Smart City
MISSION TRANSFORM-NATION

Ministry of Housing and Urban Affairs
Government of India

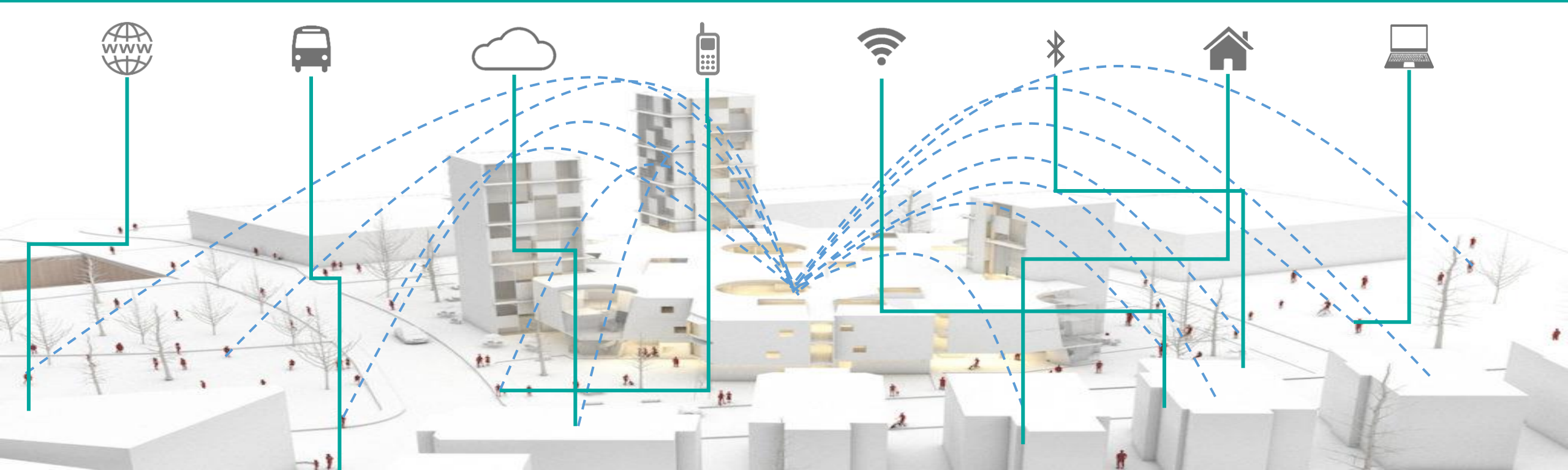
स्वच्छ भारत
एक कदम स्वच्छता की ओर

आत्मनिर्भर भारत

Data Maturity Assessment Framework Cycle 2.0

City Performance & Recommendations

City: Sagar | State: Madhya Pradesh

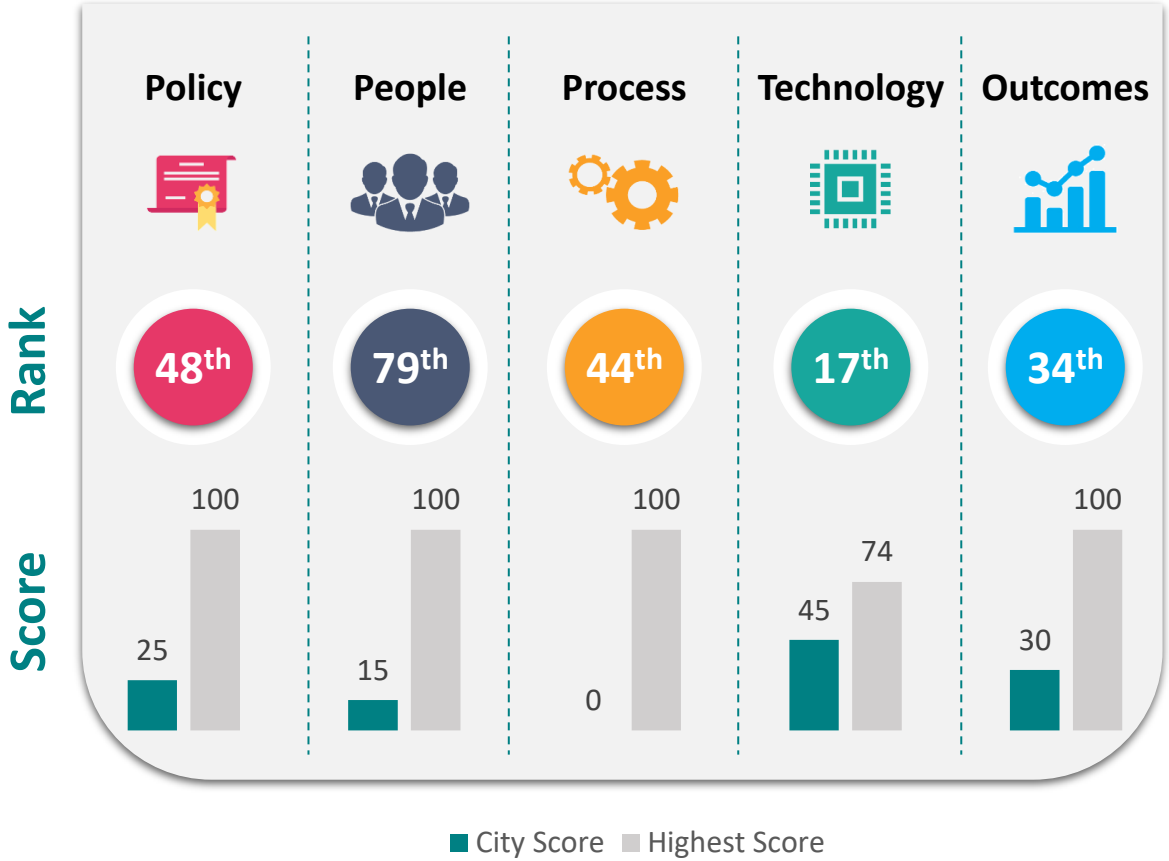


Overall Performance

Certification Level

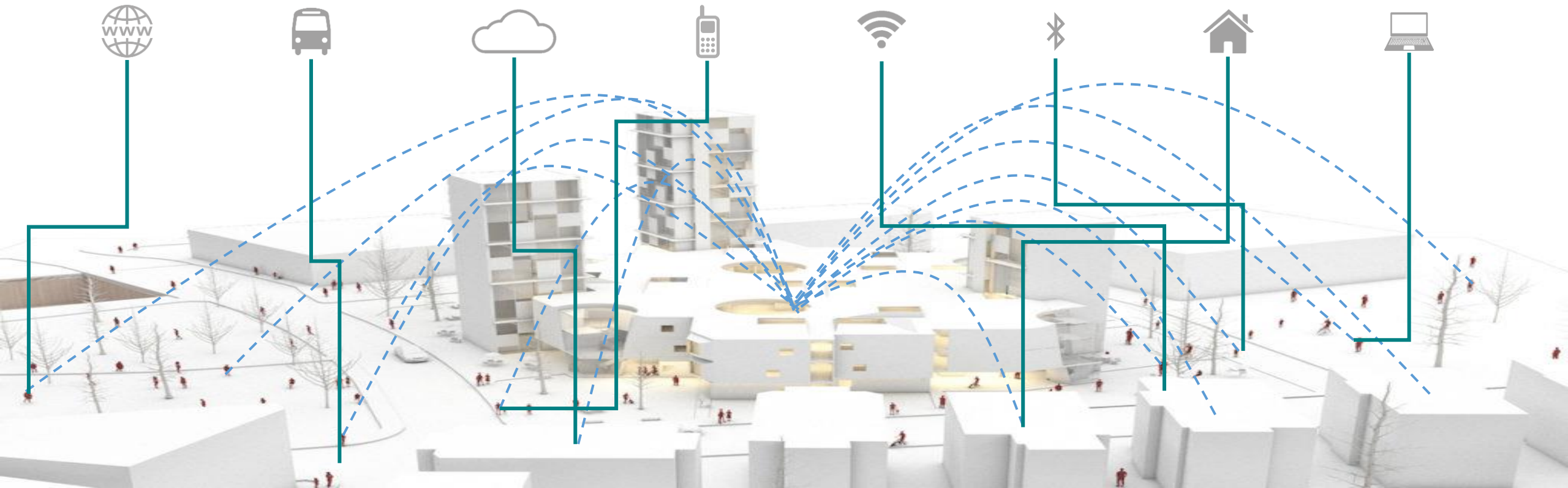
Beginner	Initiator	Explorer	Enabled	Connected
Score 1-32	Score 33-44	Score 45-59	Score 60-74	Score 75-100

Component-wise Performance



City Engagement Score (out of 100): 70

City Recommendations



COMPONENT 1 POLICY

Score 25 100

Indicator 1.a: Approval of City Data Policy

Score: 0/30

Your city may look towards drafting a data policy that acts as a frame of reference for all data initiatives undertaken in the city. Smart Cities Mission, MoHUA has published a reference guide available on the Smart Cities Open Data Portal that may help the city understand the various elements to form a robust data policy. Finally, your city is advised to get this approved by the Municipal Commissioner / Smart City CEO for implementation.

Indicator 1.b: City Data Policy Components

Score: 0/30

Further to the NDSAP policy, Smart Cities Mission, MoHUA has published a reference guide available on the Smart Cities Open Data Portal that may help the city understand the elements that need to be included to form a robust data policy. Your city may refer to this guide and modify/append the content to suit the current and future needs of the city.

Indicator 1.c & 1.d: Budget for data-related initiatives

Score: 25/40

Your city has already allocated dedicated budget for data activities. Your city is advised to ensure that the budget is rightly utilized to perform data-related activities and also continue to do the same in the coming years in order to ensure strengthening of the data infrastructure in the city. Your city may like to check if the allocated budget covers the following data activities (non-exhaustive), and include more if required:

- Salaries for data team including but not limited to CDO, data coordinators, data specialists, data analysts, database administrator, etc.
- Analytics software for data analysis.
- Setup of surveillance systems, ICCC, etc. (only software) that enables improved and accurate data collection and analysis.
- Capacity Building sessions/regional workshops/courses/certifications for upskilling of data team.
- Expenses for organizing data hackathons / data challenges, including prize money.

It is recommended that the city allocates budget for the data activities. This budget may be included as a sub line item under A&OE expenses or IT expenses smart city SPV's overall budget, or the Municipal IT budget.

COMPONENT 2 PEOPLE

Score 15 100

Indicator 2.a: City Data Officer (CDO)

Score: 10/30

Your city may look to appoint a full-time CDO, either in Municipal Corporation or in Smart City SPV, to lead and operationalize data-related activities as per the Job Description circulated in the HR guidelines for Smart Cities SPV. Appointment of a full-time CDO will help in effective management of data-related activities in the city. It will also ensure continuity of city's progress towards becoming 'DataSmart'.

Indicator 2.b: Appointment of Data Coordinators

Score: 0/20

Data coordinators help support and drive the data activities, including data collection, data publishing, analytics, etc., within their respective teams/departments. Your city is advised to work towards appointing a minimum of one data coordinator in each department for smooth operations and interdepartmental coordination for implementation of the DataSmart Cities Strategy and City Data Policy.

Indicator 2.c: Data Team

Score: 0/20

Data team is not limited to CDO and data coordinators. City may consider appointing the following members to carry forward data-specific activities to effectively use city's data:

- Data Policy & Regulatory Expert
- Capacity Building & Stakeholders' Outreach Expert
- Survey Lead
- Data Scientist
- Statistician
- Data Architecture Expert
- Open Data Expert
- Data Engineer
- Data Analyst
- Web Developer
- GIS Expert

COMPONENT 2 PEOPLE

Score 15 100

Indicator 2.d: Capacity Building – Ministry Initiative

Score: 5/15

Your city's data team is advised to attend all trainings organized by the Ministry on important topics such as Smart Cities Open Data Portal, Hackathons, Alliances, GMIS, SmartCode, City Innovation Challenge (CiX), IUDX, etc. to educate and upskill themselves and therefore translate the learnings into active implementation within your city.

Indicator 2.e: Capacity Building – City Initiative

Score: 0/15

CDO, along with your data team, is advised to identify the focus areas that will help operationalize data culture in the city. Capacity building may include departmental / city workshops conducted to organise activities for implementation of DataSmart Cities Strategy or to upskill the data team by conducting data-related certification courses or sessions/workshops conducted by external experts on topics related to data such as data privacy, policy formulation, analysing geospatial data, etc. These activities will help your city in leveraging the latest tools and technologies for making the city DataSmart.

COMPONENT 3 PROCESS

Score 0 100

Indicator 3.a: City Data Alliances

Score: 0/30

Your city is advised to identify specific problems where city needs support from other stakeholders. Your city may like to initiate the process of forming alliances for data sharing, or implementation support or other activities, between local colleges & universities, industry bodies, start-ups and civil society organizations. Alliance may be with a single organisation or multiple organisations at once. The Alliance should clearly specify the partners involved, their roles and responsibilities (across Government, Industry, Academia & Community), the purpose and scope of the partnership, time period, the Mode of execution (informal, MoU etc.) and the expected outcomes intended to be achieved via this partnership.

Indicator 3.b: Data Hackathons/ Data Challenges

Score: 0/20

Your city is advised to leverage Hackathons as a means to crowdsource solutions to the complex urban challenges. In order to drive innovation, your city is advised to hold Hackathons/Innovation competitions. First step is to identify the correct problem statement and provide relevant data to the participants to drive new insights. CDO can also set up multi -disciplinary evaluation committee and mentors to assist participants during solution design stage. Shortlisted solutions may be extended support in next stage to test the solution on ground and enable implementation in the city. Further, Smart Cities Mission, MoHUA has published a reference guide available on the Smart Cities Open Data Portal that may help the city understand the various aspects of conducting a hackathon.

COMPONENT 3 PROCESS

Score 0 100

Indicator 3.c: Solving urban challenges using data

Score: 0/30

Your city is advised to identify the most pressing urban challenges across various domains / sectors with the help of other urban stakeholders in the city, especially city departments. The challenge should be clearly identified along with the relevant datasets available in the city that may help in solutioning. Insights derived from the datasets should be analysed.

Indicator 3.d: Analytics capability

Score: 0/20

Your city is advised to identify the relevant data streams and consider applying intelligent techniques to uncover insights from the available data and generate actionable insights. Your city may also utilize its already operationalized ICCC for this kind of analysis. Your city may be like to explore various types of analytics:

- Descriptive (Tells you what happened in the past)
- Diagnostic (Helps you understand why something happened in the past)
- Predictive (predicts what is most likely to happen in the future)
- Prescriptive (Analytics recommends actions you can take to affect those outcomes)

COMPONENT 4 TECHNOLOGY

Score 45 100

Indicator 4.a: Sensors for data collection

Score: 10/10

As part of Smart City initiatives, city may be deploying sensors and other devices. Your city may consider utilising the data collected from the Field Sensors and Devices which may be in the forms mentioned below to derive actionable insights:

- Hierarchical Files (JSON, XML, YAML, etc.)
- Real-time Stream
- Objects
- Videos
- Images
- Locational Data

If your city has an ICCC or any other command centre, that may also be utilizing data from sensors.

Indicator 4.b: Number of datasets on SCODP

Score: 20/30

Your city has initiated its journey towards publishing datasets on the Smart Cities Open Data Portal. CDO is advised to further study the dataset templates (75+) present on the Smart Cities Open Data Portal and publish more datasets. CDO is advised to engage with various department heads and identify datasets that may be relevant, open and sharable. City is advised to ensure the datasets are of utmost quality and relevant for the users.

Indicator 4.c: Schedule for Updating Datasets on SCODP

Score: 0/30

It is of utmost importance that the datasets published on SCODP stays relevant and updated for improved and sustained usage. Therefore, your city is advised to update all your datasets on a periodic basis (monthly, quarterly, biannually, annually) by maintaining a data sets' updating schedule. Datasets that currently exist on the Smart Cities Open Data Portal may also be revised and updated as per schedule.

COMPONENT 4 TECHNOLOGY

Score 45 100

Indicator 4.d: Number of APIs on SCODP

Score: 0/10

In addition to static datasets in csv formats, your city is advised to also start publishing data through web services. CDO, with the help of data coordinators, may look into various departments' MIS and other data systems that showcase real-time data and follow SCODP procedures / processes to publish datasets in the form of APIs.

Indicator 4.e: Spatial Readiness

Score: 15/20

Your city is advised to utilize the existing GIS layers to draw insights and include these insights for better urban planning. Further, your city is advised to look at more arenas where geospatial data could be utilized. Your city may also utilise the ICCC to visualize the location-based datasets to be able to better understand the data. Once the layers are defined, your city may like to ensure the quality of data is maintained and there are no location coordinates or areas falling outside the specified boundaries.

COMPONENT 5 OUTCOMES

Score 30 100

Indicator 5.a: Data stories/blogs

Score: 10/30

Your city is advised to look to identify more sector-specific problem statements being faced by a particular department and build solutions through efficient and effective use of city data. City to also peruse the various data stories available on smartcities.data.gov.in which may be replicable in certain cases.

Indicator 5.b: Data-related use cases

Score: 10/30

Your city understands the need to create and define data-related use cases to solve critical urban problems and has initiated addressing these issues with the help of data-related solutions. Your city needs to identify more areas where this data-driven problem-solving approach can be applied to solve an urban challenge. Your city may clearly specify the identified problem, detail the use case under consideration, identify the datasets that may be used and envision the outcome/ impact that may be generated with the implementation of this use case. Your city may also utilize the ICCC facility to analyze the datasets available for already identified urban challenges and develop data-based use cases.

Indicator 5.c: Development of applications

Score: 0/20

Your city is advised to develop web portals and applications to aid the data-led activities and enable citizen engagement. This will help the city to not only provide a single platform for efficient service delivery, but also collect related data. These applications and systems could be used to disseminate information to end users. This will also help the city not only collect relevant data but analyse it to generate insights for improving service delivery and operations.

Indicator 5.d: Alerts & Notifications

Score: 10/20

From the various City services targeted towards citizens, your city is advised to analyse other services where timely notifications may be beneficial for the citizens. Your city may then consider using various channels such as SMS, Variable Message Displays (VMDs), Public Address Systems (PAS), etc. to disseminate information to public.

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