of all stakeholders
- Use the expertise of partner organizations to drive impact
- Use data-driven feedback loops to improve program efficacy

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1   Conversion rates (INR to USD) reflect rates available during the April 2018 to June 2018 time period.

THE OPPORTUNITY FOR IMPACT

With India's rapidly swelling urban population, demand for municipal services is straining urban governments' capacity to provide them. This problem will only worsen as India continues to urbanize. While it took 40 years (from 1971 to 2008) for India's urban population to rise by nearly 230 million people, it will take only half that time to add the next 250 million.[2]

India's leaders have long recognized that the nation's municipal services would struggle to keep pace with the country's surging urban population. In 1992, the Parliament of India passed the 74th constitutional amendment to address the problem and serve citizens more efficiently, transferring a range of administrative responsibilities from state governments to a newly formed layer of urban governance. Comprising this urban governance layer are urban local bodies (ULBs), city-level government entities. ULBs come in three forms, depending on factors such as their population density and the prevalence of employment in nonagricultural activities—municipal corporation (mahanagar palika), municipality (nagar palika), and notified area/city council (nagar panchayat). Together, they provide water and sanitation, urban transport, voter registration, grievance resolution, and other services.

Despite the legislation, urbanization continues to overwhelm ULBs. Many have neither the human resources nor the technological infrastructure to provide services in a timely, effective, and transparent manner. They also face a range of bottlenecks: most lack online channels for citizens to pay taxes or access services, as well as the ability to capture and analyze data in order to improve operational efficiency. These issues hamper ULBs' ability to perform essential activities, such as addressing citizen grievances, thereby increasing the backlog of unresolved work.

A BOLD INITIATIVE IN URBAN GOVERNANCE

Recognizing these operational gaps in urban governance, Nandan Nilekani, co-founder of Infosys, one of the country's largest IT companies, and Srikanth Nadhamuni, CEO of Bengaluru-based startup incubator, Khosla Labs, established the eGovernments Foundation (eGov) in 2003. The nonprofit seeks to provide a seamless technological interface between Indian citizens and their ULBs.

eGov has developed a scalable digital platform to help ULBs manage their operations and finances and provide efficient municipal services. The platform, known as DIGIT (Digital Infrastructure for Governance Impact & Transformation), enables ULBs to be more effective and accountable—and to make better, data-driven decisions. Its open-source software ensures both interoperability among ULBs and rapid development of new modules by a wide array of software partners.

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2 "India's urbanization: A closer look," *McKinsey Quarterly*, July 2010.

HOW THE INITIATIVE CAME TO LIFE

Back in 2003, Mr. Nilekani and Mr. Nadhamuni saw two challenges converge: the growing inability of India's urban local governments to provide services effectively and a disproportionate focus of government development spending on rural India. Based on their technology backgrounds, particularly in building platform-based solutions, they viewed technology as a potentially powerful response to these challenges. That same year, they launched eGov, to help city administrators use digital solutions to enhance productivity and improve service.

From eGov's first rollout of DIGIT in Bengaluru's Municipal Corporation in 2004, Mr. Nilekani and Mr. Nadhamuni's initiative has grown to encompass 331 of India's roughly 4,000 ULBs. These ULBs employ the platform to provide services to more than 40 million citizens in five states.

HOW THE INITIATIVE WORKS

DIGIT is distinctive, in that it serves both citizens and government. "Historically, solutions aimed at improving urban governance in India have focused on addressing the needs of citizens, which involves enabling citizens to report issues that ULBs are responsible for solving," says Viraj Tyagi, CEO of eGov. "However, eGov is capacity building from the government's side, as well, by empowering ULBs to respond to this increased demand. Taking this two-pronged approach is the only way we can deliver sustained results."

The platform lets individuals receive services without having to visit a municipal office. Through mobile apps and online portals, they can remotely access such municipal services as marriage registration, birth and death registration, property tax assessment and payment, and grievance reporting. To serve citizens who do not have access to internet-enabled devices, several ULBs have established physical service centers at their offices. Those who visit these service centers can access DIGIT's various modules while receiving assistance from government employees.

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> ## Viraj Tyagi
> CEO, eGov

The platform's government-facing tools enable employees to better manage operations at an aggregate and department level. For example, DIGIT's Big Data Analytics Engine creates up-to-date visual dashboards that let ULB decision makers measure such metrics as employee performance, department-level workflow, expenditures, and revenue collection. Additionally, DIGIT has a mobile app (Pura Seva), which lets civic employees manage workflows and collect field information remotely, saving travel time while increasing employee efficiency.

DIGIT MODULES

Citizen Portal · Marriage Registration · Birth & Death · Greivance Redressal · Building Plan Approval

Property Tax · Water Charges · Land & Estate · Advertisement Charges · Sewerage Charges · Trade License

OPEN SOURCE · MOBILE APPS · GEOSPATIAL VIEWS · STATE / CITY DASHBOARD

Employee Management · Legal Case Management · Council Management · File Management

Public Works Management · Payroll & Pension · Assets · Inventory

CITIZEN SERVICES · REVENUE · ADMINISTRATION · EXPENDITURE · FINANCIAL ACCOUNTING

A schematic of the DIGIT platform's various modules (Photo: eGov)

DIGIT is designed to encourage collaboration. Open-source software opens the platform to a wide array of digital development partners for constant improvements. For example, eGov partnered with Vassar Labs, a Boston-based technology firm, to build its government-facing dashboards. Implementation partners take responsibility for installing the DIGIT platform at ULB sites. They also train government workers on how to manage its operations. For instance, in Andhra Pradesh, a professional services company, Karvy, trains ULB employees on how to use the platform.

The foundation's software development costs are fully covered by Nilekani (INR 23 crores, USD 3.4 million) and two other funders—Tata Trusts (INR 9 crores, USD 1.3 million) and Omidyar Network (INR 13 crores, USD 1.9 million). State governments bear the costs of installing and customizing the platform. As a nonprofit, eGov only charges ULBs nominal fees to recover costs.

Beyond providing financial support, Nilekani, Tata Trusts, and Omidyar Network contribute crucial strategic and technical support to the eGov team. While Nilekani meets monthly with eGov leadership to discuss organizational strategy and platform functionality, Tata Trusts uses its pan-India network to expedite efforts to scale the DIGIT platform. Omidyar Network has also fostered collaboration between eGov and other organizations that are advancing the field of technology-enabled governance around the world.

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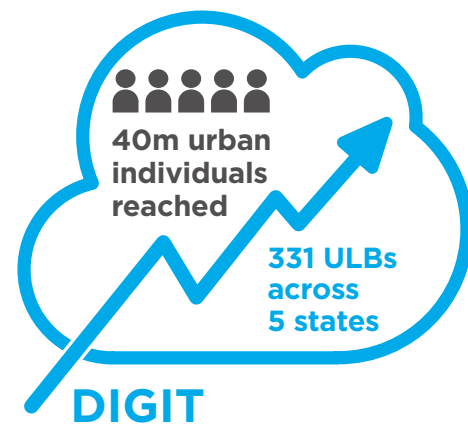
E. M. Bhargava
Director of Partnerships, eGov

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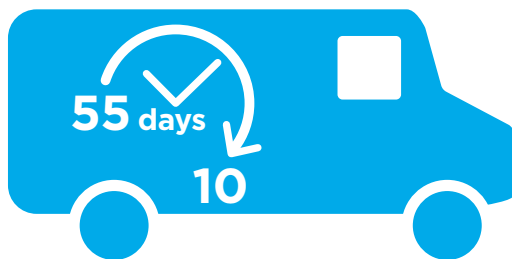
PROGRESS AND RESULTS

Since its first launch in Bengaluru 14 years ago, eGov has scaled DIGIT to 331 ULBs in the states of Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, and Uttar Pradesh. The nonprofit estimates that it has reached 40 million people across urban India. In total, eGov's digital applications have processed 4.7 million service requests, resolved 2 million citizen-logged grievances (with a grievance-resolution rate of over 90 percent), and saved 2,500 years worth of time, thanks to workflow efficiencies. In addition, according to an externally conducted survey[3] of 354 citizens and 151 ULB employees in Andhra Pradesh in February 2018, 57 percent of citizens report that DIGIT has directly resulted in an improvement in their quality of life, while 100 percent of ULB employees report that DIGIT has improved their quality of work or ability to serve citizens.

15 years
since platform launch

40m urban individuals reached

331 ULBs across 5 states

DIGIT

Municipal Services
delivery in Andhra Pradesh (2018)

55 days

10

One particular success has been in Andhra Pradesh. Beginning in April 2016, eGov installed DIGIT's full suite of tools across the state's 110 ULBs within a year. eGov credits the state leadership for a high degree of political will and support in accomplishing this feat.

Since DIGIT's advent, annual revenue collection from property tax and water charges by Andhra Pradesh's ULBs have increased by INR 100 crore (USD 15 million) and INR 239 crores (USD 36 million), respectively. In addition, ULBs in Andhra Pradesh have seen a significant increase in early tax and service payments, which have accrued additional interest over time. In the two years that DIGIT has been operating in the state, interest from early payments has totaled INR 266 crores (USD 40 million). Government officials attribute these increases mostly to the platform.

A testimonial to the platform's value comes from the commissioner of the Tenali Municipal Office in Andhra Pradesh, Mrs. S. Shakuntala, who says, "DIGIT is a great innovation. It has reduced inefficiencies, red tape, and bureaucracy in our municipal office and has made our operations more transparent."
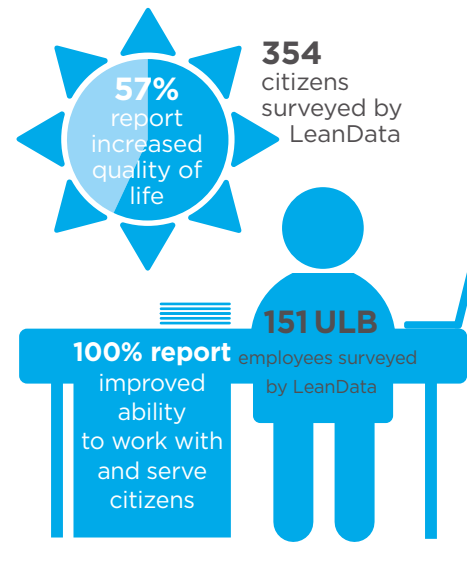
3 The survey was funded by Omidyar Network and executed by LeanData.

The numbers support her claim: the average length of time for delivering a municipal service in Andhra Pradesh has fallen from 55 days to fewer than 10 days.

However, challenges remain. Many citizens are not benefitting from the platform because they are either unaware of it or lack internet access. A persistent cultural norm of visiting government offices in person also decreases the number of users among India's urban population. To boost participation, several ULBs have launched informational advertising campaigns and door-to-door visits by municipal field officers. And as noted above, some ULBs have established service centers equipped with DIGIT's citizen-centric software at their offices, so citizens can access municipal services with the help of government employees.

As eGov looks to scale nationally, the challenge will be for ULBs across states to adopt and expedite rollout of the platform and spread its benefits to all urban citizens.

Improvements to citizens' quality of life
and ULBs' operational efficiency in Andhra Pradesh in 2018

57% report increased quality of life

354 citizens surveyed by LeanData

100% report improved ability to work with and serve citizens

151 ULB employees surveyed by LeanData

LOOKING TO THE FUTURE

By 2020, eGov has laid out an ambitious goal: scaling its platform from 331 to 2,000 ULBs. This will require changes in its growth strategy. To date, eGov has implemented its platform in response to individual ULB or state government requests. Going forward, eGov aims to convince the central government of the platform's unique value.

With the support of Omidyar Network, eGov is working directly with the National Institute of Urban Affairs and the Ministry of Housing and Urban Affairs to turn DIGIT into a national urban governance platform that is available as a public good. eGov hopes to make DIGIT available on the cloud in every state of India. According to eGov's leadership, a cloud-based architecture will dramatically reduce the time to adoption and total cost of platform ownership. Moreover, it will drive common standards for urban governance across all ULBs and states.

LEARNINGS TO DATE

Establish a scalable model to enable widespread adoption. Recognizing that ULBs across India share a number of inefficiencies, Mr. Nilekani deployed philanthropic capital in order to develop a targeted, open-source solution. The nonprofit charges ULBs, at cost, for the implementation and customization of DIGIT. By focusing funding on software development, eGov has built a platform that is both tailored to India's urban
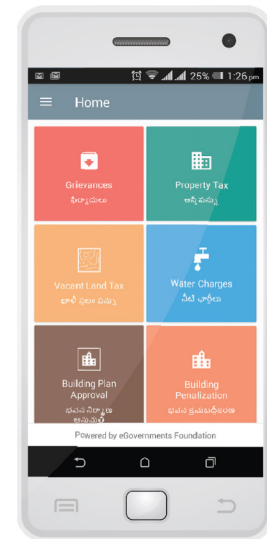
government context and customizable to specific ULB needs. This combination is uncharacteristic of other commercially available administrative software. The platform's easy-to-implement layout, low service fees, and ability to increase ULB operational efficiency and earnings create a strong business case for investing in the solution, increasing the likelihood of scaling it to eGov's target of 2,000 ULBs by 2020.

Build solutions that address the needs of all stakeholders. eGov tackles India's urban governance problems by addressing both citizens' and local governments' needs. The platform provides citizens (and nongovernment bodies) with convenient and remote access to municipal services through apps, websites, and service centers, which greatly improves convenience. Without DIGIT, citizens would have to queue up at ULB offices for services. For ULBs, the platform enables them to generate more and earlier revenues, improve oversight of operations, and provide citizens with services in a more timely manner.

DIGIT application on a smartphone (Photo: eGov)

Partner with government officials who are committed to mobilizing change. eGov rolled out the DIGIT platform across all 110 ULBs in Andhra Pradesh in under a year, thanks to strong support from the chief minister of Andhra Pradesh and a close working relationship with the state's Municipal Administration Department director. Strong government support was also critical during the rollout of DIGIT in Tamil Nadu, Karnataka, Delhi, and Maharashtra. In other states where eGov has struggled to secure buy-in from government officials, rollout has either been delayed or stopped. With the support of Omidyar Network, eGov has connected with the National Institute of Urban Affairs and the Ministry of Housing and Urban Affairs in order to scale the platform nationally.

Use the expertise of partner organizations to drive impact. eGov works with software-development partners that greatly contribute to building out the software's functionalities and capabilities. For example, eGov collaborated with Vassar Labs, a technology company based in Boston, to integrate data visualization dashboards into its platform. In states like Andhra Pradesh, the public can also view these dashboards, which adds transparency and accountability to the state government's work. Additionally, eGov works closely with professional services firms like Karvy in Andhra Pradesh to provide ongoing technical support and training to the ULBs.

Invest in efforts to increase public awareness and adoption. While ULB officials who have adopted DIGIT recognize the value in enabling citizens to access government services online, they also acknowledge that many citizens are unaware of these solutions. As a result, ULBs in Andhra Pradesh and other states have invested in advertising campaigns and door-to-door visits by municipal field officers to disseminate information about the DIGIT platform. Where citizens lack access to the internet, ULB-established service centers provide free access to DIGIT, allowing citizens to access and pay for municipal services with the help of government workers.

Use data-driven feedback loops to improve program efficacy. eGov regularly collects and analyzes data from its platform to quantify impact. It tracks improvements in rates of grievance settlements, application processing, and revenue collection. The intent is to understand the ways in which the platform has enabled ULBs to provide better services to citizens, operate more efficiently, and collect higher revenues. With this information at hand, eGov can improve platform functionality and work directly with ULBs to diagnose and rectify process gaps.