



Public data systems for measuring WASH service levels in cities in India (SLB-PAS)

March 24, 2023

PAS - a tool to measure and monitor service outcomes and sustainability

From infrastructure creation to service delivery



Journey from paper-based systems to “organized digital data”



NATIONALLY ALIGNED

With national SLB initiative

ANNUAL CITY LEVEL MONITORING

Online module - self reporting by city governments

FRAMEWORK SUITED TO LOCAL CONTEXT

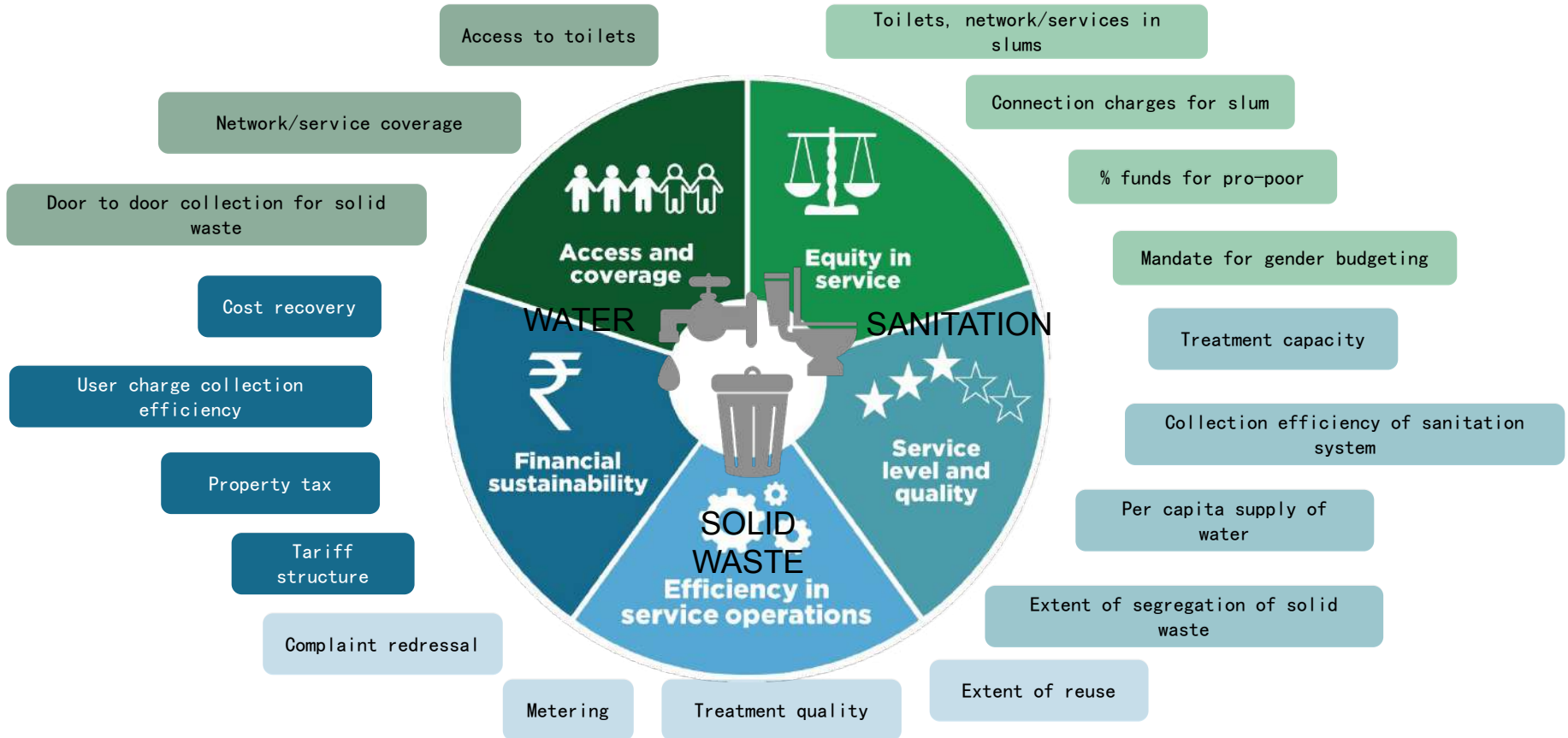
Added lens of equity, slums and on-site sanitation



Industry-academic partnership

tcs TATA CONSULTANCY SERVICES

PAS framework – key themes, indicators and data points for WASH

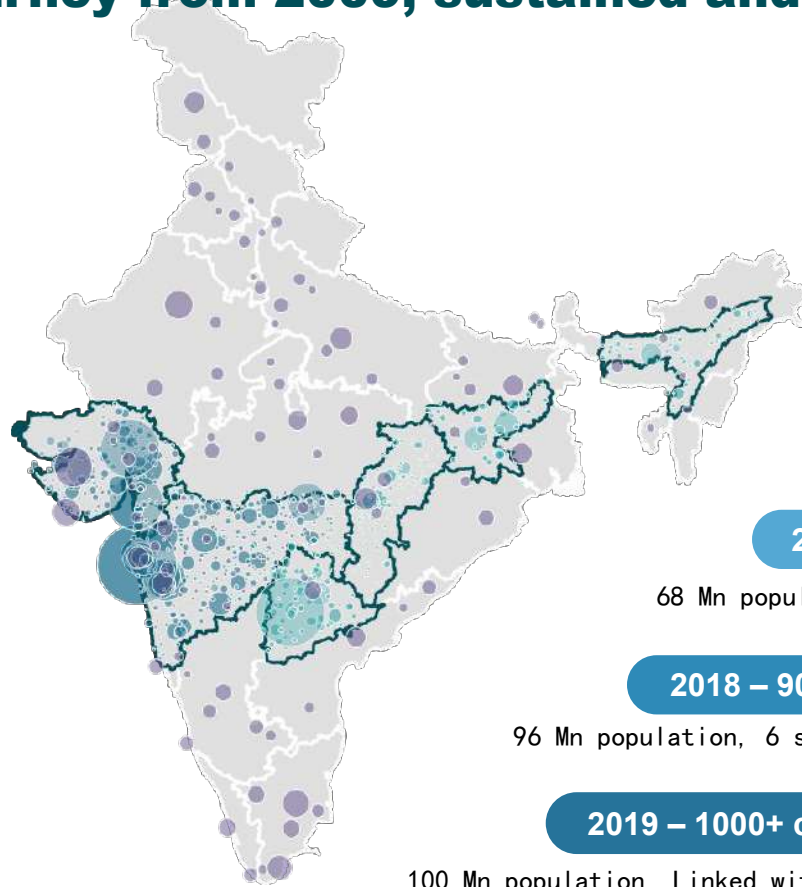


Achieving scale in India – journey from 2009, sustained and growing

No Pilots...operate at Scale

Mainstreamed by working with all three tiers of Governments

One of the largest time series databases for urban water and sanitation



2009 – 416 cities

68 Mn population, 2 states

2018 – 900+ cities

96 Mn population, 6 states

2019 – 1000+ cities

100 Mn population, Linked with
India's Smart city mission

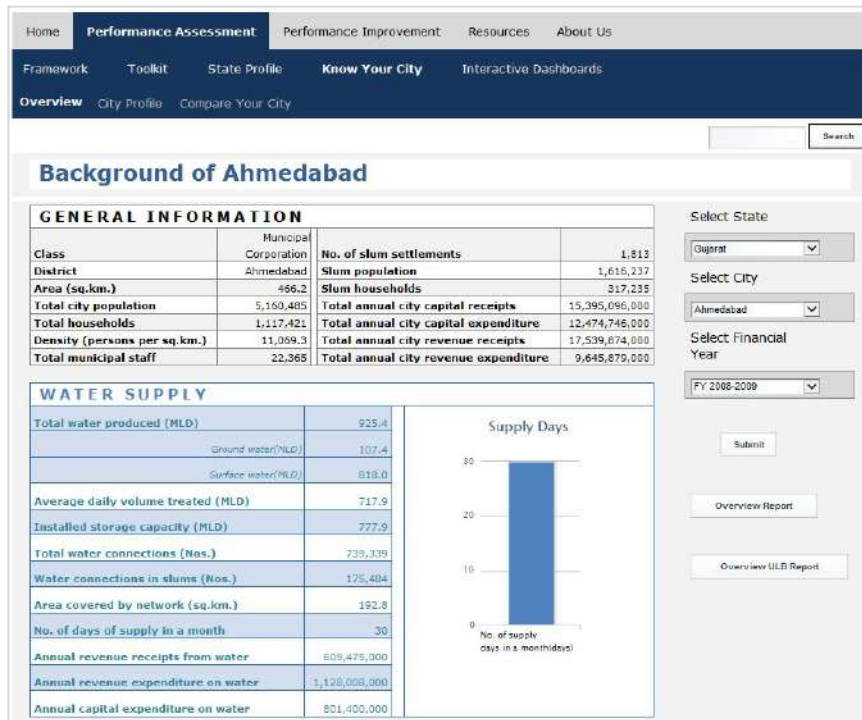
Use of PAS information – various dashboards available

- ✓ Thematic performance - state profile
- ✓ Timeseries information
- ✓ Compare with peers
- ✓ City profile - know your ULB
- ✓ Identify areas for improvement- interactive dashboards



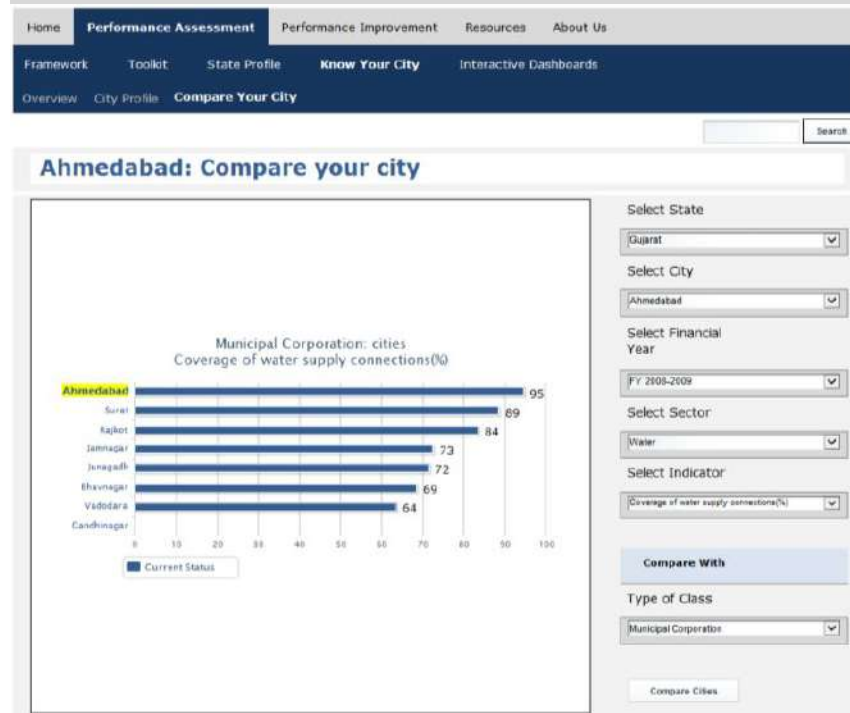
Use of PAS information – various dashboards available

City profile



Know your city and compare your city helps understand basic details and SLB indicators

Allows comparison with peers, based on class or state



Use of PAS information – a range of applications

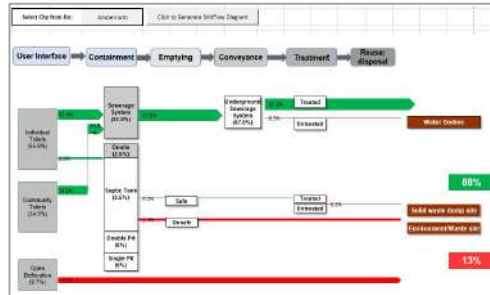
SLB-PAS data for support in policy-guidance, programme strategy and accessing inter-governmental grants



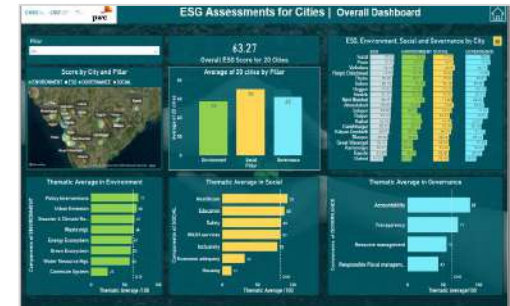
Localising SDG – Using PAS for monitoring SDG 6.2 at local level



Shit Flow Diagram can be generated from PAS – tool developed



ESG assessments and creditworthiness assessment for Indian cities – combining PAS with other data sources



Data system strengthening efforts at local level...

Maha Sanitrack



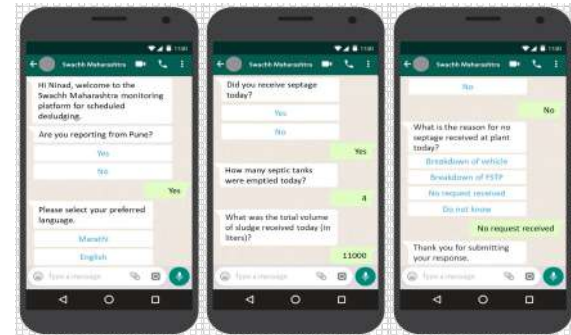
Maharashtra FSTP Dashboard



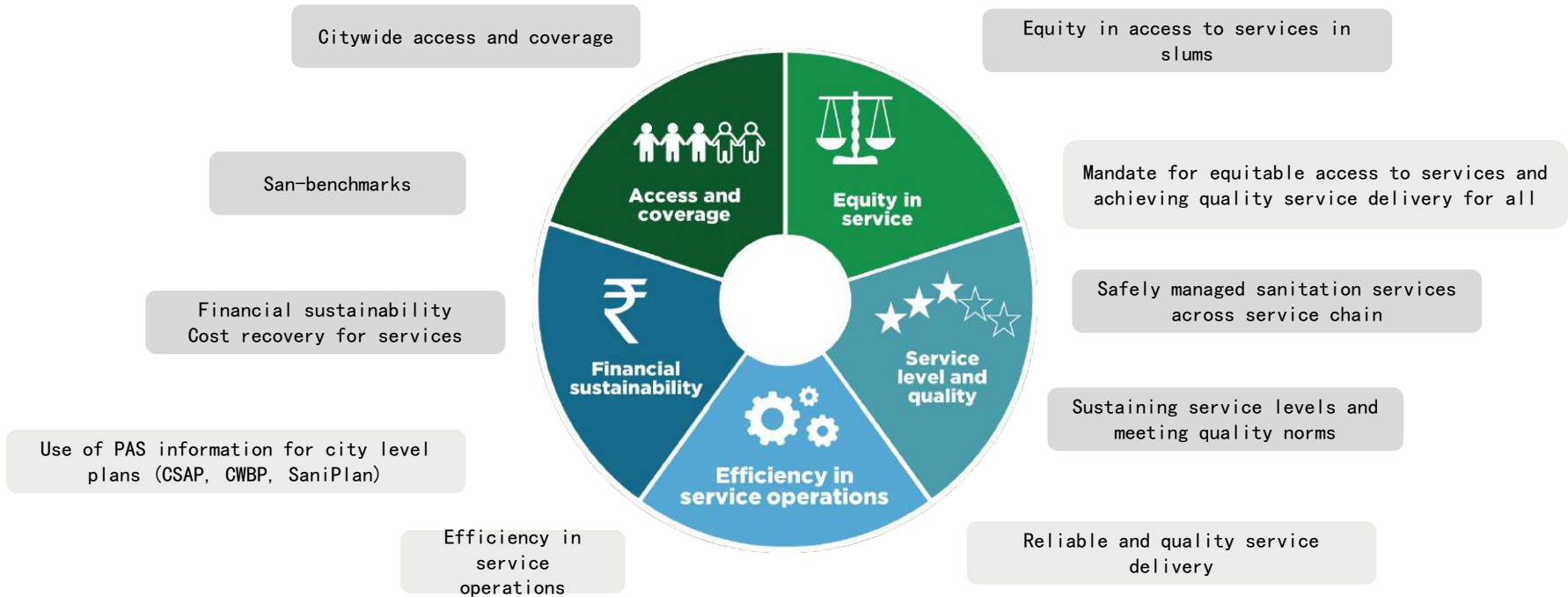
SaniTab



Whatsapp Chatbot and IVR for tracking daily operations



PAS framework capturing key CWIS elements



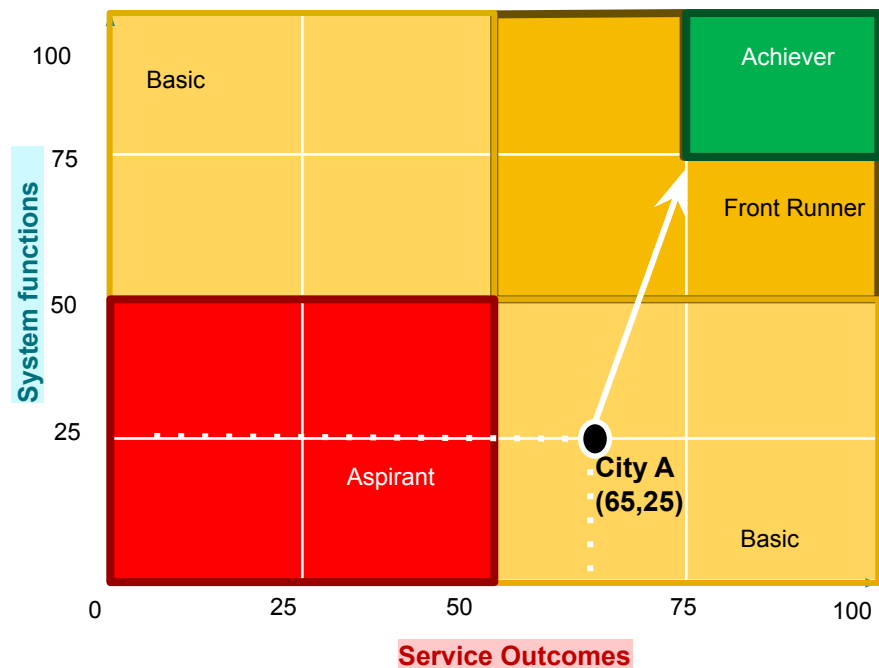
PAS framework capturing key CWIS elements



Monitoring CWIS at scale

Tracking performance on service outcomes v/s system functions using PAS information

PAS- CWIS Performance quadrants



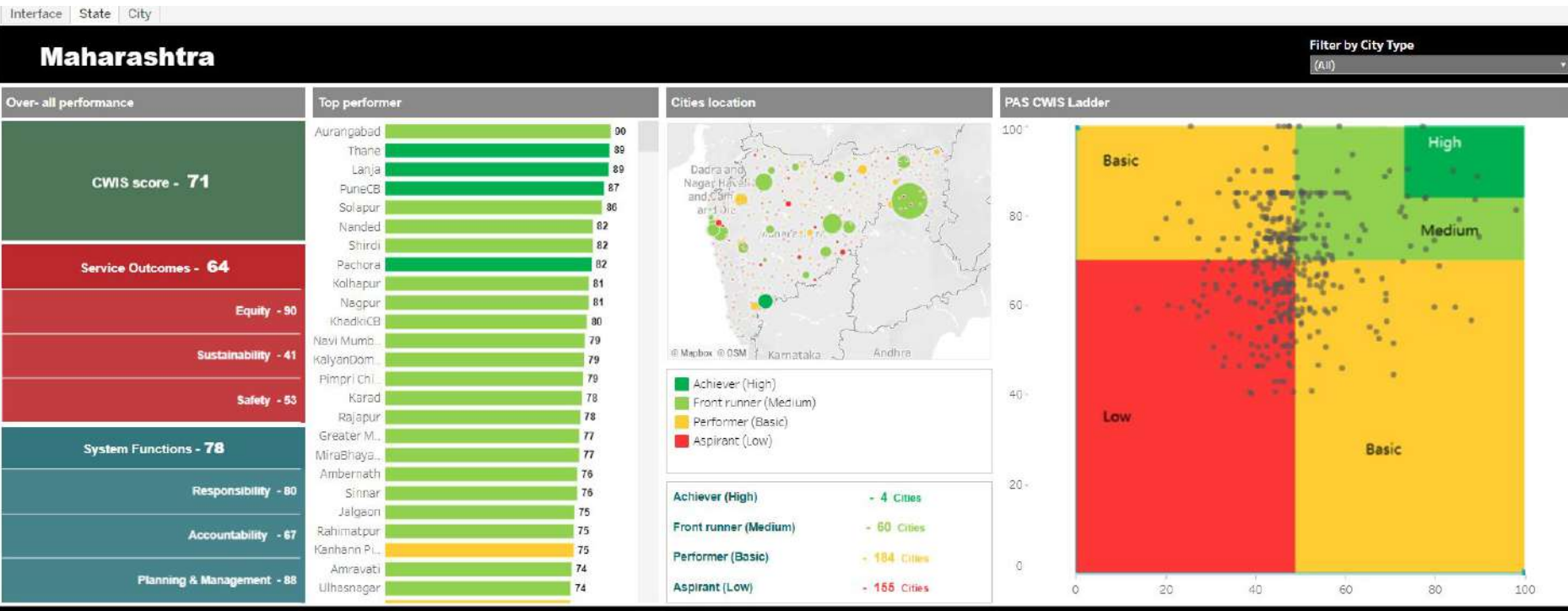
Performance quadrant assessment as an advocacy tool to support decision making for achieving CWIS goals

- Developing city/state level sector reform plans
- Developing sectoral investment plan - resource planning and mobilization
- Thematic service level improvement plan based on the quadrant scores

	Performance	System Function	Service Outcome
Q1	Achiever	>75%	>75%
Q2	Front Runner	< or =75% and >50%	< or =75% and >50%
Q3	Basic	<Or = 50%	<Or = 50%
Q4	Aspirant	<50%	<50%

Monitoring CWIS at scale

Tracking performance on service outcomes v/s system functions using PAS information



Thank you

CWAS CENTER
FOR WATER
AND SANITATION

CRDF CEPT RESEARCH
AND DEVELOPMENT
FOUNDATION

CEPT
UNIVERSITY

About us

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at CEPT University. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them in delivering water and sanitation services in an efficient, effective and equitable manner.

meeramehta@cept.ac.in



cwas.org.in
pas.org.in



cwas@cept.ac.in
tiny.cc/pasenews



[CEPT_CWA](#)
[S](#)



[cwass.cept](#)



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Performance level indicators

Themes	Water supply services	Wastewater and storm water drainage	Solid waste management
Access and coverage	▪ Coverage of water supply connections (100%)	▪ Coverage of toilets (100%) ▪ Coverage of sewage network services (100%) ▪ Coverage of adequate sanitation* ▪ Coverage of storm water drainage network (100%)	▪ Household level coverage of solid waste management services (100%)
Equity	▪ Coverage of WS connections in slums	▪ Coverage of individual toilets in slums ▪ Coverage of sewerage connections in slums	▪ Coverage of D to D collection in slums
Service levels and quality	▪ Per capita supply of water (135) ▪ Continuity of water supply (24 hrs) ▪ Quality of water supplied (100%)	▪ Collection efficiency of the sewage network (100%) ▪ Adequacy of sewage treatment capacity (100%) ▪ Collection efficiency of sanitation system* ▪ Adequacy of sanitation treatment capacity* ▪ Incidence of water logging/ flooding (zero)	▪ Efficiency of collection of municipal solid waste (100%) ▪ Extent of segregation (100%) ▪ Extent of municipal solid waste recovered (80%)
Efficiency in service operation	▪ Extent of Non- Revenue Water (NRW) (20%) ▪ Extent of metering (100%) ▪ Efficiency in redressal of customer complains (80%)	▪ Quality of sewage treatment (100%) ▪ Extent of reuse and recycling of sewage (20%) ▪ Quality of treatment of sanitation system* ▪ Extent of reuse and recycling in sanitation* ▪ Efficiency in redressal of customer complains (80%)	▪ Extent of scientific disposal of municipal solid waste (100%) ▪ Efficiency in redressal of customer complains (80%)
Financial sustainability	▪ Cost recovery in water supply (100%) ▪ Efficiency in collection of water supply related charges (90%)	▪ Extent of cost recovery in sewage management (100%) ▪ Efficiency in collection of sewage charges (90%)	▪ Extent of cost recovery in SWM (100%) ▪ Efficiency in collection of SWM charges (90%)

*SAN Benchmarks - Revised SLB indicators that captures performance of onsite sanitation along with conventional sewerage system

PAS - Sector wise Indicators

In addition to SLBs, PAS captures performance of onsite sanitation along with conventional sewerage system and equity related indicators



A 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

What sets PAS apart....

Inclusive

- Indicators include onsite systems
- Indicators on equity in service
- Available in local languages (Hindi, Marathi, Gujarati and English)

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 – not a one off pilot!
- 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