Systemic impact of performance assessment system for consistent monitoring of Water and Sanitation service levels
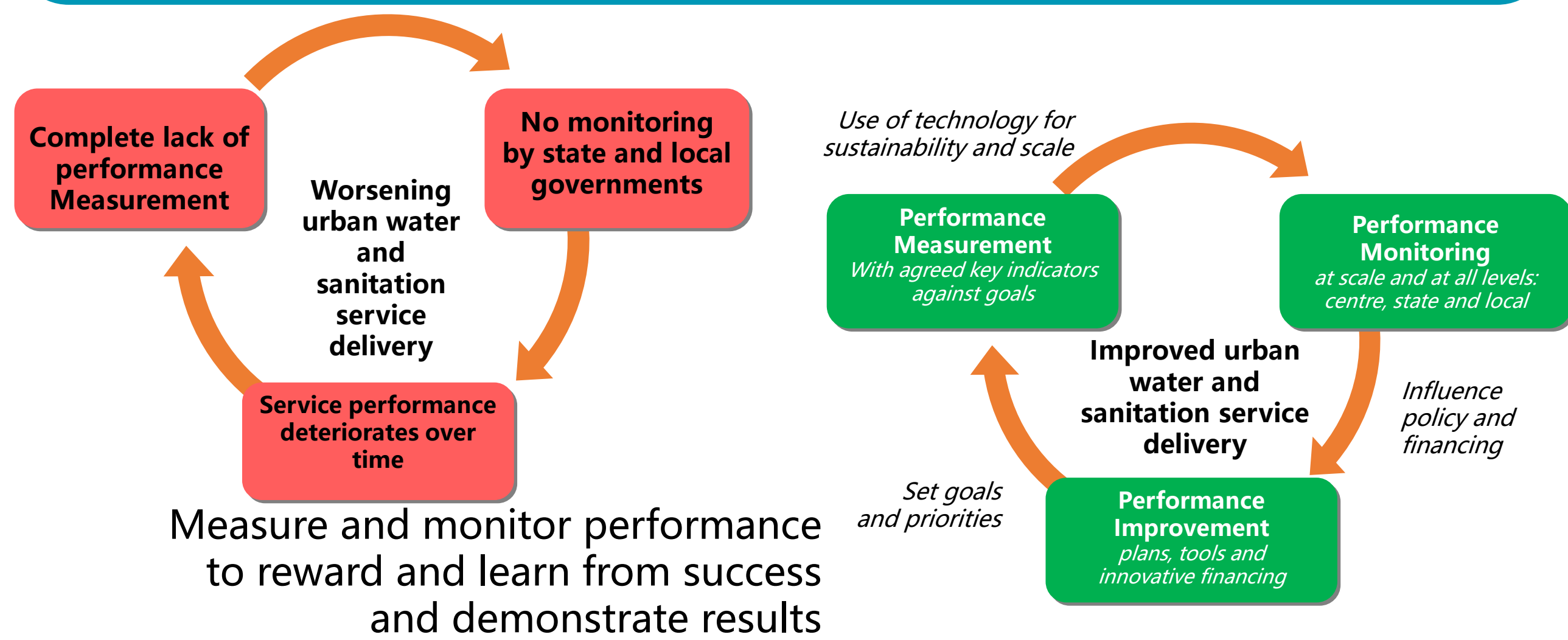
Dhruv Bhavsar, Jaladhi Vavaliya, Dhruv Bhavsar, Dhwani Sheth
Dinesh Mehta, Meera Mehta

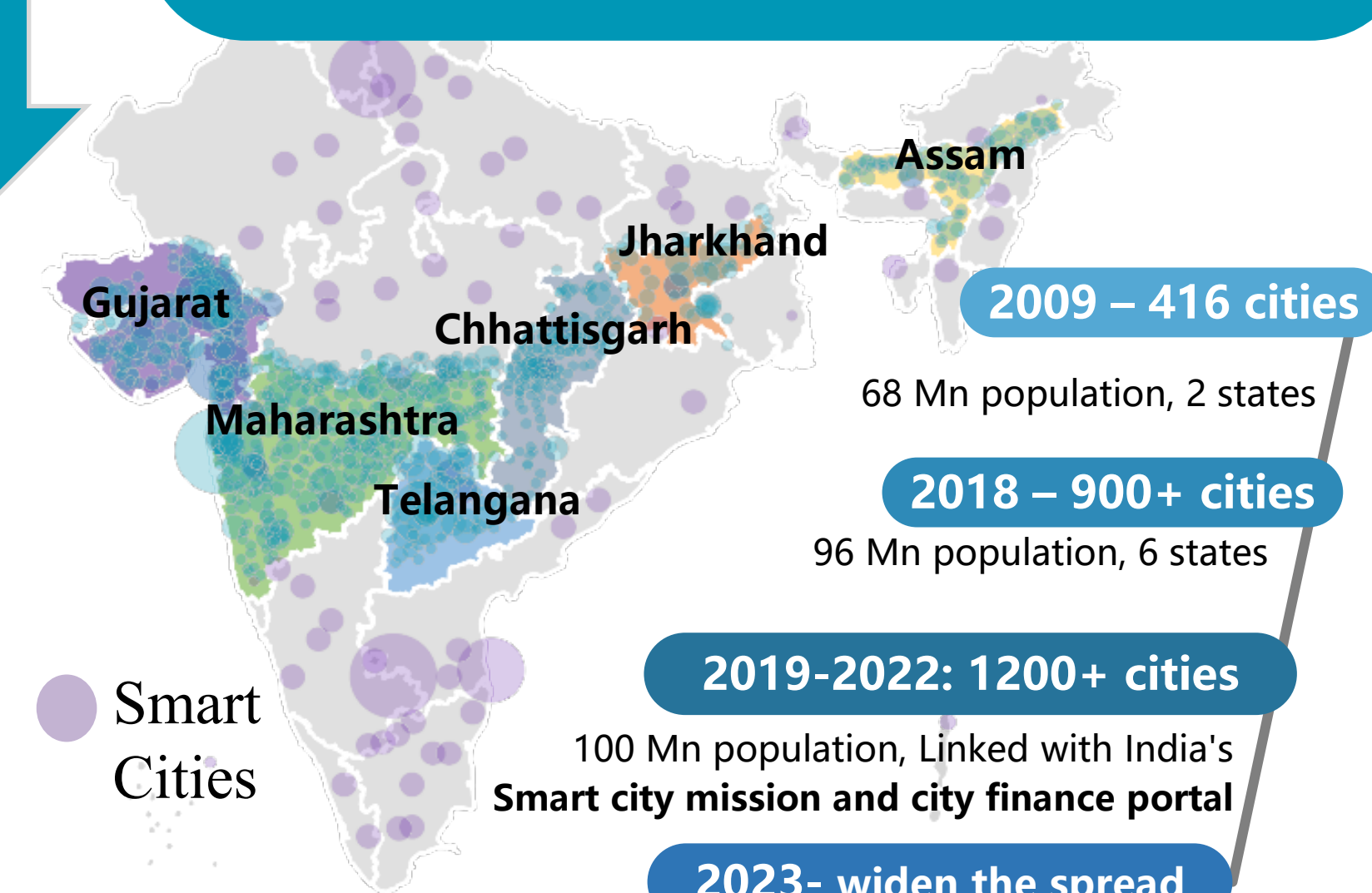"You cannot improve what you cannot measure!"

Water Supply   Wastewater   Solid waste

From infrastructure creation to service delivery

Complete lack of performance Measurement → No monitoring by state and local governments → Worsening urban water and sanitation service delivery → Service performance deteriorates over time

Measure and monitor performance to reward and learn from success and demonstrate results

Use of technology for sustainability and scale

Performance Measurement *With agreed key indicators against goals* → Performance Monitoring *at scale and at all levels: centre, state and local* → Improved urban water and sanitation service delivery → Influence policy and financing → Performance Improvement *plans, tools and innovative financing* → Set goals and priorities

www.pas.org.in   p a s performance assessment system

Journey from paper-based systems to digital system"

One of the largest databases for urban water and sanitation globally

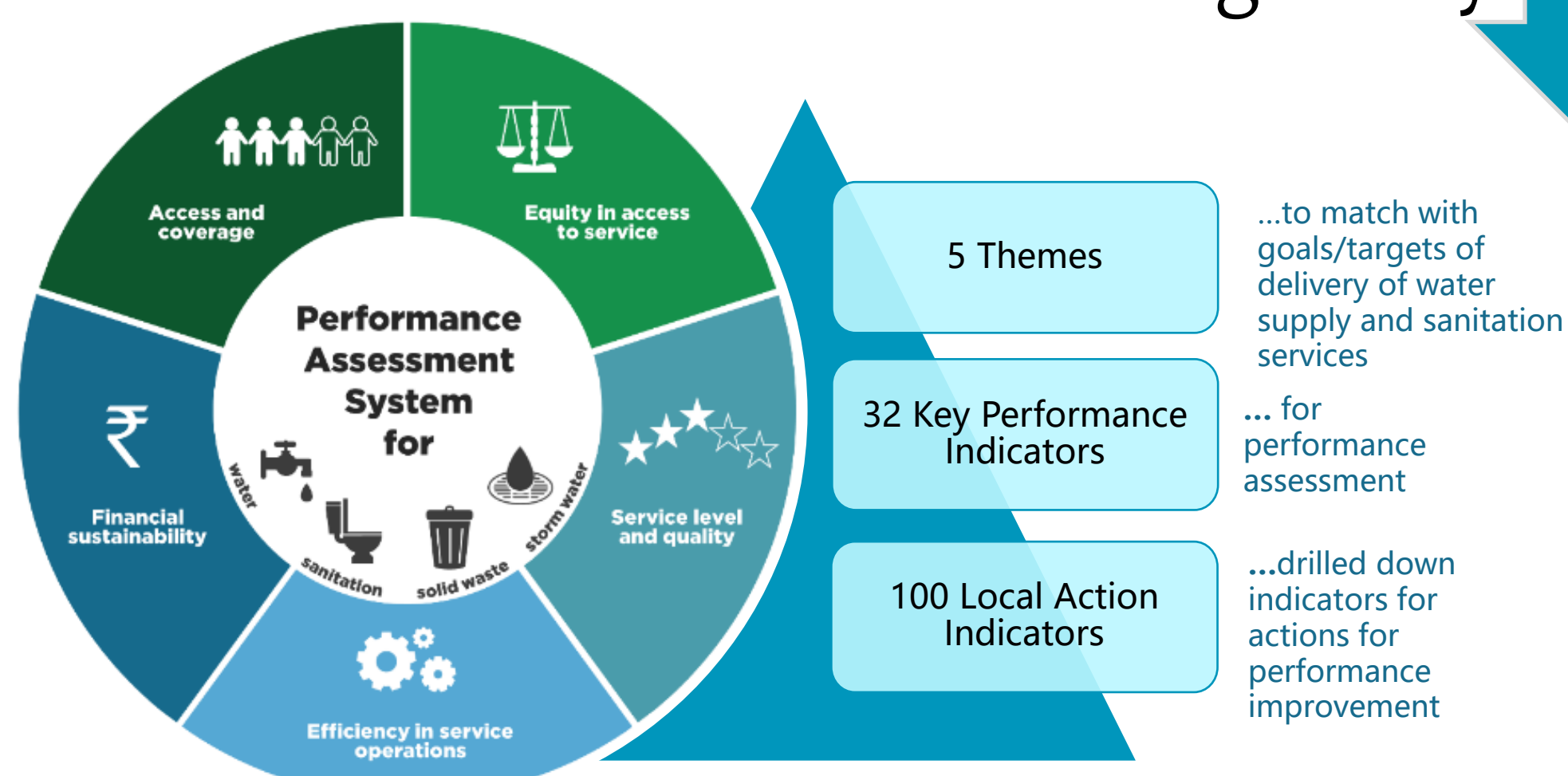## PAS Framework and PAS online portal

NATIONALLY ALIGNED
With national Service Level Benchmarking initiative

TECHNICALLY SOUND
Review of International and Indian efforts, Stakeholder consultations, Pilot studies

ANNUAL CITY LEVEL MONITORING
Online module – self reporting by city governments

PAS Project1

Performance Assessment System for — Access and coverage, Equity in access to service, Service level and quality, Efficiency in service operations, Financial sustainability

5 Themes	...to match with goals/targets of delivery of water supply and sanitation services
32 Key Performance Indicators	... for performance assessment
100 Local Action Indicators	...drilled down indicators for actions for performance improvement

15 years of PAS at scale

Assam, Jharkhand, Gujarat, Chhattisgarh, Maharashtra, Telangana

Smart Cities

2009 – 416 cities — 68 Mn population, 2 states
2018 – 900+ cities — 96 Mn population, 6 states
2019-2022: 1200+ cities — 100 Mn population, Linked with India's **Smart city mission and city finance portal**
2023- widen the spread — In discussion with MoHUA and other Indian states and international developing countries like Nepal and Zambia

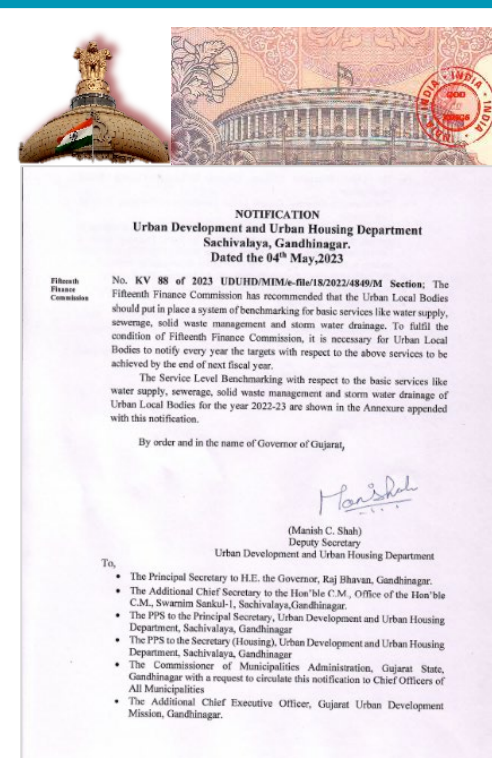## Framework suited to local context - Added lens of equity, slums and on-site sanitation

Indicators to account for onsite sanitation systems

1. Coverage of toilets
2. Coverage of adequate sanitation systems (Septic tanks + sewe connections)
3. Collection efficiency of sanitation system (Desludging+ sewerage + grey water)
4. Adequacy of treatment capacity of sanitation system (FSTP + STP)
5. Quality of treatment of sanitation system (FSTP+STP)
6. Extent of reuse and recycling in sanitation system (FSTP + STP)

Indicators to track equity in service delivery

Coverage of toilets, water supply connections, door to door solid waste collection in slums

Coverage of sewerage connections in slums

What set PAS apart?

Inclusive
- Indicators include onsite systems
- Indicators on equity in service
- Available in local languages

Data reliability
- Standardized system to report on quality and reliability of indicators based on source of data
- Inbuilt validation checks

Assessing safe and sustainable services across the full service chain
- Monitor service provision rather than just infrastructure - Efficiency in service operations, service level and quality

Government ownership and responsibility
- Work at scale annually – no one-off pilots!
- Self assessment portal – information reported by officers from city governments
- Indicators on human resources, complaint redressal and resource planning and management

Financial sustainability
- Indicators on Financial sustainability for cost recovery, collection efficiency etc.

Scalable, impactful and sustainable
- Used by 1000+ cities over 10 years
- Reliable, easily accessible and consistent state level data base
- Used for different purposes at city and state levels
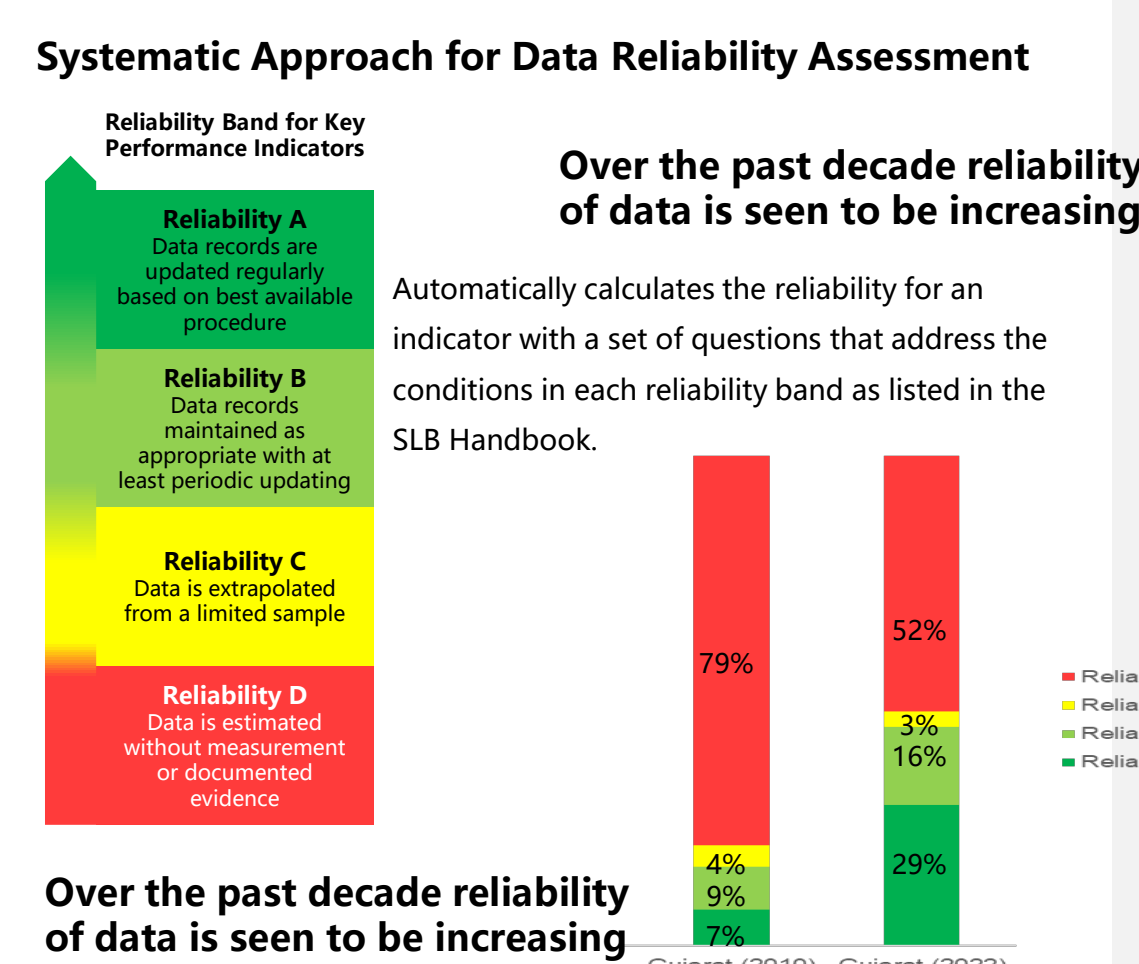- ease for states and cities to meet compliance requirements

Financial incentives for sustaining PAS - Institutionalized through intergovernmental fund transfers

- The 13th, 14th and 15th Finance Commission of the Government if India endorsed operationalizing of SLB Process. It introduced a **performance-based grant**
- State Government must notify or cause all ULBs to notify by the end of a fiscal year the service standards and targets
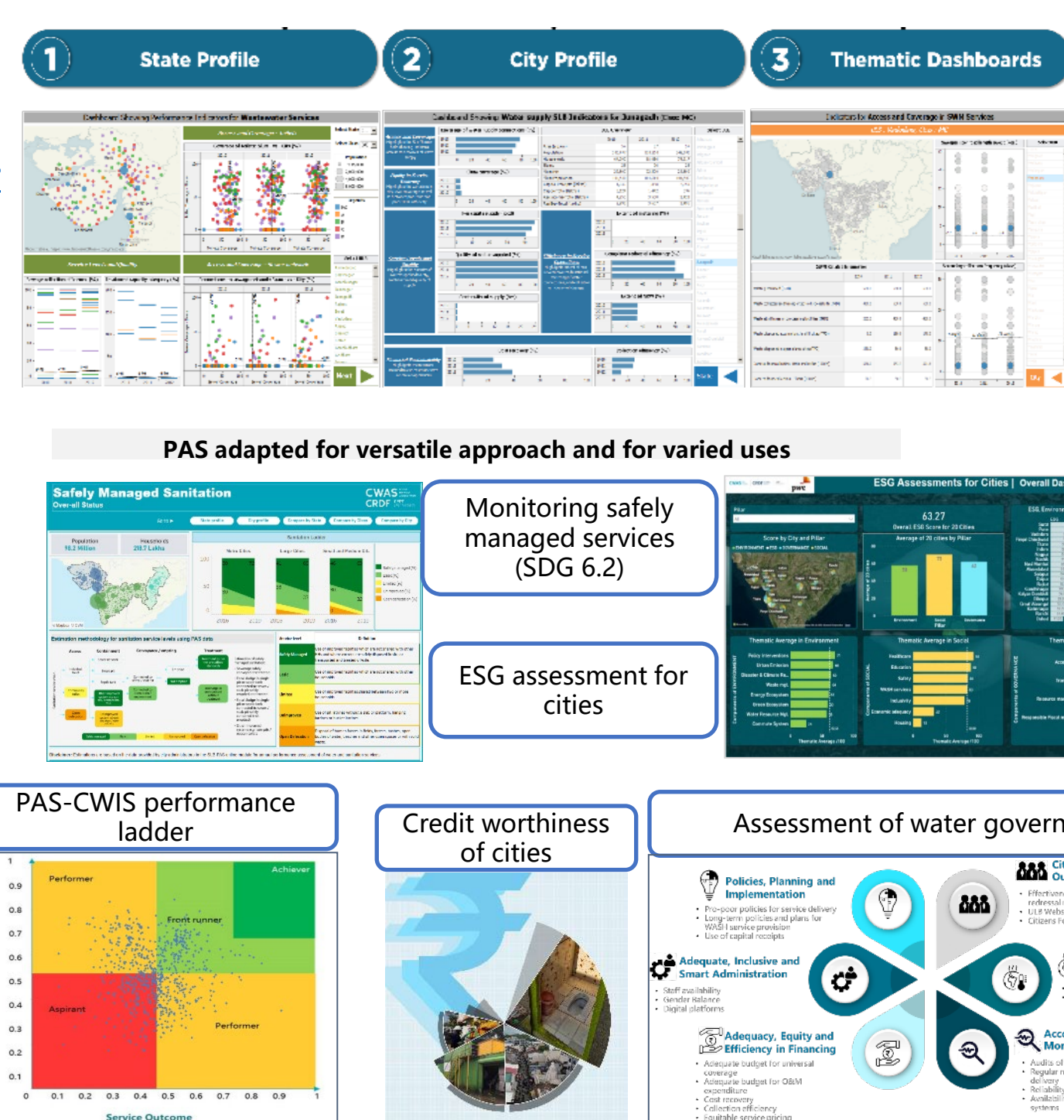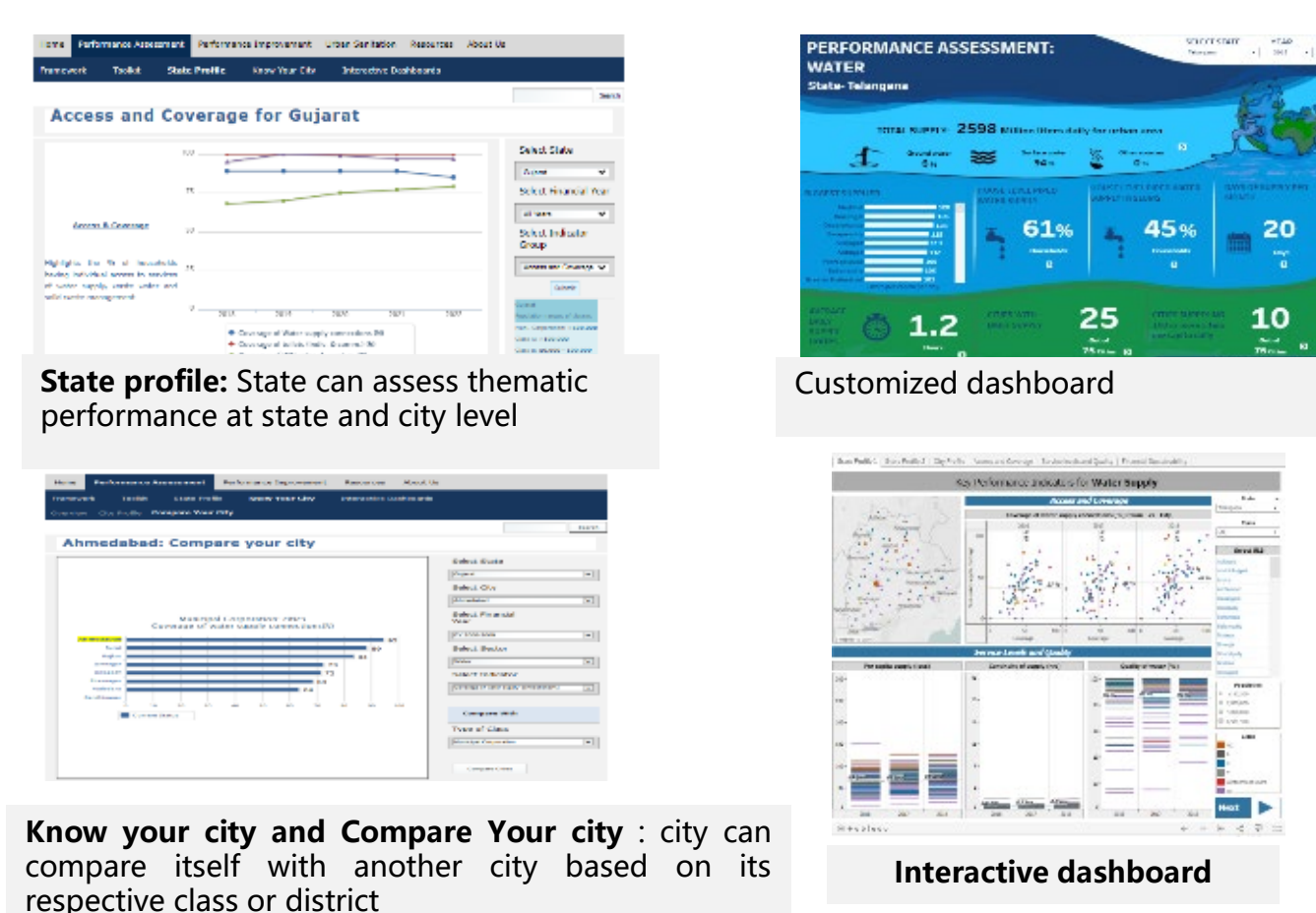- A notification must be published in the state gazette to ensure compliance

13th FC: ~10 Billion USD — 35% performance grant
14th FC: ~10.5 Billion USD — 20% performance grant
15th FC: ~14 billion USD — performance linked grants

Gradual but consistent strengthening of data quality

Systematic Approach for Data Reliability Assessment

Reliability Band for Key Performance Indicators

Reliability A Data records are updated regularly based on best available procedure
Reliability B Data records maintained as appropriate with at least periodic updating
Reliability C Data is extrapolated from a limited sample
Reliability D Data is estimated without measurement or documented evidence

Over the past decade reliability of data is seen to be increasing
Automatically calculates the reliability for an indicator with a set of questions that address the conditions in each reliability band as listed in the SLB Handbook.

Gujarat (2010): 79% — 4%, 9%, 7%
Gujarat (2022): 52% — 3%, 16%, 29%

Reliability D, Reliability C, Reliability B, Reliability A

Over the past decade reliability of data is seen to be increasing

Dashboards for different user groups, and enable time series comparisons across cities

- Time series comparisons
- Review the year wise improvement of the ULB using know your city tab
- State can assess thematic performance on state profile tab.
- Identify areas for improvement- using interactive dashboards

1 State Profile   2 City Profile   3 Thematic Dashboards

State profile: State can assess thematic performance at state and city level

Customized dashboard

Know your city and Compare Your city : city can compare itself with another city based on its respective class or district

Interactive dashboard

PAS adapted for versatile approach and for varied uses

Safely Managed Sanitation

Monitoring safely managed services (SDG 6.2)

ESG assessment for cities

PAS-CWIS performance ladder

Credit worthiness of cities

Assessment of water governance

Wide range of users – Towards data driven governance

GOVERNMENT AGENCIES
City/State governments, SFCs for policy making, assessments for improvement plans, reporting

FINANCIAL INSTITUTIONS
ADB, World Bank - information for project identification, selection and formulation

REGULATORS
CAG, State Technical Boards - To assess regulatory compliance

RESEARCHERS
Academicians, students of planning or technology colleges

CONSULTANTS
For consulting assignments in preparation of Vision documents, City Development Plans, City Sanitation Plans

Research papers journals   International reports   Government reports

Various publications on Journey of PAS

City water compendium, Making cities water positive, 2022

Guidelines for planning, design and implementation of 24x7 water supply systems

CWAS CENTER FOR WATER AND SANITATION   CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION   CEPT UNIVERSITY   IWA the international water association

cwas.org.in   pas.org.in   CEPT_CWAS   cwas.cept   cwas.cept   cwas.cept