भारतीय विज्ञान संस्थान

Smart City
MISSION TRANSFORM-NATION

सत्यमेव जयते

Ministry of Housing and Urban Affairs
Ministry of Electronics and Information Technology

Government of India

आत्मनिर्भर भारत

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Data Provider Engagement Lifecycle

Scope

The objective of the document is to appraise the reader about the process steps, artifacts for management, and methodology followed for the deployment of the platform, onboarding of datasets, and building of use cases.

It is intended for all users: Data consumers, data providers, application developers, stakeholders of IUDX, the start-up industry ecosystem who build data applications with IUDX as consortium members or application partners, other public/private organizations who wish to implement IUDX, and understand the processes.

Abbreviations

Abbreviation	Definition
IUDX	India Urban Data Exchange
SCM	Smart Cities Mission
MoHUA	Ministry of Housing and Urban Affairs
RFP	Request for Proposal
POC	Proof of Concept
Demo	Demonstration of the solution presentation (use case)
OEM	Original Equipment Manufacturer

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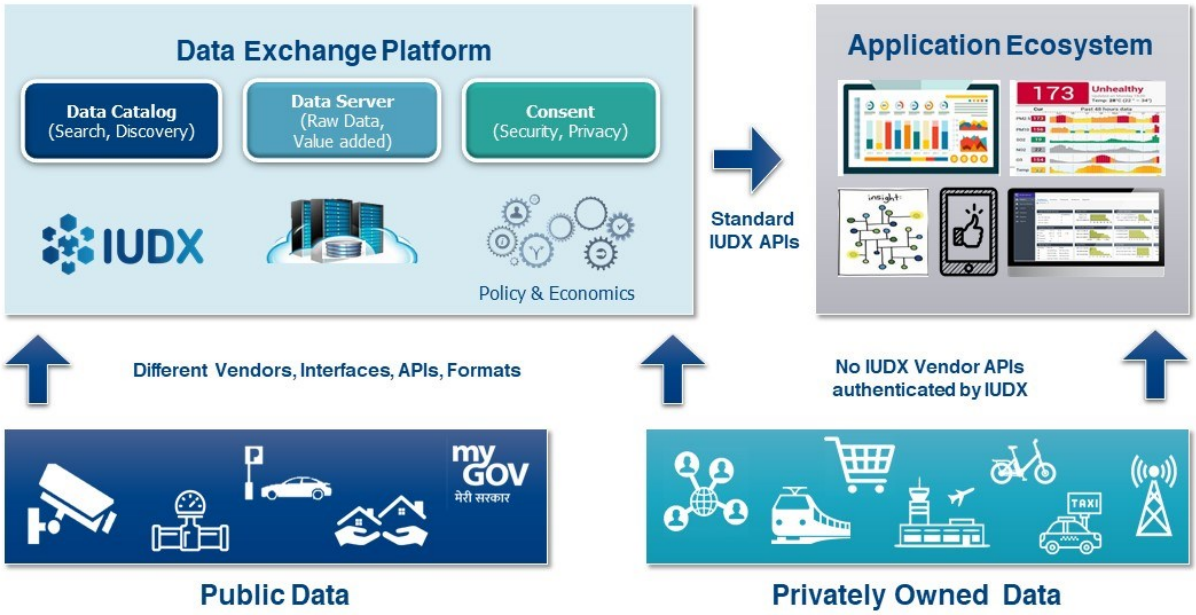
India Urban Data Exchange

The world has become increasingly digital and the applications in Smart Cities, townships, health care, agriculture, industry, e-commerce, etc. are generating good quality electronic data of late. Beyond deriving information, insights and trends from them and manage the services, the power of data lies in its combinatorial possibilities when multiple datasets come together and create innovative applications for service delivery efficiency and end-user convenience, making the best use of AI/ML technologies, which makes data the 'new oil' and an economy.

India Urban Data Exchange (IUDX)

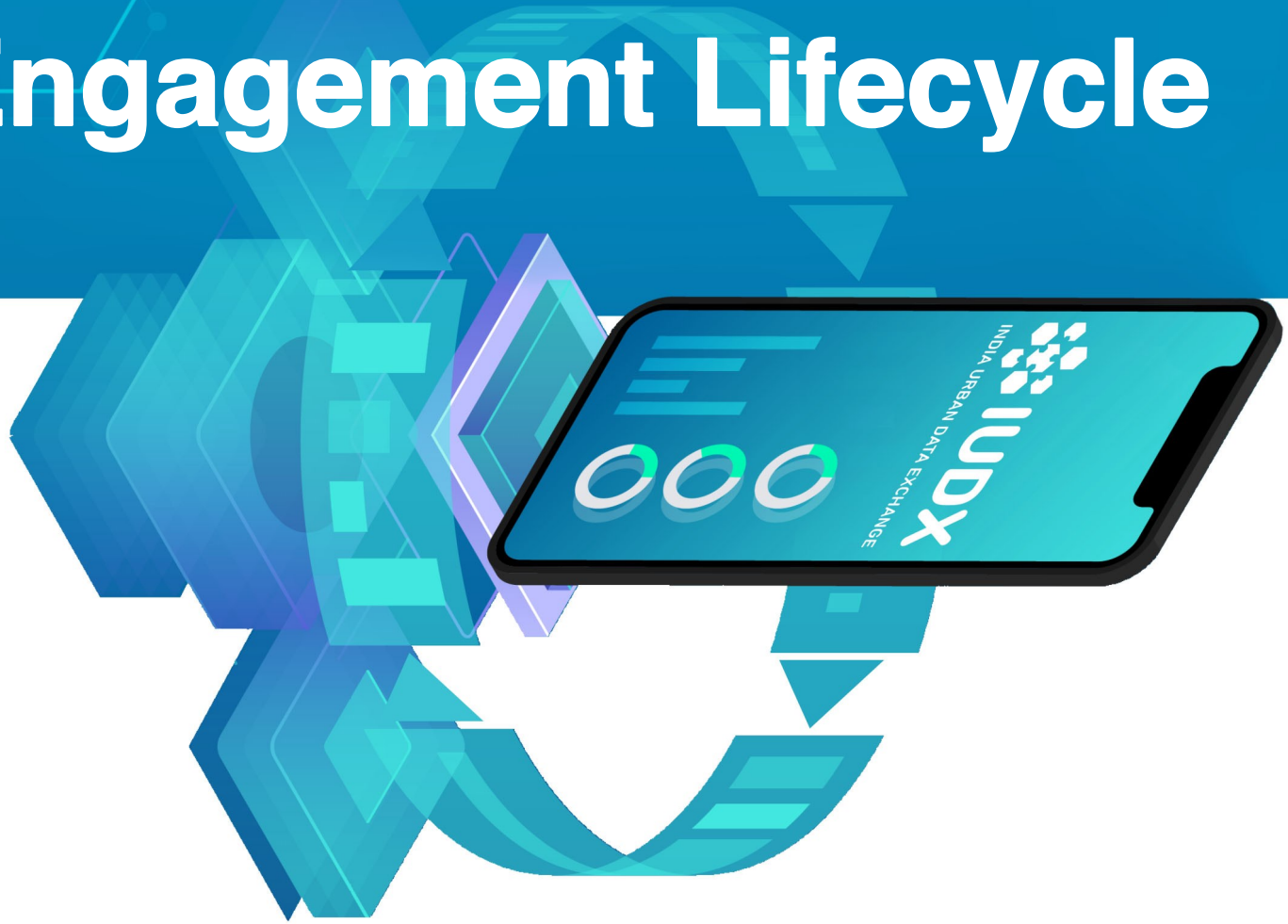
Since the data remains in the respective application domain silos and similar data is represented in different ways in different systems and also the lack of policy frameworks, it is very important to have a secured platform and policies to enable data sharing from multiple entities and to facilitate open innovation. The India Urban Data Exchange (IUDX), initiated and funded by the Ministry of Housing and Urban Affairs (MoHUA) and supported by the Ministry of Electronics and Information Technology (MeitY) and NITI Aayog is developed and deployed as a fully open-source cloud-based platform to enable sharing of all types of data.



IUDX provides a way for accessing data in a unified, common format and enables data sharing and monetization between different entities, opening it up for the internal departments as well as external agencies to create innovative applications with new business/revenue models aka data marketplace.

Public and privately-owned datasets of urban governance, mobility, health care and citizen security are being exchanged through IUDX, the industry/start-up ecosystem are taking these datasets and started building applications for traffic management, public transport, disease spread, and health care infrastructure management, emergency assistance, solid waste optimizations, flood warning, citizen safety, etc.

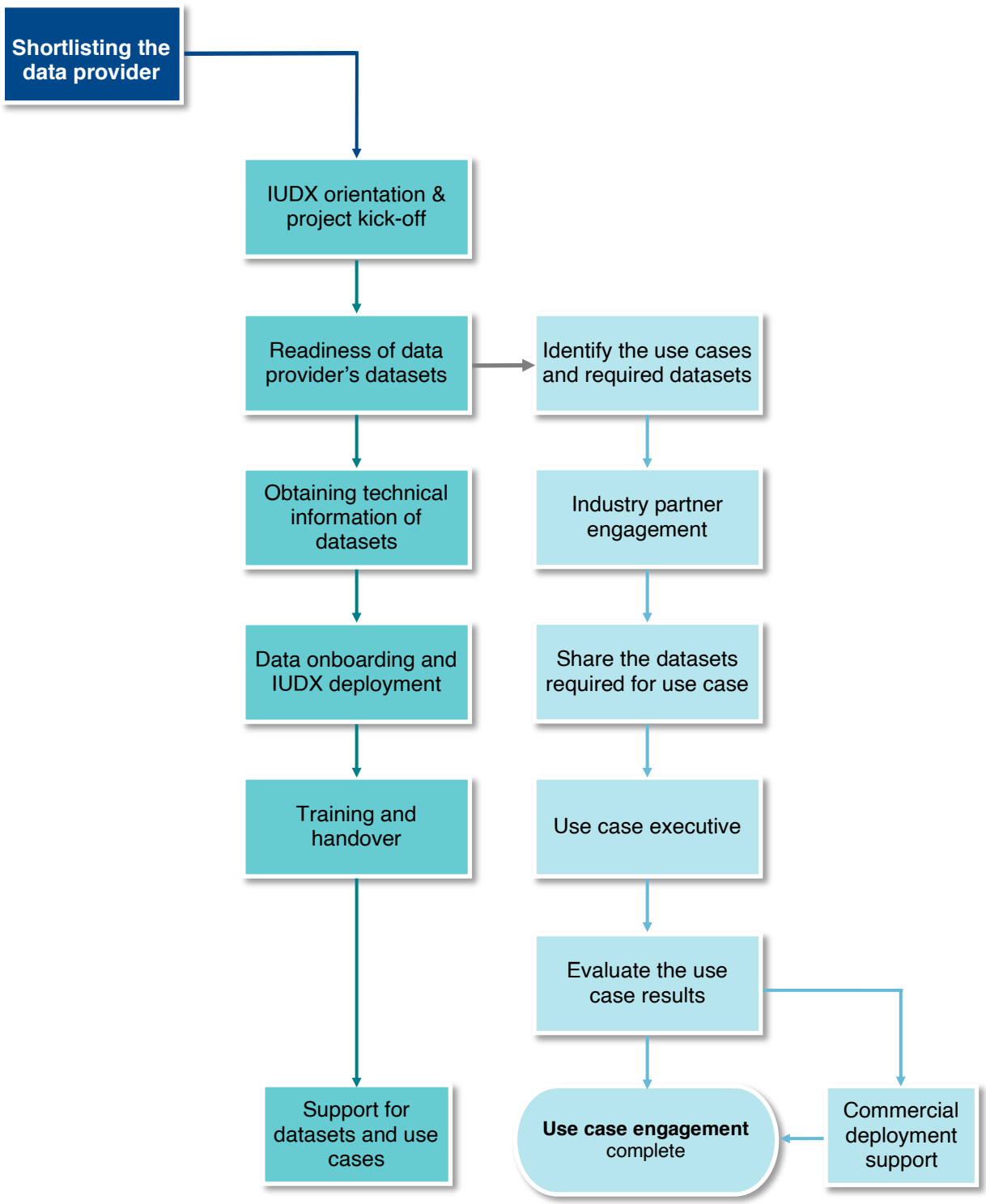
Data Provider Engagement Lifecycle



This document enlists the process and lifecycle of:

1. IUDX deployment and data onboarding project with a data provider.
2. The initiation of the use case with the data providers, application ecosystem and stakeholders.

A complete flow chart of the process of the IUDX deployment and use case engagement is as follows:



Diagrammatic explanation of the IUDX– Data Provider Engagement Lifecycle

2.1 Shortlisting of the data providers

Since there are plenty of data and data providers, it would be wise to prioritize high-value datasets (HVD) to maximize the Return on Investment (ROI). In the case of urban governance as part of the Smart Cities program, many urban governance services are digitized across cities and generating quality datasets of late.

In the case of Smart Cities, the Smart Cities Mission of MoHUA prioritizes the cities for IUDX deployment based on the availability of quality datasets and also the cities' plans to build data-driven use cases.

In the case of private partners who would want to onboard their data on IUDX. They are aligned and shortlisted by IUDX.

Based on the shortlisting of the cities the MoHUA/SCM team engages with the highest authority at the data provider side (Municipal administrative officer, CEO, CDO, Mayor) and decides to proceed with the next steps and set up the project kick-off meeting with the IUDX team to discuss IUDX technology, platform, process, and plans with the data provider team which typically consists of the CEO, CDO, IT head, PMC, MSI, ICCC, OEM Solution Provider and other department contacts.

2.2 Project kick-off:

IUDX will make a detailed presentation of IUDX technology, platform, process, and plans for the data provider team and clarify questions during the project kick-off.

The kick-off meeting covers:

1. Explanation of the IUDX project (vision, objectives, and need)
2. Data provider/Smart City 1.0 Data sharing, data silos, and how the datasets can be shared and leveraged for use-cases
3. Organizing data into information by onboarding on IUDX
4. Drawing insights from data by bringing possible use case partners/ analytics
5. Bringing broad industry ecosystem together to provide value (customer convenience or service delivery efficiency) using use cases

The IUDX team will send the 'Getting started kit' consisting of the IUDX overview, deployment process, plans, responsibility matrix, typical datasets, a compendium of use cases, and also the city readiness check template to all the stakeholders at the data provider side and the project completes the first milestone.

2.2.1 Responsibility matrix (RASIC)

RASIC

RASIC stands for:

The roles are IUDX Manager, Nodal Officer from the provider, MSI/Technical team lead who manage the systems for the data provider, the application partner who will consume the data and build use cases, and the Ministry/Appointing Authority who liaise with the data providers and IUDX and facilitate and catalyse the project.

IUDX Manager: The single point of contact in the IUDX team for the city to interact regarding the platform deployment, data onboarding, technical support and use cases.

Nodal Officer: The key single point of contact from the data provider to interact, support and provide the required datasets, bring the partners together with the IUDX team.

Master Systems Integrator (MSI): The MSI is the responsible and technical point of contact for the Nodal Officer to provide the required technical details, arrange meetings with the OEMs and provide documentation to the Nodal Officer. The MSI also supports by providing the required infrastructure: storage, network, and server requirements to achieve the IUDX deployment from the provider side.

OEMs Vendors: The vendors or OEM providers are solution providers who provide the required data provider/smart city solutions to the data provider/Smart City MSI. In general cases, there could be vendors who independently work with the Nodal Officer or MSI (if any). The OEM provides the API documentation, details, access from the endpoint to IUDX. IUDX onboards APIs from the endpoint vendors on the data platform.

Application Partner: The application partner is responsible to take the datasets from IUDX, implement the solution and provide the solution to the data provider and the citizens (according to the nature of the use case).

IUDX supports the application partner by providing the data onboarded by the data provider to the application partner. IUDX does not develop any application/software for the data provider or the use case partner. IUDX can provide technical consulting for the use case during the use case planning and implementation.

Ministry/Appointing Authority: The Ministry/Appointing Authority is the overall stakeholder who catalyses the initiation process and monitors the progress of the deployment and the use cases. It does not provide technical support or technical consulting.

RASIC Chart:

IUDX Deployment RASIC Chart					
TASK	**IUDX Mgr**	**Nodal Officer (Data Provider)**	**MSI, OEMs & Other Depts**	**Industry Partner**	**Ministry / Appointing Authority**
1. **Select the data provider** for IUDX deployment and align the data provider's CEO and Nodal Officer to start the project	I	I			R
2. **Review the datasets and use cases** with data provider's CEO, Nodal Officer, IT head, PMC, MSI, OEM solution provider and other department contacts and decide on the use cases and the datasets to be onboarded into IUDX	R/A	R/A	S		I
3. **Obtain the technical details** (Datasets, APIs, credentials, documentation) about the solutions	S	R	S		
4. **Develop data provider specific software modules,** Deploy IUDX data provider's instance, onboard datasets, testing, implement data exchange policies and training for the data provider's stakeholders	R	S	S		I
5. **Engage with industry partners**, share the required datasets to them and get the targeted use cases deployed in pilot/commercial mode	S	R	S	S	I
RASIC (Responsible, Approves, Supports, Informed, Consulted)					

Deployment Plan:

The typical deployment plan is the project plan designed for the implementation of the IUDX deployment project. The project spans about 19 weeks for the end-to-end lifecycle and steps of action.

IUDX Deployment Plans																				
	Weeks																			
Task	**w1**	**w2**	**w3**	**w4**	**w5**	**w6**	**w7**	**w8**	**w9**	**w10**	**w11**	**w12**	**w13**	**w14**	**w15**	**w16**	**w17**	**w18**	**w19**	**w20**
Project kick-off and IUDX orientation meeting with data provider CEO, Nodal Officer, IT head, PMC, MSI, ICCC, OEM solution provider and other department contacts	x																			
Review the data provider readiness with the data provider team and stakeholders and align for obtaining relevant data and technical information as per the IUDX deployment plans		x	x																	
Obtain the technical information (Datasets, APIs), documentation, define work packages, effort estimation and detailed planning				x	x	x	x													
Software development and testing of the city specific modules								x	x	x	x	x								
Deploy IUDX platform with data provider specific modules, onboard the planned data sets, testing, implement data sharing policies and commissioning													x	x	x	x				
Training & support for the data provider and stakeholder team, handover and move into support mode																	x	x		

In the post-kick-off meeting, IUDX shares templates and documents with the data provider. This includes sharing example datasets, example use cases, data provider readiness template, and API documentation with the data provider for ease of adoption and onboarding onto IUDX.
W1, W2, W3,…, W20 denotes the week number starting from the week of the official project kick-off.

For example, the data provider readiness checklist is to be filled by the data provider and shared with IUDX for further processing into the next subsequent steps of the process by W3 (week 3 from kick off).

Typical datasets

Typical datasets in the urban governance domain/Smart Cities are here for reference. It is recommended to explore the availability of all these datasets and more during the preparation of the data provider readiness checklist.

Sl No.	Dataset	Description
1	Environmental information	Pollutants, air quality, rain
2	Smart sensor locations	WiFi, PA, ECB, messaging boards, digital kiosks
3	Road information	Road quality, road assets, signs
4	E Bike sharing	Stations, availability, fare
5	Bus transit	Routes, trips, stops, bus location, ETA, occupancy, fare collection
6	Metro rail	Stations, routes, trips, fare
7	Smart parking	Parking lots, occupancy, availability, fare
8	Adaptive traffic	Traffic junctions, traffic density
9	Flood data	Water level, rivers, canals, drains, elevation maps
10	Metrological information	Rain fall (history, forecast)
11	Safety index	Safety index of streets, places
12	Video samples and feeds	Surveillance, traffic junction / special purpose monitoring
13	Revenue collection	Taxes, other revenues, trade licenses, utility bills
14	Solid waste management	Pick up locations, vehicle location, weight of waste, employee attendance
15	Citizen grievances	Cleanliness
16	Streetlights	Locations, energy consumption
17	Traffic violations	Location and type of violation, payment status
18	Water distribution	Tank capacity, supply/day, water level, pressure, quality
19	Fire and ambulance	Live location, on call status
20	GIS	City assets on maps

IUDX also shares the data provider readiness checklist which includes:

1. Public datasets (Description, metadata, project deliverable status, action item, and responsible assignee)
2. Privately owned datasets (Description, metadata, project deliverable status, action Item, and responsible assignee)
3. Use case status and scope
4. Stakeholders and points of contact

The data provider is expected to fill the checklist in detail and share it with IUDX for analysis.

2.2.2 Data provider readiness checklist

The data provider readiness checklist has sections for detailing the description, status of the public and privately owned datasets. It has a separate section for use case description and status and a separate section to document all the stakeholders and their contact information. This is the sheet we will be using for the weekly review with the data provider, update status and also the action items with due dates across team members and also send as the weekly status report to all at the data provider, IUDX and relevant stakeholders.

City Readiness for IUDX – <City Name>					
S No.	**Category**	**Details**	**Additional details**	**Current status, next steps**	**Action items, owner, due date**
1	**Solutions working well and the public datasets available**	Emergency call button	These (25 Nos) are installed at outdoor digital kiosks with the facility of two-way communication. The nearby PTZ camera is configured (through CKC) to focus on the call button incase of a button press.	APIs are not available. Provide Lat long positions as an excel file.	
		E-Governance system			
		Environmental monitoring sensors	There are 10 digital sensors along with 2 of digital display signboards. API level integration done with website and Smart City platform. OEM: Phoenix. APIs integrated with ICCC. Rain data: Available	APIs provided 31/12. Updated API document provided on 22/Jan. **Onboarded on IUDX.**	
		Intelligent traffic management system			
		Transit management system & automatic fare collection system			Provide master datasets (Bus depot, bus info, agency, stops, routes, trips, route shapes, etc. **AI: Mr. Xxx 8th March 2021**
		Adaptive traffic management system			
		Dynamic sign boards			
		Smart parking management system			
		Solid waste management			
2	**Privately owned datasets of interest**	1. E-bikes	Bicycle APIs for providing locations, availability for multimodal app. Vendors (HC, YANA, Yulu). 2000 cycles.	MO Cycle APIs to be provided to IUDX. Sample shared with YULU & YAANA(11th Feb)	
3	**City use cases to be implemented using the data**	1. Multimodal transport	Takes the data from multiple transport sources, walk paths, personal preferences and suggests the best mode of transport for the travel in place of the commuter. Integration of the open space portal's safety index also could be used for safe route recommendations	Multimodal use case has been decided by the city. Multimodal partner engagement initiated. Data APIs are shared.	Multimodal partner to provide plan of action and timeline. **AI: Pharos : Date: 7 May 2021**
4	**City, PMC, MSI, vendor, industry partner contacts**	CEO	Mr. Prem Chandra Chaudhary IAS, bbsr.bscl@gmail.com	CEO Bhubaneswar Smart City	City
		City official	Mr. Ashit, Mob : +91 6371 702 989 smartcitybbsr@gov.in	Co-ordination and support from Coty side	City
		PMC - Ibigroup	Mr. Pinaki Dash, Mob : +91 70089 32831, pinaki.dash@ibigroup.co	Co-ordinate datasets which are not in MSI scope	Vendor
		MSI - Honeywell	Ms. Dipti Panda, Mob: +91 7118 06796, Dipti.Panda@honeywell.com	Co-ordinate datasets and APIs from solution providers	MSI
		Yaana	Shivakumar Angadi, Operations, Mob: +91 7019046754, admin@yaana.bike	E Bike	Private data provider
		Industry partner	Multimodal transport - Rahul Panda Pharos Softtech, Mob: +91 95584 80559, rahul@pharoslife.in	Pharos Softtech is developing the green corridor application also for Bhubaneswar	Industry partner

IUDX creates a WhatsApp group for faster communication and collaboration. The IUDX and data provider teams also agree on the weekly meeting schedule to carry forward the engagement.

2.3 Review of the data provider readiness & next steps

Once the data provider shares the readiness checklist, then IUDX and the data provider team will jointly assess the quality of the datasets to decide which of the datasets to be onboarded onto the IUDX platform. The data provider may have many datasets and also data-driven use cases, however, considering the ROI only high-value datasets are onboarded onto IUDX.

High-value datasets are the datasets that help to create innovative applications for service delivery efficiency and end-user convenience, making the best use of AI/ML technologies.

The steps involved in this stage are:

IUDX evaluates the provided datasets and for each dataset performs the following checks:

I. Quality check of the datasets
II. The utility of the datasets to build targeted use cases (High-value data)
III. If there are no sufficient high-value datasets and the targeted use cases, the IUDX team will not be able to go ahead as per the plans and the data provider may come back to IUDX in future when the datasets are available and reinitiate the project.

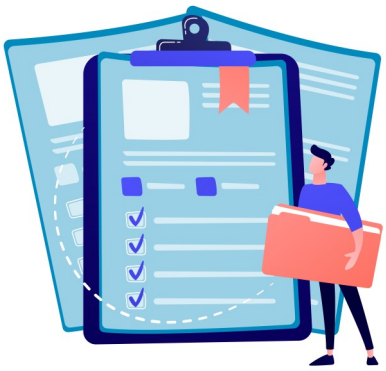
As a part of the next process, IUDX obtains the technical information from the data provider.

2.4 Obtain technical information from data provider

Based on the availability of high-value datasets and targeted use cases, the data provider is asked to provide the technical API documentation / data access methods, meta data, structure of the data, and relationships with other datasets. These will be the key deliverables to enable the IUDX deployment team to onboard the datasets into the IUDX platform.

During this process, for each of the declared datasets in the city readiness checklist, the following information is to be shared by the data provider.

- The API documentation / means of data access is provided.
- Credentials and meta data are provided.
- Frequency of data flow / nature of data (Static/dynamic) is ascertained.
- Complete API documentation (Sample on the next page)
- Sample datasets (In case required separately)
- Dataset relationships and ER diagram if applicable.



Environment Sensor Data Service

1.1. API Description

Environment Sensor Data Service will provide the weather and pollution data collected by environment sensors in example Smart City.
Below pollutant and weather parameters will be provided for each environment sensor.
AQI, pollutants like PM10,PM2,5, NO2, SO2, CO2, CO, UV and other weather parameters like Ozone, Humidity, Air-Pressure, Light, Sound and Temperature.

1.2 API Method– GET

1.3 API Construct URL

1.3.1 Environment Sensor List Device:

https://examplesmartcity.org/data/devices

1.3.2 Environment Sensor Metadata for a given Device Name:

https://examplesmartcity.org/data/device/detail?DeviceName=abc-junction-env-sensor

1.3.3 Environment Sensor for a given Device Name:

https://examplesmartcity.org/data/device?DeviceName=abc-junction-env-sensor

1.3.4 Environment Sensor History Data within Data Range and for a given Device

Name:
https://examplesmartcity.org/services/EnvSensorDataService/GetEnvSensorHistoryDataForDevices?StarTS=2019-01-01 00:00:00&EndTS=2019-01-02 00:00:00&DeviceName=abc-junction-env-sensor

1.4 Authentication Details

Type- Basic Auth
Username– IUDXadmin
Password- **********

1.5 API Request Parameters

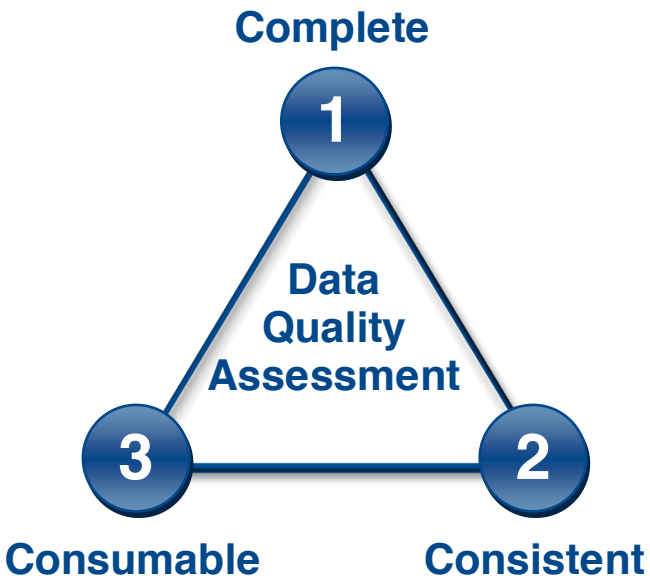
1.5.1 Environment Sensor Metadata for a given Device Name:

DeviceName– Environment Sensor Device Name string.

During this stage, the data provider also aligns the IUDX team with the Master Systems Integrator and their OEM solution provider who provides the API documentation, enabling access availability to IUDX.

During this step as part of the decision-making process, all selected datasets are checked whether they fulfil the 3-C's of IUDX data quality assessment. Those are:

1. **C**omplete
2. **C**onsistent
3. **C**onsumable



Data Quality Assessment Model.

2.4.1 Complete:

Data is referred to as complete if there are no gaps or missing information. The data is considered complete as long as it matches the expectations even if the optional data is missing. The completeness of data refers to the wholeness or comprehensiveness of the data.

Although incomplete data is sometimes unusable, it is frequently used despite the lack of information, which can result in incorrect conclusions and impact reliability.

2.4.2 Consistent:

Data is referred to as consistent if entity types and attributes are of the same basic structure whenever possible and the data is up to date according to the specified timings. Consistent data indicates that the measurement of variables is consistent across datasets and there is a single representation of the same data.

This can become particularly worrisome when data is compiled from numerous sources, and the timeliness of the data also gets affected as data gets aggregated from numerous sources.

2.4.3 Consumable:

Data is referred to as consumable if the urban data present with the data provider are available in an electronically sharable format. The ease by which data of variable size and formats is allowed to be consumed. For example, a periodically updated spreadsheet made accessible to use with the manual intervention of periodically sharing it over an email is not considered to be consumable, and on the contrary, fetching the same data programmatically over an API without any manual intervention is considered consumable.

- If data is accessible and fulfils the conditions of deployment assessment then it's a Go for the next step or else the data provider is requested to troubleshoot and provide updated documentation, API credentials, and metadata as applicable.
- The deliverables of this step are communications about the accessibility of data from the documentation provided.

As part of the next step/next process, deployment of datasets on IUDX (catalog, resource, and authentication) is taken up.

2.5 Deployment of datasets on IUDX

The datasets fulfilling the conditions of deployment assessment are to be onboarded on IUDX as a separate catalog page for the provider. The datasets are onboarded by ensuring continuity & reliability of data flow and are monitored for any changes or differences.
Onboarding of the dataset involves IUDX creating software modules (adapters), as a part of the data pipeline to source the data in a secured, automated, and organized manner to ensure continuity and sanity of the system. The list of inputs required for this stage is API documentation, API credentials, Excel files, frequency of response, etc.

During the process:

- The datasets are organized into a team to distribute and define the objectives.
- The team takes up the documentation and create the necessary catalog page (data providers' page), catalog group and items description (dataset explanation), and **adapter** (to automate pulling the data).
- During development, discoveries about dataset completeness can also trigger moving the dataset back to the data provider for clarification and completeness. This moves the data item from present to the previous task.
- The onboarded datasets are pushed into the production environment after thorough testing by IUDX.
- Once available in the production environment the data starts publishing on the resource server (Storage of data).
- Post-deployment of the **catalog page, group, and items**, the page link is communicated to the stakeholders and integrated into the catalog pages of IUDX.
- Any issues faced during this stage related to the datasets are raised and clarified. Decisions for datasets with issues related to access or completeness may be taken to exclude the dataset which later is not provided.

The deliverables of this stage are:

- Data provider catalog page
- Datasets onboarded on resource servers
- Resource groups and resource ids for all selected datasets onboarded
- Weekly reports explaining weekly snapshots of the status

As a part of the next step/next process, Initiation of use case and handover of the data provider's catalog is taken up.

2.6 Initiate & start use cases- Pilot/commercial deployment

The data provider brainstorms internally about their key problems and/or high-priority topics of interest for them and shares a list of potential use cases. This can also be jointly done with the IUDX team to support the data provider/stakeholder's process. The IUDX team then cross-reference them with the existing datasets provided to check for feasibility analysis and identify feasible use cases. A possible solution is then proposed and shared with the data provider, which once accepted becomes the base for piloting the use case implementation.

Preference of the use case partner: The data provider may give first preference to their existing partners as they are already part of their solutions and they also have an ongoing engagement with them. If there are no existing partners and if the data provider wants then IUDX can also sound it off to its Consortium partners and see if there is an interest. IUDX has a consortium of organizations that are experts in their fields of influence like transit, solid waste management, etc. In case any of the Consortium partners is/are interested in taking up the pilot, then IUDX will introduce the partner to the data provider.

IUDX Role in use case implementation: IUDX does not develop or implement the use cases as a partner. IUDX only acts as an enabler by providing technical guidance, providing the data platform and datasets to the use case partner, and authorization control to the data provider. This pilot project is taken up with the data provider officials, the MSI, the IUDX team, and the identified industry partner. The feasibility, the solution architecture, and the possible project plan are discussed.

Scope of the POC: The pilot has a limited and minimum viable scope to minimize the costs of investment and maximize the range of demonstration of the POC.

The process :

- The use cases, datasets, and the high-level solution design are finalized.
- The data provider engages with the use case partners and decides on the pilot, commercial deployment, project plan, and reviewing and reporting mechanisms.
- The prototype of the use case is validated and feedback is taken.
- Rework is carried out if required for the final refinement of the POC.
- Use case application is launched and acceptance testing is carried out.
- Communications and newsletters are to be shared by the data provider / use case owner to accelerate the adoption/marketing of the solution.
- Key metrics of the solution are monitored for feedback.

The deliverables of this stage are as follows:

- Agreement between data provider / use case owner and use case partner
- Scope and requirements documentation
- Specific use case solution design (HLD and LLD)
- MOUs if required by the data provider / use case owner
- Intermediate results: Wireframes/prototypes
- Final solution for demo
- Test results for functional requirements
- Sign off for the completion of the POC.

As part of the next steps, the data provider or use case owner is to evaluate the results of the POC against the initial expectations and based on its satisfaction initiate the scoping for the commercial deployment of the solution as per their existing standard procurement process.

2.7 Training and handover

IUDX provides exhaustive training to the participants so that they understand the process of dataset access requests, manage the approval of dataset access, catalog page of provider's data, FAQ and support pages of IUDX for their consumer's questions.

The scope of training will cover:

1. Demo of the catalog page and walk-through.
2. How to register as a consumer?
3. How to request datasets access?
4. How to approve the datasets request from the consumer.
5. Website links and locations of 'How to Documents' of IUDX for self-help.
6. Authentication tokens and subscription basics.
7. Project plan and the last weekly tracking sheet.

2.8 IUDX Support

2.8.1 Support for providers:

1. **FAQ:** List of FAQs added and updated on IUDX to be posted on the website so that the website can clarify similar frequently asked questions.
2. **'Business as Usual Support' Email / Point of Contact:** The team contact and the use case manager contacts are shared with the data provider teams so that they can reach out to the IUDX. *support@iudx.org.in*
3. The 'Business As Usual Support' essentially covers any new use cases, new datasets eventually coming forward from the teams.
4. **Product features and 'How-to Articles for Consumers and Providers':** This will enable the providers to manage the requests of consumers seeking data.
5. **New datasets / use cases:** To onboard new datasets and build new use cases in future.

2.8.2 Support for consumers:

1. **How to Documents and Technical Support Documentation:** To enable the consumers how to use the IUDX platform: Register, find resources, request authorization, and others. There is a standard FAQ and process documentation managed on GIT and a separate catalog of support pages.
2. **Business Support / Hand holding use case Consumers:** For all use cases, the project.
3. **Managed Email Request Support:** For all the consumers, a managed CRM system integrated with the support email: support@iudx.org.in is ticketed and closed.

Summary

In the document, we covered the concepts of data-sharing, IUDX components, and the process of data-sharing.

The lifecycle of the datasets onboarding process for a data provider is crucial in the success of its later data sharing objectives. A detailed high quality driven data onboarding would ensure that the data requestors get and understand quality data that conforms to IUDX standards. Starting from shortlisting of data providers, project kickoff, and project management, the data provider's data readiness checklist ensures a complete involvement of the partners and stakeholders from the provider during the data onboarding process.

The 3Cs methodology for data quality ensures that we help the data provider in identifying discrepancies in data quality and improving the existing systems. The methodology of deployments and adapter documentation ensure that the process chain and task can be parallelized and ensure easier break fixes in the data pipeline. Training and handover of the onboarded datasets enable the data provider to independently manage data sharing with an interested partner with authorization and request management in their control.

Digital 1.0 solutions are doing their job and also generating data, the public and privately owned data owners/providers are looking forward to monetizing their data, IUDX is all set to facilitate this and the industry players are keen to take the data and build the solutions and commercially deploy them.

It’s time for the public/privately owned data providers, industry/start-up ecosystem, Government departments and academia/research (a real quadruple helix) to collaborate with innovative business/ revenue models, exploiting the best of AI/ML technologies to unlock the full potential of data and create impactful applications.

Let us do it together!

IUDX

INDIA URBAN DATA EXCHANGE

Unleashing the power of data for public good