Ministry of Housing and Urban Affairs
Government of India

Smart City
MISSION TRANSFORM-NATION

CITY DATA OFFICER (CDO) HANDBOOK

Smart Cities Mission

2022

CONTENT

1 WHY DOES A CDO NEED TO READ THIS DOCUMENT?

About the Document

Welcome to DataSmart Cities! Congratulations for being nominated as the City Data Officer (CDO). CDO is the torch bearer for the on-ground implementation of the data related initiatives in their cities. This document is designed to help the CDO navigate through the data journey and understand the important role that he/she shall be playing in making the city 'DataSmart'.

About the Strategy

The functions integral to the working of a city are performed by different stakeholders such as the government line departments, private sector organizations, academic institutions and community members, through provision of infrastructure, services, research, co-creation and valuable feedback. Data available with these entities remains in silos, which needs to be unlocked and used for data-driven decision making.

DataSmart Cities initiative was conceptualized to successfully institutionalize a culture of data, drive data governance and policy formulation, promote data sharing, promote multi-disciplinary research to thereby achieve co-creation, open innovation and empowerment of citizens. Ministry of Housing and Urban Affairs (MoHUA) launched this Strategy in February 2019.
Visit: *www.dsc.smartcities.gov.in*

What should I do with my city's data?

I heard about MoHUA's DataSmart Cities Strategy. Have you checked that?

Pillars of DataSmart Cities Strategy

People: Refers to the collaboration of various stakeholders and the institutional structures which will anchor the implementation of the data initiatives, while being cognizant of the ground realities in cities. This will involve identification of actors (City Data Officer, and and other members) and their responsibilities for implementing the principles of data governance.
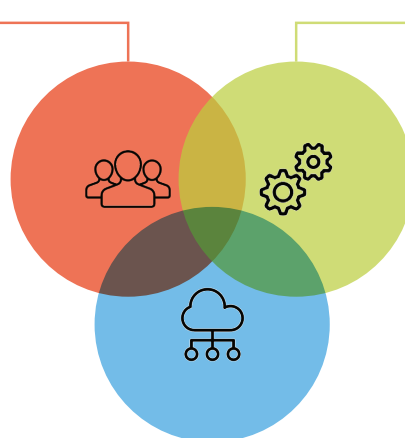
Process: Refers to robust and forward-looking data governance mechanisms to achieve the objectives of the DataSmart Cities Strategy. These include creating and implementing a city data policy, participating in annual maturity assessment frameworks, building alliances / partnerships, conducting hackathons etc. These will help in building a data-enabled ecosystem, active city government and engaged citizenry.

Platforms: This refers to leveraging technology platforms to enable the use of data for governance. MoHUA has invested in building of data platforms that enable data collection, analysis and secure exchange. The objective is to guide cities in the adoption of these data platforms, along with a roadmap for evolution to a mature data marketplace.

I got appointed as a CDO!

Are you aware of the responsibilities of a CDO?

No, do you have any idea about this?

Let's prepare you for your new role !

LET'S GET YOU READY !

2 WHO IS A CITY DATA OFFICER (CDO)?

CDO is the driver of data-related initiatives and supports their implementation in the city. CDO reports directly to City Leadership and acts as a single point of contact for all internal and external stakeholders in the city for data-related aspects.

Key responsibilities of a CDO

Align Stakeholders

- Anchor data-related activities through preparation and planning of city-level strategy, preparation of business case for allocation of dedicated data budget, data-oriented KPIs and activities for the year, under supervision of the Municipal Commissioner (MC) and/or Smart City CEO.

- Organize regular meetings with CEO / MC to keep them updated on city's progress towards upcoming data-related initiatives.
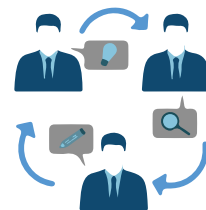
Build and Nurture Data Team

- Identify Data Coordinator(s) in each of the line departments who shall help in streamlining processes of data reporting, collection and analysis etc. They will be responsible for leading data activities for their respective departments.

- Data team is not limited to CDO and data coordinators. City may consider appointing members to carry forward data-specific activities such as Data Policy & Regulatory Expert, Capacity Building & Outreach Expert, Data Analyst, Data Scientist, Statistician, Data Engineer, Data Architecture Expect, Software Engineer, Survey Lead, among others.

- Coordinate with officers of various other government departments/agencies within the city.

- Identify key trainings that may help upskill the data team in various domains such as data analytics, database management, data analysis using excel and other tools / technologies etc.

Establish Data Process

- Participate and anchor all assessment frameworks initiated and conducted by the Ministry.

- Support in creating a City Data Policy (CDP) for their city which will be reviewed periodically to keep it contextual and relevant. The policy should be finalized in consultation with relevant stakeholders. It will be responsibility of the CDO in consultation with the Municipal Commissioner and Smart City CEO to ensure that the policy evolves as per the needs of various stakeholders of the city and accordingly relevant upgrades are carried out from time to time. Refer to: *City Data Policy: Reference Guide.*

- Maintain a culture of open data by publishing Data Catalogues and Datasets/Feeds on the Smart Cities Open Data Portal (SCODP), ensure that such data sets are updated at regular time intervals as needed.
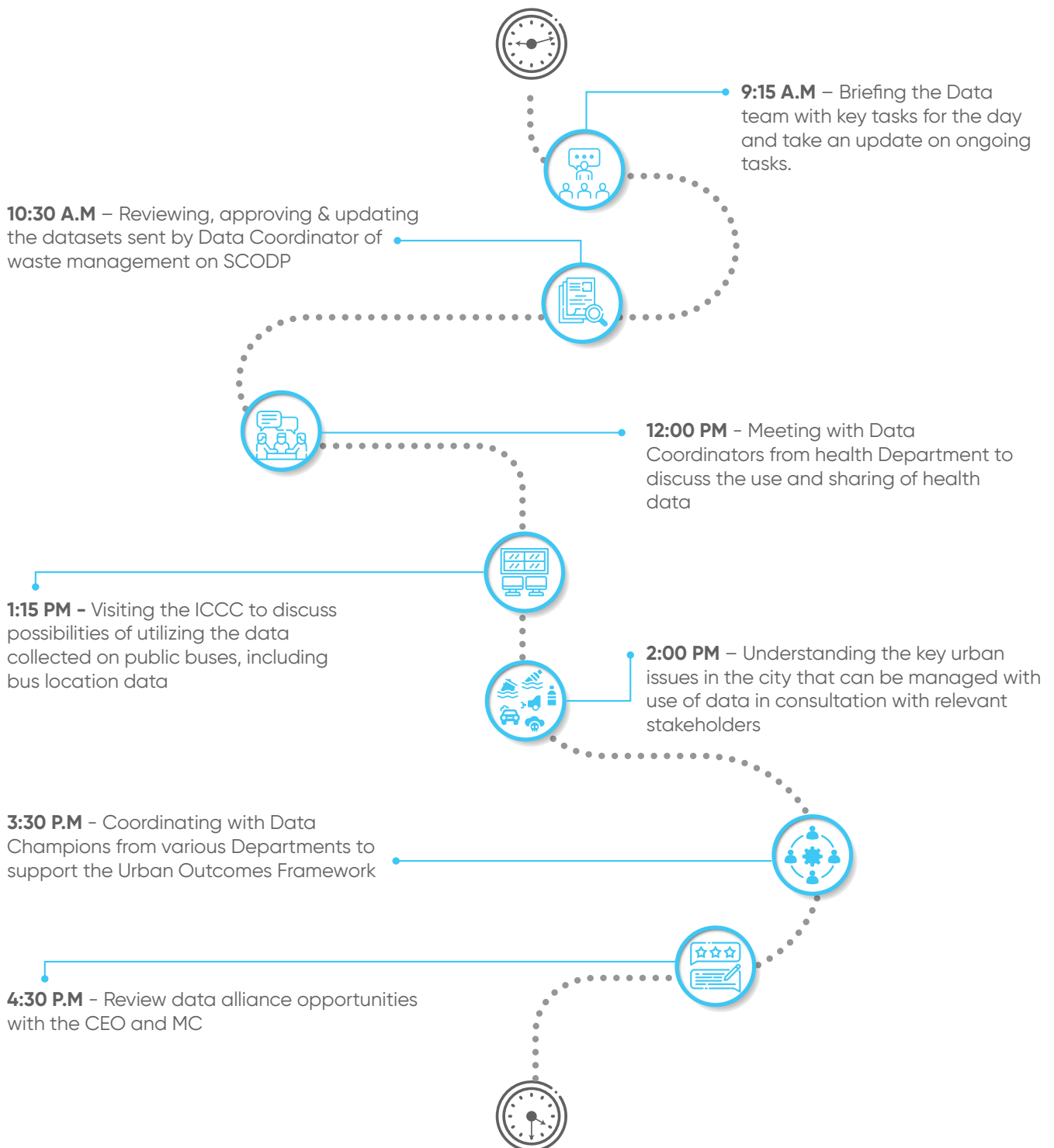
A Day in CDO's Life

So, what would my day look like?

So, although it may differ basis the priority of tasks, but a typical day may seem like...

9:15 A.M – Briefing the Data team with key tasks for the day and take an update on ongoing tasks.

10:30 A.M – Reviewing, approving & updating the datasets sent by Data Coordinator of waste management on SCODP

12:00 PM - Meeting with Data Coordinators from health Department to discuss the use and sharing of health data

1:15 PM – Visiting the ICCC to discuss possibilities of utilizing the data collected on public buses, including bus location data

2:00 PM – Understanding the key urban issues in the city that can be managed with use of data in consultation with relevant stakeholders

3:30 P.M - Coordinating with Data Champions from various Departments to support the Urban Outcomes Framework

4:30 P.M - Review data alliance opportunities with the CEO and MC
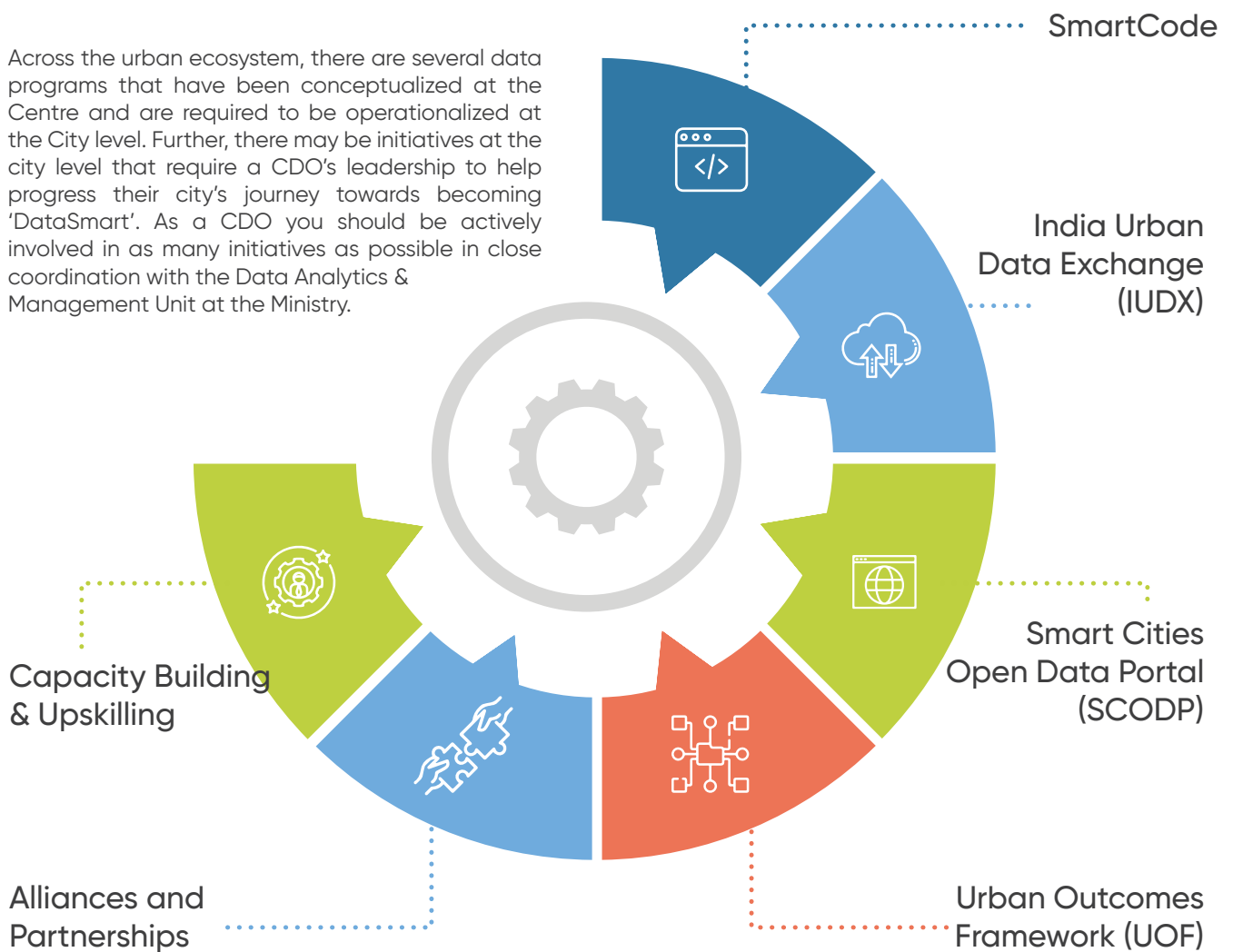
3 WHAT DATA INITIATIVES SHOULD A CDO SUPPORT?

Your city has enormous amounts of data which when utilized to its full potential can help drive better urban outcomes.

That's great! What are the various data initiatives that I could support?

Across the urban ecosystem, there are several data programs that have been conceptualized at the Centre and are required to be operationalized at the City level. Further, there may be initiatives at the city level that require a CDO's leadership to help progress their city's journey towards becoming 'DataSmart'. As a CDO you should be actively involved in as many initiatives as possible in close coordination with the Data Analytics & Management Unit at the Ministry.

SmartCode

India Urban Data Exchange (IUDX)

Smart Cities Open Data Portal (SCODP)

Urban Outcomes Framework (UOF)

Alliances and Partnerships

Capacity Building & Upskilling

3.1 SMART CITIES OPEN DATA PORTAL

SCODP is an instance of the *Open Government Data Portal* developed under the OGD initiative of MeitY. SCODP functions as a repository of open data for multiple cities under one roof. The portal currently draws data from 100 smart cities in the country and houses 5,000+ data sets across 200+ indicators.

This portal also houses 85+ data stories that have been published by cities showcasing their successful use of data for better governance and service delivery.

Website Link –
https://smartcities.data.gov.in/
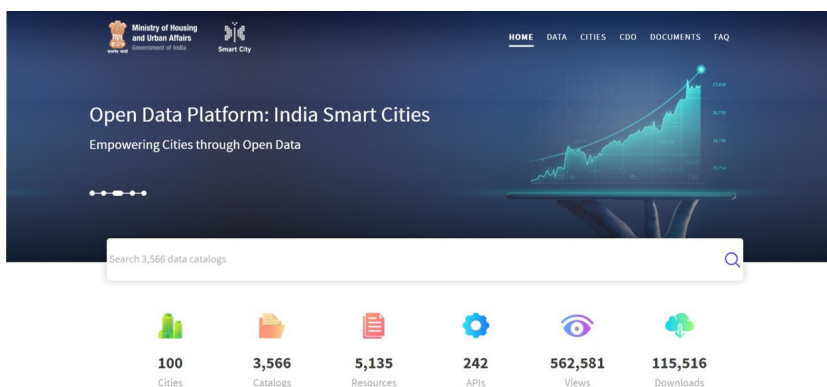
CDO's Involvement on Smart Cities Open Data Portal

Getting Started

CDO may login to the portal with their credentials that have been provided in the CDO nomination form (also available on SCODP).

For this, CDO should use the official email (as stated on the Nomination Form).

Identifying Data Teams

CDO should have a handy list of various Data Contributors for respective departments.

CDO should also ensure that all these nominated Data Contributors have been added to this platform for data sharing.

Publishing Catalogs & Resources

To ensure high visibility of the city, CDO needs to ensure that maximum possible catalogs & resources are published on the portal. City may have already published catalogs and resources and the same may be accessed on the Cities' page on the SCODP.

It is also encouraged that the cities should consider publishing datasets in the form of APIs/Web Services.

Timely Updating the Resources

It is of utmost importance that the CDO understands that publishing a type of resource is not a one-time activity. CDO should prepare a resource compliance schedule and circulate with the Data Contributors for timely contribution to the portal. Uploading resources via web services /API will help ease this process.

Refer to: *Template 2: Resource Compliance Schedule in this document* (Page 22)

Publishing Data Stories

CDO should also keep abreast of where and how data is being used to solve city's problems. Data Stories can be used to showcase the city's success stories that highlight the use of data for solving urban challenges and the outcomes that have been achieved. Check out the *Data Stories* on SCODP.

3.2 URBAN OUTCOMES FRAMEWORK (UOF)

Over the past few years, the Ministry has launched various assessment frameworks to understand the maturity of city services. Recently, the focus has shifted to data and outcomes, resulting in the launch of Urban Outcomes Framework. These frameworks help understand the performance of cities across various indicators to guide cities in identifying the areas of improvement.

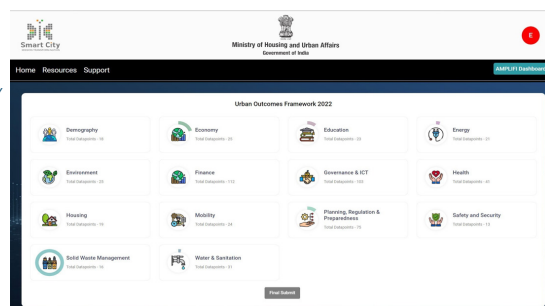For further details on these, check out the below links:

Urban Outcomes Framework – *https://smartnet.niua.org/uof-2022/*

Data Maturity Assessment Framework (DMAF) – *https://dmaf.mohua.gov.in/*

Climate Smart Cities Assessment Framework (CSCAF) - *https://niua.in/csc/*

ICCC Maturity Assessment Framework – *https://smartnet.niua.org/imaf*

Ease of Living (EOL) & Municipal Performance Index (MPI) – *https://eol.smartcities.gov.in/home*

Performance Assessment System (PAS) – *http://www.pas.org.in*

CDO's Involvement on Urban Outcomes Framework

Set up a City Data Office and Data Team:

Cities should have a dedicated Data Team which is available to work with the various stakeholders to efficiently share relevant and updated data for the various data building exercises.

Outline data needs and formulate strategy to for the UOF:

The CDO should outline the overall strategy of dealing with data collation activities that may occur across the year. Data may be housed in different Departments or Agencies within the city. CDO must prepare a comprehensive Data Collection Calendar & Sourcing Template that will help the city be prepared in advance.

Sensitize the Heads of Departments about impending data requirements:

CDO needs to appraise all data contributors and data team members of the upcoming data needs. These exercises should be treated as tools to improve current conditions in the city. Effective communication and collaboration are key to success.

Identify stakeholders and partners:

CDO in coordination with their city CEO / MC may choose to onboard external partners to assist with the data collection and cleaning processes. Cities may leverage these alliances to further adept at coordinating with respective Departments/agencies in getting the requisite data.

Invest in infrastructure:

From a long-term perspective, cities should invest in infrastructure and surveys which will help them gather relevant and updated data in a structured manner. They can plan surveys for collecting specific data or invest in tools for gathering geospatial data and performing necessary analytics throughout the year.

Monitor performance:

In order to measure the effectiveness of any initiative or program, it is vital to periodically review its progress. At the end of each assessment, CDOs should be responsible in debriefing their CEOs/MCs as well as the data team on success areas as well as areas of improvement.

3.3 INDIA URBAN DATA EXCHANGE (IUDX)

What is IUDX and where do I find it?

IUDX allows data to be located and identified through a data catalog; ensures the data consumer has authorized access in accordance with the data provider's policies; and ensures that data is transferred from provider to consumer in an understandable format in a secure manner. It allows sharing of data without losing control.

In cooperation with the incumbent vendors and system integrators, the IUDX team will assist the city in identifying datasets, providing connectors, identifying use cases and onboarding the required data sources.

Login on to: www.iudx.org.in

CDO's Involvement on IUDX

The city can place a request with the Ministry for a demonstration and introduction session to understand the scope of IUDX in their city.

Next, there must be an understanding of datasets that can be shared with the ecosystem and potential use cases where data sharing is priority

Further, reaching out to citizens, vendors and local business ecosystem will be beneficial to understand the demand of data sharing in the cities.

Lastly, the IUDX team will undertake a city readiness assessment to see if an IUDX engagement is suitable for the city.

City will receive full support of the IUDX implementation team to take things forward.

3.4 DATA ALLIANCES & PARTNERSHIPS

> *There are so many things that can be done. But do I need to have in-house capability for everything?*

> *No! You may collaborate with other agencies and organizations to share data, get technical capabilities, technology support and many more!*

To enhance the urban ecosystem through expert problem solving, cities should consider leveraging the overall ecosystem and forming data alliances and conducting hackathons.
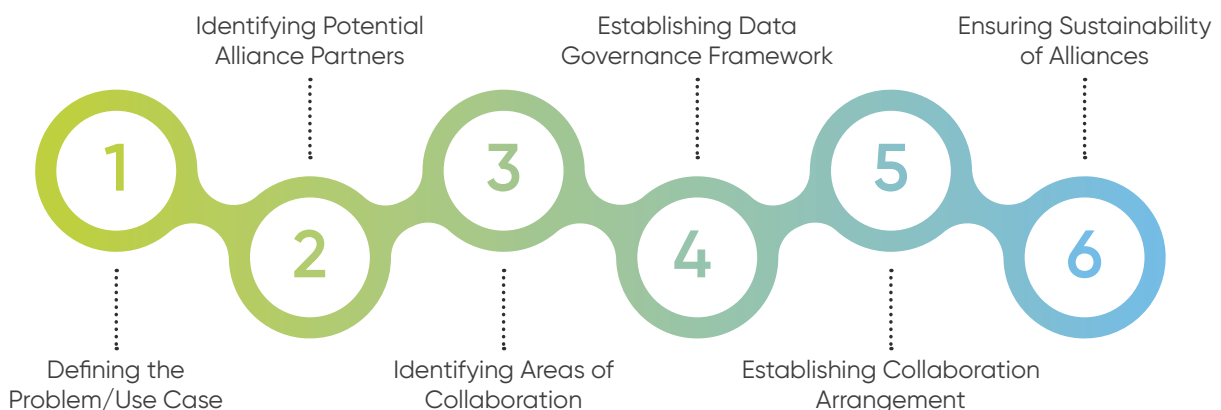
These alliances / partnerships can be formed for diverse purposes such as data sharing, data gathering through devices or surveys, data cleaning and processing, data validation, analysis and analytics capabilities, GIS capabilities, sharing specific tools or solutions and so on, as per their expertise and interest.

Refer to: *Alliance Guidance document; Conducting Hackathons – A City Guide*

- Government
- Industry/Start-ups
- Academia
- Civil Society/Community
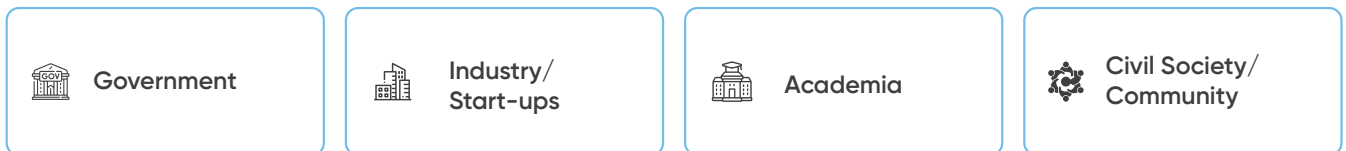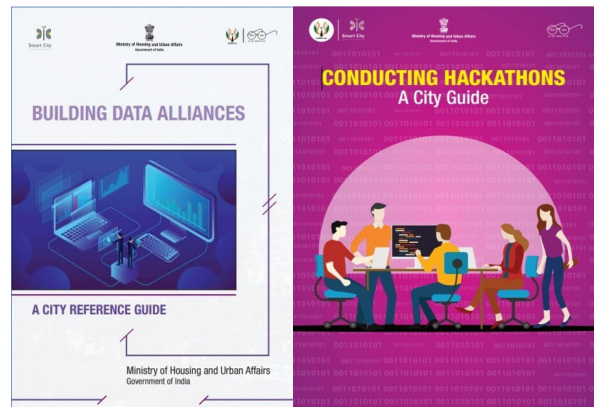
CDO's Involvement for Data Alliances

Cities should keep an updated list of stakeholders (external) who could be potential candidates for forming partnerships for solutioning on different arrays of urban issues and challenges. These partners can then be explored based on city's prioritization of urban issues. Hackathons may also be conducted at the city level to crowdsource solutions from diverse group of stakeholders which may lead to unearthing of innovative solutions.

1. Defining the Problem/Use Case
2. Identifying Potential Alliance Partners
3. Identifying Areas of Collaboration
4. Establishing Data Governance Framework
5. Establishing Collaboration Arrangement
6. Ensuring Sustainability of Alliances

3.5 SMART CODE

My city does not currently have a robust data team to help develop applications / codes. Could I take help from other cities?

Yes. SmartCode does exactly that. It is a repository to leverage the vast network of developers across the country.

SmartCode Repository is an open platform to leverage a vast network of developers across the country focused on serving the software development demands of cities. This initiative is meant to lower the barriers of participation and access, making it possible for cities in solving urban challenges across the entire urban geography using the developed code.

The platform ensures faster development cycles and increases the opportunities for faster product development and decision-making. SmartCode is open to use by stakeholders such as Governments, Startups, Academia/Students, Industries and more importantly Open-source developers.

Website link - *https://smartnet.niua.org/smartcode/*

The User Guide attached as "Annexure I" enumerates the steps to use SmartCode portal along with frequently asked questions (FAQs) and the details of all 7 solutions currently available on it.

CDO's Involvement on SmartCode

CDOs can access the above link and explore the various existing solutions / open-source codes that exist across multiple sectors such as Citizen Engagement, Mobility / Transport, Solid Waste, Housing, WASH, Tourism, etc. CDOs should involve their city's key decision makers i.e., Municipal Commissioner / Smart City CEO as well as the data team or IT department to identify codes that may be most relevant and applicable to their current urban challenges / issues.
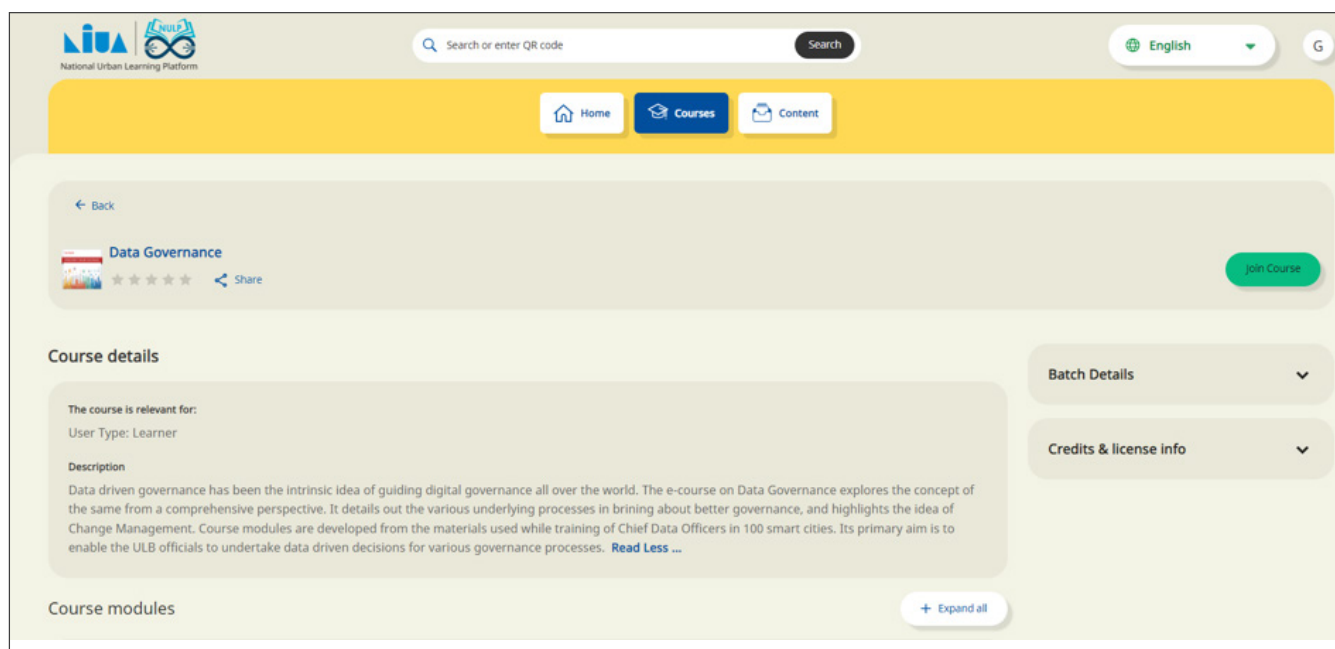
3.6 CAPACITY BUILDING AND UPSKILLING

CDO should ensure that they and their data team continuously upskill themselves to stay updated on current initiatives, data skills and related topics. This shall ensure that the CDO and data team are able to ignite, fulfil and instill data culture initiatives in their respective city. This can be achieved by self-learning through online courses or trainings being conducted / suggested by the Mission.

Capacity Building Program

Ministry has been conducting trainings that the CDO and the city's data team should attend for building and enhancing their current capabilities. The same would be communicated by the Ministry at appropriate times.

National Urban Learning Program

NULP boasts of an ecosystem approach to capacity building for the urban sector, convening actors of the quadruple helix - Government, Academia, Industry, and Civil Society, to participate in strengthening the overall system to better solve challenges of urban India.

NULP envisions to be an aggregated platform for all learning needs of not just CDOs, but all city officials across all domains and sectors.
Website link – *https://nulp.niua.org/*

CDO's Involvement on Capacity Building and Upskilling

CDOs can regularly scan the NULP platform to explore trainings and certification courses as per their interests or need and appraise their team of important content.

3.7 OTHER INITIATIVES

In addition to the above initiatives, CDO shall appraise his team on the potential activities that may benefit the city and further its journey towards becoming DataSmart.

Process Strengthening

It is not adequate to only have the data in place. Data should be reliable, trusted and be in a form so that sense can be made from it. A City Data Policy will help the city in defining mechanisms around data governance, protection, collaboration and innovation. It is important that a CDO brings in coherence to the data through a set of rules, guidelines that can help the city be accountable and transparent for both the data itself as well as for addressing the issues about data. This may be extensively addressed through introduction and implementation of a City Data Policy.

Refer to: *City Data Policy: Reference Guide*

Utilizing Geospatial Information System (GIS)

To build the geo-spatial capacity in ULBs under DataSmart Cities Strategy, the Ministry promotes the creation of minimum high quality geo-spatial layers with data and meta-data standards across the cities. This is intended to encourage and guide cities to create spatial layers and publish them on the SCODP.

Cities are encouraged to collect, create, and publish spatial data, and build the necessary hardware and software capabilities across departments to synchronize and mainstream geo-spatial adoption in urban governance.

Ministry also launched the India Urban Observatory (IUO) which plugs into different sources of data published by the cities, both from real-time and archival sources. It provides an interactive showcase of collective insights at the National, State and City level, over various parameters using data through various sensors, devices, third party sources including citizens and social media.

Technology & Innovation

Smart Cities Mission launched the "City Innovation Exchange" with an intention to match urban solution seekers to innovators for co-creation of better solutions. The platform aims support operationalizing pilots in cities to demonstrate solutions and validate them in local settings and be certified by a competent authority for large scale commercial procurement. The immediate benefits to the city would be a tested and co-designed solution, immensely reducing the risks of failure.

Based on different data analysis and discussions with other stakeholders, the city (Solution seeker) needs to upload challenges on the platform basis which innovators (Solution provider) may apply for the solution relevant to the applicable challenge. The city should then raise an Expression of Interest (EoI) on the platform and conduct a pilot basis the discussion with the innovator and support from the CiX Core Team at the Ministry. CDO may consult the Municipal Commissioner or the Smart City CEO to identify and finalize the challenge with city specific details and supporting datasets.

Further, the Ministry has released 'AI Playbook for Cities' and 'AI Use Case Compendium' to facilitate cities to adopt artificial intelligence to tackle urban problems.

Refer to: https://smartnet.niua.org/ai/

4 MANTRA TO SUCCESS

Taking Ownership:

CDO should spearhead activities related to management, quality, sharing, and completeness of data that is generated in the city. CDO should periodically review the data strategy, timelines and milestones with the Municipal Commissioner / Smart City CEO to ensure alignment. The ownership lies with the CDO on publishing data periodically and anchoring capacity building activities for data team to ensure sanctity of data.

Effective Communication and Collaboration:

CDO should closely coordinate with Data Coordinators and the SPOCs in various departments for understanding current progress and plan for future data-related activities. CDO may lead these initiatives and activities in alignment and agreement with the city-level stakeholders i.e., Municipal Commissioner / Smart City CEO.

CDO may also consider forming alliances and partnerships with external stakeholders i.e., the quadruple helix (Other City / State Governments, Academia, Industry members and Civil Society) to support the use of data for building solutions, products and services to solve identified urban challenges.

Data Stories on the SCODP, SmartCode solutions and City Innovation Exchange (CiX) may be studied to identify opportunities to connect and collaborate with other data mature cities on gaining a detailed understanding of their solutions – the problem statement at hand, activities completed on ground, challenges faced, critical success factors, governance structure, budget and timelines for successful execution – and analyze scope of replicability.

Upskilling:

CDO should stay appraised with the following types of trainings-
- Trainings conducted by the Ministry which may include Ministry-led trainings, and trainings by external agencies that have been organized and coordinated by the Ministry.
- Trainings and learning content present on the NULP platform
- Trainings identified by CEO/MC/CDO which could range on topics related to data analytics, data cleansing, data-driven decision making etc.

Ensuring Sustainable Data Outcomes:

CDO should ensure that collecting and sharing updated and complete data is not the end goal of the 'DataSmart' journey. CDOs along with their stakeholders and data team should also focus on proper usage and solutioning of urban challenges through use of available data.

Staying Updated:

There are 2 ways that the CDO can stay updated on the current and upcoming data initiatives and programs –

- Website links – *https://smartcities.gov.in/, https://dsc.smartcities.gov.in/, https://smartnet.niua.org, https://nudm.mohua.gov.in/*
- Closely coordinating with the DAMU team members for any new developments in relation to the data initiatives at the Ministry level.

Contact us at: dsc.mohua@gmail.com

ANNEXURE

5.1 CURRENT ACHIEVEMENTS

Through continued support from the Center, all 100 smart cities have successfully initiated their data journey, while some have made significant advances in the same. Some of the outcomes achieved by implementation of data-led initiatives are summarized below:

> *All these initiatives seem attractive and may benefit my city in making data-driven decisions. Can you also tell me about how these initiatives have impacted cities over the last few years?*

> *Yes, of course. Numerous CDOs have made significant progress in their city's data journey.*

PEOPLE

75+ CDOs have successfully cleared and qualified the 'Data-Driven Decision Making' certification course organized by Tata Trusts.

Several cities have conducted their own capacity building sessions for their data teams and departments in addition to their proactive participation in Ministry-led trainings.

While all **100** cities have appointed a CDO, **60+** CDOs have a data team to help coordinate data activities for their respective departments.

PROCESS

CDOs have anchored **2** cycles of DMAF, in addition to supporting the EOL, MPI, CSCAF and PAS.

45 cities have created their City Data Policies, of which **35** have been approved by city authorities i.e., Municipal Commissioner / Smart City CEO and are in the process of implementation.

Some cities have successfully formed alliances and have achieved tangible outcomes including building solutions for urban challenges, etc.

PLATFORM

5,000+ datasets have been published on the Smart Cities Open Data Portal (SCODP).

85+ data stories/blogs have been published on the SCODP showcasing sector-specific achievements through use of data.

35 cities have leveraged their data analytical capabilities to correctly identify sector specific challenges and solutions.

5.2 NEW CDO INITIAL CHECKLIST

S. No.	Activity	Completion Status
1	Share your CDO nomination form with *ndsap@gov.in* and CC: *dsc.mohua@gmail.com* Refer to: *CDO Nomination Form* The email specified on the form should not be a personal email id, rather a common city email that can be accessed by authorized personnel.	
2	Create a common CDO email ID for – • Receiving and sending official communication on data activities related to the city • Access to sharable folders created by the Ministry e.g. – cdo.<cityname>@gov.in This will ensure all knowledge products and access remains with the city despite change in the CDOs over time.	
3	Login to smartcities.data.gov.in using the email ID mentioned in the CDO nomination form and update name and details if required. Refer to: *SOPs & Workflows*	
4	Gain access to shared drive / folders / files for work done in the city towards data from previous CDO. Ensure all working / completed files are added in this drive to ensure seamless coordination and handover (if required). In case there is no current existing drive, create a drive / shared folder and place all city-related data files in this folder.	
5	Identify contacts relevant to your role as a CDO. These may be details of previous CDO(s), data coordinator(s), departments' point of contact. Refer to: *Template 1: Data Team Contact Details* (page 21)	
6	Prepare / update list for collaboration on data activities. This list may include contact details of industry/academia/research members that the city may be associated with for performing data-related initiatives in the city.	
7	Plan regular meetings with the data team to gain knowledge and insights into city's current progress and initiatives towards data. Prepare roadmap for data activities to be completed.	
8	Keep yourself updated with the latest trainings being organized by the Ministry to ensure presence in all registered and upcoming trainings / courses to help upskill yourself and the data team.	
9	Reach out to the central DAMU team at *dsc.mohua@gmail.com* for any queries or concerns regarding data-related initiatives.	

5.3 TEMPLATE 1: DATA TEAM CONTACT DETAILS

Name of City: _____

Name of CDO: _____

Phone No.: _____

Email ID: _____

S. No.	Name	Designation	Department	Responsibility within data team	Contact Details
1				\<Data Coordinator / Previous CDO / Department POC\>	Email ID: Phone:
2					
3					
4					
5					
6					
7					
8					

5.4 TEMPLATE 2: RESOURCE COMPLIANCE SCHEDULE

S. No.	Name of Department & Data Contributor	Catalog Name	Resource Name	Schedule/ Frequency of Updation (please tick)	Compliance (Actual updation)
1	Department Name: Responsible Data Contributor:			☐ Yearly ☐ Biannually ☐ Quarterly ☐ Monthly ☐ Bi-monthly	• Published on: dd/mm/yyyy • Last updated on: dd/mm/yyyy • Next update on: dd/mm/yyyy
2					
3					
4					
5					
6					
7					
8					

5.5 DOCUMENTS AVAILABLE ON SCODP

S. No.	Document Name	Document Type	Use of the Document
1	Nomination Form for CDOs	Forms	This form should be used by MC / CEO in case of new nomination / change of a CDO for their city. This form needs to be filled and signed by the smart city MC / CEO and should be shared with *ndsap@gov.in* and *dsc.mohua@gmail.com*.
2	City Data Policy – A Reference Document	Guidelines & Manuals	This reference guide has been developed to facilitate cities in designing their own CDPs. It essentially captures the need for forming a data policy at the city level and outlines a broad structure and key themes for a city to be able to manage and best utilize the data it generates.
3	Conducting Hackathons – A City Guide	Guidelines & Manuals	This document is a city guide that helps city officials understand types of hackathons, checklist for conducting a hackathon and case studies revolving around completed hackathons in the country.
4	Data Story – Guidelines Checklist	Guidelines & Manuals	This document shall provide step by step activities on preparing & publishing a data story on the Portal.
5	NDSAP Implementation Guidelines	Guidelines & Manuals	This document is the base document on which the relevant open data documents have been prepared. National Data Sharing & Accessibility Policy (NDSAP) is a policy that governs the operations and handling of open data by all government stakeholders.
6	Open Data Portal – Dos & Don'ts	Guidelines & Manuals	This document defines the nuances and elements to be kept in mind by the CDO before uploading / approving the catalogs and/or resource on SCODP.
7	Smart City CDO User Manual	Guidelines & Manuals	This document will assist the CDO in the end-to-end activities from logging in, publishing catalogs & resources, adding data contributors and viewing the dashboard for current progress on uploaded catalogs & datasets.
8	Publishing Datasets Through Web Services & APIs	Guidelines & Manuals	This manual shall assist cities in uploading datasets through web services & APIs.
9	Case Studies	Reports	These reports have been published to showcase learnings & experiences across various cities using data for better governance.
10	Resource Templates	Resource Templates	These are xlsx / csv template files prepared by the Ministry that the cities may use to populate the available data and upload on the SCODP. These are the first set of datasets that cities may populate, and they are encouraged to add other datasets as per the availability.