

# List of Suggested Use cases

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#	Use Cases	Department	Layer and associated Department	Benefits/ Advantages to Department
1.	Potential Location for Substations	Energy	<ul style="list-style-type: none"> <li>• Road network- PWD</li> <li>• Cadastral maps- Revenue</li> <li>• Existing industrial zones- Industry</li> <li>• Urban planning zones- UAD</li> <li>• Habitations- P&amp;RD</li> <li>• Forest boundary- Forest Dept.</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies optimal locations for substations to ensure reliable power supply to industries and residential areas.</li> </ul>
2.	Alignment of New Transmission Line			<p>Most optimal route –</p> <ul style="list-style-type: none"> <li>• Avoids obstacles, Transmission length</li> <li>• Reduces overall cost and Time</li> <li>• Identifies areas requiring land acquisition.</li> <li>• Identification of relevant departments for obtaining necessary NoCs.</li> <li>• Prior assessment before conducting field survey</li> </ul>

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3.	Planning of Food Park/location for Food Processing Units	Industries	<ul style="list-style-type: none"> <li>• Crop Production Zones- Mandi Board</li> <li>• Road Network- PWD</li> <li>• Minor forest produces-Forest Dept.</li> <li>• Power Supply-Energy</li> <li>• Water availability -WRD</li> <li>• Habitations- P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>• Helps identify strategic location using data layers such as crop production zones, road network, power supply, and water availability</li> <li>• Enables integrated planning of food parks and processing clusters in agri- rich areas</li> </ul>
4.	Planning of multi-modal logistics hubs at optimal locations for industrial and agricultural support	Industries/ Transport	<ul style="list-style-type: none"> <li>• Crop Production Zones- Mandi Board</li> <li>• Existing Warehouses &amp; Cold Storage- Food &amp; Civil Supplies</li> <li>• Rail &amp; Road Network- PWD &amp; Railways, Habitations- P&amp;RD</li> <li>• Utility Infrastructure- UAD</li> <li>• Existing industrial zones- Industries dept.</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitates identification of optimal locations for multi-modal logistics hubs using data such as crop clusters, existing warehouses, cold storage, rail/ road terminals and utility access.</li> <li>• Enhances supply chain efficiency for both agricultural and industrial goods by leveraging connectivity.</li> </ul>

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5.	Planning of Tourism Circuits/ resorts	Tourism	<ul style="list-style-type: none"> <li>• Tourist Attractions –Tourism Board</li> <li>• Road Network- PWD</li> <li>• Accommodation Facilities- Tourism Board</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies and connects key tourism sites to create well-planned tourism circuits.</li> <li>• Supports infrastructure development by mapping amenities like resorts and homestays.</li> <li>• Promotes regional tourism growth by improving connectivity between attractions.</li> </ul>
6	Assets Planning (Residential Complex, Roads, Shelters etc.,)	Housing Board	<ul style="list-style-type: none"> <li>• Population- census data</li> <li>• Urban Growth Zones, Existing Housing and Infrastructure- UAD</li> <li>• Road network- PWD</li> <li>• Land-Use-Revenue</li> <li>• Flood Zones- WRD</li> <li>• Forests cover- forest dept.</li> <li>• Cadastral Maps- Revenue</li> <li>• Habitations- P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>• Ensures planned development of residential complexes, roads, and shelters based on population density and urban expansion needs</li> <li>• Integrates environmental considerations into housing projects, promoting eco-friendly construction and waste management.</li> </ul>

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7.	Mapping of Potential Sites for Millet Processing Clusters	Agriculture/ Industries Department	<ul style="list-style-type: none"> <li>• Millet Production Zones- Agricultural</li> <li>• Tribal Population -Tribal</li> <li>• Market Locations- UAD</li> <li>• Road Network- PWD,</li> <li>• Electricity &amp; water availability – Energy &amp; WRD,</li> <li>• Cadastral layer- Revenue,</li> <li>• Existing Food Processing Units- Industries</li> </ul>	<ul style="list-style-type: none"> <li>• Helps identify ideal locations for millet processing and value addition clusters based on production zones, tribal concentration, market access and utility infrastructure.</li> <li>• Promotes value chain development for millets (e.g. Kodo-Kutki), especially under the international year of Millets initiative.</li> <li>• Facilitates integration with ODOP(one district One Product) and PMFME (Formalization of Micro Food Enterprises) schemes.</li> </ul>
8.	Development of healthcare infrastructure and mobile medical units in remote areas	Health & Family welfare Department	<ul style="list-style-type: none"> <li>• Existing Health Facilities-Health &amp; family welfare</li> <li>• Habitation Data- P&amp;RD</li> <li>• Road Network- PwD</li> <li>• Transport Routes- transport dept.</li> <li>• Electricity Infrastructure- Energy dept.</li> <li>• Urban/Rural Boundaries- Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Finding out the potential areas , where medical facilities are needed.</li> <li>• Improves healthcare access and emergency response.</li> </ul>

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9.	Potential locations for Super Specialty hospital in unserved areas	Health & Family Welfare	<ul style="list-style-type: none"> <li>• Existing Healthcare Facilities -Health,</li> <li>• Population Density- Census</li> <li>• Road Network –PWD</li> <li>• Electricity Infrastructure – Energy</li> <li>• Cadastral layer –Revenue</li> <li>• Habitations -P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>• Enhances accessibility to advanced medical care in underserved regions and reduces patient burden on existing facilities</li> <li>• Facilitates proximity to road networks, electricity and existing healthcare centers for optimal site selection.</li> </ul>
10.	Identifying locations for new educational institutions and infrastructure improvements	Higher Education, DTE	<ul style="list-style-type: none"> <li>• Existing Higher Education Institutions- Higher Education Dept.</li> <li>• Habitation Data- P&amp;RD</li> <li>• Road Network- PWD</li> <li>• Electricity Infrastructure –Energy</li> <li>• Urban/Rural Boundaries –Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing colleges in underserved areas ensures students, especially from tribal regions, have better access to quality education.</li> <li>• Proximity to colleges reduces dropout rates and encourages higher participation in tertiary education.</li> </ul>

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11.	Identifying potential locations for police stations	Home (PHQ)	<ul style="list-style-type: none"> <li>Existing Police Stations &amp; Check Posts – Home dept.</li> <li>Electricity Infrastructure-Energy</li> <li>Road Network-PWD</li> <li>Cadastral layer- Revenue</li> <li>Industrial Zones- C&amp;I</li> <li>Habitations- P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>Helps in determining the proximity to existing check post and facilitates planning of new police stations.</li> </ul>
12.	Planning of potential new VTP centers & courses, Polytechnic and Engineering Institute based on the requirements of local industry	Chhattisgarh State Skill Development Authority	<ul style="list-style-type: none"> <li>Existing Industrial Clusters- C&amp;I</li> <li>VTP/Polytechnic/Engineering Institutes- DTE</li> <li>Electricity Infrastructure- Energy,</li> <li>Cadastral layer- Revenue</li> <li>Habitations -P&amp;RD</li> <li>Road Network- PwD</li> </ul>	<ul style="list-style-type: none"> <li>Identifies gaps in skill development infrastructure using existing industrial clusters and employment opportunities</li> <li>Helps in aligning VTP centers with regional industrial requirements.</li> </ul>

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13.	Planning of new retail liquor shops	Excise	<ul style="list-style-type: none"> <li>• Population Density- census data</li> <li>• Road Network -PWD</li> <li>• Restricted Zones (Schools, Hospitals, Religious Places)- Concerned Dept.</li> <li>• Electricity Infrastructure- Energy</li> <li>• Cadastral layer- Revenue</li> <li>• Habitations- P&amp;RD</li> <li>• Road Network- PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Aids in identifying dry areas for liquor outlets using population density, road network, distance from restricted zones (schools, hospitals, religious places etc.)</li> <li>• Facilitates site planning through buffer analysis, ensuring compliance with regulatory norms.</li> </ul>

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14.	GIS-Based Site Selection for Sewage Treatment Plants (STPs) in Urban Areas	UAD	<ul style="list-style-type: none"> <li>Population Density &amp; Growth Projections- Census data</li> <li>Drainage Network- UAD</li> <li>Land Use and Land Availability - Revenue</li> <li>Water Bodies- WRD</li> <li>Existing Sewerage Infrastructure &amp; STPs- UAD</li> </ul>	<ul style="list-style-type: none"> <li>Identifies technically and environmentally suitable locations for STPs.</li> <li>Prevents overloading of existing sewerage systems by distributing treatment capacity.</li> <li>Reduces pollution in rivers and water bodies through better sewage management.</li> <li>Supports urban expansion by planning infrastructure ahead of demand.</li> <li>Enables cost-effective planning by leveraging existing road and utility networks.</li> <li>Ensures compliance with environmental regulations and buffer zone norms.</li> <li>Facilitates real-time monitoring of sewage flow and treatment capacity.</li> </ul>

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15.	Planning effective road connectivity to ease out traffic congestions and enhance traffic capacity	PwD	<ul style="list-style-type: none"> <li>Road network- PwD</li> <li>Traffic density &amp; travel time analysis- UAD, Home (Phq)</li> <li>Habitation- P&amp;RD</li> <li>Urban land use- Revenue</li> <li>Accident prone zones- Home (Phq)</li> </ul>	<ul style="list-style-type: none"> <li>Helps identify traffic bottlenecks and prioritize decongestion projects</li> <li>Supports data driven planning of bypasses, flyovers, and alternate routes</li> <li>Enhances traffic flow and commuter safety in urban and semi-urban areas</li> <li>Enables capacity enhancement of critical road corridors through GIS-based modelling.</li> </ul>
16.	Planning of Canal networks effectively in drought regions	WRD, Agriculture	<ul style="list-style-type: none"> <li>Drought-prone area maps- Revenue</li> <li>Crop pattern &amp; soil moisture index- Agriculture</li> <li>Rainfall distribution- IMD</li> <li>Existing canal and irrigation network- WRD</li> <li>Agricultural land use- Revenue</li> <li>Ground water and surface water availability- CG Ground water Authority</li> </ul>	<ul style="list-style-type: none"> <li>Enables strategic canal expansion in water-stressed zones to improve irrigation coverage</li> <li>Aids in optimizing resource allocation for drought mitigation projects</li> <li>Supports convergence with scheme like Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for micro-irrigation and water conservation</li> <li>Facilities equitable water distribution and enhances climate resilience in farming communities.</li> </ul>

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17.	Mapping of Drought-Prone Areas for Climate Resilient Infrastructure Planning	Water Resources Department / Agriculture Department/ Disaster Management	<ul style="list-style-type: none"> <li>• Rainfall Trends (IMD)</li> <li>• Groundwater Levels-CG Ground Water</li> <li>• Crop failure records &amp; soil moisture- Agriculture dept.</li> <li>• Land Cover/ land use- Revenue dept.</li> <li>• Watershed Boundaries Check Dams – WRD</li> <li>• Administrative Boundaries- UAD</li> <li>• Habitations -P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>• Utilizes rainfall trend analysis, groundwater level data, soil moisture maps, and crop failure records to identify drought-prone villages and blocks.</li> <li>• Facilitates targeted planning of drought-resilient infrastructure like check dams, water harvesting structures, drought-tolerant crop zones, and tank rejuvenation.</li> <li>• Supports proactive drought mitigation and preparedness, particularly in vulnerable districts such as Balrampur, Surajpur, and Kanker.</li> <li>• Helps prioritize fund allocation and project approvals under schemes like RKVY, PMKSY, and SDRF for sustainable water and agriculture management.</li> </ul>

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18.	Identification of optimal locations for new fire stations to improve emergency response times and coverage in high-risk or underserved areas	Home (Fire)	<ul style="list-style-type: none"> <li>Educational institute locations- School education/ higher education/ DTE</li> <li>Road network- PwD</li> <li>Electricity infrastructure- Energy</li> <li>Water availability- WRD</li> <li>Administrative Boundaries- Habitations-P&amp;RD</li> </ul>	<p>UAD</p> <ul style="list-style-type: none"> <li>Improved resource targeting: Identify where new schools or expansions are needed</li> <li>Equity planning: Reach tribal/remote students currently underserved</li> <li>Data-backed proposals: Justify school creation to central and state bodies</li> <li>Multi-agency collaboration: Use road and transport inputs to reduce dropouts due to access gaps</li> </ul>
19.	Use satellite images taken over time to see how cities are spreading and make plans to control unplanned development	T&CP	<ul style="list-style-type: none"> <li>Satellite image- ISRO</li> <li>Urban limits- T&amp;CP</li> <li>Land use map- revenue</li> </ul>	<ul style="list-style-type: none"> <li>Enables evidence based urban planning</li> <li>Helps control unauthorized development</li> <li>Aids in drafting zoning regulations and infrastructure planning</li> </ul>

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20.	Identify land parcels suitable for future urban expansion based on proximity to roads, water bodies, and existing settlements	T&CP	<ul style="list-style-type: none"> <li>Road network- PwD</li> <li>Water Bodies- WRD</li> <li>Existing built-up area- T&amp;CP</li> <li>Land use- Revenue</li> </ul>	<ul style="list-style-type: none"> <li>Supports scientific and planned urban expansion</li> <li>Prevention encroachment on ecologically sensitive or flood prone zones</li> <li>Enables better zoning and infrastructure layout planning</li> </ul>
21.	Use GIS to map all fair price shops and analyze their coverage areas to ensure all villages and habitations have access to essential commodities.	Food & Civil Supplies	<ul style="list-style-type: none"> <li>FPS locations- food &amp; Civil supplies</li> <li>Village boundaries- P&amp;RD</li> <li>Habitations – P&amp;RD</li> <li>Road network - PwD</li> </ul>	<ul style="list-style-type: none"> <li>Identifies underserved areas</li> <li>Supports planning of new FPS locations based on habitation clusters</li> <li>Improves last mile delivery of ration and PDS items</li> <li>Enhances transparency and monitoring of distribution coverage</li> </ul>

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22.	Utilize SMP layers to map Godowns, cold storages units, and procurement centers across the State to optimize logistics and reduce wastage of perishable goods	Food & Civil Supplies	<ul style="list-style-type: none"> <li>Godowns/ cold storage locations- Food &amp; civil supplies</li> <li>Procurement centers- cooperative dept.</li> <li>Agricultural Mandis- Agri Dept.</li> <li>Road- PwD</li> </ul>	<ul style="list-style-type: none"> <li>Helps in strategic placement of cold chains and godowns</li> <li>Supports data driven decisions for procurement and stocking</li> <li>Minimizes losses during transportation</li> <li>Facilitates planning of logistics routes for food grains and perishables</li> </ul>
23.	GIS based trigger system for illegal Mining areas	Geology & Mining	<ul style="list-style-type: none"> <li>Mining lease boundary- Mining dept.</li> <li>Forest boundaries- Forest dept.</li> <li>Cadastral- Revenue</li> <li>Satellite image- ISRO</li> <li>Water bodies-WRD</li> </ul>	<ul style="list-style-type: none"> <li>Enables real time alerts on encroachment or illegal mining outside lease areas</li> <li>Helps monitor mining activities in forest zones or near water bodies</li> <li>Supports enforcement and regulatory actions with geo-tagged evidence</li> <li>Improves transparency and environmental compliance</li> </ul>

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24.	Enhancing travel routes for seamless access to isolated tourist attractions	Tourism	<ul style="list-style-type: none"> <li>• Tourist attraction points- Tourism</li> <li>• Road and rail network- PwD/ Railways</li> <li>• Land use ownership- Revenue</li> <li>• Existing public transport routes- Transport</li> </ul>	<ul style="list-style-type: none"> <li>• Helps identify remote or disconnected tourist spots lacking proper access</li> <li>• Aids in planning new or upgrade roads to promote tourist footfall</li> <li>• Facilitates multimodal transport planning</li> <li>• Encourages regional development tourism</li> </ul>
25.	Planning emergency response planning at major tourist locations	Tourism	<ul style="list-style-type: none"> <li>• Tourist hotspots and footfall- tourism dept.</li> <li>• Health infrastructure- health dept.</li> <li>• Police and fire stations' location- Home Dept.</li> <li>• Road network &amp; evacuation routes- PwD/ Transport</li> </ul>	<ul style="list-style-type: none"> <li>• Ensures tourist safety and faster disaster responses.</li> <li>• Aids in deployment of services at large events / sites</li> <li>• Supports safety planning across all tourist places in State</li> </ul>

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26.	Identification of Particular Vulnerable Tribal Groups (PVTGs) hamlets with gap of health and road facility	Dept. of Tribal	<ul style="list-style-type: none"> <li>PVTG habitation locations- Tribal welfare dept.</li> <li>Health infrastructure- health dept.</li> <li>Road connectivity- PwD/ PMGSY</li> <li>Forest areas- forest dept.</li> </ul>	<ul style="list-style-type: none"> <li>Identifies critical gaps in access to healthcare and transport for PVTG communities.</li> <li>Enables planning of focused interventions under schemes like PM-JAY, PMGSY, and NHM.</li> <li>Promotes inclusive development of tribal areas through need-based prioritization.</li> <li>Supports convergence planning among multiple departments for better outcomes.</li> </ul>
27.	Mapping of tribal hostels, ashram schools, and educational gaps in remote tribal belts to improve accessibility and reduce dropouts.		<ul style="list-style-type: none"> <li>Tribal Hamlets &amp; existing ashram schools, Eklavya Model Schools – Tribal Welfare Dept.</li> <li>Road network, bus stops – PWD / UAD</li> <li>Land ownership for expansion – Revenue Dept</li> </ul>	<ul style="list-style-type: none"> <li>Helps in identifying underserved tribal habitations for education outreach.</li> <li>Aids in location planning for new hostels or school upgrades.</li> <li>Supports tribal youth development and long-term social upliftment.</li> <li>Enables data-backed funding proposals under EMRS or state tribal schemes.</li> </ul>

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28.	Identify strategic locations for ICDs, CFSs, and MMLPs based on proximity to industrial clusters, railway lines, highways, ports, and demand centers.	CONCOR	<ul style="list-style-type: none"> <li>Industrial cluster and park- C&amp;I</li> <li>Rail network- Railway</li> <li>NH/SH-PwD</li> <li>Existing warehouse- CG WGCL</li> </ul>	<ul style="list-style-type: none"> <li>Facilitates optimal siting of ICDs, CFS &amp; MLPs to reduce logistic cost and time</li> <li>Enhances last –mile and multimodal connectivity for freight</li> <li>Supports the development of logistics infrastructure aligned with Industries</li> </ul>
29.	Identifying Anganwadis not having last – mile road connectivity	WCD	<ul style="list-style-type: none"> <li>Anganwadi center location- WCD</li> <li>Village boundary &amp; habitation- P&amp;RD</li> <li>Road network- PwD/ PMGSY</li> </ul>	<ul style="list-style-type: none"> <li>Enables targeted planning for improving access to essential child and maternal services</li> <li>Helps prioritize road construction under PMGSY or State schemes</li> <li>Improves delivery of ICDs, nutrition, and early education schemes</li> <li>Aids in monitoring accessibility gaps in remote and tribal areas</li> </ul>

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30.	Strategic Planning for Educational Infrastructure Development	Higher Educational/ School education/ DTE	<ul style="list-style-type: none"> <li>• Population density- census data</li> <li>• Road Network - PWD)</li> <li>• Electricity Infrastructure- Energy</li> <li>• Cadastral layer -Revenue</li> <li>• Student-teacher ratios- education depts.</li> <li>• Locations and capacities of existing schools and colleges- Higher education</li> </ul>	<ul style="list-style-type: none"> <li>• Equitable access to quality education.</li> <li>• Reduced travel time for students.</li> <li>• Improved student performance and retention.</li> <li>• Data-driven infrastructure investment</li> </ul>

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31.	Mapping Public Toilets in Urban Areas	ULBs / Urban Administration	<ul style="list-style-type: none"> <li>• Toilet Locations – ULBs</li> <li>• Population Density – Census</li> <li>• Road Network – PWD</li> <li>• Land Use – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies sanitation gaps</li> <li>• Aids Swachh Bharat targets</li> <li>• Improves public hygiene</li> </ul>
32	Solar Rooftop Potential Mapping	CREDA / Energy	<ul style="list-style-type: none"> <li>• Building Footprints – UAD</li> <li>• Solar Radiation Zones – CREDA</li> <li>• Electricity Infrastructure – Energy</li> <li>• Land Use – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Promotes renewable energy</li> <li>• Supports rooftop solar subsidies</li> <li>• Aids CREDA planning</li> </ul>
33	Mapping Flood-Prone Areas	WRD / Disaster Management	<ul style="list-style-type: none"> <li>• DEM/Elevation – NRSC</li> <li>• Rainfall Zones – IMD</li> <li>• River Buffer Zones – WRD</li> <li>• Drainage Network – UAD</li> </ul>	<ul style="list-style-type: none"> <li>• Enables flood risk zoning</li> <li>• Prioritizes flood prevention</li> <li>• Informs master planning</li> </ul>
34	Land Bank GIS Portal	Industries / Revenue	<ul style="list-style-type: none"> <li>• Govt. Land Parcels – Revenue</li> <li>• Roads/Rail Proximity – PWD, Railways</li> <li>• Water/Electricity – WRD, Energy</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitates investment promotion</li> <li>• Streamlines land allotment</li> <li>• Enhances transparency</li> </ul>

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35	Water Tanker Route Planning	PHE / WRD	<ul style="list-style-type: none"> <li>• Habitations – P&amp;RD</li> <li>• Water Sources – WRD</li> <li>• Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Optimizes tanker movement</li> <li>• Prioritizes drought-hit areas</li> <li>• Reduces delivery cost</li> </ul>
36	Monitoring Plantation Areas	Forest	<ul style="list-style-type: none"> <li>• Plantation Area – Forest</li> <li>• Satellite Imagery – NRSC</li> <li>• Boundaries – UAD</li> </ul>	<ul style="list-style-type: none"> <li>• Tracks afforestation</li> <li>• Evaluates survival rate</li> <li>• Ensures plantation coverage</li> </ul>
37	Streetlight Coverage Mapping	UAD / Energy	<ul style="list-style-type: none"> <li>• Streetlight Poles – ULBs</li> <li>• Road Network – PWD</li> <li>• Population Density – Census</li> </ul>	<ul style="list-style-type: none"> <li>• Improves urban safety</li> <li>• Reduces dark spots</li> <li>• Helps smart city goals</li> </ul>
38	Mapping Cultural Heritage Sites	Culture / Tourism	<ul style="list-style-type: none"> <li>• Heritage Sites – Culture Dept.</li> <li>• Road Network – PWD</li> <li>• Tourist Circuits – Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Preserves cultural assets</li> <li>• Boosts heritage tourism</li> <li>• Aids protection from encroachment</li> </ul>

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39	School Catchment Mapping	School Education	<ul style="list-style-type: none"> <li>• Schools – Edu. Dept.</li> <li>• Population Density – Census</li> <li>• Habitations – P&amp;RD</li> <li>• Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies underserved students</li> <li>• Reduces dropouts</li> <li>• Optimizes school planning</li> </ul>
40	Road Accident Blackspot Mapping	Home / Transport	<ul style="list-style-type: none"> <li>• Accident Points – Police</li> <li>• Road Network – PWD</li> <li>• Speed Zones – Transport</li> </ul>	<ul style="list-style-type: none"> <li>• Improves road safety</li> <li>• Targets infrastructure upgrades</li> <li>• Supports enforcement</li> </ul>
41	Animal Shelter Planning	Animal Husbandry	<ul style="list-style-type: none"> <li>• Livestock Density – AH Dept.</li> <li>• Habitations – P&amp;RD</li> <li>• Land Availability – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Supports animal welfare</li> <li>• Aids emergency planning</li> <li>• Promotes vet service access</li> </ul>
42	Urban Heat Island Mapping	Environment / UAD	<ul style="list-style-type: none"> <li>• Land Surface Temp. – NRSC</li> <li>• Green Cover – Forest</li> <li>• Land Use – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies high-heat zones</li> <li>• Aids greening and planning</li> <li>• Supports resilience</li> </ul>

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43	Waterbody Encroachment Detection	WRD / Revenue	<ul style="list-style-type: none"> <li>• Waterbody Boundaries – WRD</li> <li>• Satellite Imagery – ISRO</li> <li>• Land Use – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Aids in enforcement</li> <li>• Protects water bodies</li> <li>• Enables restoration efforts</li> </ul>
44	Voter Booth Accessibility Mapping	Election Commission	<ul style="list-style-type: none"> <li>• Polling Booths – Election Dept.</li> <li>• Habitations – P&amp;RD</li> <li>• Roads – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Ensures voter access</li> <li>• Reduces crowding</li> <li>• Improves voter turnout</li> </ul>
45	Mapping Unbanked Areas	Finance / Lead Bank	<ul style="list-style-type: none"> <li>• Bank/ATM Locations – Banks</li> <li>• Habitations – P&amp;RD</li> <li>• Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Aids financial inclusion</li> <li>• Plans new banking outlets</li> <li>• Supports PMJDY rollout</li> </ul>
46	Water/Sewer Utility Mapping	ULBs / PHE	<ul style="list-style-type: none"> <li>• Pipelines – ULBs</li> <li>• Buildings – UAD</li> <li>• Roads – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Prevents accidental damage</li> <li>• Aids repair and expansion</li> <li>• Enables network digital twin</li> </ul>

## List of identified Use cases

#	Use Cases	Department	Layer and associated Department	Benefits/ Advantages to Department
47	Solid Waste Route Optimization	ULBs / SBM	<ul style="list-style-type: none"> <li>Bin Locations – ULBs</li> <li>Collection Routes – ULBs</li> <li>Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Saves time &amp; fuel</li> <li>Enhances service delivery</li> <li>Improves cleanliness</li> </ul>
48	Forest Fire Alert & Mapping	Forest	<ul style="list-style-type: none"> <li>Forest Boundaries – Forest</li> <li>Fire Incidents (FIRMS) – ISRO</li> <li>Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Enables early response</li> <li>Reduces forest loss</li> <li>Guides resource deployment</li> </ul>
49	Skill Gaps in Industry Clusters	CSSDA / Skill Development	<ul style="list-style-type: none"> <li>Industrial Clusters – C&amp;I</li> <li>Training Infra – DTE</li> <li>Habitations – P&amp;RD</li> </ul>	<ul style="list-style-type: none"> <li>Aligns training with demand</li> <li>Improves employability</li> <li>Supports industry needs</li> </ul>
50	Anganwadi Infrastructure Gap Mapping	WCD	<ul style="list-style-type: none"> <li>Anganwadis – WCD</li> <li>Population (0–6 yrs) – Census</li> <li>Roads – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Ensures child coverage</li> <li>Supports infrastructure development of centers</li> </ul>

## List of identified Use cases

#	Use Cases	Department	Layer and associated Department	Benefits/ Advantages to Department
51	City Beautification Planning	UAD / Tourism	<ul style="list-style-type: none"> <li>Parks &amp; Public Spaces – UAD</li> <li>Tourist Areas – Tourism</li> <li>Road Network – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Enhances city aesthetics</li> <li>Boosts tourism</li> <li>Guides beautification</li> </ul>
52	Crop Insurance Risk Zoning	Agriculture	<ul style="list-style-type: none"> <li>Crop Data – Agri Dept.</li> <li>Weather Data – IMD</li> <li>Claims Data – Insurance</li> </ul>	<ul style="list-style-type: none"> <li>Improves risk mapping</li> <li>Reduces losses</li> <li>Supports subsidy targeting</li> </ul>
53	Public Grievance Heatmaps	CMO / CM Helpline	<ul style="list-style-type: none"> <li>Complaint Locations – CM Helpline</li> <li>Ward Boundaries – UAD</li> <li>Admin Boundaries – Revenue</li> </ul>	<ul style="list-style-type: none"> <li>Data-backed redressal</li> <li>Tracks recurring issues</li> <li>Enhances governance</li> </ul>
54	Referral Healthcare Network Mapping	Health	<ul style="list-style-type: none"> <li>Hospitals/PHCs – Health Dept.</li> <li>Ambulance Routes – Transport</li> <li>Population – Census</li> </ul>	<ul style="list-style-type: none"> <li>Improves patient transport</li> <li>Strengthens emergency care</li> <li>Optimizes health infra</li> </ul>

## List of identified Use cases

#	Use Cases	Department	Layer and associated Department	Benefits/ Advantages to Department
55	EV Charging Station Mapping	Energy / Transport	<ul style="list-style-type: none"> <li>Charging Stations – CREDA</li> <li>Commercial Areas – Revenue</li> <li>Roads – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Promotes EVs</li> <li>Enables infra expansion</li> <li>Aids private/public charging setup</li> </ul>
56	Urban Green Cover Monitoring	Forest / UAD	<ul style="list-style-type: none"> <li>Green Cover – ISRO</li> <li>Land Use – Revenue</li> <li>Satellite Imagery – NRSC</li> </ul>	<ul style="list-style-type: none"> <li>Aids green planning</li> <li>Prevents loss of green belt</li> <li>Supports Smart City plans</li> </ul>
57	Road Signage Planning	Transport / PWD	<ul style="list-style-type: none"> <li>Accident Data – Home</li> <li>Schools/Temples – Revenue</li> <li>Road Junctions – PWD</li> </ul>	<ul style="list-style-type: none"> <li>Improves traffic safety</li> <li>Reduces accidents</li> <li>Enhances navigation</li> </ul>
58	Emergency Shelter Mapping	Disaster Management	<ul style="list-style-type: none"> <li>Shelter Locations – DM Dept.</li> <li>Risk Zones – WRD</li> <li>Population – Census</li> </ul>	<ul style="list-style-type: none"> <li>Aids disaster response</li> <li>Ensures coverage</li> <li>Informs evacuation planning</li> </ul>

## List of identified Use cases

#	Use Cases	Department	Layer and associated Department	Benefits/ Advantages to Department
59	Cold Chain Infrastructure Gap Mapping	Agri Marketing / F&CS	<ul style="list-style-type: none"> <li>• Cold Storages – Agri Dept.</li> <li>• Mandis – F&amp;CS</li> <li>• Roads – PWD</li> </ul>	<ul style="list-style-type: none"> <li>• Reduces food wastage</li> <li>• Supports logistics</li> <li>• Enhances perishables storage</li> </ul>
60	Mapping Unconnected Habitations	PMGSY / PWD	<ul style="list-style-type: none"> <li>• Habitations – P&amp;RD</li> <li>• Road Network – PWD</li> <li>• Elevation – NRSC</li> </ul>	<ul style="list-style-type: none"> <li>• Aids rural road planning</li> <li>• Supports last-mile infra</li> <li>• Promotes village connectivity</li> </ul>