

Retail Sector Development in Dholera Special Investment Region (SIR): An Observation-Based Case Study

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Abstract

The Dholera Special Investment Region (DSIR) represents one of India’s most ambitious smart city and industrial corridor initiatives, yet public perception is often polarized between claims of complete readiness and allegations of fraud. This study employs a **mixed qualitative approach**, integrating field surveys with videography-based analysis (*Ground Reality India*) to assess the ground-level development, infrastructure implementation, and planning execution across multiple Town Planning (TP) schemes. Findings reveal that government-led development is currently concentrated within **TP-2 East (Activation Area)**, with visible progress in roads, drainage systems, canal-based flood management, and utility corridors, while non-activation zones and areas outside TP schemes exhibit higher risk and longer gestation periods. Comparative assessment of government and private development models highlights trade-offs between regulatory security and execution speed. The study underscores the need for **transparent communication, careful document verification (including Non-Agricultural land certification), and informed investment decisions**, and provides a comprehensive analytical framework linking statutory planning, on-ground infrastructure, spatial differentiation, and stakeholder perception. These insights contribute to a more realistic understanding of DSIR’s phased, long-term development trajectory within the Delhi-Mumbai Industrial Corridor.

Keywords: Dholera SIR, Retail Development, Smart City, Field Observation, Case Study, DMIC

1. INTRODUCTION

Urban and regional development projects increasingly recognize the retail sector as a catalyst for economic vibrancy, employment generation, and quality of life. In greenfield smart cities, retail development often follows a phased trajectory aligned with population growth and industrial activation. Dholera Special Investment Region (SIR), located in Gujarat, represents a landmark initiative under the Delhi–Mumbai Industrial Corridor (DMIC), aimed at creating a globally competitive manufacturing and investment destination. The Special Investment Region (SIR) Act refers to the Gujarat Special Investment Region Act, 2009, enacted to facilitate planned industrial and urban development in designated regions of the state. The Act provides a legal and institutional framework for the creation of large-scale investment regions with world-class infrastructure, integrated land use planning, and streamlined regulatory mechanisms. Under the provisions of the SIR Act, regions such as Dholera Special Investment Region have been developed as growth nodes to promote industrialization, attract domestic and foreign investment, and support sustainable urbanization through coordinated development of industrial, residential, commercial, and social infrastructure. Dholera Special Investment Region (SIR), covering an area of approximately 932 square kilometres, is planned as India’s first greenfield smart city under the Gujarat Special Investment Region Act, 2009.

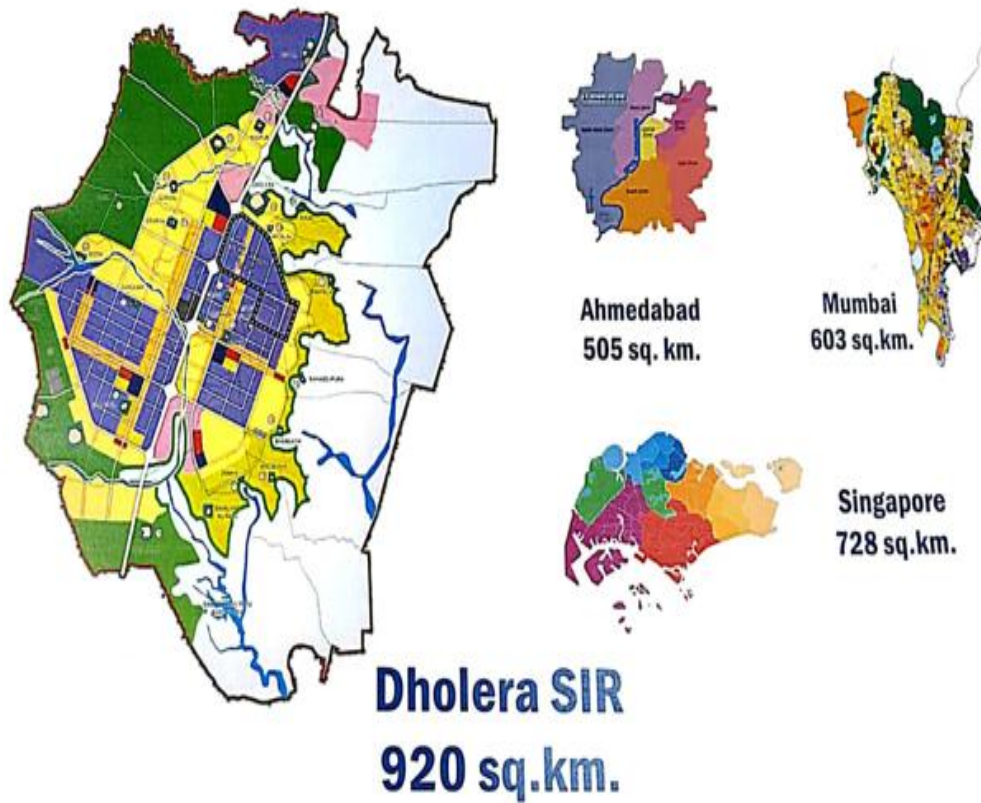


Figure 1

The figure presents a **chronological development timeline of the Dholera Special Investment Region (DSIR)**, outlining key institutional, planning, regulatory, and implementation milestones from 2009 onwards. It shows a structured progression from **statutory notification and master planning** to the establishment of dedicated authorities, approval of development plans, environmental clearances, engineering design finalization, and initiation of infrastructure works.

Figure 2

The figure illustrates the phased transformation of the Activation Area in DSIR across three time horizons—2016, 2025, and 2030. It visually demonstrates an infrastructure-first development approach, beginning with largely undeveloped land (2016), progressing to the construction of major canals, roads, and basic utilities (2025), and culminating in a planned, built-up urban environment with commercial and institutional structures (2030).



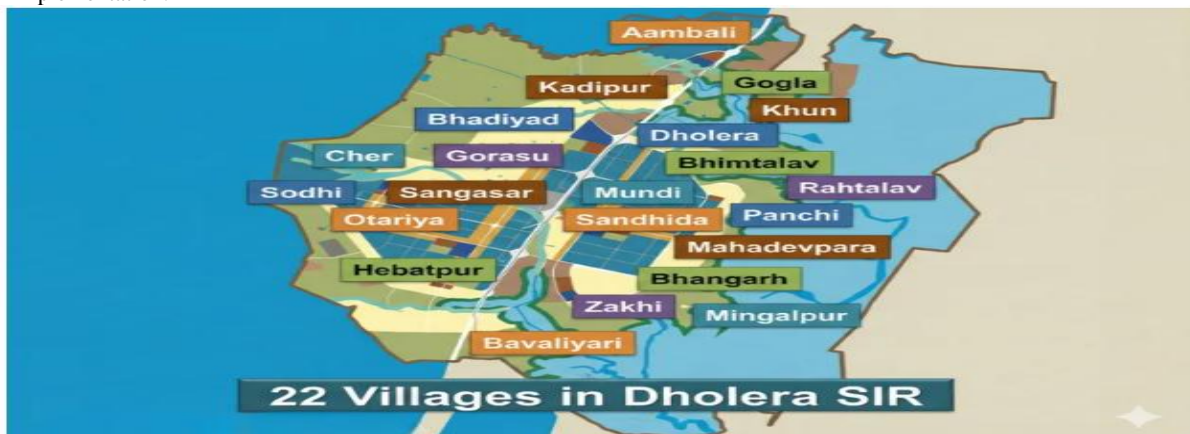
The figure illustrates the **spatial scale and planning significance of the Dholera Special Investment Region (DSIR)** by comparing its total area (920 sq. km) with other major urban regions such as Ahmedabad (505 sq. km), Mumbai (603 sq. km), and Singapore (728 sq. km). The comparison highlights that DSIR is substantially larger than these established cities, emphasizing its design as a **future-oriented, low-density, industrial–urban region** rather than a conventional compact city. The internal land-use map further reflects a **planned zoning structure** comprising industrial, residential, green, and infrastructure corridors, supporting the interpretation that DSIR is conceived for **phased, long-term development** aligned with regional and national growth strategies, rather than immediate full-scale urbanization.



<https://dholerasmartcityinfo.com/dholera-city-map/>

The region is divided into six Town Planning (TP) zones to facilitate phased development and regulated investment. The present study focuses specifically on TP-2 and TP-3, as these zones represent contrasting stages of development and offer valuable insights into early retail and commercial evolution. TP-2, particularly the eastern activation area spanning approximately 22.5 square kilometres, is currently witnessing active infrastructure development and ongoing construction, making it the most advanced and investment-secure zone. The western part of TP-2 is semi-developed and reflects transitional growth. TP-3 has an approved master plan with the town planning scheme at the draft stage, offering relatively affordable investment

opportunities but requiring a longer investment horizon of 10–15 years. Field-based observations were systematically conducted in TP-2 and TP-3 to assess on-ground development patterns, retail activity, and infrastructure utilization, thereby capturing the gap between planned development and actual implementation.



<https://dholerasmartcityinfo.com>

The **Dholera Special Investment Region (SIR)** spans an extensive area of **920 km²** and encompasses **22 villages** within the Dholera sub-district. Identifying which villages fall within the Dholera SIR and their corresponding **Town Planning (TP) Schemes** is crucial for investors to ensure their plots are **safe, legal, and ready for development**. All 22 villages within the Dholera SIR are poised to benefit from the planned **smart city infrastructure and growth initiatives**.

DHOLERA SPECIAL INVESTMENT REGION : TOWN PLANNING SCHEMES

Sl No.	TP No.	Sub TPs	Villages							
			1	2	3	4	5	6	7	8
1	TP 1	1A_1	AMBLI							1
2		1A_2	AMBLI	KADIPUR						2
3		1A_3	AMBLI	KADIPUR						3
4		1A_4	AMBLI							4
5		1A_5	AMBLI	GOGLA						5
6		1B	AMBLI	GOGLA						6
7	TP 2	2A	DHOLERA	RAHTALAV	MUNDI	KHUN	BHIMTALAV			7
8		2B_1	DHOLERA	KADIPUR	BHADIYAD	KHUN	BHIMTALAV			8
9		2B_2	DHOLERA	GORASU						9
10		2B_3	DHOLERA	GORASU	OTARIYA	SANDHIDA				10
11		2B_4	DHOLERA	GORASU	OTARIYA	SANDHIDA				11
12		2B_5	DHOLERA	KHUN	RAHTALAV		BHIMTALAV			12
13		2B_6	BHADIYAD	GORASU						13
14	2B_7	BHIMTALAV	RAHTALAV	KHUN					14	
15	TP 3	3A	DHOLERA	OTARIYA	SANDHIDA	MUNDI				15
16		3B	PANCHI	SANGASAR	SANDHIDA					16
17		3C	OTARIYA	PANCHI	SANGASAR	SANDHIDA	SODHI	CHER		17
18		3D	SANGASAR	SODHI						18
19	TP 4	4A	DHOLERA	MUNDI						19
20		4B_1	DHOLERA	PANCHI	MUNDI	SANDHIDA	HEBATPUR			20
21		4B_2	DHOLERA	PANCHI	MUNDI	MAHADEVPUR	BHANGADH	ZANKHI	SANDHIDA	21
22	TP 5	5A	HEBATPUR	PANCHI						22
23		5B	HEBATPUR	BAVALIYARI						23
24		5C	HEBATPUR	PANCHI	SANGASAR	SODHI				24
25		5D	HEBATPUR	BAVALIYARI						25
26	TP 6	6A	HEBATPUR	BAVALIYARI						26
27		6B	BHANGADH	MINGALPUR	ZANKHI	BAVALIYARI				27

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The figure depicts the statutory planning structure of the Dholera Special Investment Region (DSIR), showing its division into six Town Planning (TP) zones with multiple Sub-TP schemes and associated villages. It highlights that **TP-2 (including TP-2A)** is the designated **Activation Area**, where infrastructure development is currently prioritized, explaining the visible on-ground progress. Other TP zones are legally planned but scheduled for phased development in the future. Overall, the figure confirms that DSIR follows a **phased, government-led planning framework**, and differences in development across TP zones reflect priority sequencing rather than illegality or planning failure.

2. REVIEW OF LITERATURE

Existing studies on smart cities and industrial corridors emphasize that retail growth is closely linked to demographic stability, disposable income, and workforce concentration. Research on greenfield developments suggests that informal retail often dominates early phases due to low entry barriers and immediate demand for essential goods. Studies on DMIC nodes highlight infrastructure readiness as a necessary but insufficient condition for commercial vibrancy, underscoring the importance of demand-side factors. However, limited empirical research exists on retail sector evolution within Indian SIRs, particularly using primary observation-based methods. This study contributes by addressing this gap. Smart city research has matured into a multidisciplinary field capturing planning, infrastructure, governance, and socio-economic aspects, and it is critical to understand how these broader systems shape sectoral development such as retail planning. Comprehensive reviews frame smart city research into core themes that include technological, social, and spatial components — laying a foundation for specialized urban sector analysis. (Fang Zhao, Volume 119, 2021)

In the Indian context, institutional processes and policy frameworks have a profound influence on implementation outcomes of smart city initiatives, affecting how infrastructure and services — including retail ecosystems — evolve over time. (Purushottam Kesar, Volume 146, 2024) Retail outlet distribution and spatial patterns are influenced by planning policies, accessibility, and socio-economic contexts, emphasizing that urban planning mechanisms play a crucial role in shaping retail landscapes in developing urban regions. (Xinrui, Volume 7-2025) Emerging research underscores the need to integrate retail planning with broader city infrastructure initiatives to ensure balanced growth and sustainable economic activity within smart urban environments. (Siva Prakash C S, Volume 10-2025)

3. OBJECTIVES OF THE STUDY

1. To examine the planned framework for retail sector development in Dholera SIR.
2. To assess the current status of retail activity through field-based observation.
3. To analyse retail sector prospects using SWOT and PESTLE frameworks.
4. To suggest policy and managerial implications for phased retail development.

3.1 RESEARCH QUESTIONS

- RQ1: What is the current nature and typology of retail activity in Dholera SIR?
- RQ2: How do workforce characteristics and footfall patterns influence retail demand in a greenfield smart city?
- RQ3: What strengths, weaknesses, opportunities, and threats shape retail sector development in Dholera SIR?
- RQ4: What policy and strategic interventions can support phased retail development in industrial smart cities?

4. RESEARCH METHODOLOGY

The present study adopts a qualitative, exploratory research design to assess the ground reality of development in the Dholera Special Investment Region (DSIR). Given the gap between official planning documents, market-driven narratives, and public perception, the study integrates field-based observations with visual content analysis to provide an empirical understanding of infrastructure development, planning priorities, and spatial differentiation within DSIR. This mixed qualitative approach enables triangulation of data from multiple sources, thereby enhancing the reliability and validity of findings.

Research Design and Approach

- **Type of Study:** Single case study
- **Sources of Data:**
 - Secondary data: Government reports, DSIR master plan documents, DMIC publications, policy papers, and scholarly articles.
 - Primary data: Field-based non-participant observation.
- **Method of Analysis:** Qualitative thematic analysis supported by analytical frameworks.

Secondary data analysis: The Dholera Special Investment Region (DSIR), a key node of the Delhi-Mumbai Industrial Corridor (DMIC), exemplifies one of India’s most ambitious smart city and industrial development initiatives. The region’s development is guided by comprehensive master plans and policy frameworks published by the Dholera Special Investment Regional Development Authority (DSIRDA),

which detail phased urban growth, land use zoning, infrastructure provision, and socio-economic objectives (DSIRDA, 2022). These official documents also ensure alignment with DMIC strategic goals, emphasizing sustainable industrialization, connectivity, and investment facilitation. Complementing these government publications, scholarly studies provide critical analyses of Dholera’s planning and implementation processes, highlighting challenges related to urbanization, land acquisition, and socio-economic impact (Kumar, 2024). Collectively, the integration of official master plans, policy guidelines, and academic insights provides a multi-dimensional understanding of DSIR’s development, illustrating its strategic significance within India’s broader industrial corridor framework.

Field Survey Method: Primary data were collected through on-site field surveys conducted across selected locations within DSIR, with a particular focus on different Town Planning (TP) schemes, including TP-2, TP-3, and adjoining areas. The survey emphasized direct observation of physical infrastructure such as road networks, drainage systems, canals, signage, and planning boards installed by government authorities. Special attention was given to identifying Activation Areas, where government investment is currently prioritized, and distinguishing them from non-activation zones. Observations were systematically recorded through field notes, photographs, and spatial interpretation of development intensity.

Videography-Based Content Analysis: To complement the field survey, the study employed videography-based analysis using documentary-style content from the Ground Reality India YouTube channel. This platform was selected due to its non-promotional, on-ground reporting approach, explicitly aimed at countering misinformation related to real estate marketing. Multiple video segments focusing on Dholera Smart City were analyzed thematically, covering issues such as the concept of Activation Areas, legality of land beyond TP schemes, government versus private development models, and infrastructure readiness. The video content served as a visual verification tool to corroborate field observations and provided longitudinal insights into infrastructure progression.

Link of you tube channel

Analytical Framework: The collected data were analyzed using a thematic qualitative framework, categorizing observations under predefined themes such as planning hierarchy (TP vs Activation Area), infrastructure prioritization, risk perception in land investment, and flood management strategies. Comparative analysis was undertaken between government-notified planning intentions and observable ground-level execution. This framework allowed for systematic interpretation of discrepancies between planning provisions and actual development outcomes.

Focus on Infrastructure Indicators: Infrastructure indicators such as highway development, drainage networks, canal systems, and utility corridors were treated as key variables in assessing development readiness. Given DSIR’s low-lying geographical context, flood management and rainwater harvesting infrastructure were specifically examined. Observations related to wide road right-of-way provisions were interpreted in light of future mobility plans, including proposed mass transit systems. These indicators provided measurable proxies for evaluating the phased implementation strategy adopted by the government.

Validation and Triangulation: Data validation was achieved through triangulation of field observations, videography evidence, and official planning interpretations displayed on Town Planning boards. The convergence of findings from these independent sources strengthened the credibility of conclusions and minimized bias arising from reliance on a single data stream. This approach ensured that the study reflects actual ground conditions rather than speculative or promotional narratives.

STATUTORY PLANNING FRAMEWORK (DSIR)

- Government-notified Special Investment Region
- Town Planning Schemes: TP-1 to TP-6
- Designated Activation Area: TP-2 East (22.5 Sq

INFRASTRUCTURE IMPLEMENTATION (GROUND REALITY)

(Validated through Field Survey and Videography)

- Road and highway development
- Drainage and canal-based flood management
- Utility corridors (water, power)
- Infrastructure-first, phased execution

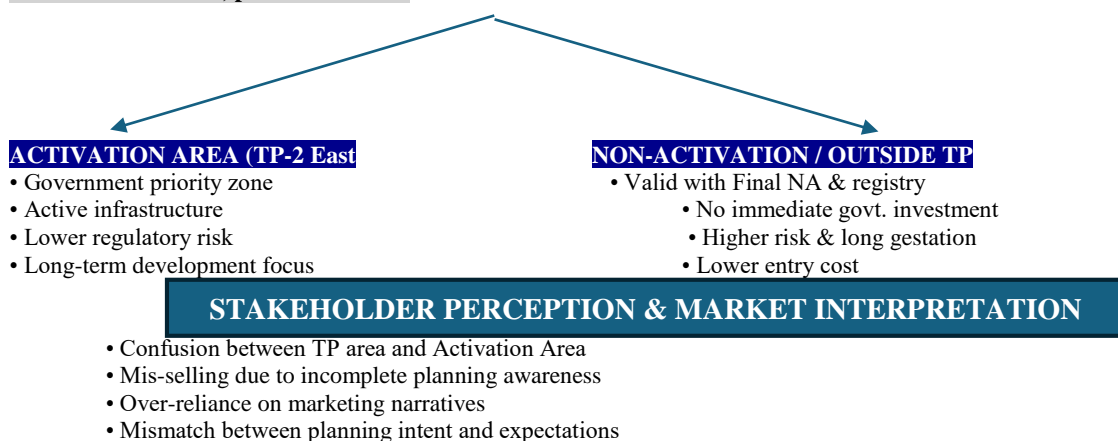


Figure 1. Integrated Analytical Framework of DSIR Development

Table 1: Summary of Field Observations on Retail Indicators

Parameter	Observation	Implication
Nature of retail	Informal and temporary	Early-stage market
Consumer base	Workforce-driven	Necessity retail demand
Footfall pattern	Shift-based	Convenience retail potential
Commercial plots	Mostly vacant	Phased retail development
Infrastructure	Developed	Long-term opportunity

Table 2; SWOT Analysis of DSIR (Based on Field Survey and Videography)

Observation Domain	Field & Videography Observations	Strengths	Weaknesses	Opportunities	Threats
Planning Structure (TP & Activation Area)	DSIR is divided into TP-1 to TP-6. Active government development is concentrated in TP-2 East (Activation Area). TP boards indicate statutory planning inclusion but not development priority.	Clear statutory planning framework; phased development approach; reduced risk in Activation Area.	Public confusion between TP area and Activation Area; uneven spatial development.	Better dissemination of planning information can improve investor awareness and trust.	Misinterpretation leads to mis-selling and speculative investment risks.
Infrastructure Development (Roads & Highway)	Wide highways under construction with future provisions for mass transit (monorail). Roads observed as part of government-led infrastructure.	Strong long-term mobility vision; visible government investment.	Infrastructure progress limited to select zones; roads alone do not ensure urban development.	Potential for transit-oriented development in future phases.	Overreliance on road visibility may create false perception of full development.
Drainage & Flood Management	Extensive drainage canals and flood management infrastructure observed due to low-lying terrain. Rainwater harvesting-based canal system planned due to non-potable groundwater.	Proactive flood mitigation planning; sustainable water management focus.	High initial infrastructure cost; dependency on timely execution.	Long-term resilience against flooding and climate risks.	Delays or incomplete execution could expose region to flood vulnerability.
Land Legality Outside TP / Activation Areas	Land outside TP or Activation Area is not illegal if Final NA and registry are available, but remains outside priority development zones.	Lower entry cost for investors; legal ownership possible.	Higher uncertainty; lack of assured infrastructure timelines.	Long-term appreciation if future TP expansion occurs.	High speculative risk; potential investor dissatisfaction.
Government vs Private Development	Government-led projects show slower execution but higher regulatory security; private developments show faster progress but depend on developer credibility.	Institutional safety in government projects.	Slow implementation pace.	Scope for public-private collaboration.	Risk of project delays or abandonment in private developments.
Information Transparency (Developer Offices & Marketing)	Developer offices and brochures observed; approvals not guaranteed merely by office presence. Clarity of documentation varies.	Availability of information for scrutiny.	Marketing narratives often dominate over factual data.	Improved due diligence frameworks for investors.	Misleading promotional content can distort investment decisions.
Overall Development Status	Development is phased, infrastructure-first, and long-term in nature. Claims of both "fraud" and "complete readiness" are inaccurate.	Strong long-term planning intent; government backing.	Temporal mismatch between planning and execution.	Opportunity for planned industrial city evolution.	Unrealistic expectations may undermine public confidence.

The SWOT-based observation summary highlights that DSIR's development is characterized by a robust statutory planning framework and long-term infrastructure vision, particularly within designated Activation Areas. However, spatially uneven implementation and information asymmetry pose significant challenges. While the region offers substantial opportunities for sustainable industrial and urban growth, misinterpretation of planning stages and overreliance on marketing narratives represent

Key Findings

- The development trajectory of the Dholera Special Investment Region (DSIR) does not align with claims of either complete readiness or complete non-functionality; instead, it reflects a phased and long-term development process.
- Field surveys and videography-based analysis confirm that DSIR operates within a well-defined statutory planning framework, structured through multiple Town Planning (TP) schemes.



ADMINISTRATIVE BUILDINGS

Current government-led infrastructure implementation is primarily concentrated in TP-2 East, designated as the Activation Area.



Planning Board in activation area

- Visible on-ground progress has been observed in road networks, drainage systems, canal-based water management infrastructure, and utility corridors, indicating an infrastructure-first development strategy. This is purley based on global infrastructure techniques which are there in china Singapore etc.



Canal based water management



Drainage System



Ahemdabad- Dholera Expressway

<p>Internal Road Network 70 km Long, 18 to 70 m Wide</p>	<p>Utility Corridor Underground Utility Network for Water, Power, Gas, ICT and Waste Water Collection</p>	<p>Water Treatment Plant 50 MLD Commissioned, expandable up to 150 MLD</p>	<p>Power Substations 2 Substations (33/66 kv and 220 kv GIS) by Torrent Power</p>	<p>ABCD Building Administrative Building with City Integrated Operation Center</p>
<p>Water Supply & Storage Infrastructure 2 Master Balancing Reservoirs and 2 Elevated Service Reservoirs</p>	<p>Common Effluent Treatment Plant 20 MLD Commissioned, expandable up to 60 MLD</p>	<p>Sewerage Treatment Plant 10 MLD Commissioned, expandable upto 30 MLD</p>	<p>Canal & Canal Front 6.5 km Long Canal for Storm Water Management. Canal Front to be used as Recreation Zone</p>	<p>Tata Semiconductor</p>

- Significant spatial disparities in development intensity exist across different TP zones, contributing to public confusion and misinterpretation of the region's development status.
- Land parcels located outside the designated Activation Areas are legally transferable provided they comply with statutory and regulatory requirements, including valid Non-Agricultural (NA) status and registration. However, such parcels do not fall within the immediate government investment priority zones. Despite this, several private developers and large real estate firms are actively promoting housing society projects in these areas, offering furnished and semi-furnished apartments, duplex units, and flats at relatively low entry prices, often starting in the range of a few lakhs.
- Investments outside Activation Areas involve higher risk and longer gestation periods, requiring greater investor patience and due diligence.
- A clear distinction exists between government-led and private-led development models:
 - Government-led development offers higher regulatory security but slower execution.
 - Private-led development shows faster visible progress but carries greater dependency on developer credibility.
- Overall, DSIR represents a long-term planned urban-industrial region, where the mismatch between planning intent, execution timelines, and market expectations remains a critical challenge.

Suggestions and Policy Implications

- Enhance **institutional transparency and public communication** to bridge the gap between statutory planning provisions and stakeholder perception.

- Ensure **clear demarcation and public dissemination** of Town Planning Activation (TPA) boundaries, development phases, and infrastructure timelines to reduce misinformation and speculative mis-selling.
- Prioritize the publication of **simplified planning maps** and **periodic ground-level progress updates** to improve investor awareness and confidence.
- Strengthen **regulatory oversight of private developers** by enforcing stricter disclosure norms and standardized documentation requirements to curb premature and misleading marketing practices.
- Introduce **incremental development benchmarks** for non-activation TP zones to provide clearer signals regarding future expansion and align long-term investment decisions with realistic planning horizons.
- Promote a **balanced public-private collaboration framework** that combines private sector efficiency with strong government oversight to ensure planned, equitable, and sustainable development.
- **Investor Advisory:** Any investment proposed outside the Town Planning Activation (TPA) areas through private or company-led projects should be undertaken only after obtaining a **signed and legally valid Non-Agricultural (NA) land certificate**, as this is mandatory for regulatory compliance and investment safety.

Conclusion

The study concludes that the Dholera Special Investment Region is a government-planned, long-term industrial and urban development project characterized by phased, infrastructure-led implementation. Field survey and videography-based evidence indicate that development is currently concentrated within designated Activation Areas, while other zones remain in preliminary stages, leading to varied on-ground realities. The gap between statutory planning intent, execution timelines, and public perception has contributed to misinformation and unrealistic expectations. Overall, DSIR exhibits strong long-term potential; however, informed decision-making, document verification, and transparent policy communication remain critical for sustainable development and investor confidence.

References

- DSIRDA, 2. A.-2. (2022). <https://dholera.gujarat.gov.in/annual-reports-of-dsirda/23>. Retrieved from Government of Gujarat. <https://dholera.gujarat.gov.in>: <https://dholera.gujarat.gov.in/annual-reports-of-dsirda/23>
- Fang Zhao, O. I. (Volume 119, 2021). Smart city research: A holistic and state-of-the-art literature review. *science direct*.
- Kumar, A. &. (2024). Study of Dholera Special Investment Region. *International Journal for Multidisciplinary Research*,, 45-60.
- Purushottam Kesar, P. A. (Volume 146,2024). Past, present and future of the Smart City in India: An institutional perspective. *Science Direct*.
- Siva Prakash C S, S. R. (Volume 10-2025). E-Commerce and the Future of Retail Infrastructure: Implications for Policy and Development. *Journal of Information Systems Engineering and Management*.
- Xinrui, R. A. (Volume 7-2025). The evolution of retail outlet distribution: a systematic review of spatial patterns, drivers, and implications for urban development and economic growth. *Frontiers*.