

IMPORTANCE OF SMART CITY STANDARDS & KPI ANALYTICS



WCCD

ISO 37120

ISO 37122

ISO 22320

Presented By-

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ASTRIKOS CONSULTING

ICT | SMART CITY | SMART INDUSTRY



ISO/IEC
21823-1:2019

ISO/IEC
20000-1:2011

ISO/IEC
27001-1:2013

ISO
9001:2015

We specialise in the areas of Technology (ICT/IoT) Consulting, Implementation of Technological applicability to Public/Enterprise Policy. Areas of focus are ICT, Smart Healthcare Next Generation Data Centres, Smart Cities, Smart Infrastructure, Smart Industries and Smart Analytics.

Astrikos Consulting provide advisory and implementation efforts to industries on migration/ implementation of Industrial Automation, Industry 5.0 and IIoT by means of cognitive intelligence and data science product lines.



Let's Get Started

Our Footprints in Smart City

Smart Cities

Namchi Smart City (Sikkim)

Belagavi Smart City

Aligarh Smart City

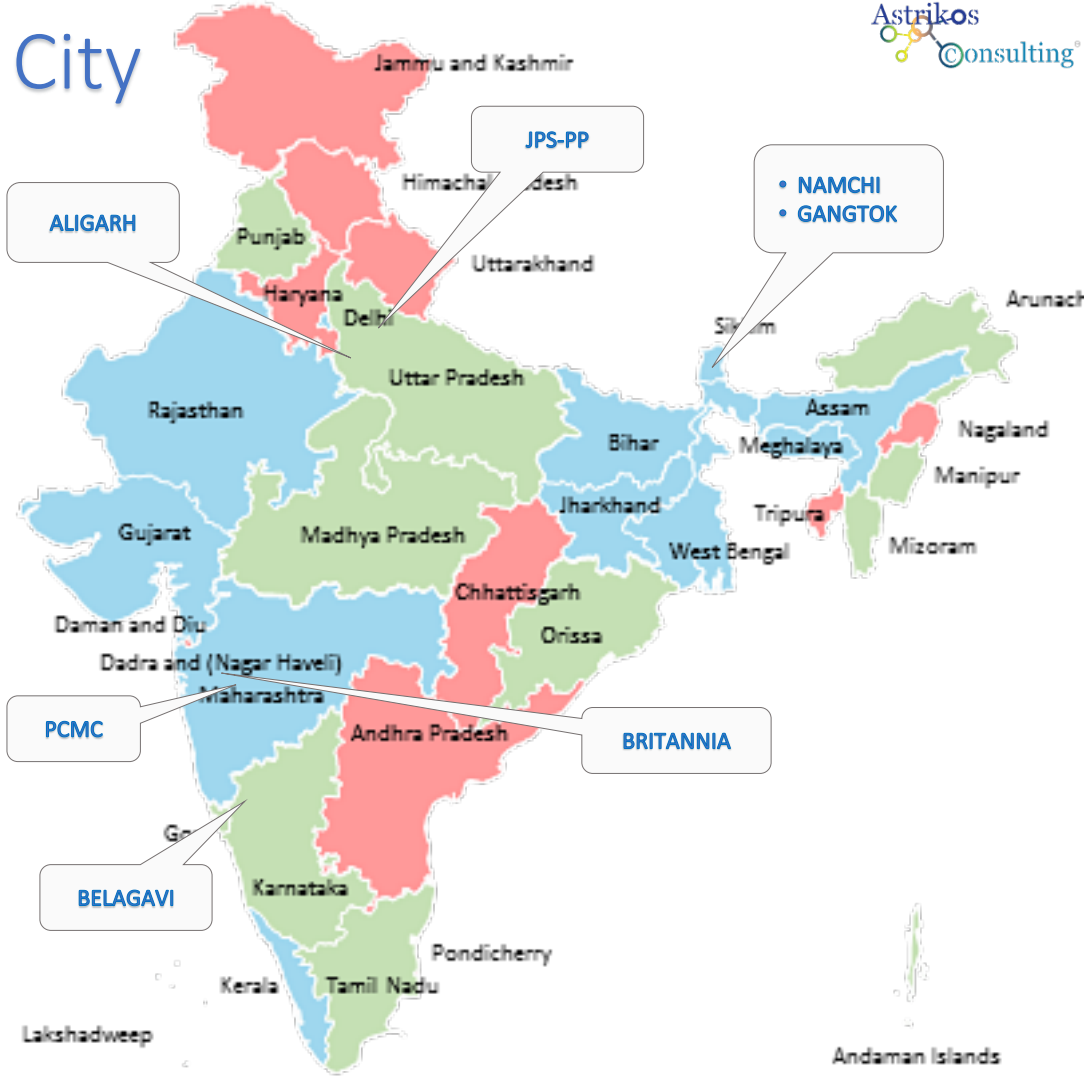
PCMC Smart City – Pune

Gangtok Smart City

Smart Industrial Parks

JPS Plastics and Packaging (WIP)

Britannia Industries (WIP)



AGENDA

- ❖ **Global Standards** – Essential References
- ❖ Global Smart City Framework
- ❖ **India's Mission** – POLICIES/GUIDELINES
- ❖ Public Policy Gap Analysis and Scorecard
- ❖ Balanced Score Card – Application & Illustration
- ❖ How to measure performance – **KPI Management**
- ❖ Role of City Command and Control Center in Measuring performance and Building Action Plans
- ❖ How **Astrikos S!aP** Addresses the needs – Cognus & C2RMS
- ❖ Importance of Putting the Cognitive Intelligence in to Action



Global Standards – Essential References

WCCD CERTIFICATION LEVELS

WCCD certification levels are based on the number of indicators reported by the city. The WCCD offers a wide range of certification levels.



ASPIRATIONAL	BRONZE	SILVER	GOLD	PLATINUM
30-45 Core Indicators	46-59 Indicators	60-75 Indicators	76-90 Indicators	91-100 Indicators
	46 Core + 0-13 Supporting	46 Core + 14-29 Supporting	46 Core + 30-44 Supporting	46 Core + 45-54 Supporting

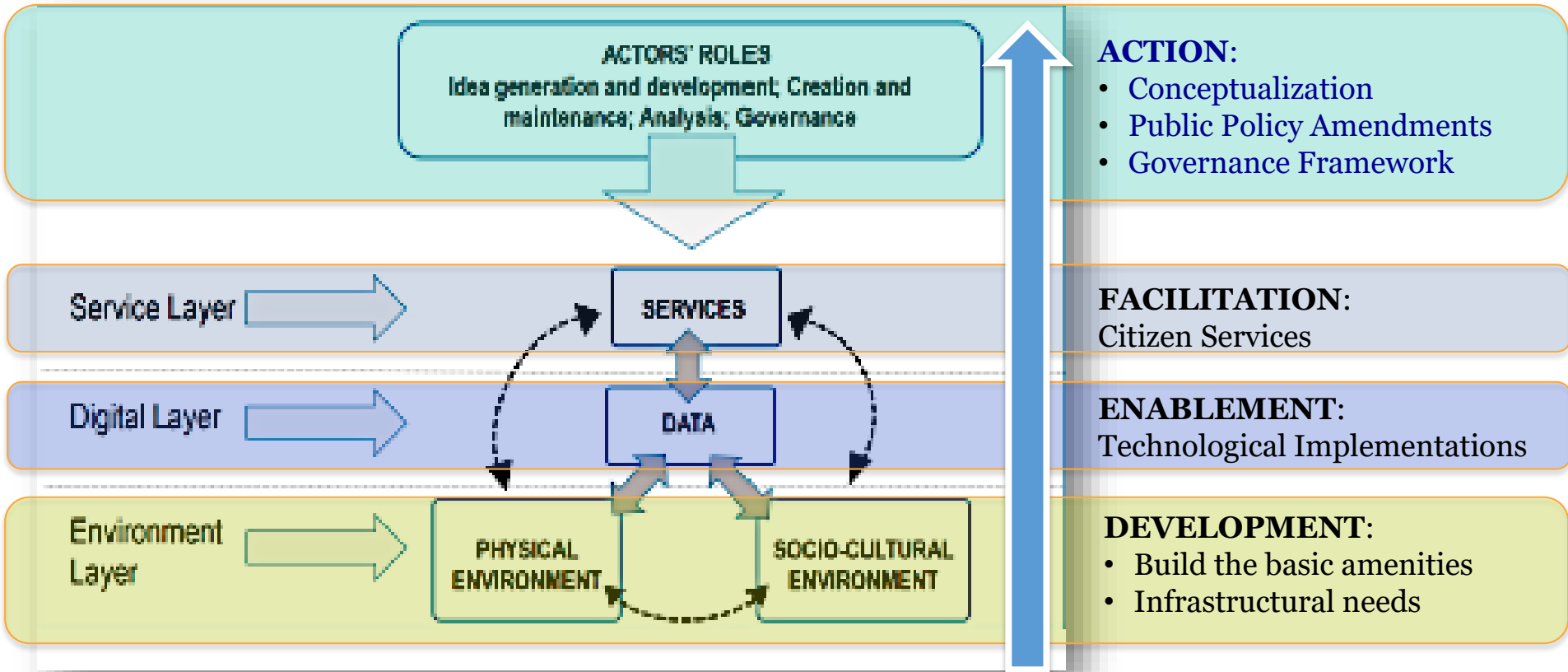


WCCD | WORLD COUNCIL
ON CITY DATA

@wccitydata

- **ISO 37122:2019** | Sustainable cities and communities — Indicators for smart cities
- **ISO 37120:2018** | Sustainable cities and communities — Indicators for city services and quality of life
- **ISO 22320:2018** | Security And Resilience — Emergency Management — Guidelines For Incident Management and Response Mechanism

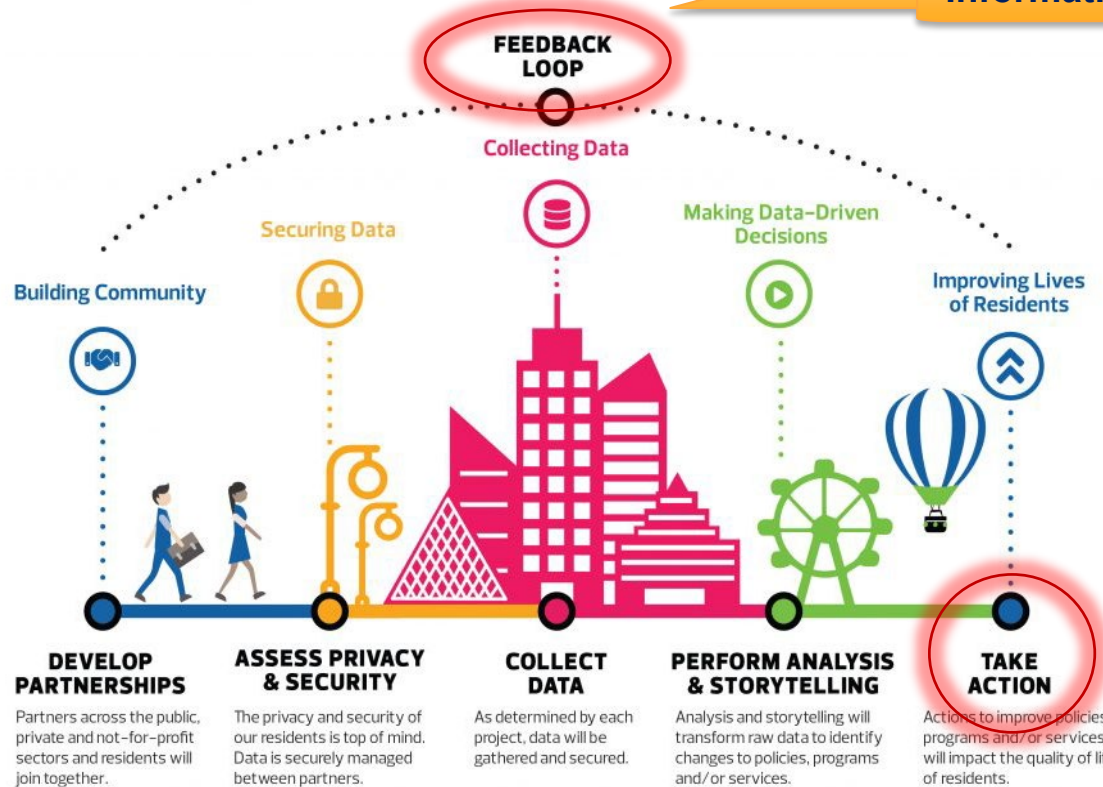
GLOBAL SMART CITY FRAMEWORK (GSCF)



GSCF – KNOWN FRAMEWORKS & MODELS

SMART CITY FRAMEWORK

Information – to – Action



- **NIST (USA) Frameworks** – CPS (Cyber-Physical Systems) and IES (IoT Enabled Smart City) - <https://pages.nist.gov/smartcitiesarchitecture>
- **European Smart City Model** - <http://www.smart-cities.eu/model.html>
- **Spain's Smart City Model (matured compared to EU standards)** - <http://www.agendadigital.gob.es/digital-agenda/Documents/Spanish-Smart-Cities-Model.pdf>

GSCF – KNOWN FRAMEWORK MODELS

Performance Measurement Metrics



**BALANCE
SCORECARD
APPROACH**

The Balanced scorecard is used for managing strategy



SMART CITIES MISSION

Building a
Smart India

INDIA'S MISSION

GUIDELINES – POLICIES – MODELS – MEASURES

Astrikos
consulting®

SMART CITY MISSION GUIDELINES

- MoHUA Guidelines – **What should be the part of Smart Cities?**
- MoHUA Guidelines – **ICT Enablement in Smart Cities**
- MoHUA Guidelines – **Citizen’s Data Privacy and Cyber Security in Smart Cities**
- **Responsibilities of Stakeholders**
- **Generic Guidelines:**
- <http://smartcities.gov.in/content/innerpage/guidelines.php>
- **Data Privacy and Cyber Security:**
- <http://smartcities.gov.in/upload/oms/5821b621a862dCyberSecuritypdf.pdf>

```

mirror_mod = modifier_ob.
    mirror object to mirror_
    mirror_mod.mirror_object =
        operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
        operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
        operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

```

```

selection at the end -add
    mirror_ob.select=1
    modifier_ob.select=1
    context.scene.objects.active
    ("Selected" + str(modifier_
    mirror_ob.select = 0
    bpy.context.selected_obj
    data.objects[one.name].se

```

```

print("please select exactly
OPERATOR CLASSES -----

```

```

types.Operator):
    X mirror to the selected
    object.mirror_mirror_x"
    mirror X"

```

```

(context):
    context.active_object is not

```

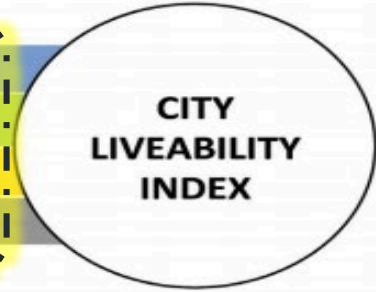
Smart City Livability Index – Weighted KPIs

Four pillars of comprehensive development

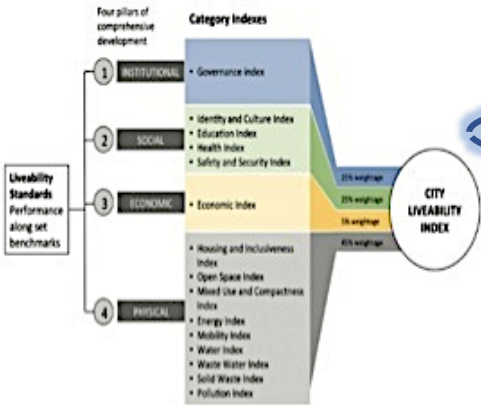
Category Indices



Liveability Standards Performance along set benchmarks



Cardinal Lapse...!!!



Governance

- Percentage of services integrated through Command Centre (Supporting)
- Extent of cost recovery (O&M) in water supply services (Core)
- Average delay in grievance redressal (Core)

Identity and Culture

- Number of cultural/sports events hosted by city authority (Supporting)

Health

- Average response time in case of health emergencies (Supporting)

Power Supply

- Average length of electrical interruptions per customer per year (Supporting)
- Average number of electrical interruptions per customer per year (Core)

Safety and Security

- Number of streets, public places, junctions covered through surveillance systems (Core)
- Transport-related fatality per lakh population (Supporting)

Water Supply

- Quality of water supplied (Core)
- Level of non-revenue water - NRW (Core)
- Per capita supply of water (Core)

BUT, ARE WE REALLY IMPLEMENTING THOSE ??



Covid wake-up call: Health infrastructure only 1 per cent of Smart City projects

Lesson Learnt

5-6 minutes

Written by [Karishma Mehrotra](#) , [Harikishan Sharma](#) | New Delhi | Updated: May 25, 2020 7:23:38 am



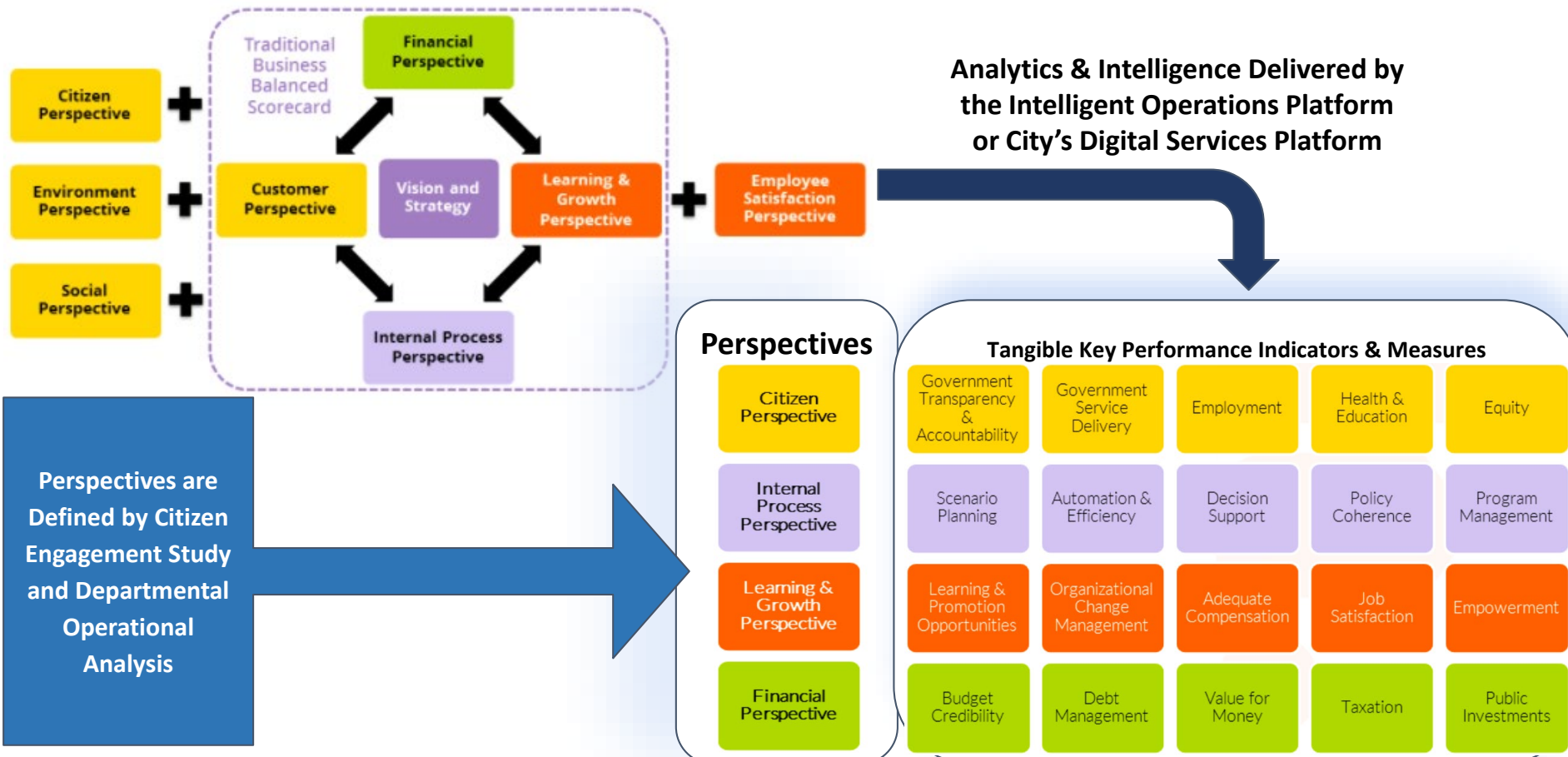
Of the 17 hotspots that are also smart cities, Delhi has spent the most on health-related projects (Express Photo by Prashant Nadkar)

As urban centres struggle to put down the outbreak of **Covid-19**, creation of health infrastructure seems to be very low priority in projects for 100 cities being developed as smart cities under a central government scheme.

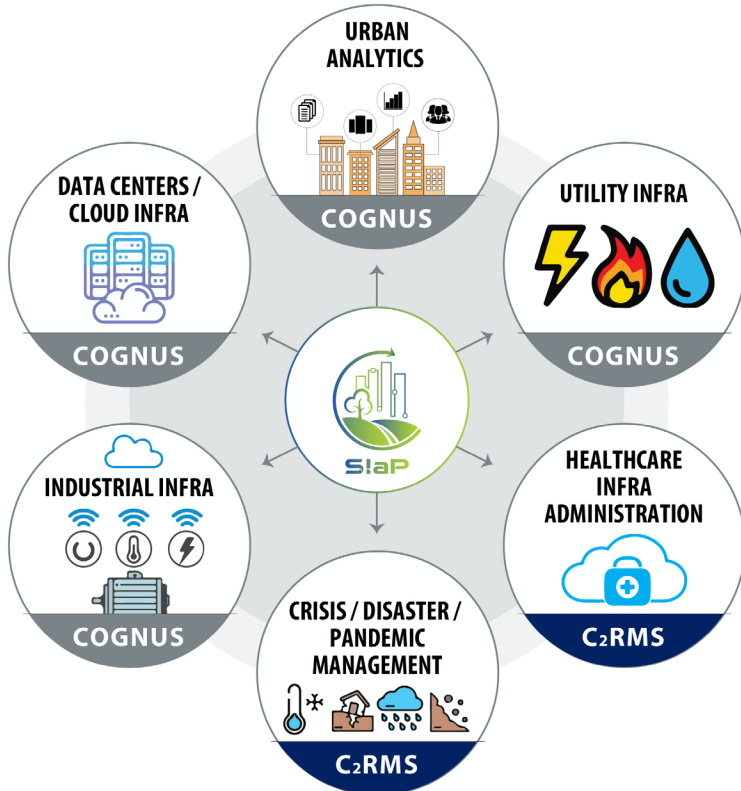
A scrutiny of publicly available data of projects taken up under the Smart City Mission reveals that only 69 of 5,861 projects were for health infrastructure and capacity building — this works out to a little over 1 per cent of total projects selected since 2015.

Measuring Performance – Methodology

Balanced Scorecard Framework for Policy Guidelines



RELEVANCE & GLOBAL STANDARDS



COGNUS

Certified Platform

ISO 37122:2019

Sustainable Cities & Communities - Indicators for Smart Cities

ISO 37120:2018

Sustainable Cities & Communities - Indicators
for City Services & Quality of Life



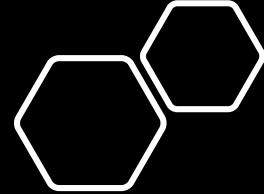
C2RMS

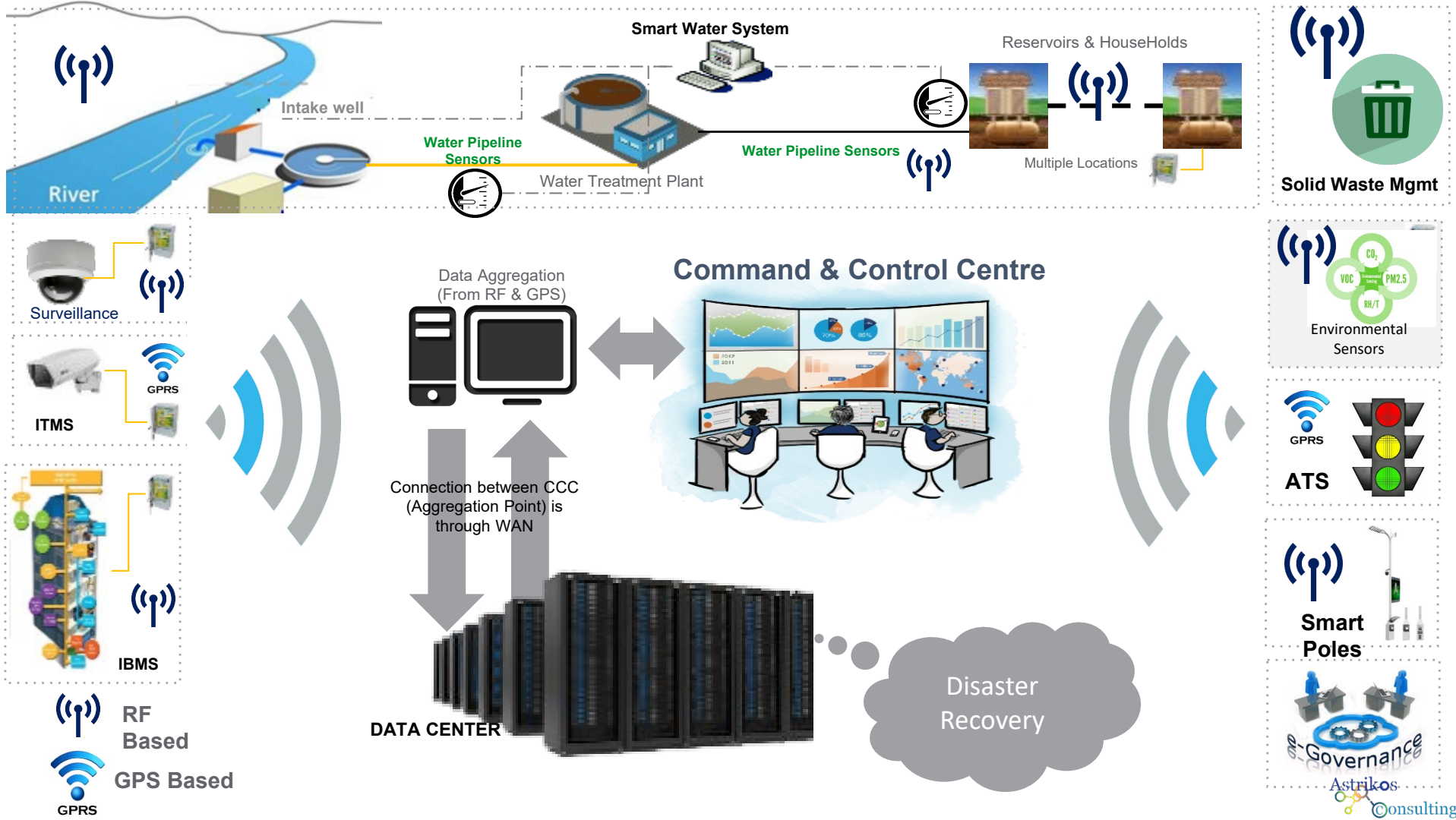
Certified Platform

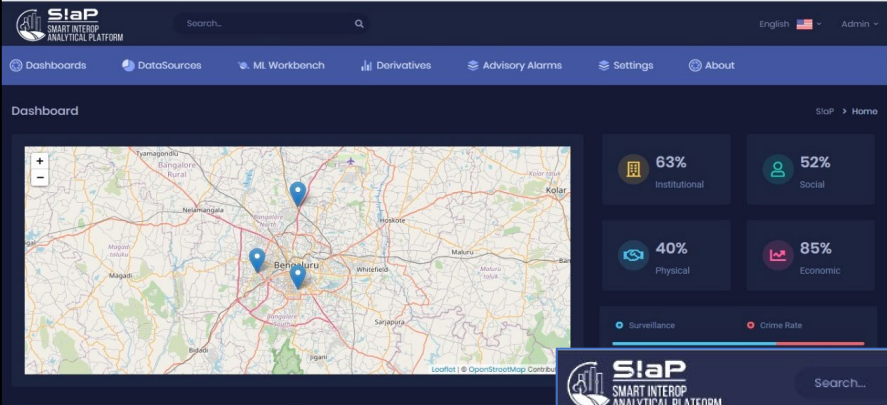
ISO 22320:2019

Security & Resilience - Emergency Management -
Guidelines for Incident Management & Response Mechanism

MORE DETAILS: <https://Astrikos.Ai>







Personalized Dashboard & KPIs – Smart City

Analytics on Livability Indices:

- History and trends
- Insights with “cause-effect analysis”
- Prediction based on heterogenous data sources
 - Including sub-parameters
- Prescription advisory– “how to plan and act to do better?”



Personalized Dashboard & KPIs – Smart City



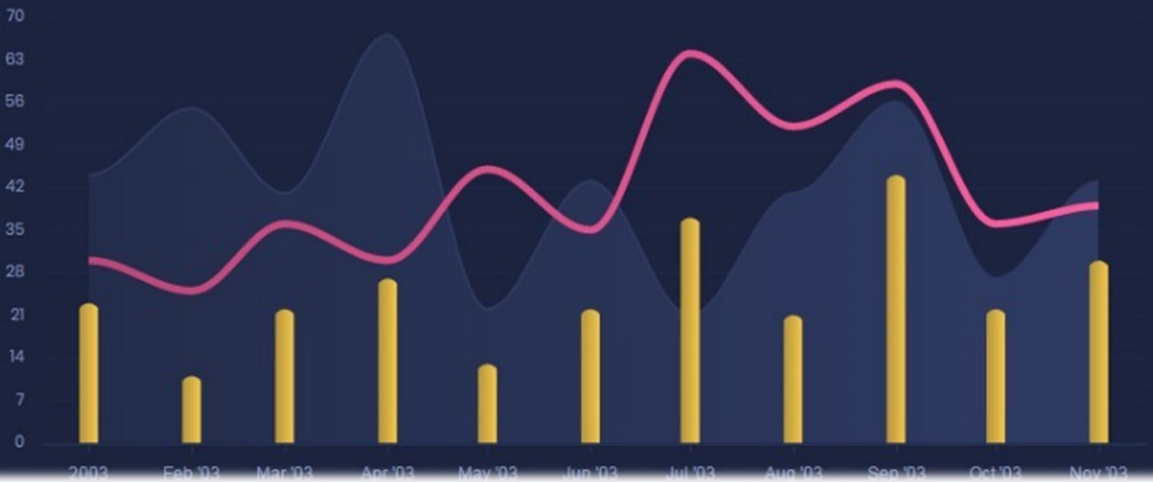
Search...

English Admin

- Dashboards
- DataSources
- ML Workbench
- Derivatives
- Advisory Alarms
- Settings
- About



Track Report



SIAp
SMART INTEROP ANALYTICAL PLATFORM

Search...

Dashboards DataSources ML Workbench Derivatives **Advisory Alarms** Settings About

Advisory Alarms

Manufacturing Advisories

Energy Advisories

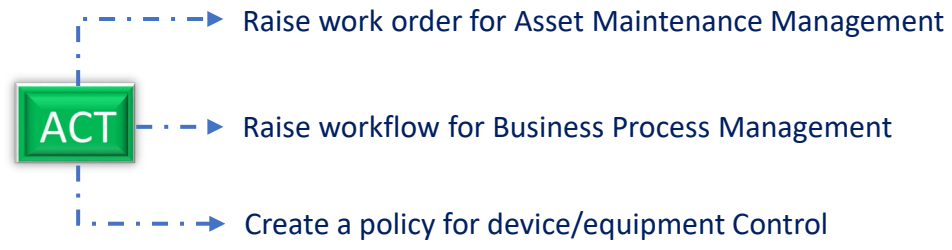
Mobility Advisories

Very High Traffic Density alert ... [Know More](#) ACT Ignore

Air pollution alert ... [Know More](#) ACT Ignore

Water Treatment Advisories

Advisory Alarms followed by Actions



SIAp
SMART INTEROP ANALYTICAL PLATFORM

Search...

Dashboards DataSources ML Workbench Derivatives **Advisory Alarms** Settings About

Advisory Alarms

Manufacturing Advisories

Energy Advisories

Mobility Advisories

Water Treatment Advisories

Sewage water leakage alert ... [Know More](#) ACT Ignore

Water Level Alert ... [Know More](#) ACT Ignore

SIAp
SMART INTEROP ANALYTICAL PLATFORM

Search...

Dashboards DataSources ML Workbench **Analytics & Derivatives** **Advisory Alarms** Settings

Advisory Alarms

Manufacturing Advisories

Energy Advisories

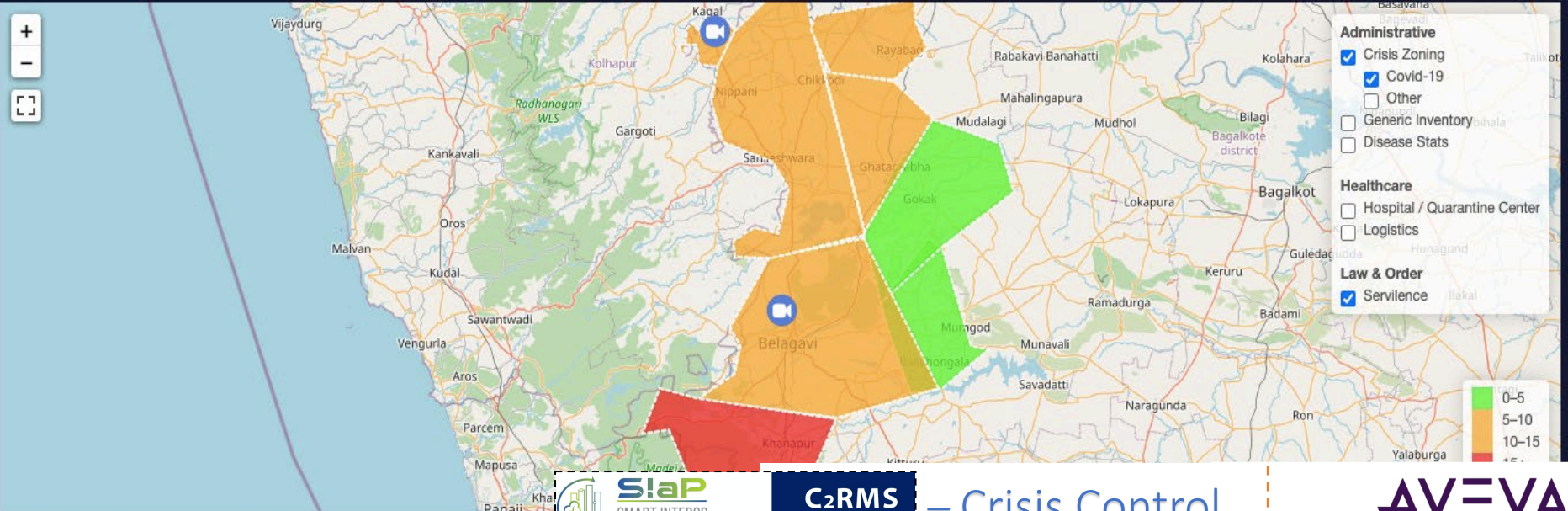
Advised power down for SEGMENT-5 between 6:30PM to 8:00PM -PUE improvement by 2.3%... [Know More](#) ACT Ignore

It is advised to schedule a maintenance for :

Switching Panel in LV network LV-LT-121 in Main may need maint... [Know More](#) ACT Ignore

UPS system SAVO-16 battery bank <6> draining at <4%> every week... [Know More](#) ACT Ignore

Mobility Advisories



C2RMS – Crisis Control
Response & Mitigation
System



COVID-19 KPIS			
Confirmed 304	(o) ↓	Recovered 287	(o) ↓
		1	(o) ↓
			16
			(o) ↓

AVEVA Wonderware UOC Integration – C2RMS

Unified Operations Centre for Cities

Smart Bus | Street Lighting | CCTV | ITMS | Environment Sensor | Smart Parking | Smart Garbage Bins | STP | Water | Power | IBMS | SOPs | COVID-19

C2RMS Law@Example.Com

Home | Pending Action | Analytics & Advisories | Video conference



100

No of kits Available



15.2%

Isolation room Availability



135

Ambulance Availability


WARDS WISE PATIENTS DETAILS

Ward/Mandal	Covid-19 Affected	Affected Ratio	Zone
Belagundi	1	1.8%	●
Hire Bagewadi	17	27%	●
Piranawadi	1	1.8%	●
Hukkeri	1	1.8%	●
Khasai Galli Camp	1	1.8%	●
Kudachi	17	31%	●

COVID-19 Summary

Live Update

Total Cases	221
Active Cases	80
Recovered	140
Fatalities	1

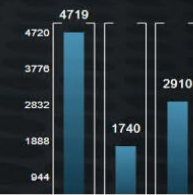


COVID-19

- Total Cases 221 (50%)
- Active Cases 80 (18%)
- Recovered 140 (32%)
- Fatalities

Live Update















Total Samples Sent (B1)	4,719
Results Awaiting (B2)	1,740
Total Negative Cases (B3)	2,910



Action Oriented System with Advisories & Workflows

C2RMS

Home Task Management Healthcare Analytics & Advisories Video conference

Task Name	Task Description	Assign To	Status	Action
Conduct Door to door screening activity	Conduct Door to door screening activity	all	Completed	 
Area health screening order one more time	Conduct Door to door screening activity	health	Completed	 
Conduct area surveillance	Conduct activity	law	Completed	 
Area health screening order-2	Area health screening order-2	law	Completed	 
Again	law	Completed	 	
	health	Completed	 	
	health	Completed	 	

C2RMS

Home Task Management Healthcare

Task Management

Task Name





Task Description

Assign to

- Select
- All
- Law & Order
- Health Authority
- Help Desk
- Food & Grocery

Close Start

TASK MANAGEMENT

Task Name	Task Description	Assign To	Status	Action
Conduct Door to door screening activity	Conduct Door to door screening activity	all	Completed	 
Area health screening order one more time	Conduct Door to door screening activity	health	Completed	 

New Task



CERTIFIED BY ADCAI (INDIA'S LARGEST THINK TANK ON TECHNOLOGY)



Aerospace & Defence
Consultants Association of India

Please Reach Us:- info@adcai.in |  

C2MCRS - CORONAVIRUS CRISIS MANAGEMENT
CONTROL & REPORTING SYSTEM

Q & A
... THANK YOU

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