

Directorate of Town & Country Planning, Haryana

Ayojna Bhawan, SCO No. 71-75, Sector-17C, Chandigarh, Website: tcpharyana.gov.in

Phone: 0172-2549349; email: tcpharyana1@gmail.com

To

1. Addl. Chief Secretary to Government, Haryana, Power Department.
2. Addl. Chief Secretary to Government, Haryana, PWD (B&R) Department.
3. Principal Secretary to Government, Haryana, Irrigation Department.
4. Principal Secretary to Government, Haryana, Electronics & Information Technology Department.
5. Principal Secretary to Government, Haryana, Industries Department.
6. Principal Secretary to Government, Haryana, Urban Local Bodies Department.
7. Principal Secretary to Government, Haryana, Transport Department.
8. Managing Director, HSIIDC, Sector 6, Panchkula.
9. Chief Administrator, HUDA, Sector-6, Panchkula.
10. Commissioner, Municipal Corporation, Gurgaon.
11. Commissioner, Municipal Corporation, Faridabad.
12. Chief Scientist, HARSAC, CCS Haryana Agriculture University Campus, Hisar 125004, Haryana.

Memo No: Misc-65B/2015/ 4120-31

Dated: 16/03/2015

SUBJECT: MINUTES OF MEETING DATED 02.03.2015 UNDER THE CHAIRMANSHIP OF SH. P. RAGHAVENDRA RAO, ACSTCP: "CREATION OF HARYANA URBAN GEO-SPATIAL APPLICATIONS LTD. (HUGSA LTD)" FOR PREPAREDNESS IN URBAN E-GOVERNANCE & DEVELOPMENT OF SMART CITIES.

Please find enclosed the minutes of the meeting as indicated under subject above for your information and further necessary action.

DA/As above.

Sd/-

(P.P. Singh)

District Town Planner (HQ)

For: Director General, Town & Country Planning
Haryana, Chandigarh

Endst. No: Misc-65B/2015/ 4132

Dated: 16/03/2015

A copy of the above is also forwarded to the PS/ACSTCP, Haryana for information & record, please.

Sd/-

(P.P. Singh)

District Town Planner (HQ)

For: Director General, Town & Country Planning
Haryana, Chandigarh

SUBJECT: MINUTES OF MEETING DATED 02.03.2015 UNDER THE CHAIRMANSHIP OF SH. P. RAGHAVENDRA RAO, ACSTCP: "CREATION OF HARYANA URBAN GEO-SPATIAL APPLICATIONS LTD. (HUGSA LTD)" FOR PREPAREDNESS IN URBAN E-GOVERNANCE & DEVELOPMENT OF SMART CITIES.

The list of participants who attended the meeting is enclosed at Annex-A. A copy of the 'Background Note' earlier circulated for the meeting is enclosed at Annex-B.

2. Initiating the discussion, Sh. S.N. Roy, PSULB, enquired about the scope and mechanism adopted for creation of the GIS database by the Department. It was explained by Sh. P.P. Singh, DTP(HQ) that the GIS database already created by the Department covers all controlled area plans, development plans, layout plans, demarcation/ zoning plans etc., i.e., the complete gamut of spatial data dealt within the Department. These plans stand digitised and Geo referenced with overlays of satellite imageries, shajra plans etc. The satellite imageries stand procured for the purpose from NRSC. Whereas, satellite data of 0.6 m resolution stands procured for Gurgaon, satellite data of 1.0 m resolution stands procured for half of the balance area of the State and for the remaining areas LISS data has been used. PSULB observed that relying on satellite imageries for digitisation purpose suffers from inherent error to the extent of upto 1.0 meter even while using data of one-meter resolution. He emphasised that technologies were available as on date which were able to reduce such errors to less than 5.0 cm, which need to be adopted in urban scenarios where no additional margin of error is acceptable.

3. While making a brief presentation, DTP(HQ)PPS explained that such observations were valid on part of the Urban Local Bodies Department (ULB). Similarly, all the concerned Departments/ Utility agencies would also have their respective concerns, for which a technologically-appropriate-and-cost-effective solution will have to be found. It was added that eliminating such errors while digitising (with satellite imageries in the background) was easy in case of the layout plans of licenced colonies approved by the Department or in HUDA layout plans, since a detailed demarcation plan existed for such colonies which already stood verified at ground. Accordingly, the dimensions duly verified on the demarcation plan can be incorporated in the GIS database during digitisation after proper geo-referencing, thus ruling out any error in the process. It was, however, accepted that the same may not be true for all other developments, viz., old city areas, unauthorised colonies etc. for which no such demarcation plans were in existence. The proposal for creation of a specialised agency viz., HUGSA was accordingly aimed at addressing the specific requirements of each Department/ Utility agencies and develop need-based solutions for each Department and then share the integrated plan with all Government agencies to avoid duplication of efforts, savings on account of economies-of-scale, develop a technology-based system/platform for data sharing and coordination amongst various agencies. The applications that can be developed on such system can be endless. However, some of the critical functions that such system/platform can perform are as follows:

- a. Undertake high resolution mapping of existing built-up areas developed in organic manner in old city/ old municipal limits/ unauthorised colonies, where no reliable/ authenticated demarcation plan exists. **(For: ULB; Municipalities etc.)**.
- b. Undertaking a survey of underground utilities through ground-penetration- radar to build a 3-D map of underground utilities, which can serve as a reliable database for all such agencies who intend to undertake excavation in urban areas for any future infrastructure development purpose. **[For HUDA, Licenced Colonies, Public Health, Municipalities, PWD(B&R), Delhi Metro etc.]**.
- c. Build applications for linking and development of an intelligent network of CCTV cameras on roads/traffic intersections for Centralized Traffic Control Room, minimizing the need for deployment of traffic police to a great extent. **[For District Administration, Traffic Police etc.]**
- d. Provide unique Property ID across all licenced colonies/ municipal areas/ HUDA/ HSIIDC etc. in a common database enabling integration of various citizen services, common billing etc. **[For District Administration, Integrated Property Tax collection system etc.]**
- e. Development of an integrated spatial-cum-non-spatial database across all user Departments, eliminating any data inter-operability issues at later date.

4. The participants in the meeting were broadly in agreement with the need for development of such system through which sharing of information as well as development of agency specific applications could be taken up. However, there were several concerns raised regarding the modalities to be adopted for such purpose. There was a general view that the lead Department for undertaking this exercise should be either the Revenue Department (for rural areas) or Urban Local Bodies Department (for urban areas) or Science & Technology Department (for the entire State), since the intended objectives of the proposed agency did not gel properly with the activities of the Department of Town and Country Planning. The ACSTCP desired to know if any such agency stands created anywhere in the country or abroad. Dr. Sultan Singh, Sr. Scientist, HARSAC informed that a similar initiative was taken in Delhi, where the Delhi Geo-Spatial Data Infrastructure Act, 2011 stands enacted by the IT Department of Government of NCT Delhi. However, the data infrastructure creation, not being compatible with the functions of the user agencies in general and DDA in particular, there have been several problems in its widespread usage. Another example of Karnataka was also quoted where similar exercise for few towns of Karnataka was undertaken on BOT basis by a consortium of private agencies. That project has also not been able to break-even till date on account of its limited usage by user Departments. The ACSTCP emphasised that keeping in view these examples it is important that we learn the lessons/ shortcomings of such initiatives, so that we are able to avoid such pitfalls, before embarking on any such legislation.

5. Dr. Sultan Singh, Sr. Scientist, HARSAC further informed that HARSAC was already in the process of executing a similar project for Sohna town which was expected to be completed by June 2015. In case HARSAC is entrusted with the responsibility of undertaking the activities envisaged under HUGSA, they possess the necessary capabilities and the mandate to deliver the necessary outcome. It was pointed out by DTP(HQ)PPS that the activities envisaged under HUGSA required a focus on several micro level activities of various user Departments involved in the urban sector. It was necessary to build an entire system which is extremely responsive and alert to day-to-day challenges emerging in the decision making process in the urban areas. The idea is not to have a delivery based project but to put in place a system which develops an understanding of the needs of various agencies and enables administrative re-engineering of the user agencies to multiply their efficiencies. Thus the HUGSA Bill, rather than creating a delivery-based project envisages creation of a new system of functioning of the user/utility agencies, which replaces the present opaqueness between the functions of such agencies with complete transparency. Accordingly, it was important to build a new organisation from scratch, with no legacy burdens to carry forward, so that it is geared up to mould itself to meet the challenges on regular basis.

6. After detailed deliberations on the matter the specific comments/suggestions from all the participants in the meeting were also obtained. A common view emerged that before the enactment of any such law, it was important to address the concerns that have emerged in the meeting. Further, since HARSAC was already in the process of undertaking a project in this direction at Sohna, the same also needs to be reviewed before taking any final decision on the matter. Accordingly, the following decisions were taken in the meeting:

- i. A team of officers may be deputed to visit Delhi and Bangalore to examine in detail the initiatives taken in the respective States regarding creation of integrated Geo-Spatial Data Infrastructure with a specific focus to study the success factor, if any, and shortcomings/ deficiencies, if any, to develop an understanding about the do's-and-don'ts of any such initiative to be adopted in the State.
- ii. The pilot project being undertaken by HARSAC be completed by June 2015. The same shall be reviewed on its completion before taking a final view on the proposed Haryana Urban Geo-Spatial Applications Bill, 2015.

The meeting ended with a vote of thanks to the Chair and the participants.

ANNEXURE-A

**MEETING UNDER THE CHAIRMANSHIP OF SH. P. RAGHAVENDRA RAO, ACSTCP
DATED 02.03.2015: "CREATION OF HARYANA URBAN GEO-SPATIAL APPLICATIONS
LTD. (HUGSA LTD)" FOR PREPAREDNESS IN URBAN E-GOVERNANCE &
DEVELOPMENT OF SMART CITIES**

LIST OF OFFICERS WHO ATTENDED THE MEETING

Sr No.	Name of Officers	Designation
1.	Sh. S. N. Roy	PS, ULB
2.	Sh. Avtar Singh	PS, Transport
3.	Sh. Arun Kumar Gupta	DGTCP, Hr.
4.	Sh. Brijender Singh	CA, HUDA
5.	Sh. Sanjay Joon	Admin (HQ) HUDA
6.	Sh. Rajesh Jindal	CCF, HUDA
7.	Sh. K.Surjit Singh	CTP, Hr (Retired)
8.	Sh. Dilbag Singh Sihag	CTP, Haryana
9.	Sh. K. Anirudh Sharma	CTP, Municipal Corporation Gurgaon
10.	Sh. Arvind Mehtani	CTP, HSIIDC
11.	Smt. Manjit Kaur	CTP, HUDA
12.	Sh. T.D.Chopra	CE, HUDA
13.	Sh. Jaswant Singh	STP(M)HQ
14.	Sh. Sanjay Sharma	GM(IT) HUDA
15.	Dr. Sultan Singh	Sr. Scientist, HARSAC
16.	Sh. P.P. Singh	DTP(HQ) TCP

**CREATION OF HARYANA URBAN GEO-SPATIAL APPLICATIONS LTD.
AS A FIRST STEP TOWARDS BUILDING PREPAREDNESS FOR
URBAN E-GOVERNANCE & DEVELOPMENT OF SMART CITIES**

1.1. Overview: The Ministry of Urban Development (MoUD), Government of India (GOI) is in the process of finalizing the policy parameters for development of 100 Smart Cities across the country. In the tentative list of towns that are likely to be listed under the scheme, three towns of Haryana, i.e., Gurgaon, Faridabad and Sonapat are likely to figure. The 'Draft Concept Note' issued by Ministry of Urban Development, Government of India (MoUD, GOI) on the 'Smart Cities Scheme' lays great emphasis on building GIS Database for selected towns as well as on Urban e-Governance. In view of the GIS Database for all controlled areas (covering approx. 25% of the State) of the State being at an advanced stage of development by the Town and Country Planning Department which is planned to be rolled out across all the field & circle offices in the next months period, there exists an opportunity to leverage the GIS database to build upon

- i. Urban E-Governance Applications covering all utility agencies & Government Departments providing services in urban areas.
- ii. Build preparedness for 'Smart City Scheme' covering all concerned public & private sector agencies.

1.2. Imperatives: It is imperative on the part of State Government to develop preparedness in view of the above against following aspects:

- i. Develop understanding of "Smart City" concept.
- ii. Since Urban centres are to be the key driver of future growth a "Framework for Inter Departmental Co-ordination" needs to be developed to enable development of Urban E-Governance Applications.
- iii. Build preparedness of the State Government Departments/ agencies for effective and efficient implementation of the scheme.

1.3. What is a Smart City: There is no exact definition of a Smart City and each country adopts its own version of the definition depending upon what it eventually intends to achieve. From the broad contours of the Smart City Scheme as available in the Draft Concept Note circulated by MoUD, GOI it is clear that the Smart City Project stands formulated with the following basic intent:

- i. **Minimum Disruption of Infrastructure Services**, viz., Water Supply, Electricity, Urban Transport etc.
- ii. **Safe** in terms of low crime rate and low health hazard

- iii. **Economically Viable**, in terms of provision of affordable housing, availability of job options, presenting a conducive business environment etc.
- iv. **Sustainable** in terms of no adverse impact on climate change as well as an optimum utilisation of natural resources.

1.3.1. Creating a balance between Complementarities and Conflicts: As one may see from the above, there is likely to be some complementarity as well as certain conflicts within the intended goals from the Smart City Project. For example, increased availability of jobs, conducive business environment and affordable housing would go a long way in reducing the crime rate in any town, whereas the strategy of reliable utility services like water supply, electricity & urban transport as well as increasing job opportunities requires to take into the concerns for climate change and optimum utilisation of natural resources. Thus the strategy needs to be fine-tuned to reflect inter sectoral balance among various goals instead of compartmentalized effort by various Department/Agencies.

1.3.2. Integrated effort by public and private agencies involved in providing public utilities and services: In addition to above, many of the services as indicated above have several controlling actors within the State Government set-up, the urban local bodies and private sector agencies who also need to work in a concerted manner to enable achievement of the end-objectives. The strategy for development of Smart cities also needs to be fine-tuned to attain balance of efforts among various public, private sector agencies.

1.4. Understanding the Smart City Components: In order to have clarity regarding the Smart City Components, it is important to underline the 'Actionable Issues' to be taken up for Development of 'Smart City' as indicated below:

1.4.1. Collaboration and cooperation among various agencies providing public utility services: The provision of various utility services in our urban areas involve multiple agencies, who have their own processes and procedures to follow and function in an independent manner without much collaboration. A tentative list of such agencies is as follows:

- i. All Municipalities of the State
- ii. Department of Town and Country Planning, Haryana
- iii. Department of Urban Local bodies, Haryana
- iv. Department of Forest and Wild life, Haryana
- v. Department of PWD(B&R), Haryana
- vi. Department of Irrigation, Haryana
- vii. Department of PWD(PH), Haryana

- viii. Revenue Department
- ix. Haryana Urban Development Authority
- x. HSIIDC
- xi. Haryana Vidyut Prasaran Nigam Ltd
- xii. Uttar Haryana Bijli Vitaran Nigam Ltd.
- xiii. Dakshin Haryana Bijli Vitaran Nigam Ltd.
- xiv. Bharat Sanchar Nigam Ltd
- xv. Private Sector Telecom Operators active in Haryana
- xvi. Gas Authority of India Ltd.
- xvii. Delhi Metro Rail Corporation Ltd.
- xviii. National Highway Authority of India
- xix. Indian Railway

In order to ensure a collaborative effort by all agencies, an IT-enabled common platform for information sharing and informed decision making is essential.

1.4.1.1. Tool to ensure such collaborations: One of the primary requirements of all these agencies is to have a spatial plan, which is ideally linked to all non-spatial attributes, in short, a GIS database. Without adopting a collaborative effort, each of these agencies would be required to develop their own database, which is going to be an exercise in futility resulting into a loss of huge amount of time and resources. One of the pre-requisites of a 'Smart City' would be to have an integrated and reliable database with a specialized agency taking care of requirements of all concerned agencies.

1.4.1.2. Advantages and cost-savings on account of such collaboration: The potential of an application created for any single Department explodes, with its usage by all other concerned line Departments leading to uniformity in approach and transparency in dealing. For example;

- i. The CIS module presently created by the Department of Town and Country Planning for dealing all licence/CLU applications, Building plan approvals, Occupation/Completion cases, EDC/IDC accounting etc. can be customized to function as a unique engine to serve the urban local bodies, HUDA and HSIIDC also.
- ii. The GIS software suite already procured by Department of Town and Country Planning at a cost of approx. Rs. 40 lakhs can be utilised by all other Department working in the Urban sector, thus eliminating the need for each of the Department to procure the same. Similarly, a digitised GIS database covering all controlled areas of the State stands created which can be utilised by all other Departments/ agencies.

iii. The procurement of satellite imageries at periodic interval can also be utilised by all other Departments/ agencies.

1.4.1.3. Mechanism to be adopted to ensure collaboration: Once such integrated GIS based platform is prepared, each user Department can be assigned access and authentication rights for the layers within its jurisdiction. For example, the Town and Country Planning Department can overlay its Development Plan over the revenue map layers authenticated by the Revenue Department. The Power utilities can authenticate the layers for power lines and sub-stations whereas HUDA can authenticate the layers pertaining to EDC works within the town. The list is endless, and the end-result would be an authenticated, integrated, intelligent plan, which each user Department can access on real-time basis for building upon its programs and strategies.

1.4.2. Smart Infrastructure Network: The infrastructure sector covers a wide range of services, out of which a few key services are being deliberated to understand the basic components going into it for making it smart and efficient.

1.4.2.1. Smart Grid: We are already aware of the huge thrust given to reforms in the power sector to develop a 'Smart Grid' for increased efficiency in the Power Sector. A GIS based platform lies at the core of such 'Smart Grid'. Whereas, a lot of effort has already gone into Power sector reforms being spearheaded by the Government of India, the initiatives in Water Supply and Urban Transport are very few.

1.4.2.2. Smart Water Supply: Smart water supply networks are possible through induction of 'Automated Water Meters' into the network, with each such meter having a electronic chip (similar to a mobile SIM) which can send meter readings over a regular interval (varying from few minutes to several days) making it possible for the network to zero down on the leakage along a specific stretch of the network, and also have readily available reports on backflow, meter-sizing, peak-flow detection, meter stopped alarm, meter reversed alarm etc.

1.4.2.3. Smart Storm Water & Sewer: In a similar manner, sensors can also be deployed to make our Storm water drains and Sewers 'Smart' by deploying sensors. While the initial capital cost involved in such deployment may be large, in the long run, such deployments prove to be highly cost-effective and efficient.

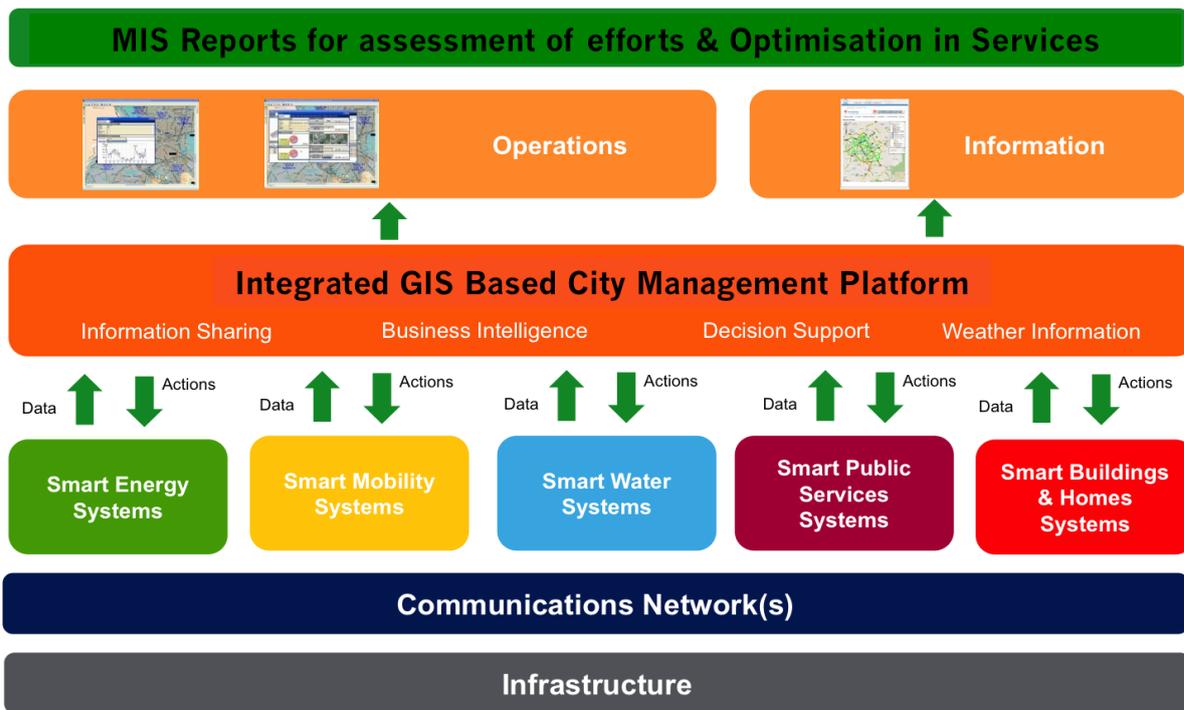
1.4.2.4. Conclusion: In case one takes a hard look at the specific components of the 'Smart City' it will be clear that each of such components has a very strong 'spatial parameter' engrained within it, i.e., a question on "where is such component located or is getting provided" gets invariably raised. In conclusion, all such smart infrastructure

networks should ideally be mounted on a common GIS platform, making it the starting point for development of 'Smart Cities'.

1.4.3.Smart Master Planning: The GIS database presently prepared by the Department merely functions as a database (spatial + non-spatial), which integrates all our plans notified/ approved till date. A GIS platform however, has the potential to perform site-suitability analysis for various land uses and also designing of an optimum infrastructure network through input of various environmental, geological, topographical data into the system. Thus utilizing the GIS platform for better master planning of towns and services results in the entire system becoming more scientific and transparent.

1.4.4.Opportunities galore: There are unlimited opportunities of integrating the database and operations of not just the other infrastructure utilities of telecom, gas grid, urban transport, solid waste management etc, but also the Health sector, Education sector etc.

1.5. Opportunity for adopting GIS Based City Management Platform as the starting point for 'Urban E-Governance' as well as for development of 'Smart Cities': A critical success factor for integrated 'Urban E-Governance' and for the 'Smart City Project' shall involve integration, coordination and synergistic functioning of various agencies involved in the city eco-system on a 'GIS based City Management Platform' to which all the 'Smart Components' can plug into. A flow chart of a proposed scenario has been depicted below, where the 'Integrated GIS based City management Platform' lies at the heart of the system to which the components being planned for various infrastructure services, viz., water supply, sewerage, storm water, Power, Other utilities, urban transport etc can plug into. All the concerned utility agencies and general public get benefitted out of the information and reports generated from an integrated data analysis from such system.



1.6. **Examples where such system stands deployed and is functional as on date:** The city of Singapore and the GIFT City being planned between Ahmedabad and Gandhi nagar are two such live examples of what such “GIS based integrated urban planning, infrastructure planning, transport planning, architecture and engineering platform” can deliver.

1.7. **Opportunity to Leverage the Synergies of the Computerisation Project of the Department with the “Smart Cities Scheme” to possess an edge in terms of Preparedness as well as enable Urban E-Governance:** It is clear from the details submitted above that we stand at a juncture where the full potential of the present GIS based project that the Department has got completed can form a starting point of reference by all the agencies working in the urban space, and the same can be further built upon by a collaborative effort to have an integrated technology platform for maintaining and deploying data and applications throughout every aspect of the ‘Smart City’ project life-cycle. Some of the major advantages that such integrated system is likely to bring are:

1.7.1. **All Departments remain on the same page:** Since all the IT related requirements of all Departments/ agencies involved in the urban sectors is taken care of by a specialised agency, the user Departments are left with the function to use such facility to the optimum. In addition, since there is an integrated database each user Department is able to access data about all other Departments on a real-time basis.

1.7.2. **Usage of single applications by multiple agencies leading to savings of costs and uniformity in procedures:** An integrated platform through which all agencies having varied jurisdictions can grant all sorts of permissions by deploying the same engine.

Any customisation, if required, can also be deployed for different agencies. For example, the CIS module presently created by the Department for dealing all licence/CLU applications, Building plan approvals, Occupation/ Completion cases, EDC/IDC accounting etc. can be customized to function as a unique engine to serve the urban local bodies, HUDA and HSIIDC also.

1.7.3. Eliminating of data inter-operability issue: In case various Departments develop their own independent application and data-bases, it would be next-to-impossible at any later stage to ensure data inter-operability i.e., a mechanism through which all such databases can talk to each other. On the other hand, in case all agencies working in the urban sector develop an integrated database from day-one, it can be ensured that there are no data inter-operability issues at any later date.

1.7.4. Scope for building applications of all concerned Departments on the unified platform: Once an integrated database is available, any user Department requiring development of an Application (Software) to serve the requirements of such Department can get such application develop and hosted on the integrated platform, thus reducing the project cycle for all future projects to a considerable extent. Though, the list of such applications can be endless, some of which already stands highlighted under para 1.4.1.2 above. In addition, some other application which can come up in future are as follows:

- i. **Cost Estimates for Infrastructure Projects:** All infrastructure Departments viz., PWD(B&R), HUDA, Municipalities etc. can get their cost-estimates for infrastructure projects by utilising the integrated GIS database.
- ii. **Integrated Infrastructure Planning:** Since the complete network of all overground and underground infrastructure networks, either already executed or planned for future, would be available in the form of an Integrated GIS Database, the future conflicts in planning/ designing of infrastructure projects can be eliminated.
- iii. **Property Tax Demand Notice:** Since the site area as well as covered floor area of all plots whether approved by Department of Town and Country Planning or HUDA or HSIIDC or Municipality, would be available, the PROPERTY TAX demand notice generated by the ULB would not have to rely upon any survey for the purpose. This can have the potential to multiply the revenue of Urban Local Bodies by several times.
- iv. **Integrated Billing:** It will be possible to raise an integrated bill for water supply, sewerage, electricity, telecom, gas connection, property tax etc. which

would eliminate the requirement of raising independent bills and devising independent collection mechanism for each of such services.

Similarly, there can be hundreds Departments specific applications that can be hosted on such integrated database to utilize its complete potential and aid in collaborative decision making process.

1.7.5.A dedicated Urban Geo-spatial agency with domain expertise: A nodal public agency with expertise in such functions is created to handle the IT functions of all concerned urban agencies in an integrated manner. The agency derives its revenue out of the cost charged for the services provided by it and is self-sustaining without any budgetary support. The initial capital for creation of such agency is contributed by all concerned agencies or through support from HIDB which has in its mandate to support such technological initiatives in the urban sector.

1.7.6.HARSAC can continued to focus as Nodal Agency for areas beyond Controlled Areas: Whereas, the urban areas requiring focused and specialised intervention can be served by such dedicated "Urban Geo-Spatial Agency", HARSAC can continue to serve the requirements of Remote Sensing & GIS Database creation for areas falling outside the controlled areas of the State, i.e., approx. 75% of the geographical area of the State.

1.8. PROPOSAL: A company called Haryana Urban Geo-Spatial Applications Ltd needs to be created to serve as the Nodal Agency and a one-stop solution for all IT needs of various agencies working in the urban sector who are supposed to implement the 'Smart City' project in the days to come. An institution with such focus would be able to instill 'Smart Governance' throughout the urban areas of Haryana, including such towns which remain untouched by the Smart City Project. Apart from that, such institution would also contribute immensely for serving as an Urban e-Governance catalyst. In order to provide a head-start to such institution, it is also proposed to:

1.8.1.Transfer of the existing data infrastructure and applications already created (CIS+GIS) by Deptt of Town and Country Planning under its Computerisation Project. A brief of the said CIS & GIS application is as follows:

(a) Client Information System (CIS) Module: The CIS application is a customized software application developed by ROLTA to function as a Decision Support System (DSS) for automation of the processes and procedures involved in the scrutiny/evaluation of applications/documents received by the Department. In essence, the CIS, which is further sub-divided into 20 sub-modules, serves as a structured and transparent tool for the scrutiny/evaluation of all standard applications/requests received by the Department involving statutory permissions/sanctions/renewals etc. and conveying a final decision on such applications/requests.

(b) **Geographical Information System (GIS) Module:** The GIS module is envisaged to serve as an institutional memory for the department and shall contain the entire spatial, geo-referenced data innately linked to a corresponding non-spatial database. In short, all plans approved by the department till date (controlled area, development plans, layout plans, demarcation, zoning along with overlays of revenue plans, topo-sheets etc.) linked with the corresponding set of non-spatial attributes comprises the GIS module.

1.8.2. Merge the relevant data infrastructure created under HUDA with the proposed HUGSA Ltd.

1.8.3. The IT data/ infrastructure created at the level of all Municipal Corporations/ other ULBs be also integrated.

1.8.4. Any GIS data created under the APDRP program or any other power reforms program be also merged.

1.8.5. Create legal backing for achieving the purpose.

A Bill for providing a legal backing to such organisation has also been prepared and is attached as **Annexure-1**.

HARYANA URBAN GEO-SPATIAL APPLICATIONS BILL, 2015

*A Bill to provide for the creation of Haryana Urban Geo-Spatial Applications Ltd. for creation, updation and maintenance of integrated urban geo-spatial information systems and development of user-specific applications for the public sector agencies functioning in the urban areas of Haryana.
Be it enacted by the Haryana State Legislature in this the sixty-fifth year of the Republic of India as under*

Section 1. Definitions.-In this part of the Act, unless the context otherwise requires,--

- (a) "attribute" means the qualifying data pertaining to the spatial feature and any non-spatial or texture data that is associated with the mapped feature;
- (b) "company" means the Haryana Urban Geo-Spatial Applications (HUGSA) Ltd, a wholly owned subsidiary of the Govt, registered under the Companies Act 1956;
- (c) "geo-portal" means the Haryana Urban GeoSpatial plan server or software application for access of geo-spatial data and application residing on an identified system of any Data Centre, including the Haryana State Data Centre;
- (d) "geo-spatial applications" include the applications developed to use the geo-enabled data to cater to specific governance needs of the Government;
- (e) "geo-spatial data" included 3-dimensional Geo-spatial information system including land information system of various urban areas of the State for which Development Plan stands finalised under the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963, comprising land-use data, land revenue record data, land ownership etc., along with urban information system comprising property details, property ownership, water pipelines, sewerage lines, roads, bridges, water tanks and the likes , basemap in hard copy and soft copy and electronic transaction forms to be made available by and to a line Department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies;
- (f) "geo-spatial plan" includes the 2-dimensional or 3-dimensional plan of urban areas of Haryana generated with the help of satellite imageries, aerial photography, photogrammetry, various surveying processes, geo-referenced scanned/digitised records, created with 2-dimensional or 3-dimensional topology and texturing including ortho-photo vectorisation, validation, digital electronic model so as to provide 2-dimensional or 3-dimensional visualisation of the projected area;
- (g) "geo-spatial system" includes all hardware, software, spatial data applications, surveillance systems and other allied informations technology equipments for the control centres and monitoring centres with appropriate linking mechanism to the line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies;

- (h) “line department” includes a Department, Corporation, Board or Authority of the Government, by whatever name called, for the time being invested by law to render essential services of public utility within the urban areas of Haryana or to control or manage or regulate civic services within a specified local area, having right to access the base map through access control;
- (i) “monitoring centre” means the monitoring centre established in the urban areas of Haryana for live monitoring of various urban activities and developments in urban areas of Haryana, including building activities, traffic and transport related activities etc. for the purpose of recording, collecting, compiling and tabulating information either in the form of audio/video or in statistical formats, and, for creating a local archive of data collected through various electronic recording devices including internal protocol cameras, for fulfilling the felt needs of the line Departments;
- (j) “public and private agencies” include public or private electricity distribution companies, public and private sector real estate developers, public or private telecommunication companies, internet service providers and the like rendering services of public utility;
- (k) “utility mapping” includes the mapping and creation of a geo-spatial database of on the ground, underground, or over-ground utilities such as water pipelines, sewerage lines, cables, mapped using ground probing radar, ground survey and other forms of survey;
- (l) “utility services” include services of water, sewerage, electricity storm-water, telecommunication/ optical fibre, oil/ gas and the likes.

Section 2. Establishment and empowerment of Haryana Urban Geo-Spatial Applications (HUGSA) Ltd

- (1) The State Government shall establish Haryana Urban Geo-Spatial Applications (HUGSA) Ltd, a body registered under the Companies Act, 1956 for the purpose of integration (including creation, updation, management, dissemination and sharing) of geo-spatial data, geo-spatial plans, geo-spatial system, geo-spatial application, geo-spatial portal of land-use and land-ownership records, public utility networks including roads, water, sewerage, electricity, telecommunication/optical fibre, oil/gas etc., managed/maintained by various line departments, local bodies, public authorities, corporations, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc.
- (2) For the purpose of undertaking the responsibilities as indicated under sub-section (1) above, the company shall, after the commencement of this Act, be empowered by the

Government by notification and by such amendments to the memorandum of association of the company as may be necessary.

- (3) The Haryana Urban Geo-Spatial Applications (HUGSA) Ltd shall be a body corporate by the aforesaid name, shall have perpetual succession and a common seal with power to enter into contracts and to acquire, hold and dispose of properties both movable and immovable and shall by the said name sue and be sued.

Section 3. Mandatory sharing, accessing, utilization and updation of geo-spatial data.-

Every line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies rendering services of public utility in the urban areas of Haryana shall –

- (a) Ensure that various geo-spatial data attributes pertaining to them are got uploaded in the geo-spatial database;
- (b) Utilise the geo-spatial data and geo-spatial plan for proper coordinated planning, management and delivery of the various services rendered as a part of their administrative and statutory functions;
- (c) Update their respective attribute data continuously on real time basis for updation of geo-spatial data and geo-spatial plans created, maintained and managed in accordance with the provisions of the Act;
- (d) Link their respective attribute data to the geo-spatial data and geo-spatial plans created, maintained and managed in accordance with the provisions of the Act;
- (e) Ensure safety and security of geo-spatial data.

Section 4. Services of Public Utility

- (1) For the purposes of this Act, services of public utility include the services rendered by the line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies, as listed in Schedule-I.
- (2) The Government may, by notification, amend the Schedule-I on the recommendation of the Regulatory Committee from time to time.

Section 5. Functions of the company

The company shall maintain geo-spatial data, geo-spatial plan, geo-spatial system, geo-spatial application, develop geo-spatial portal and applications for the Government and shall. –

- (a) act as an integrator and provider of geo-spatial data of various line departments, local bodies, public authorities, corporations, HUDA, HSIIDC, Housing Board, Authority

and City Authorities, public and private agencies etc, and make appropriate use of the same as authorised by the Government;

- (b) own and maintain the hardware, software and data procured by it or transferred to it by various line departments, local bodies, public authorities, corporations, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc. for the purpose of carrying out its functions;
- (c) update the geo-spatial data on the basis of change requests received from the line departments, local bodies, public authorities, corporations, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc. rendering services of public utility;
- (d) provide value added services and consultancy to the Government and the Government of India for better coordinated planning, utilisation and maintenance of resources;
- (e) formulate the revenue model governing charges, fees, costs and the like to be levied upon the line departments, local bodies, public authorities, corporations, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies and the general public for usage and access of the geo-spatial data, geo-spatial plan, geo-spatial applications and the like.

Section 6. Access of geo-spatial data by the line departments etc.

- (1) Every line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies shall have access to the geo-spatial data, geo-spatial plan and geo-spatial applications through access control to access, utilise and update their spatial as well as attribute data.
- (2) Every line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies may subject to payment of charge, fee, cost download or obtain live feed, updation of both spatial and attribute data in various forms such as portable document format or continuous sharing through web-application and the like for their internal use and for building additional applications on the same.
- (3) The Government shall allow controlled access of the geo-spatial data, geo-spatial plan and geo-spatial application to the public in general, private individual, public and private agencies subject to rules made under this Act:

Provided that the Government shall be authorised to classify the geo-spatial data, geo-spatial plan and geo-spatial application into the categories of restricted and

unrestricted and allow access to the data classified as unrestricted in accordance with the rules made under this Act, to the public in general, private individual, public and private agencies and the like.

Provided further that the Government shall abide by the policies, guidelines, rules, regulations, etc. of the Government of India, made from time to time regarding display of information in public domain to private individual, public and private agencies and the like.

Section 7. Service level agreement or other agreement with the line departments etc.

- (1) The company may enter into service level agreements or other agreements with any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies rendering services of public utility in the urban areas of Haryana to achieve the objective of this Act.
- (2) The company may authorise the line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies to have access through secured means, viz., VPN, password protection and the like to the geo-spatial data, geo-spatial plan and geo-spatial application of their respective data assets, to use and update to enhance its value and utility.
- (3) Every line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc shall update the attribute data on real time basis. In case of failure, the Regulatory Committee shall be entitled to take action against defaulting officials and/or line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies in the manner provided in the regulations.
- (4) Every line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc shall mandatorily use the geo-spatial data, geo-spatial plans, geo-spatial system, geo-spatial application, geo-spatial portal.
- (5) Every person or Government employee authorized to access the geo-spatial data, geo-spatial plans, geo-spatial system, geo-spatial application, geo-spatial portal may use his respective Digital Signature, VPN access, secured password or the like while using, updating and administering the same.

- (6) It shall be mandatory for all such line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies etc to establish a paperless regime, to the extent possible in terms with policy of e-governance as envisaged and declared by the Government from time to time.

Section 8. Application and utility of the geo-spatial data

- (1) The company may enter into agreements with any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies rendering services of public utility in the urban areas of Haryana to formulate the various geo-spatial applications to use the geo-spatial data and geo-spatial plans in accordance with the scheme of this Act and the rules and regulations framed thereunder:

Provided that all such agreements shall be put up by the company before its Board of Directors for approval and shall be effective once these are approved by the Board.

- (2) Creation and management of a common Monitoring Centre for integration, coordination and management of Landuse Planning and Monitoring under Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963 & The Haryana Development and Regulation of Urban Areas, Act, 1975, Municipal Governance under Municipal Corporation Act and Urban Transport in the entire State.
- (3) After a notification by the Government to the effect that the geo-spatial portal stands activated, any contractor authorised by any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency shall apply to the company online and shall obtain a unique identification number before starting any development work in the urban areas of Haryana. The line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency shall be responsible for providing and continuously updating a;; relevant information of the proposed project of development along with th progress of work of development idetifiable by the unique identification number so generated and obtained online in accordance with the rules made under this Act.
- (4) The unique identification number interms of sub-section (2) shall be generated online and all such request applications seeking unique identification number shall be decided within fifteen days from the receipt thereof by the company:

Provided that the company shall be authorised to charge such application fee as per the rates so finalised and fixed by the Board of Directors of the company payable by such contractors, persons or authority intending to start such development work in the urban areas of Haryana. The company shall be authorised in the like manner to revise such rates from time to time. All such rates of application fees or revised application fee shall be duly notified by a notification.

- (5) It shall be the duty of each line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency having right to access to the geo-spatial data and the like under this Act to certify in writing every quarter of the year to the Regulatory Committee that all geo-spatial data and attribute data generated as a result of developmental activities has been updated to that effect.

Section 9. Constitution of Haryana Spatial Data Regulatory committee.

- (1) With effect from such date as the Government may notify in this behalf, there shall be established for the purpose of this Act, a "Haryana Spatial Data Regulatory Committee" (hereinafter referred to as the 'Regulatory Committee'.

- (2) The Government shall constitute the Regulatory Committee having the following members, namely:--

i.	The Chief Secretary, Haryana.	Chairperson
ii.	The Administration Secretary, Revenue Department, Government of Haryana.	Member
iii.	The Administration Secretary, Town & Country Planning Department, Government of Haryana.	Member
iv.	The Administration Secretary, Urban Local Bodies Department, Government of Haryana.	Member
v.	The Administration Secretary, PWD (B&R) Department, Government of Haryana.	Member
vi.	The Administration Secretary, Information Technology Department, Government of Haryana.	Member
vii.	Any other person(s) as nominated by the Government or as co-opted by the Regulatory Committee.	
viii.	Managing Director, Haryana Urban Geo-Spatial Applications Ltd.	Member Secretary

- (3) The meeting of the Committee shall be held once every quarter or as often as decided by the Chairperson.

Section 10. Powers, Functions and duties of the Regulatory Committee.

- (1) Subject to the provisions of this Act, the Regulatory Committee shall have the powers, functions and duties in respect of following matters, namely:-

- (a) Monitoring the Geo-spatial systems as created by the Government;
- (b) Approval of terms and conditions including service charges, fees and cost governing sharing and accessing the geo-spatial plans, geo-spatial system, geo-spatial application, geo-spatial portal by any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency rendering services of public utility;
- (c) Lay down safety code pertaining to geo-spatial systems;
- (d) Fix liability and accountability in case of breach of safety code by any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency rendering services of public utility in urban areas of Haryana and the public or its respective responsible officers;
- (e) Enforcement and implementation of policy and plan for development of geo-spatial system and its further application and utilisation;
- (f) Act as adjudicating authority in case of any dispute governing sharing accessing, application and updation of the data infrastructure between or among the various any line department, local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies rendering services of public utility in urban areas of Haryana;
- (g) Act as a disciplinary body in case of violation of any of the provisions of the Act, rules and/or regulations made thereunder on the part of any local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agency rendering services of public utility in urban areas of Haryana and its respective responsible officers and issue time-bound directions for compliance or impose penalties in accordance with the regulations framed under this Act:

Provided that all such decisions shall be taken by the Regulatory Committee by majority.

- (2) Before passing any adverse order the Regulatory Committee shall issue a show cause notice, seeking explanation within a period not less than thirty days. The Regulatory Committee shall then pass a speaking order on the matter.
- (3) In the discharge of its functions, the Regulatory Committee shall have the following powers, namely:--
 - (a) Summoning and enforcing the attendance of any person or authority;
 - (b) Summoning and directing production of any document, books of account, record;
 - (c) Summoning any witness, record his statement in evidence on oath, and

- (d) Passing such directions or orders as deemed necessary and expedient while enquiring into any issue which the Regulatory Committee is competent and empowered under this Act.

Section 11. Protection of action taken in good faith

No suit, prosecution or other legal proceedings shall lie against the State Government or the Haryana Urban Geo-Spatial Applications Ltd. for anything which is in good faith done or intended to be done under this Act or the rules or regulations made there under.

Section 12. Notices, etc. to fix reasonable time

Where any notice, order or other document issued or made under this Act or any rule or regulation made there under requires anything to be done for the doing of which no time has been fixed in this Act or the rule or regulation, the notice, order or other document shall specify a time not less than one week for doing the same.

Section 13. Officers to be public servants

Every officer and employee of the Haryana Urban Geo-Spatial Applications Ltd. shall be deemed to be a public servant within the meaning of Section 21 of the Indian Penal Code (45 of 1860).

Section 14. Effect of other laws

- (1) The provisions of this Act, and the rules and regulations made there under shall have effect notwithstanding anything inconsistent therewith contained in any other law.
- (2) Notwithstanding anything contained in any such other law, development in any area in accordance with the provision of this Act or rules and regulations made there under shall not be deemed to be unlawfully undertaken or carried out by reason only of the fact that permission, approval or sanction required under such other law for such development has not been obtained.

Section 15. State Government to make rules

- (1) The State Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act pertaining to Haryana Urban Geo-Spatial Ltd. and the Haryana Spatial Data Regulatory Committee. Without prejudice to the generality of such power, the rules may provide for all or any of the following matters :
 - (a) Terms pertaining to framing of the revenue model governing charges, fees, costs and the like to be levied upon the line departments; local body, public authority,

- corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies and the general public;
- (b) The conditions to be prescribed in the service level agreements or other agreements with the local body, public authority, corporation, HUDA, HSIIDC, Housing Board, Authority and City Authorities, public and private agencies;
- (c) Application and procedure governing generation of unique identification number and notification of schedule of fees fixed and revised from time to time, payable by the contractor;
- (d) The method and procedure for classification of data into restricted and unrestricted;
- (e) Terms of appointment of the Regulatory Committee;
- (f) Any other matter which is required to be or may be prescribed.

Section 16. Removal of difficulties

If any difficulty arises in giving effect to the provisions of this Act, the State Government may, by notified order, not inconsistent with the provisions of this Act, remove the difficulty.

SCHEDULE-I **[See Section 4]**

Sr No	Line Departments/ Local bodies/ Public authority, Corporation, Board, Authority and City Authorities, Public and Private Agency
1	All Municipalities of the State
2	Department of Town and Country Planning, Haryana
3	Department of Urban Local bodies, Haryana
4	Department of Forest and Wild life, Haryana
5	Department of PWD(B&R), Haryana
6	Department of Irrigation, Haryana
7	Department of PWD(PH), Haryana
8	Revenue Department
9	Haryana Urban Development Authority
10	Haryana Industrial and Infrastructure Development Corporation
11	Haryana Vidyut Prasaran Nigam Ltd
12	Uttar Haryana Bijli Vitaran Nigam Ltd.
13	Dakshin Haryana Bijli Vitaran Nigam Ltd.
14	Bharat Sanchar Nigam Ltd
15	All private sector telecom operators active in the State of Haryana
16	Gas Authority of India Ltd
17	Delhi Metro Rail Corporation Ltd.
18	National Highway Authority of India
19	Indian Railway