
CONSULTATION FEEDBACK REPORT

**TECHNICAL
IMPLEMENTATION
GUIDELINES: CITIZEN-
CENTRIC SMART
GOVERNANCE
PROGRAM**



National Institute of Urban Affairs



AUGUST 2020

This Report aims to capture findings from an extensive Consultation effort conducted by the National Institute of Urban Affairs (NIUA) and Civis, on the Technical Implementation Guidelines of the Citizen Centric Smart Governance Program. This program falls within the ambit of the National Urban Innovation Stack initiative - anchored at the NIUA.

While all efforts have been made to record and capture the points made by all Consultation respondents, any errors are incidental and unintentional. Omissions may only be for the purpose of succinctness.

ABOUT THE ORGANISATIONS

NATIONAL INSTITUTE OF URBAN AFFAIRS

Established in 1976, National Institute of Urban Affairs (NIUA) was tasked to bridge the gap between research and practice on issues related to urbanization, and suggest ways and mechanisms to address these urban challenges of the country. For more than 40 years now, NIUA has been the vanguard for contributing to, and at times, building the urban narrative for a fast-evolving urban India. The Institution has been actively working towards bringing forth key areas of concern for urban India in order to build the urban discourse at various scales. It has utilized its competencies in research, knowledge management, policy advocacy and capacity building to address the urban challenges, and continuously strive to develop sustainable, inclusive, and productive urban ecosystems in India. It has emerged as a thought leader and knowledge hub for urban development in India, and is sought out by both Indian and International organizations for collaborations and partnerships for India's urban transforming journey. NIUA is committed towards aligning its efforts towards achieving the Sustainable Development Goals (SDGs) through all its initiatives and programs.

CIVIS

Civis is a platform which enables citizens' engagement by creating a channel for constructive dialogue on draft laws and policies between Governments and citizens. Civis is built and maintained by Civic Innovation Foundation. The Foundation has considerable expertise in designing and executing public consultations with Government partners, ensuring that constructive insights are gathered and that policies can be co-created to address on-ground challenges.

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LIST OF ABBREVIATIONS

AMRUT	ATAL MISSION FOR REJUVENATION AND URBAN TRANSFORMATION
API	APPLICATION PROGRAMMING INTERFACE
CCSG	THE CITIZEN CENTRIC SMART GOVERNANCE PROGRAM
IT	INFORMATION TECHNOLOGY
IUDX	INDIA URBAN DATA EXCHANGE
MOHUA	MINISTRY OF HOUSING & URBAN AFFAIRS
NICSI	NATIONAL INFORMATICS SERVICE CENTRE
NIUA	THE NATIONAL INSTITUTE OF URBAN AFFAIRS
NUIS	THE NATIONAL URBAN INNOVATION STACK
NULP	THE NATIONAL URBAN LEARNING PLATFORM
PAAS	PLATFORM-AS-A-SERVICE
RTI	RIGHT TO INFORMATION
SCM	SMART CITIES MISSION
TIG	TECHNICAL IMPLEMENTATION GUIDELINES
UI	USER INTERFACE
ULB	URBAN LOCAL BODIES

INTRODUCTION

By 2030, India's urban population is expected to grow to 600 million or to 40% of the national population. Yet, India's urban challenges continue to be complex and diverse.

India's cities are the drivers of economic growth in the country and the harbingers of quality of living for a large percentage of the population. In the past, many State and Central Government Missions have aimed at strengthening actors in the urban ecosystem, in addition there has been significant investment in platforms and programs to ensure India's digital evolution.

With these building blocks, India is in a position to unlock innovation in the urban ecosystem at speed and at scale. To assist all ecosystem actors, the Ministry of Housing and Urban Affairs launched in February 2019 - the National Urban Innovation Stack.

This stack is envisioned as a shared digital infrastructure which provides baseline infrastructure required for innovation in the urban ecosystem, akin to how the National Payments Corporation of India has leveraged the IndiaStack to enable ease of payments and innovations in financial technology in India.

The National Urban Innovation Stack (NUIS) has many anchors (such as the National Urban Learning Platform, the Indian Urban Data Exchange etc.) around which it is being operationalised. The Citizen Centric Smart Governance (CCSG) program is one such anchor that is being developed to realise the vision of the NUIS. This program looks at ways to improve service delivery by urban local bodies (ULBs) and other government agencies that provide services in urban India.



**THE CCSG PROGRAM IS
ONE OF MANY
ANCHORS BEING
DEVELOPED TO
OPERATIONALISE THE
NUIS VISION**

CCSG will enable urban governments to rapidly digitise the systems used to register, monitor, and collect payments for key municipal services in an integrated manner.

The Technical Implementation Guidelines were designed to help states identify ways to leverage the platforms, applications, and other support provided by the CCSG program in order to improve urban e-governance in their cities.

The Guidelines outline three main implementation options for the States along with the other levels of support such as capacity building, empanelment, and programmatic support.

This report delves into the findings of extensive Consultation effort done by the National Institute of Urban Affairs (NIUA) and Civis on the Guidelines.

CCSG OBJECTIVES

The objectives of the CCSG program are:

- Improving ease of access to services for citizens, by enhancing the range of services available digitally.
- Making service delivery more equitable.
- Enhancing ULB self-sufficiency.
- Simplifying administrative record-keeping.
- Fostering innovation by reducing barriers to entry for aspiring entrepreneurs.
- Unlocking the power of data to drive informed & innovative decision-making in cities.

FEEDBACK OVERVIEW

THE GUIDELINES HAVE BEEN VIEWED AS PROGRESSIVE & PRAGMATIC - A STEP IN THE RIGHT DIRECTION

There has been overarching support for the NUIS program and the Guidelines, however clarity has been sought on the costs and benefits of the program. Challenges of State's capacity constraints have been raised, while further information on the platform architecture has also been sought.

ACADEMICS

Have raised concerns around the integration of spatial data into the platform, as well as on including elected functionaries in the urban ecosystem into the ambit of the Guidelines

CITIZENS

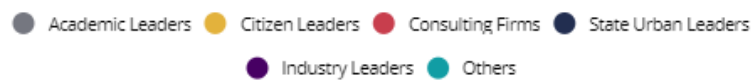
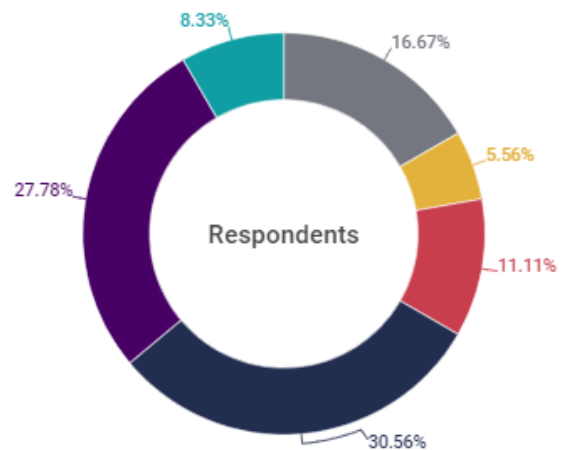
Have lauded the initiative and requested more information on cyber security standards and an implementation plan.

INDUSTRY

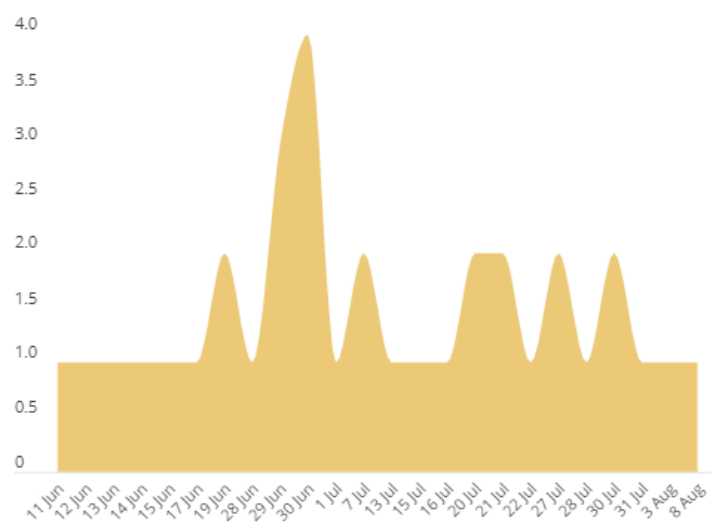
Have raised concerns around standards curbing innovation. They have shared many insights on building State capacity and ensuring that a robust data infrastructure is created.

ULB FUNCTIONARIES

Have shared best practices and challenges faced in statewide implementation of eGovernance services. Concerns have been raised around empanelment, training and capacity building of municipalities uniformly across the State.

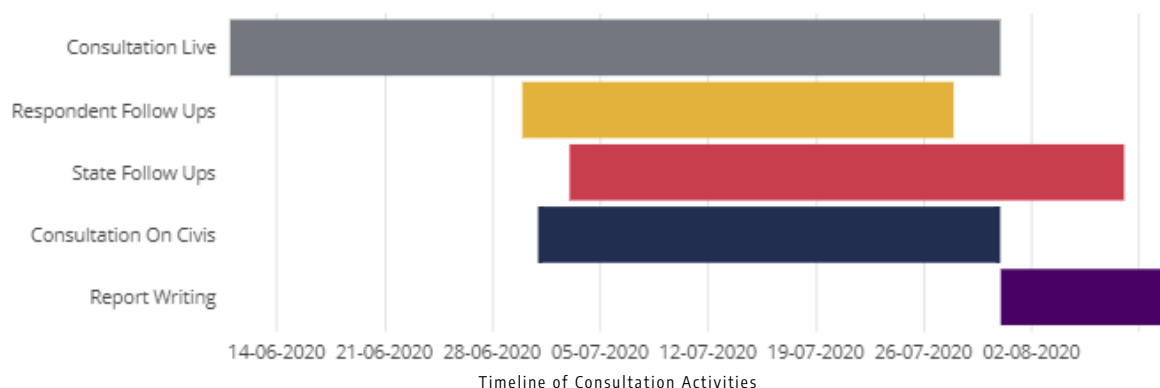


Composition of Respondents



Frequency of Responses by Date

METHODOLOGY



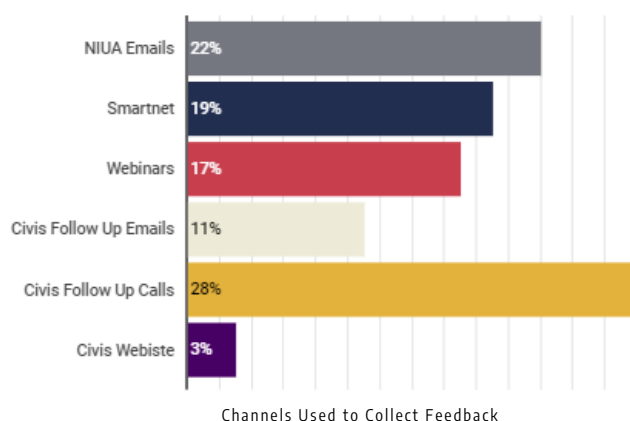
The National Urban Innovation Stack recognizes that in India’s urban context a quadruple helix of actors needs to be enabled, in order to ensure that India’s cities are sustainable and are highly livable.

In keeping with the quadruple helix of Academia, Citizen, Government and Industry, efforts have been made to gather feedback on the Technical Implementation Guidelines for Citizen Centric Smart Governance from the aforementioned stakeholders. An extensive 61 day effort was carried out jointly by the National Institute of Urban Affairs and Civic Innovation Foundation to gather constructive feedback on the program, and on challenges that may arise in implementation, from a diverse set of respondents.


The Consultation was published on [Smartnet](#) on June 11th 2020 and on [Civis](#)’ web platform on 1st July 2020 - feedback was collected until 31st July 2020.

Aside from responses collected on the web platforms, through the duration of the Consultation period, NIUA also reached out to Academics, all Principal Secretaries of State Urban Development Departments, SmartCity CEOs and Industry respondents (through a webinar with NASSCOM on 30th June 2020 and subsequent follow up conversations).

Civic Innovation Foundation using its expertise in consultation design and communication design, reached out to Citizen Leaders on its platform as well as provided support in responding to the Consultation to all stakeholders. This support included conducting interactions with State Governments pan India, answering questions and concerns arising about the program through webinars with State Governments and Smart City teams, conducting in-depth follow ups with academics, industry, urban development experts and State governments to gather feedback.



CONSOLIDATED FEEDBACK



The Technical Implementation Guidelines have been well received. A majority of respondents have expressed that the Guidelines are futuristic, comprehensive and clear. Respondents have mentioned that this is a much needed and welcome approach to set up a national level platform, standards and reference applications to digitize ULB service delivery processes in India. Individuals have also appreciated that the program will be anchored in the NIUA.

There have been many encouraging statements made by all stakeholders, the insights shared in this section pertain to the clarity sought or concrete steps suggested by each group of respondents.

ACADEMICS

A number of Professors, researchers, urban planners and academics have shared their valuable inputs on the Guidelines. A key concern arising was on the availability of spatial data. A recommendation made was to bring the National Spatial Data Informatics Centre, Department of Science and Technology into the ambit of the program, with 'Spatial Data Infrastructure Standards' being enumerated upon.

In addition to standards for spatial data, incorporating the following standards has also been recommended:

- Data Standards
- API Standards
- Security Standards
- UI Standards
- Metadata Standards



For the data standards in particular, ease of collection, accuracy, verifiability, privacy and correlation with program monitoring and evaluation metrics are a few suggested additions. Validation and authentication mechanisms have also been suggested to ensure that the platform continues to evolve.

While there has been an acknowledgment of the fact that urban planning is a state subject, some have indicated a preference for the first option of a National Reference platform, to ensure that there is uniformity and consistency in data sharing pan-India, among all concerned actors.

Acknowledging the capacity constraints of urban local bodies, greater clarity has been sought on the institutional roles of the NIUA, MoHUA, Smart Cities and Urban Local Body. Further it has been recommended to include Principal Secretaries of land and building departments, city development authorities,

Principal Secretaries of revenue, Mayors and elected representatives in the cities as well as the Ministry of Electronics and Information Technology and National Informatics Centre into the deliberations on the Guidelines.

Including RTI related solutions and city level economic data are some of the other suggestions made.

CITIZENS

Citizens who have responded to this Consultation have shared that the document has been well thought out. However, certain implementation challenges have been raised. A concern is ensuring that the platform is not susceptible to malicious attacks and cyber threats. In addition, information on speedy implementation has been requested.

INDUSTRY

Numerous industry respondents and consultants have shared their inputs on the Technical Implementation Guidelines. Acknowledging that the approach is one which has learnt from past implementation of nationwide platforms and programs and is a step in the right direction.

The options provided under the Technical Implementation Guidelines have been viewed as pragmatic. There has been broad consensus that adopting the option of a PaaS, hosted in a central smart city cloud, with an open source repository of code stored by the NIUA - is the preferred option in theory. Practically however, States need to retrofit existing solutions with the NUIS infrastructure and principles, and the flexibility of the platform must facilitate such integration with existing services.

Clarity has been sought on the platform and its components. Concerns have been raised on how one platform can cater to the diverse needs of urban local bodies including citizen centric services, as well as back end operational services like financial accounting, human resource functions etc. There have also been questions raised around how such a platform will evolve to be delivered through mobile applications and other service delivery devices used by the end user - while standardizing the citizen experience.

In addition to the platform, further information has also been requested on the program structure, an implementation plan, business process mapping, additional architecture diagrams (perhaps like an enterprise architecture encompassing data architecture, business architecture and technology architecture).

There has been a preference indicated for both - open source technology and open standard technology in equal measure.

However, broad consensus has been shared on building an environment for developers to build on the stack with a standard set of applications and innovation standards, using new development methodologies.

Commenting on innovation, a strong stand has been taken encouraging the NIUA to develop standards, but to make these standards open, ensuring that such standards do not curb or kill innovation.



**THE NUIS APPROACH IS
ONE WHICH HAS
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PAST
IMPLEMENTATIONS OF
NATIONWIDE
PLATFORMS**



On data, a significant number of responses shared ideas which would be helpful to keep in consideration while further designing the program. The ideas were shared keeping in mind a goal to create productive data as an asset for the program, to ensure better insights. These suggestions include:

- Data sharing between States, ULBs and the NIUA and data handshakes between different departments.
- The importance of unstructured data lakes.
- Data interoperability.
- The importance of data governance frameworks.
- Implementation of scalable data models.
- Digitizing data collection.
- Development of city data models.
- Monetization opportunities by making non-personal data accessible to all.

In addition, it was recommended to create a 'meta-data fabric' for the platform to ensure that all innovation is communicated back to the Stack.

To bolster State capacity, multiple levels of IT maturity in the States were highlighted from practitioners' lived experiences - going from limited IT investments in some States, to sophisticated development in others.

Acknowledging that successful eGovernance implementation needs considerable domain knowledge, the need to optimise service efficiencies in the State and enable the State to enable the ULBs was highlighted. Further details were requested on the support and continuity of services that would take place when migrating to the National Reference Platform. Clarity was also sought on whether there is an impetus for the States to "graduate" between the options in the States, and what support would be provided at that stage.

In the document itself, specifying the independence provided to the States on the level of customization of the platform was recommended. Along with this, illustrating the cost and benefit of such an implementation in the Guidelines from existing state-wide

eGovernance implementations was advised. Ensuring that States have adequate opportunities and resources to choose a suitable option and aren't compelled to follow the mandate or preferences determined by the NIUA was emphasized.

On empanelment and price discovery; empanelment for all the layers of the stack was recommended. Price discovery has been recommended for the personnel, platform, IT infrastructure and hardware. The overall approach should allow for multiple solution providers and a recommendation to not restrict partners to the taxonomy level but also to enable partners to build multiple microservices was reiterated.

"THE CORE [IMPLEMENTATION] TEAM IS PRIMARY, TECHNOLOGY IS SECONDARY"

ULB FUNCTIONARIES

A number of functionaries from State ULB departments, Principal Secretaries for Revenue, Smart Cities leaders and consultants closely involved in urban development, took out a considerable amount of time to understand and respond to the Guidelines, despite time and bandwidth constraints arising due to the ongoing Covid-19 pandemic.

It was observed that the key responsibility of implementing digital initiatives in the State varied greatly.

The primary points of contact included IT Project Officers, Smart City CEOs as well as other functionaries like Local Self Government officials.

These respondents were across a mix of IT and eGovernance maturity levels. Some respondents are pioneers - with significant prior investment in IT services. Others are just embarking on their eGovernance journeys, while a few others were grappling with challenges of digitization. The Consultation has therefore reached a large gamut of urban leaders relevant to the program's implementation.

Broadly, resistance to change, ambiguities on existing laws and privacy concerns have been shared as the foreseeable risks to program success. Specific guidelines on cyber security and data sharing have also been requested by the States.

Current challenges which State Governments, Smart Cities and Urban Local Bodies grapple with include:

- A lack of uniformity in business processes within the State.
- Providing on-going training and capacity building support.
- Technical skill set availability at the Nagar Palika level.
- Empanelment of reliable service providers and vendors.

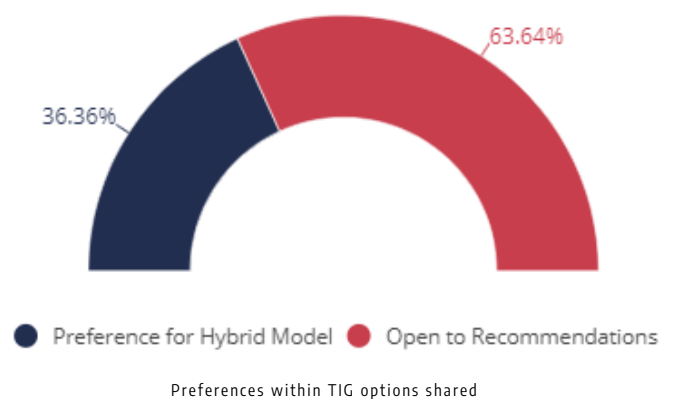
On average, States with statewide implementation of eGovernance solutions have shared a timeline of 2 to 4 years to complete their implementation journeys. States with successful eGovernance implementations have strongly recommended creating a highly-autonomous core team of individuals (including Consultants if required) to drive platform adoption. Going so far as to say that "the core team is primary, technology is secondary".



In certain states, domain specific committees were also set up to ensure that there is adoption of eGovernance systems. An administrative push is required from the Principal Secretaries in a State, to ensure compliance.

Ensuring that urban local body leaders understand the scope of the program and see value in its adoption has been emphasised.

Within the options given in the TIG, there has either been a predominant preference for a hybrid implementation of the National Reference Platform or no preference specified:

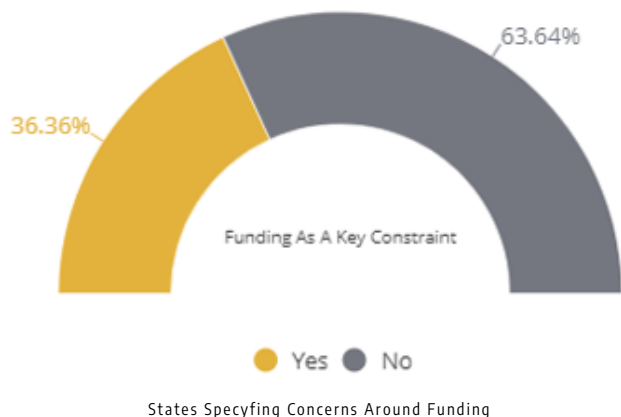


On priority, States have requested that solutions for building plan approval, property tax collection, financial management and grievance redressal be created. While some States have these solutions in place, this has been recommended as a first step for States commencing on their eGovernance journeys.

Ensuring adequate funding for computers and other hardware has also been emphasised for States beginning on this journey - the assumption that such hardware is available must not be made, as smaller ULBs may struggle with such procurement.

With regard to the National Reference Platform, language barriers in using the solutions of the platform have been raised by a few States, the recommendation has been to translate the Platform and its solutions into multiple Indian languages. In terms of the support required by the States for successful implementation of the program, most have said extensive training will be required. Support has also been requested in assessing the suitability of existing solutions in the context of the NUIS principles. Given this request, the authors believe that support in evaluating and selecting the suitability within the 3 TIG options will be required.

Funding to implement the platform and also re-purpose existing solutions is a foreseeable challenge for the following respondents:



Given that States do struggle with empanelment, the option of empanelling consultants, vendors and service providers at pre-discovered rates by NIUA, has been received positively.

Recommendations made on structuring this support include:

- Creating a database of consultants, vendors and service providers at pre-discovered rates, akin to what NICSI had provided.
- Defining guidelines for engagement with these vendors (for example: guidelines stating that a database management consultant with 3 years of experience can be hired from this database at Rs. X cost per month for long term engagements and X cost per project for shorter engagements).

Most States with existing eGovernance systems have shared that their response to the Covid-19 pandemic has been quick, effective and innovative because of the eGovernance infrastructure built in the state. Citizens awareness drives conducted through WhatsApp, collection of taxes through online payment systems, creation of Covid call centres are some of the innovative solutions shared by the States.



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