Monetization of Data generated from ICCC in the Smart City Mission

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Background

- Important product of Smart City Mission: **Integrated Command and Control Centre (ICCC)**
- **ICCC** integrates different technologies by creating layers of information **to increase the efficiency in city planning and governance**
- R**aw data,** can be **analyzed** for different set of needs and trends. Useful source of information for citizen based services
- This data holds immense potential to be leveraged and in turn help the **city economy, making different businesses more effective and creative/ innovative**
- **ICCC projects are being implemented by Master System Integrators** appointed for the respective cities

ICCC and Smart City Mission

State	City Name	Contractor Name
Maharashtra	Pune	Larsen and Toubro
Maharashtra	Nagpur	Larsen and Toubro
Andhra Pradesh	Vizag	Larsen and Toubro
Andhra Pradesh	Kakinada	Sterlite
Gujrat	Surat	IBM
Gujrat	Vadodara	Ncode & CMS
Gujrat	Ahmedabad	Trimax
Gujrat	Rajkot	Honeywell
Odisha	Bhubaneswar	Honeywell
Madhya Pradesh	Bhopal, Ujjain , Sagar, Satna, Jabalpur, Gwalior, Indore	Hewlett Packard
Chhattisgarh	Raipur	Larsen and Toubro
Chhattisgarh	Naya Raipur	IL&F & Schneider
New Delhi	NDMC	Larsen and Toubro
Rajasthan	Jaipur	AXE & Wipro

Objective

Select an vendor with a mandate to maximise social and economic value of data for the benefit of citizens, city government, and businesses to promote economic growth and efficiency while building a self-sustainable revenue plan for integrated command and control centres

Goal

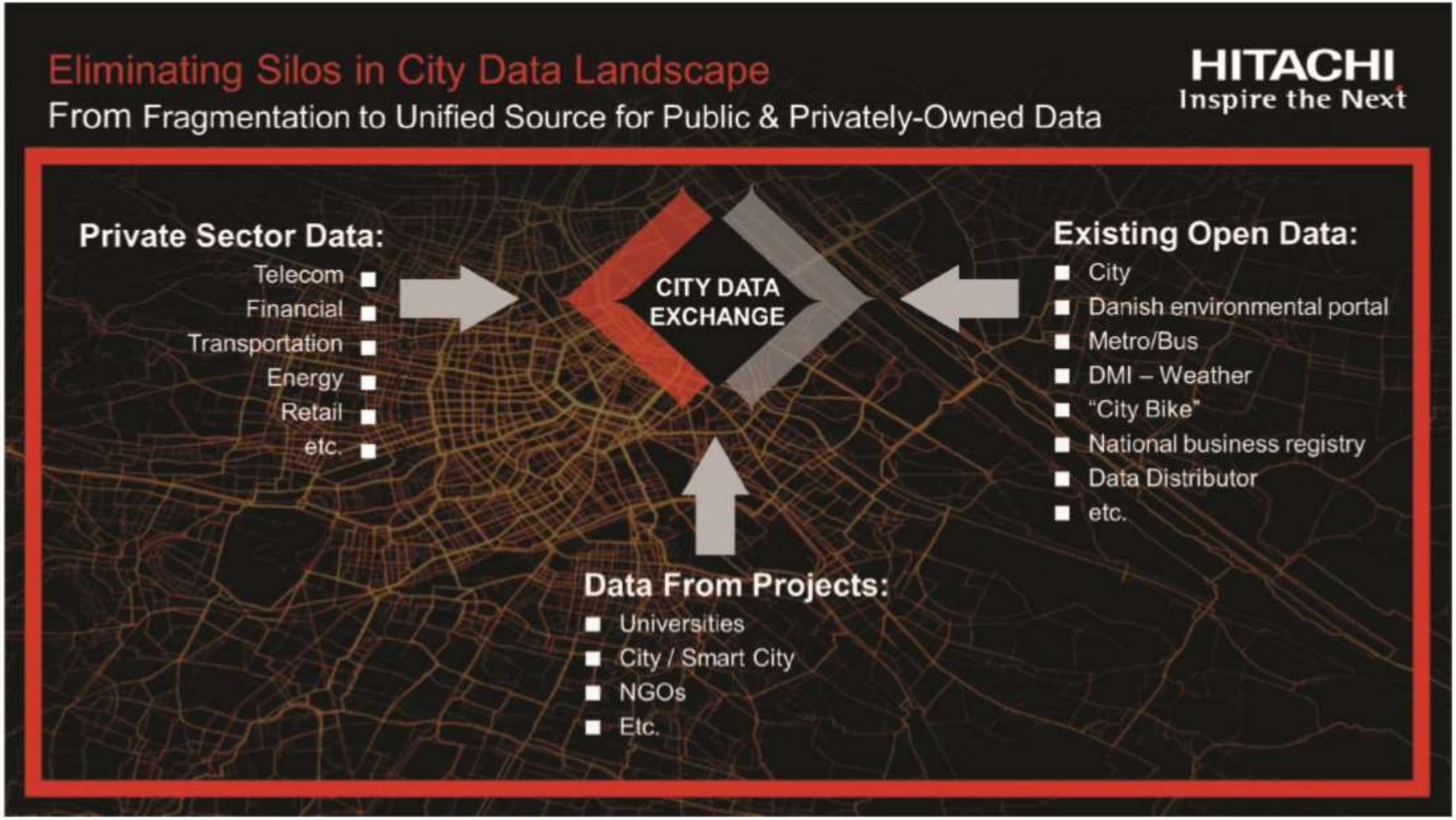
- Share city-level data to foster innovation and stimulate business activity
- Analytics for improving efficiency in governance and business through evidence based strategizing and decision making
- Democratizing access to city data for citizens and businesses
- Raise revenue for contributing to operation & maintenance cost of the infrastructure created by the City SPV

Ex: Chennai ICCC – Capex: Rs 120 crores and Opex: Rs 90 crores for 5 years.
Can we reduce the OPEX of these Command & Control Centres?

Case-study: Copenhagen

- Copenhagen, Denmark, is aggressively moving towards becoming a smart, carbon-neutral city by 2025.
- City initiated smart city programs: -
  - Smart lighting, Sensor-based traffic management, Intelligent building management and more.
- Data from individual smart city initiatives kept in silos. Efforts to integrate data service to eliminate these silos.
- In 2014, the Copenhagen city issued an RFP for a vendor to create a sustainable business model for the online marketplace
- Hitachi, a Japan-based technology company, had the winning bid, and the Data Exchange Centre was launched in May 2016 (www.cityexchangedata.com)

Case-study: Copenhagen



(Source: https://www.hitachivantara.com)

Case-study: Copenhagen

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Data layers & potential users … 1/3

1. Communications Network

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Fibre Optic Infrastructure including Network Electronics	Telecom companies, Large Corporate, Industries, Academic Institutions, Data cable services, Real Estate Developers	Public & Private
b	City Wide Wi-Fi System	Telecom Service providers, Retailers, Real Estate developers, Advertising companies.	Public & Private
c	Environmental Monitoring System	Consulting Firms, Researchers, Academic Institutions, NGOs, Travel advisory for VIP movement (Domestic/international)	Public & Private
d	Smart Poles	Advertising companies, Rental from Telecom companies	Public & Private

2. Smart Traffic Management System

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Traffic Violation Detection System	Traffic police, Transport Department	Public
b	Red Light Violation Detection (RLVD) Sensor	Traffic police, Transport Department	Public
c	Automatic Traffic Counter and Classifier (ATCC)	Consulting Firms, Researchers, Traffic management apps (Google Maps)	Public & Private
d	Public Address System (PAS)	Disaster Management depts., Consulting firms, NGOs	Public & Private
e	Dynamic Message Sign (DMS)	Advertising Firms, Private transporters	Public & Private
f	e-Challan System	Traffic police, Transport Department	Public
g	Traffic Accident Recording System (TARS)	Traffic police, Transport Department	Public

Data layers & potential users … 2/3

3. Smart Tracking System

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Automatic Vehicle Location (AVL) System	Police Dept., Car Insurance Companies, Private Schools, transport app developers	Public & Private
b	OBITS Hardware - (State Buses, Emergency Vehicles, Police Vehicles, PCR Vans, Fire Trucks, Government Ambulances, Municipal Vehicles, Solid Waste Vehicles, Government Water Tankers, Private Water Tankers, 3G/GPRS enabled SIM Cards)	Consulting Firms, Researchers, Traffic management apps (Google Maps), Private Hospitals, Green corridor, Private players in Waste to Energy plants, respective govt. depts.	Public & Private
c	Passenger Information System (PIS) - Passenger Information Display at Bus station and terminals	Advertising Firms, Private transporters, Transport app developers	Public & Private
d	Electronic Ticketing	Advertising companies	Public & Private
e	Handheld ticketing machine compliant with Common Payment System (CPS)	Credit Card Companies, Payment wallet companies	Public & Private
f	Transit Management System	Researchers, Consulting firms	Public & Private

4. ICOMC

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Command and Control Centre	Govt. Departments,	Public
b	Building Management System (BMS)	Consulting Firms, Public utilities depts.	Public
c	GIS Platform		Public & Private

Data layers & potential users … 3/3

5. Smart Parking Management System

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Off-street PMS Components	Restaurants, Shopping Malls, Hospitals, parking operators, Retail, Transport app developers, Tour operators, Hotels,	Public & Private
b	On-street PMS Components		Public & Private
c	Parking Management System (Central)		Public & Private

6. Smart Parking Management System

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	Surveillance System	Govt. Departments, Hospitals, NGOs	Public & Private

7. Smart Governance and Smart Connect

S. No.	Layers of Data at the ICCC	Potential Users	Public/Private
a	e-Governance	Govt. Departments	Public
b	ERP	Govt. Departments	Public
c	Solid Waste Management System	Private Waste to Energy plants,	Public & Private
d	Multi-Services Digital Kiosks	Retailers, Advertising companies	Public & Private
e	Education and Healthcare Management	Private Schools, Private Hospitals,	Public & Private

Scope of Work for DAMA

Selection of a Data Analytics and Monetising Agency (DAMA)

Creating **Standard Operating Procedures** / Use Cases manual	Specifying Security and Audit procedures
Data Mining and Segregation	Vetting, access and storage of Data
Anonymizing the Data as per the rules of the land	Data privacy – No Personal data
Creating packets of analytical data (sets)	Creating as per the need of market
Create a **Digital Market Place** for data procurement for users	B2B Market Place
Go Live - Commercialising the Data sets for Public/Private enterprises	Crossing checking applicable laws

Instructions for Applicants

Eligible Bidders

- Single applicant or a consortium of companies
- **Lead Bidder** responsible for ensuring the successful execution of Agreement

Pre-bid Meeting

- Organize pre-bid conference(s) to clarify, modify and customize

Earnest Money Deposit (EMD)

- As per State Govt. rules

Bid Validity Period

- Bid submitted for the selection of DAMA should be valid for 180 days

Bid Parameter

- Bid Parameter would the Net Present Value of the fee shared by DAMA to the Authority (including the upfront fee) over the contract period, discounted at the rate of 10% per annum

Selection Process….. 1/3

Preliminary Examination of Bids

- Examine the responsiveness of bids submitted

Pre-Qualification

- Validation of the submitted RFP Document fee & Bid Security/Earnest Money Deposit (EMD) and other prescribed conditions.

Evaluation Process

- The City SPV or the Authority may undertake a two stage evaluation process, as indicated below:

    - **Stage 1:** Technical Bid Evaluation
    - **Stage 2:** Financial Bid Evaluation

Selection Process….. 2/3

Stage 1: Technical Bid evaluation

S. No.	Criteria	Max. Marks
1	Experience of the Lead bidder/ Consortium in Data Analytics (4 marks for every project)	15
2	Prior experience of developing Data applications portal	15
3	Prior work experience with Government Agencies	15
4	Prior experience of running commercial e-data online services	15
5	Presentation on Understanding of the Terms of reference, Approach & Methodology on creating Data Sets	30
6	Financial Eligibility (Net worth & turnover)	10
	Total Technical Score	**100**

Important: Minimum 70% (70 marks) of the total technical score is the Qualification criteria for progression to Financial bid evaluation stage

Stage 2: Financial Bid Evaluation

Highest Net Present Value (NPV) of the Concessional Fee discounted at 10% per year, as per the payment schedule below:

S. No.	Payment Schedule	Concession Fee quoted	Net Present Value
1	Upfront Fee (T)	Q1	V1
2	T + 6 months	Q2	V2
3	T + 12 months	Q3	V3
4	T + 18 months	Q4	V4
5	T + 24 months	Q5	V5
6	T + 30 months	Q6	V6
7	T + 36 months	Q7	V7
8	T + 42 months	Q8	V8
9	T + 48 months	Q9	V9
10	T + 54 months	Q10	V10
11	T + 60 months	Q11	V11

Highest NPV of Concession Fee = V1+V2+V3+..... +V11

Selection Process….. 3/3

Additional Payments to be made by DAMA:

Over and above of the total quoted Concession Fee, DAMA will pay to the Authority an **Additional Concession Fee** which is **[10%] of the total Realisable Fee** to be received by DAMA in its Escrow Bank, from this project. It is also clarified that DAMA would need to pay this Additional Concession Fees, provided the total Realisable Fee in the Escrow Account, is more than the total quoted Concession Fee, over a period of six months

- For avoidance of any doubt, if the total Realisable Fee in the Escrow Account of DAMA for the project, is less that the total Concession Fee in one payment schedule (six months), then it need not pay any Additional Concession Fee to the Authority. To be finalised by the City SPV

- "Realisable Fee" means all Fee due and realisable under this project. It shall be the amount so declared by DAMA on the basis of its provisional accounts or the audited accounts, as the case may be.

Award of Work

Contract Period

- May be kept as 5 years,
- The City SPV or the Authority may like to access the market interest based on the scale of data generated from the city and take a suitable judgement to increase or decrease the Contract period
- It is recommended that the contract period should be less than 10 years in all cases.

Performance Bank Guarantee

- PBG for yearly assured revenues to be provided by the successful bidder
- The PBG would be needed to be renewed for the yearly committed amount every year during the Contract Period

Escrow Account

- Escrow Account to be opened with the Escrow Bank by selected DAMA
- All inflows and outflows of cash and receivables on account of capital, revenue, expenditure or otherwise that accrue or arise under, under this Agreement shall be credited to or debited from, as the case may be, in the Escrow Account during the Contract Period *

Audit

- The Authority / its authorized representative(s) shall conduct periodic / surprise security reviews and audits, to ensure the compliance by the DAMA/ service provider to data / system security systems/SOPs.

Thank You

We look forward towards your feedback & support ...

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