Data Driven Governance

CEPT University, June 2019
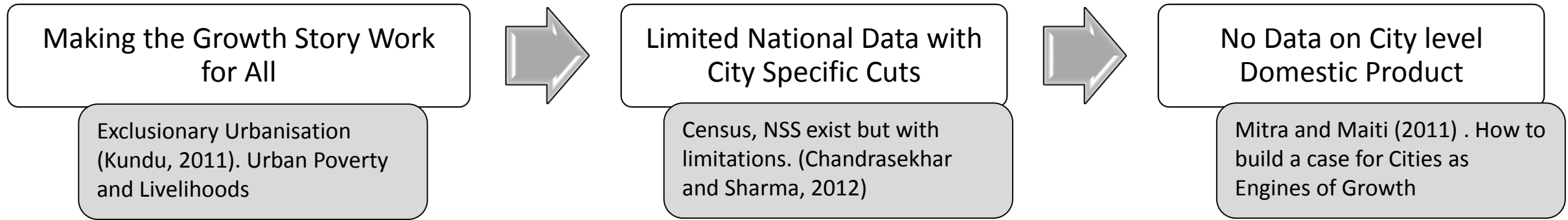
Dr. Poornima Dore

Head – Data Driven Governance
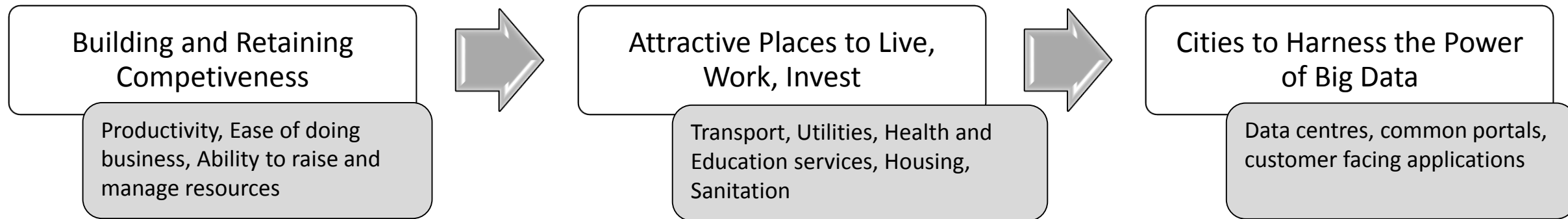**Tata Trusts**

Cities in India : Now and Beyond

Cities as Engines of Growth: Challenges

Making the Growth Story Work for All	→	Limited National Data with City Specific Cuts	→	No Data on City level Domestic Product
Exclusionary Urbanisation (Kundu, 2011). Urban Poverty and Livelihoods		Census, NSS exist but with limitations. (Chandrasekhar and Sharma, 2012)		Mitra and Maiti (2011) . How to build a case for Cities as Engines of Growth

Need to Maximise the Benefits of this Growth Story

Building and Retaining Competiveness	→	Attractive Places to Live, Work, Invest	→	Cities to Harness the Power of Big Data
Productivity, Ease of doing business, Ability to raise and manage resources		Transport, Utilities, Health and Education services, Housing, Sanitation		Data centres, common portals, customer facing applications

Data Driven Governance at Tata Trusts

Objective: Support and Empower Urban & Rural Governments and associated Stakeholders
to move towards a data-reliant culture of decision making

Gaps

Limited existing toolkit

Gaps in fund allocation & program delivery

Insufficient public service systems
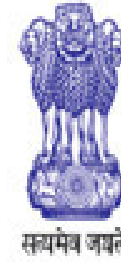
Reduced development outcomes

DIGITIZATION

ADVANCED VISUALIZATION & ANALYTICS

INSTITUTIONAL STRENGTHENING

Operating mechanism

Work with government structures to:

- Understand and **upgrade** existing **traditional** data collection **methodologies** and frameworks

- Use **technology** to facilitate **real time** collection and analysis of standardized, drilled down data sets

- Drive **inclusion** in govt **policy making**, by enabling need based participatory methods

- Identify **critical data** sets **relevant** to quality of life of citizens, and **enable** the **govt** to standardize, vet and utilize the same; **create model systems** for usage

- **Upskilling** of **govt functionaries** across levels to use state of the art technology for decision making

Approach and Government Interface

Micro-targeting of interventions using the data from mobile-based, real-time data survey and creating a model of convergence of government schemes

Improving last-mile linkage of individuals to schemes and empowering communities

Open data platform which tags all individual data across sources against a single identifier

GOVERNMENT OF ANDHRA PRADESH
सत्यमेव जयते

Ministry of Rural Development
Government of India
सत्यमेव जयते

महाराष्ट्र शासन

झारखण्ड सरकार

Ongoing Projects – Data Driven Governance

RURAL GOVERNANCE

- DELTA
- DELTA Plus
- MPLADS(DISHA) Tracker
- DEGC

URBAN GOVERNANCE

- E-Governments Foundation
- City Data for India Initiative

ACCOUNTABILITY

- Transformative Scenario Planning
- Centre for Budgetary Governance & Accountability(CBGA)
- Model Data Systems

CAPACITY BUILDING

- Supporting Parliamentarians in Research & Analysis in Constituency(SPARC)
- Village Social Transformation Foundation(VSTF)

DIGITIZATION

ADVANCED VISUALIZATIONS & ANALYTICS

INSTITUTIONAL STRENGTHENING

Flagship Initiatives

Data, Evaluation, Learning, Technology and Analysis (DELTA)

The Trusts have developed a systematic structure of participatory micro-planning based primarily on data intensive model village goals. It is a system of collecting data from communities, as well as government departments, analyzing and reproducing it in the format which can be used to prioritize activities, optimize resources and track the progress. Tata Trusts initiated four pilot projects in four different locations – Vijayawada in Krishna district in Andhra Pradesh, Chandrapur district in Maharashtra, Balasore district in Odisha and West Singhbhum district in Jharkhand.

Supporting Parliamentarians on Analysis and Research in the Constituency (SPARC)

Tata Trusts through SPARC aims to support MPs in their constituency development programs. The SPARC associate program offers a unique opportunity to young professionals to work with the members of parliament from across India to support constituency development programs. The scope of work could range from supporting a MP to pilot a self-help group (SHG) program that could employ more women to strategizing on how to spend MP Local Area Development Funds

KEY GEOGRAPHICAL OUTREACH*

Jharkhand

Program	Key Outputs
JK corridor - DELTA	• 221 Village development plans created covering a population of 1,85,481
Fund flow analysis	• Round table with key stakeholder, scoping study report and perspective paper shared

Maharashtra

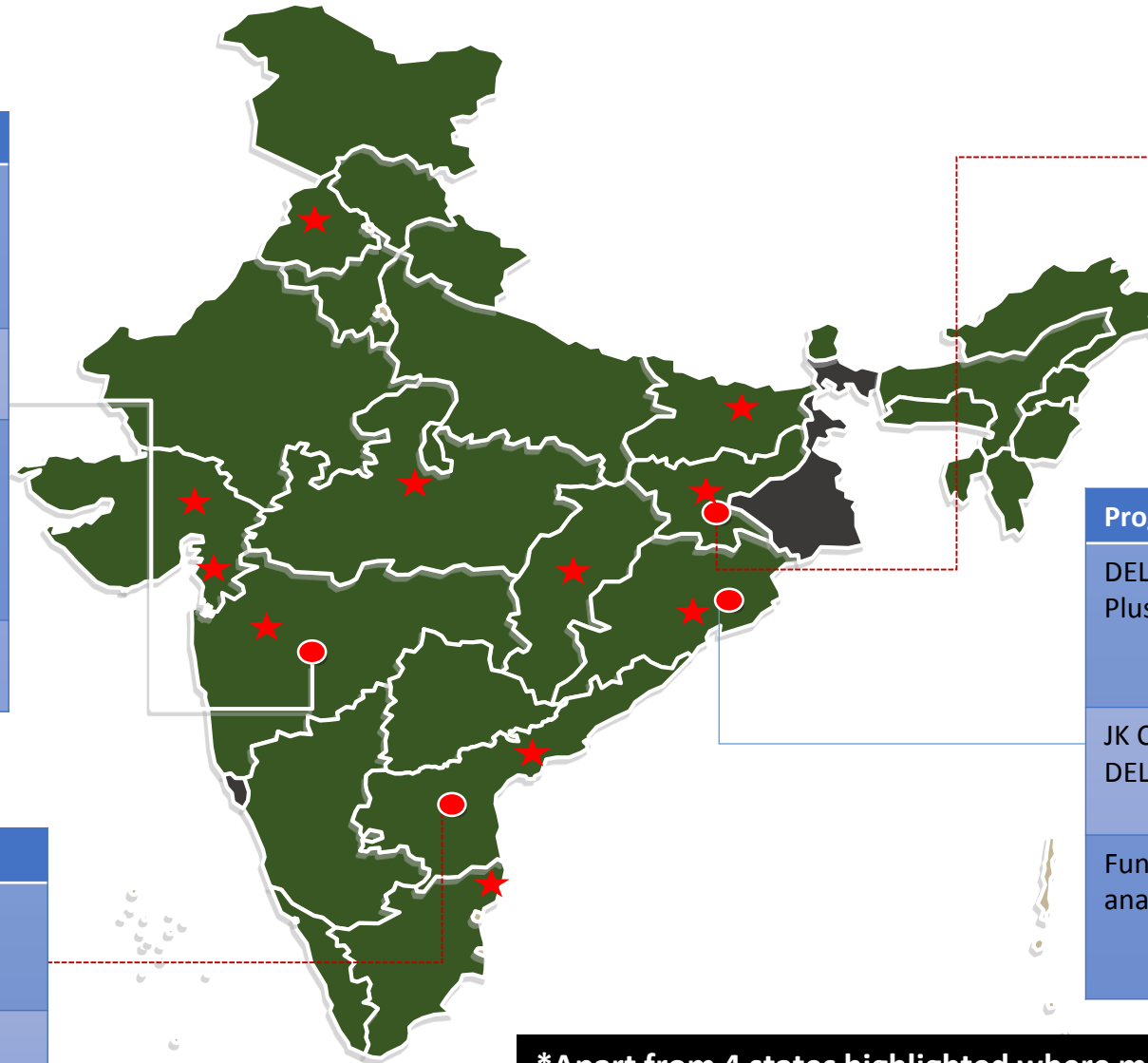| Program	Key Outputs
DELTA Plus(Chandrapur)	• Amount leveraged Rs.95.99 Cr • 21299 households received direct benefits
Chandrapur Expansion	• 1524 VDPs developed
Fund flow analysis	• Round table with key stakeholders, scoping study and perspective papers are shared
DEGC	• Digital tracking of around 900 children daily

Odisha

Program	Key Outputs
DELTA Plus(Balasore)	• Amount leveraged Rs.74.52 Cr • 35550 households received direct benefits
JK Corridor-DELTA	• 242 village development plans created covering a population of 1,80,761
Fund flow analysis	• Round table with key stakeholders, scoping study and perspective papers are shared

Andhra Pradesh

Program	Key Outputs
Fund flow analysis	• Perspective paper and scoping study reports prepared
City Data for India Initiative	• Platinum level of ISO certification completed
DIGIT Platform	• Platform implemented in 110 ULBs in AP

● Rural Intensive

★ Urban Intensive

*Apart from 4 states highlighted where multiple DDG interventions are present, the Transformation of Aspirational District program covers 27 out of 29 states in India and the Data Smart city engagement where we provided centralised support to MoHUA to enable nomination of 100 CDOs

DELTA – Data Evaluation Learning Technology and Analysis

Eg: Chandrapur
500 Volunteers, 3 Talukas, 3 Months, 48,000+ Households surveyed.

Offline & Remote Functionality

Local Language Support

Time Tagging and GPS Tracking

Offline Data Validation

TATA TRUSTS

Approach of the DELTA Framework

Integrating Technology with Traditional Govt. Planning Processes

- Bottom up approach

- Technology paired with traditional methods: *Tab-based, GIS-GPS mapping, PRA tools*

- Resource pool of Central and State Government schemes

- Multipronged approach to development plan: *Household, Village, Area development, Perspective planning*

- Potential human resource for development activities – Around 3500 youth from local villages trained over 12-15 days

1	Understanding Current Status
2	Auto-generated requirements for each village
3	Estimates based on department budgets

📍 Patan | ⓘ Overview | 🌐 Demographics | 🗄 Schemes Outreach | 💳 Economic | 📖 Education | ✚ Health | 👥 Anganwadi | 🏛 Village Development Plan

Select a tehsil ▾   Select a village ▾

Basic Amenities Services	House condition	Pucca houses for BPL households	2	Build 35 Pucca houses for remaining BPL households	Indra Awaz Yojana (IAY)		Rs. 4,550,000
Basic Amenities Services	House condition	Pucca houses for SC households	5	Build 9 Pucca houses for remaining SC households	Ramai Awaz Yojana		Rs. 1,170,000
Basic Amenities Services	House condition	Pucca houses for non BPL & non SC households	36	Build 164 Pucca houses for remaining households	Pradhan Mantri Awaz Yojana (PMAY)		Rs. 21,320,000
Basic Amenities Services	Drinking water source	Households not getting processed water from Tap	250	Processed water tap connectivity for 250 households		Rural Water Supply & Sanitation (RWSS)	Rs. 62,500
Basic Amenities Services	Electrification	Households with electricity	123	Provide power connection to 127 remaining households	Rajiv gandhi vidwati kharan	Electricity Department, MSEB	Rs. 254,000
Basic Amenities Services	LPG connections	Households with LPG connections	25	Provide LPG connection to 226 remaining households	Ujjwala	Ministry of Petroleum and Natural Gas (MoPNG)	Rs. 1,582,000
Basic Amenities Services	Infrastructure – Road	All weather road	Yes		PWD, PMGSY	Ministry of Rural Development (MoRD)	Rs. 0
Basic Amenities Services	Transportation facility	bus stop	Yes		MP & MLA fund		Rs. 0
Basic Amenities Services	Community Places & Functionality	Ration shop	Yes			Department of food and civil supply	Rs. 0
Basic Amenities	Infrastructure – Road	Internal cement road	Yes		Thakar bapa	Ministry of Rural Development (MoRD)	Rs. 0

Village Social Transformation Foundation – Govt. of Maharashtra

CONCEPT
Convergence of Strengths
Section 8 Company
Young India building New India

Convergence of Strengths
- ~**2500 villages** in Maharashtra, ranking low on HDI transformed into **Model Villages** by providing hard & soft infrastructure
- **GoM + top corporates** collaborating and bringing their own strengths and resources to the Mission. eg. Tata Trusts –Health, HUL – sanitation;

Section 8 Company
- Dedicated **Not For Profit company** established to run the Mission professionally
- Each corporate partner is a board member

Young India building New India
- Rural Development Fellows (<30 years) deployed in each village to **drive implementation activity**
- Catalyst of change at the ground by **empowering the village communities**

# Transforming Aspirational Districts with NITI Aayog

India on high growth trajectory; Low on HDI (Ranked 131 of 188 nations-2016)

Significant variations: Inter-State & district

Program attempts to put system in place comparison with State's best and Nation's best,

Real time monitoring mechanism to capture progress

115 Districts selected through transparent process

Ranking of Aspirational districts to spur competition

NITI Aayog (30)
Ministries pool (50)
MHA (35)
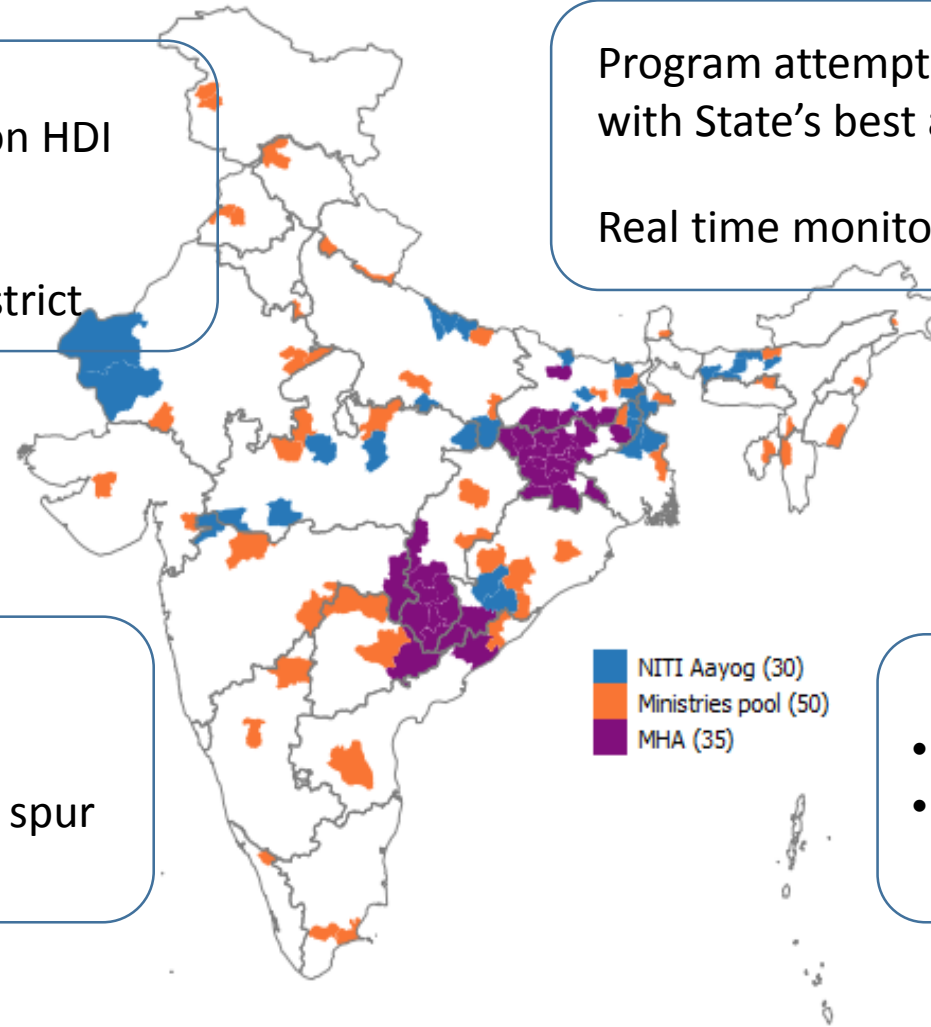
- Capacity of States kept in mind
- Programme covers 28 States

Strategy

FOCUSED APPROACH

Tata Trusts providing Monitoring and Assessment mechanism for 76 districts

Focus Areas

- Health & Nutrition
- Education
- Agriculture + Irrigation
- Financial Inclusion
- Basic: Infrastructure

Implementation

- Implemented by States
- **Senior officers from Centre and State**
- Convergence
- Collaboration

Impact

- Quick outcomes
- Demonstration effect
- Annual Ranking

Competition Among Districts: Annual Ranking of Districts by Niti Aayog

Focus on Technology and Sharing of Best Practices

Urban Engagements - Consolidated

| DIGIT Platform	DataSmart Cities	City Data for India Initiative
• **Ongoing grant to e-Governments Foundation enabled creation of DIGIT platform** – a shared digital infrastructure for urban India. • **DIGIT is the foundation of NUIS** – Trusts are a part of Steering Committee. Blue Book launched for public consultation. • **Demonstrated uptake**: AP, Punjab, North Eastern and Hilly States	• Contribution to **Data Smart Cities Strategy** and Data Maturity Assessment Framework **(DMAF)** • **100 City Data Officers** have been nominated for all smart cities, plan to capacitate and empower them over next FY to fulfill DSC mandate. • **5000 datasets** being populated on **Smart Cities Open Data PortaL, led by PWC** • **Open Data Guidelines** being developed by the Trusts recommended to MoHUA as policy guidelines	• Initiative covers **8 ISO 37120 certified cities** – first competitive benchmarking exercise in India • Learnings have been built into **Ease of Living/Livability Standards** rolled out by MoHUA to benchmark 100 smart cities. • Basis **demonstrated success of City Data Officer deputation** in Pune, the SCM has incorporated **CDO as a recommended role in Smart City HR guidelines.** • **15 hours e-learning content on urban DDG being developed** for potential capacity building of CDOs.

DIGIT Platform

The National Urban Governance Platform to deploy Digital Governance across India at scale and speed
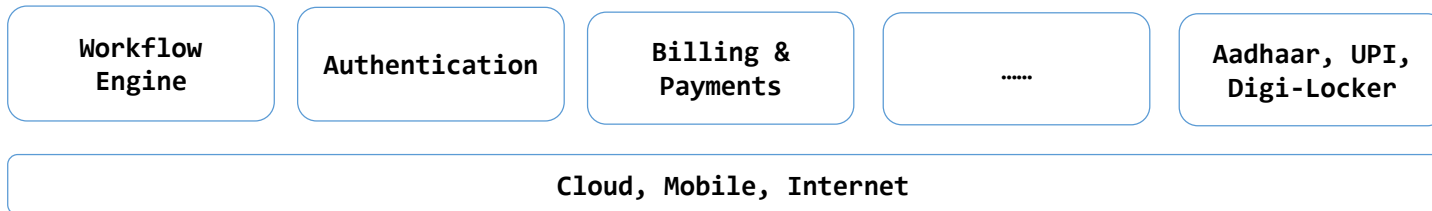
- Configure/Customize/Extend Reference Apps
- Build Own Portal and Apps
- Real time standardized data
- 3rd Parties can build innovative apps
- Secure and Access Controlled Data
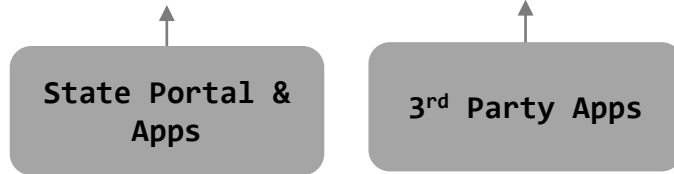
- 21 Urban Governance Applications
- Workflows, Reports and Dashboard
- Multilingual UI
- Configuration & Customization Tools
- Master Data Management Utility

The NUGP will have a multitenant architecture, wherein a single instance of the platform can be reused and customised by state and local governments to configure, contextualize and extend the NUGP to suit their needs.

Key Benefits

| State Portal & Apps | 3rd Party Apps | | Urban App Suite | NUGP Portal |

NATIONAL URBAN GOVERNANCE PLATFORM

| Workflow Engine | Authentication | Billing & Payments | …… | Aadhaar, UPI, Digi-Locker |

Cloud, Mobile, Internet

An API-Based Platform
- Built on available internet infra and Digital India platforms
- Identity and role management
- Urban context aware services
- Modular and Extensible
- Business Process Frameworks (Property tax, Public Grievance Redressal, SWM….)
- Reference Master Data Management Framework

CITIZENS
- Digital, Presence-less, cashless services
- Responsiveness and transparency in service delivery & transactions

STATE GOVERNMENTS
- Improve ease of doing business
- Targeted policy making and fund disbursements

URBAN LOCAL BODIES
- Data Driven Governance & decisions making
- Enhance municipal revenues
- Higher efficiency leading to better services

FIELD EMPLOYEES
- Reduced workload through automation
- Streamlined workflows to drive productivity

CENTRAL GOVERNMENT
- Standardised granular data on urban India
- Data driven management of schemes and missions

City Data for India Initiative

❑ **Project Brief** - The initiative engages with identified ULBs to potentially break down data silos in individual government departments, by way of advocating a standardized data collection framework (ISO 37120). This is followed by demonstrating actionable pilots on data governance, architecture and quality; and institutionalization of a City Data Officer to take the urban innovation mandate forward

❑ **Project Vision** – To empower city leaders, decision-makers and citizens to make data-informed decisions to improve city planning, infrastructure investment and operational performance management using ISO standardized, comparable city data.

❑ **Partners** - World Council on City Data and PwC India Ltd

❑ **Coverage** - 8 Indian cities – Pune, Surat, Jamshedpur, Ahmedabad, Bhubaneswar, Chennai, Vijayawada & Bhopal

❑ **Project USP**
   ❑ Uniquely placed to develop a network of ULBs in India with standardized, comparable data sets(internal & external) for effective municipal governance; and thereby promote cross learning within ULBs
   ❑ Positioned to shape the data engagement and management efforts of the ULBs through the CDO, including promotion of open data, and data driven research and innovation.

ISO 37120 – INDICATORS FOR CITY SERVICES AND QUALITY OF LIFE

ISO 37120 includes **100** indicators (46 core and 54 supporting),
which are structured around the following **17** themes:

Economy	Governance	Telecommunications
Education	Health	Transportation
Energy	Recreation	Urban Planning
Environment	Safety	Wastewater
Finance	Shelter	Water & Sanitation
Fire & Emergency Response	Solid Waste	

WHO REPRESENTS MY CITY?

Women as a percentage of total elected to city-level office

50

Surat
India

ISO 37120

GOLD CERTIFIED
WCCD
2016

WORLD COUNCIL ON CITY DATA

WCCD | WORLD COUNCIL ON CITY DATA

City Data for India Initiative – ISO 37120 certification of ULBs related to urban quality of life of citizens.

Out of 100 Indicators, developed ULBs had **60% data sets collected, 25% indicators extrapolated and 15% were not present.**
Developing ULBs such as Bhopal - **50% data sets collected, 25% extrapolated and 25% not present.**

Major Learnings

a) Siloed Data Sets at a Municipal Level affecting decision making
b) Data sets external to a ULB, affecting the QOL of citizens – Need to integrate into ULB Decision Making mechanisms
c) Data Extrapolation from State to District to City Level required due to unavailability of granular data
d) Non availability of Real Time Data leading to 2011 Census data usage for several indicators
e) Definitions of indicators not standardised across ULBs leading to issues in benchmarking

Case in Point

1. Non Municipal Data Sets include **Public Safety, Emergency Services and Environmental indicators**
2. Indicators which required extrapolation – **Percentage of Youth, Senior Citizens, Avg HH Income, Size of Informal Settlements**
3. Indicators derived from Census 2011 data – **Youth Unemployment Rate, Number of Cell Phone, Landline & Internet Connections/100,000, City Population, Density**
4. Non Standardised Indicators across ULBs – **Fire & Emergency Response Times, Noise Levels(Day – Evening – Night), Assessed value of commercial and industrial properties as a percentage of total assessed value of all properties, Percentage of City's Solid Waste disposal mechanisms based open dump, sanitary landfill, incinerator**

City Data Officer – Genesis, Role Summary & Pilot Learnings

Objective: Empower Urban Local Bodies and associated Stakeholders to move towards a data-reliant culture of decision making by shaping and bolstering their data engagement & management strategies

Genesis & Role Summary

- **Lack of Data Standardization** - Deployment of departmental/municipal level Enterprise Resource Planning(ERP) Systems – with legacy systems operating in silos

- **Operationalization of Integrated Command & Control Centers in Smart Cities identified as a challenge** across the board - gaps in the connecting bridges between the ICCC and relevant department

- Deployment of dashboards at the municipal level for data integration and visualization, while **departmental functionaries continue to use manual systems for collection and digitization of data**.

- **Led to a demand based deputation of a City Data Officer** at Pune Municipal Corporation(enabled via partnership with TCS) in 2017.

Learnings – CDO Deputation at PMC

- **People management and change management skills were equally critical to a CDO's functioning,** as were tech & data handling skills

- **Ownership of City** is critical in ensuring success of the role

- **Need** to mobilize **citizen's groups, civil society organizations, academia, research entities and corporates** to participate in the data transformation journey of the corporation

- A certain level of fluidity to the CDO engagement framework is expected to be able **to add value to the city's data enabled governance journey** as is, while envisioning a short and medium term plan for the city.

- Takes **a minimum of two years** to demonstrate the complete set of possibilities

The Pune Story – Best Practices post CDO Deputation

Activation of the Open Data Portal

- Open Data Portal activated with 450+ datasets published
- Increasing citizen centric engagements with open data through hackathons and awareness(560+ monthly downloads) (*http://opendata.punecorporation.org*)

Data Governance Frameworks

- Technical Insights to Consortium related partnerships such as the Toilet Board Coalition on the Sanitation front
- Data Governance Guidelines developed for increased inter departmental convergences

Establishment of Convergences

- Engagements with Academic Entities such as Pune University, CEE, CoEP, IEEE and student bodies leading to publications in peer reviewed journals(Property Tax, Environment, Health)
- Engagements established with civil society organizations such as Mashal, Shelter Associates, Global Shapers and data networks such as DataMeet

Supporting Development of Data Smart Cities

Identification & Onboarding of CDOs

- In alignment with NDSAP, CDOs are being identified and onboarded on the Open Data Portal
- CDO hiring and governance structures institutionalized in the Smart Cities SPVs

Data & Platform Integration

- 50 datasets across domains are being collated, sanitized and integrated on a platform
- Creating possibilities of research, innovation, and usage by varied stakeholders in the academic, industry and civil society circles
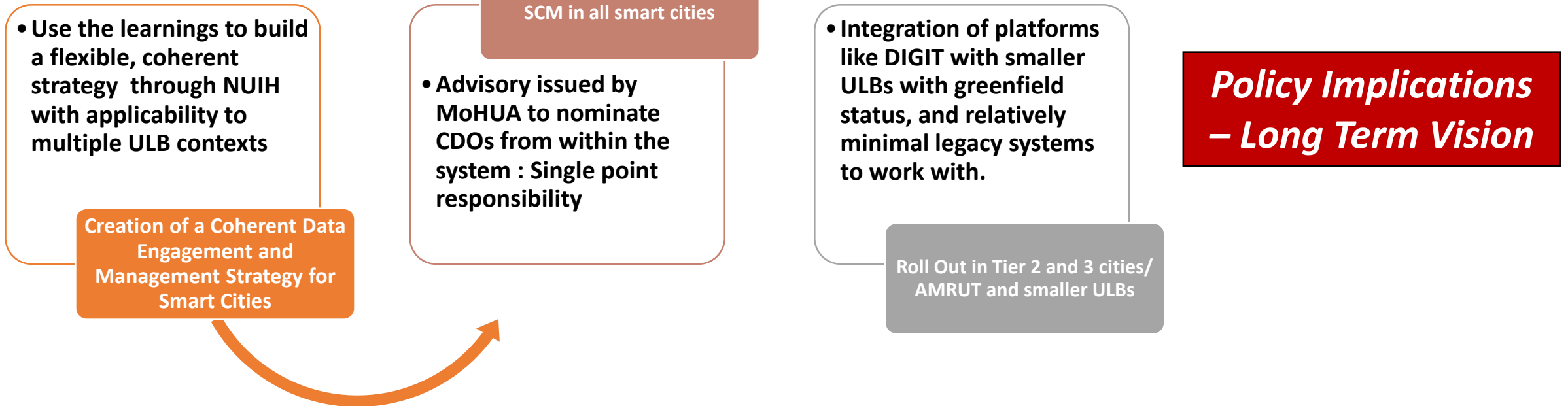
Capacity Building

- E-Learning Modules being developed for mid to senior level municipal officials on building departmental and cross departmental data consumption, correlations, usage and understanding.
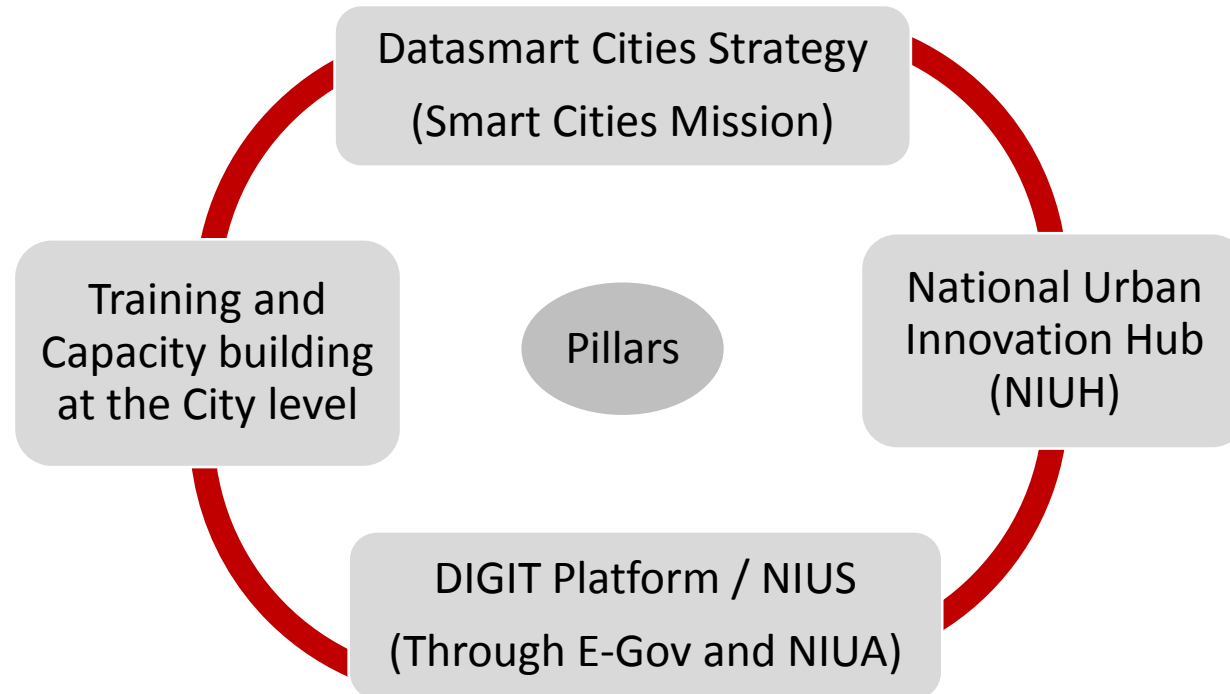
Getting Embedded into MoHUA plans

Uptake

- ✓ Instituting and capacitating the role of the **CDO in 100 smart cities** with appropriate review, reporting structures. Setting up a centralised Mission Data Officer framework
- ✓ Early investments in **e-Government Foundation** – now reaping benefits - NE and Hilly states.
- ✓ Develop **open data policy guidelines and frameworks**, data strategies and **blue books** for reference.

Integration of CDO within the structre being rolled out under SCM in all smart cities

- Use the learnings to build a flexible, coherent strategy through NUIH with applicability to multiple ULB contexts

Creation of a Coherent Data Engagement and Management Strategy for Smart Cities

- Advisory issued by MoHUA to nominate CDOs from within the system : Single point responsibility

- Integration of platforms like DIGIT with smaller ULBs with greenfield status, and relatively minimal legacy systems to work with.

Roll Out in Tier 2 and 3 cities/ AMRUT and smaller ULBs

Policy Implications – Long Term Vision

From Pilots - to Partnerships at the National Level

Datasmart Cities Strategy
(Smart Cities Mission)

Training and Capacity building at the City level

Pillars

National Urban Innovation Hub (NIUH)

DIGIT Platform / NIUS
(Through E-Gov and NIUA)

Multi-pronged approach to System strengthening and eco-system activation

THANK YOU

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Performance Benchmarking towards Effective Governance

Objectives of Performance Benchmarking(PB) in Governance
- *Ranking governance units basis performance in certain outlined domains, thereby measuring the effectiveness, efficiency and quality of public service delivery and administration structures.*
- *Baselining performance data to capture incremental progress and impact on a regular basis, while promoting a spirit of competition within governance units.*

Governance based PB Indices in India

- **Urban Specific Indices -** Liveability Index(MoHUA, GoI), Annual Survey of India's City Systems(ASICS) Survey(Janagraha)
- **Thematic Indices -** SDG Index(Niti Aayog, GoI), , DIPP Ease of Doing Business Rankings , Annual Status of Education Report(ASER – Pratham &), Swachh Sarvekshan(MDWS, GoI)
- **Generic Indices -** Public Affairs Index, Human Development Index, Social Progress Index.

Challenges - PB Indices in India

- **Data Extrapolation** to fit index requirements(eg: state/district level data used for city level indexes)
- **Multiple generic** and **thematic indices** with **overlapping indicators** by govt. and third party agencies
- **Linking Index Findings & Insights to Implementation**
  - Baselining index data to capture progress on a real time basis at regular frequencies
  - Link performance and index reporting to implementation plans and incentive funding for development of governance units

Translated into the Liveability/Ease of Living Index by MoHUA

The Liveability Index is a credible governance measure to have to fulfil the following mandates:

Initiate Performance Benchmarking at a ULB Level

Empower the city administration to act as a comprehensive administrative entity, replete with disaggregated ward level data for decision making

Build breath and depth to support national and international mandates such as the SDGs

Source: IPE Global