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Smart cities acing
COVID-19 response
using smart technology
and data governance
solutions



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COVID-19 has affected almost the entire world, causing widespread disruptions in economies and healthcare services. More than 40 million people were infected as of mid-October 2020. In such situations, citizens expect their governments to provide credible information, leadership, and guidance to ensure their safety and healthcare, and avoid economic hardships. The pandemic forced governments to take actions usually reserved for war, depression, and natural disasters. Governments across the world are taking extreme measures to limit the loss of human lives and minimize economic disruption.

The Government of India's response has also been somewhat similar to those of other countries, focusing on minimizing impact on people's health, lives, and economy. However, challenges in India, especially in its cities, were somewhat larger than those in other countries because of the following reasons:

- Large population
- Healthcare capacity related constraints
- Higher vulnerability of a section of the population to economic shock

Smart Cities Mission (SCM) acting as a key enabler for cities' responses

The smart cities in India, alongside the central and state governments, have played a crucial role in responding to COVID-19. The Smart Cities Mission, launched by the Government of India in 2015, had already equipped a number of cities with state-of-the-art technology platforms and smart solutions. The Integrated Command and Control Center (ICCC), which forms the "brain and nerve center" for smart solutions at the city level, was effectively used by most of the Indian smart cities as part of their pandemic response strategies. This move helped them coordinate and monitor activities of various state and city agencies.

The report, "Technology and Data Governance in Smart Cities – Indian Smart Cities at the forefront of the fight against COVID-19", a study carried out by Deloitte, jointly with World Economic Forum (WEF) and the Ministry of Housing & Urban Affairs (MoHUA), India features three Indian smart cities (Bengaluru, Surat, and Pimpri Chinchwad) and three

global cities (Tel Aviv, Lisbon, and New York City), which were assessed in terms of their responsiveness to the pandemic, together with underlying mechanisms for institutional coordination, technology, and data governance.

Setting up COVID-19 War Rooms

A number of Indian smart cities have used their ICCCs as COVID-19 War Rooms to coordinate, manage, and monitor the city-level response to the pandemic. Using the COVID-19 War Room, the cities set up data analytics and monitoring dashboards to manage and contain the spread of the virus. This helped cities to track and monitor positive cases and provide them timely health care support; ensure the supply of essentials; and provide food to economically weaker and vulnerable sections of the society; set up quarantine facilities; and disseminate relevant pandemic-related information. Many of these cities also brought the civil society, local businesses, and others on a single platform using web portals and mobile applications to collaborate with the city administration to provide public services.



The key elements of Smart Cities response to COVID-19 can be categorized into the five key thematic areas highlighted below:

Table 1: Technology solutions adopted - Indian Smart Cities



Source: Deloitte Analysis

Using dashboards, scenario visualization, and simulation models, cities were able to conduct predictive analysis of the pandemic spread and plan their responses. These initiatives demonstrate how smart cities in India have used their capabilities to respond to the pandemic.

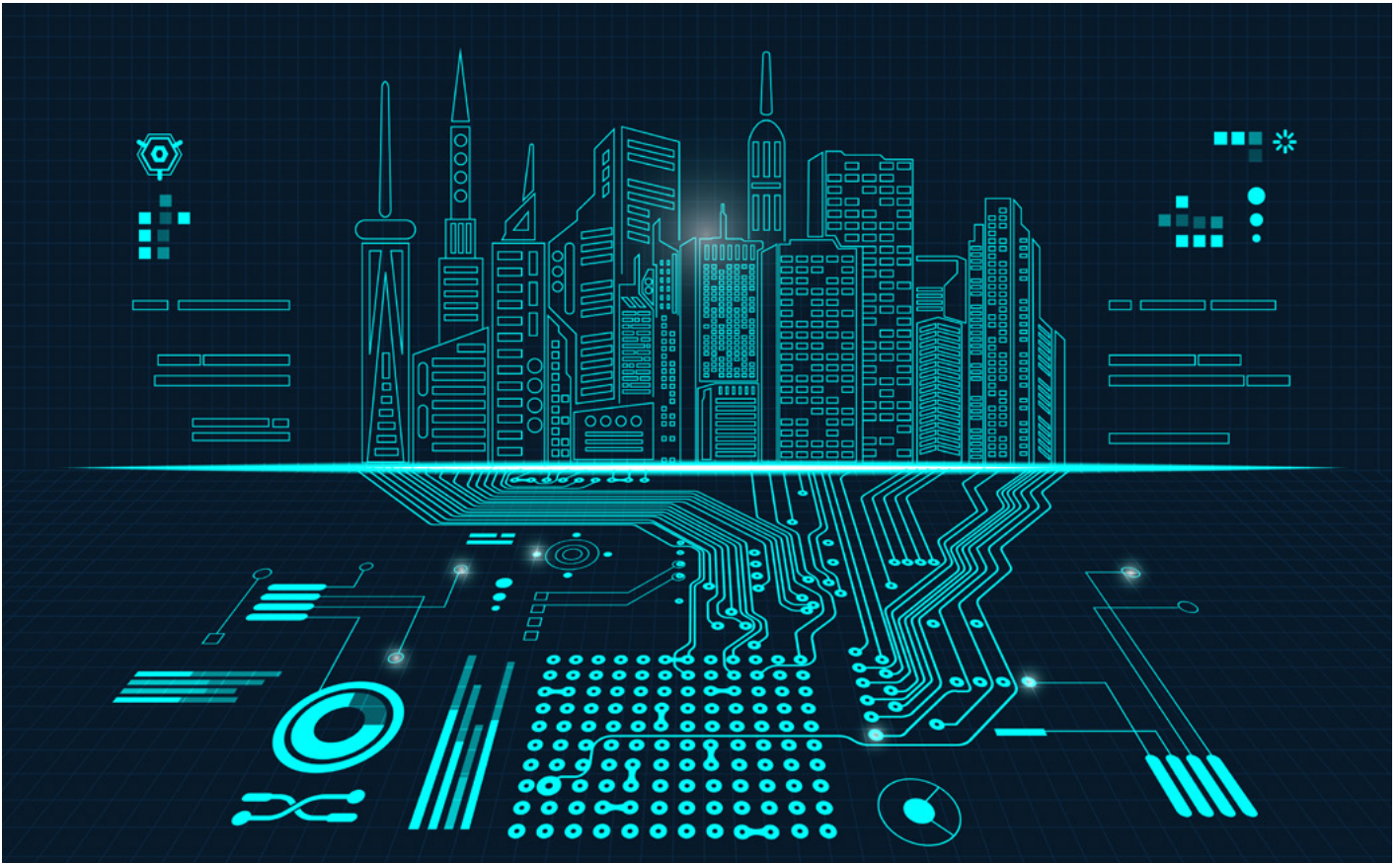
However going forward, there is need to address the technology and data governance challenges, especially those relating to managing and protecting data, and addressing privacy and security issues, by putting together adequate policy and regulatory frameworks.

To enable this, as part of its DataSmart cities strategy, the Ministry of Housing and Urban Affairs (MoHUA), the nodal ministry for the Smart Cities Mission, has put in place enablers such as National Urban Innovation Stack, to effectively

facilitate the quick roll out of solutions, ensure standardization, and share best practices and knowledge across cities. These enablers include the following:

- Open Data Portal
- India Urban Observatory
- India Urban Data Exchange
- National Urban Learning Platform

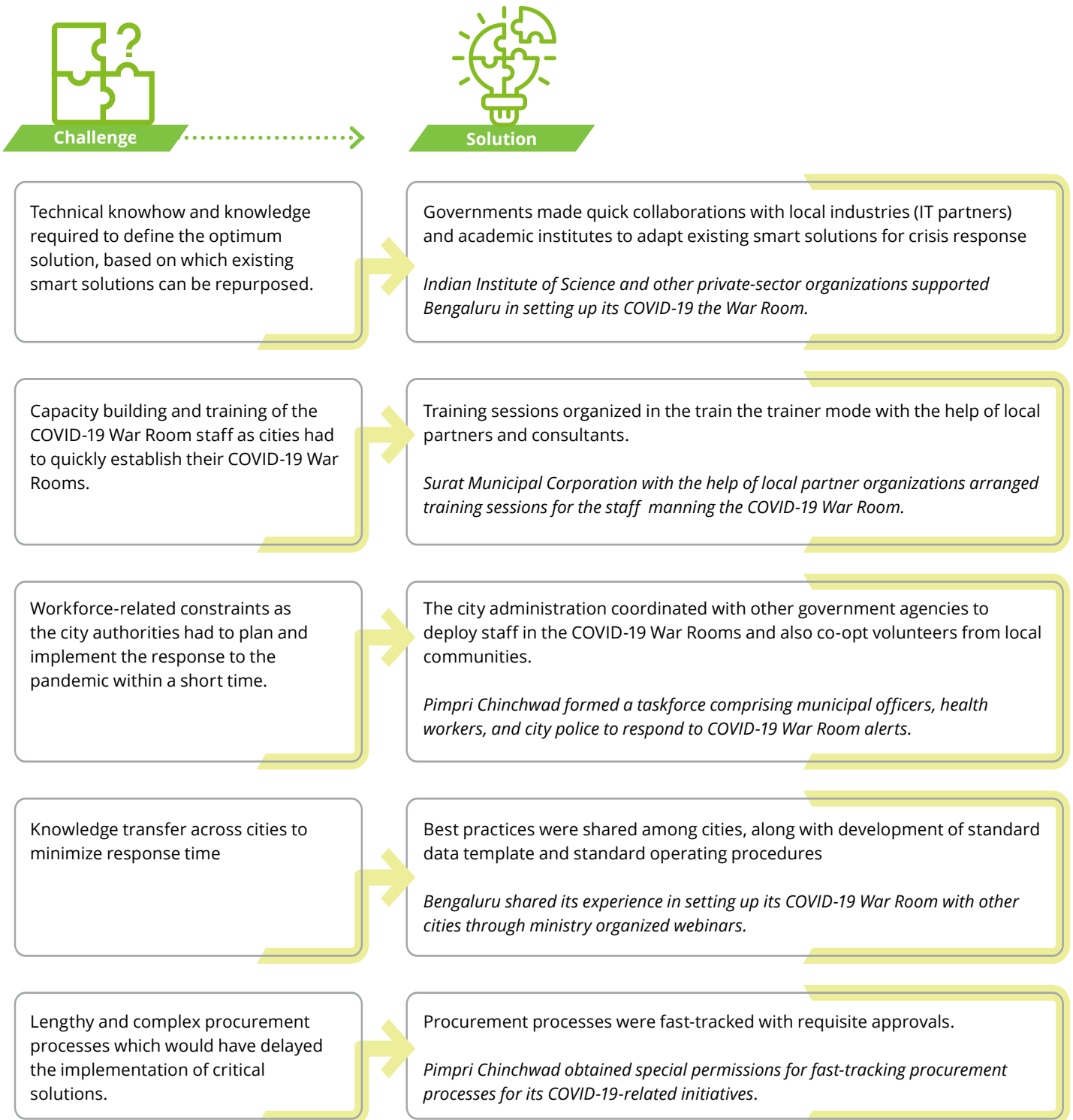
Global cities had tackled the pandemic in a similar manner, with effective coordination amongst various city agencies to plan and monitor their responses. The cities had quickly put in place a robust mechanism using existing smart solutions to ensure health care measures to tackle the spread of the pandemic, manage the lockdown, and maintain effective communication channels with citizens.




Addressing challenges faced in designing COVID-19 response


The study identified key challenges that Indian smart cities faced while designing and implementing their COVID-19 response, together with solutions that were used to address these.


Some of the key challenges faced by the cities together with solutions that were adopted to address the same have been highlighted below:





The above measures demonstrate that cities were able to respond to challenges as part of their COVID-19 responses within a short time. However, if cities are to institutionalize and strengthen these practices, the following actions need to be prioritized:


-  **Ensure standardization and interoperability**

Respective cities to formulate technology management policies and strategies. They should use policy advisory support and guidance provided by MoHUA, along with platforms such as Open Data Portal and India Urban Data Exchange.
-  **Data security and protection**

Develop (i) data policies in compliance with national laws and guidelines to ensure citizens' data security and protection; and (ii) standard operating procedures addressing data collection, storage, usage, and management, along with data sharing protocols.
-  **Institutional coordination among agencies**

Establish mechanisms to share information among city and state agencies, and define protocols for responding to citizen requirements in line with the respective agency's mandate. A city's ICCC can be used as the platform to coordinate and monitor agencies' activities.
-  **Adequately staffed technology and data management**

Appoint city data officer and data contributors, and establish/strengthen the city data cell by including professionals in areas such as data architecture, security, privacy, and analytics.
-  **Adopting objective indicators to monitor citizen service delivery**

Use assessment frameworks, such as MoHUA's ICCC Maturity Assessment Framework, to assess gaps and learn from experiences of better performing cities.
-  **Using multiple delivery channels for citizen outreach**

Implement connectivity-related smart solutions in ICCC that include help desks and call centers, citizen portal and mobile apps, and variable messaging display systems.

Click [here](#) to read the complete report.



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