



NITI Aayog

Economic Master Plan for **Surat Economic Region**



September 2024

Disclaimer

This document presents the Economic Master Plan for the Surat Economic Region (SER). It describes the growth drivers and roadmap that will steer the region to its goal by 2047.

The datasets used in this document have been derived from various public sources and the inputs received from the state government. The proposed projects and other key interventions laid out in this document are based on the consultation held with major stakeholders and detailed market analysis. The project cost, land area, and locations indicated have been determined based on initial analysis and stakeholder consultation. The respective implementing authorities will need to adhere to the standard procedures of feasibility studies while implementing the projects outlined in the report. Maps have been prepared using multiple sources. Locations of infrastructure and proposed projects are illustrative and not to scale. All images have been sourced from open platforms.

Economic Master Plan to develop

Surat city-region as a Growth-Hub by 2047



September 2024



Table of Contents

i	Message by Honorable Chief Minister of Gujarat	29	Chapter 5 Strategic customized approach for primary growth drivers
iii	Foreword by Chief Secretary, Gujarat	85	Chapter 6 Developing new avenues of growth
iv	Preface by CEO, NITI Aayog	113	Chapter 7 Making SER an aspirational region with a strong support system
vi	Acknowledgement Program Director, Urban, NITI Aayog	125	Chapter 8 Towards achieving sustainability of SER
viii	List of Abbreviations	137	Chapter 9 Making SER livable
xii	Key Highlights	143	Chapter 10 Regulatory & governance framework to achieve the transformation of SER
01	Chapter 1 Growth-Hub initiative – planning for city regions of the future	149	Chapter 11 Conclusion
09	Chapter 2 Surat is one of the fastest- growing cities but SER faces regional and sectoral disparities	153	Project Team
17	Chapter 3 Vision and targets for SER	154	Bibliography
25	Chapter 4 Growth drivers and enablers	157	Annexures



Message

Honorable Chief Minister of Gujarat

Bhupendra Patel

Chief Minister, Gujarat State



Message

"More than just a blueprint, this Economic Master Plan is a testament to our dedication to fostering a visionary, dynamic and inclusive growth as partners in nation-building."

Hon'ble Prime Minister has envisioned the next 25 years as "Amrit Kaal", marking the completion of 100 years of India's independence. The collective efforts at the level of each State and UT are required to achieve the aspirations for a Viksit Bharat @ 2047. Gujarat as a dynamic and progressive state has always been at the forefront of India's growth narrative and has already prepared a comprehensive vision document to achieve the aspirations of people. With the vibrant landscape of Gujarat, its cities play a pivotal role in driving economic growth and development. The vision of transforming cities into growth hubs, harnessing their potential and creating a sustainable future is the need of the hour.

The Surat Economic Region (SER) is a vital engine of growth for our state and I am pleased that an Economic Master Plan for SER has been prepared. This marks a significant step towards realizing our vision of Gujarat as a prosperous, developed and inclusive economy. This master plan provides a clear roadmap for unlocking the region's full potential and transforming it into a global economic powerhouse.

Gujarat is committed to fostering a more dynamic and sustainable Surat Economic Region (SER) through strategic planning and the effective utilization of local resources. While the region is already recognized as a prominent manufacturing hub, shifting focus towards services and trade will position it to better achieve the aspirations of its residents. Our commitment is to strengthen the ecosystem that supports the development of the region as a growth hub.

I commend the team from NITI Aayog, officials of the State Government and district authorities for their collective efforts in preparing this plan. To me, this represents a stellar example of cooperative federalism. The State Government will continue to work in close collaboration with NITI Aayog to evolve an implementation framework to ensure that we realise the goals of this master plan. I am sure that we will not only accelerate SER's growth, but also replicate this template for establishing more growth hubs in Gujarat. This will help us achieving the goals of Viksit Gujarat@2047 paving the way for Gujarat to meet its citizens' aspirations for a prosperous and equitable future. Let us seize this opportunity to construct a more promising future for the generations ahead.

Jai Jai Garvi Gujarat!

(Bhupendra Patel)

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Foreword

Chief Secretary, Gujarat

Raj Kumar, I.A.S.
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FOREWORD

Gujarat stands as a leading state economy contributing substantially to the nation's growth trajectory. With the launching of vision document 'Viksit Gujarat@2047', Gujarat emerged as the first state to unveil a roadmap to achieve the vision for 'Amrit Kaal'. Gujarat aims to become a US\$ 3.5 trillion economy by 2047, the Surat Economic Region (SER) will play a pivotal role in driving Gujarat's economic growth. Spanning over 21,217 sq km, the SER region currently has a GDP of US\$ 72 billion and is targeting an increase to US\$ 1.3-1.5 trillion by 2047, contributing more than 35% of Gujarat's overall economic growth.

Cities have traditionally been the epicenters of economic activity and going forward, their role in driving growth is set to expand exponentially. Recognizing the importance of leveraging urbanization for economic growth, developing economic master plan for positioning city-regions as Growth Hubs is crucial. This approach not only drives economic growth, but also promotes the inclusive development of city regions through a multisectoral approach.

I am pleased that the Economic Master Plan for SER developed by NITI Aayog is a meticulously crafted blueprint guided by Viksit Gujarat@2047 and outlines a clear roadmap for the region's future. The plan's focus on identifying growth drivers, addressing challenges and proposing strategic interventions is commendable.

The vision for SER will be supported by ongoing and proposed mega infrastructure projects within the state. This Economic Master Plan of SER serves as a strategic framework built on these initiatives to achieve inclusive growth by leveraging primary growth drivers, developing new growth avenues and key focus on ensuring overall liveability & sustainability of the people representing all segments.

The plan adopts a comprehensive approach by addressing key environmental and climatic risks by prioritizing sustainability and the health & well-being of both people & nature, alongside a commitment to continuous monitoring and regulation to bridge existing gaps.

This plan is the outcome of a rigorous research & analysis, extensive stakeholder consultations and collaboration among the Government of Gujarat, various state implementation agencies, district authorities and industry & private stakeholders. I would like to thank NITI Aayog and WRI for their dedicated efforts in the preparation of this master plan.

Like any perspective plan, the projects and policies outlined here would require relevant departmental inputs, regular review, refinement and an implementation roadmap. The State Government will put in place a robust implementation framework in collaboration with the NITI Aayog to ensure that we realise the goals set in the plan towards achieving the vision for 2047 for the region, the State and the Country.


[Raj Kumar]

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Preface

CEO, NITI Aayog

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P R E F A C E

India has embarked on the path to become *Viksit Bharat* by 2047, with an ambitious target of achieving a \$30 trillion economy. Urban planning with a focus on spatial aspects and provision of services often overlooks economic visioning. It is more useful if urban planning is not limited to city boundaries and expands to feed economic plans for cities. Considering the role of urban centers catalysts of economic growth, developing city regions as Growth Hubs becomes critical to lock the full potential of urban centers to contribute in achieving the vision of *Viksit Bharat@2047*.

To pioneer a transformative shift in urban development, NITI Aayog has taken up the '**Growth Hub (G-Hub) Initiative**' prioritizing economic visioning as the cornerstone for accelerated economic growth. By delineating city regions beyond traditional urban boundaries, the initiative seeks to develop a comprehensive economic vision centered around three key pillars (i) An Economic and Investment plan; (ii) Quality of Life; and (iii) An Inclusivity and Sustainability plan. Embracing the spirit of cooperative federalism, the initiative commenced with four pilot city regions, viz. Mumbai Metropolitan Region (MMR), Surat, Varanasi and Vishakhapatnam. State Governments, in collaboration with NITI Aayog and relevant stakeholders, crafted economic blueprints and implementation frameworks for their cities.

In each Economic Region, specific economic visions have been developed on the basis of a 5-stage process, viz. (i) An as-is-diagnostic, (ii) A SWOT, Endowments & Capability analysis, (iii) Economic Visioning, (iv) Identification of key economic growth drivers and (v) An Implementation Framework. Given the scale of the initiative, an institutional mechanism has been put in place wherein a National Steering Committee chaired by CEO, NITI Aayog has been set-up involving officials from the Ministry of Housing & Urban Affairs, Govt. of India and domain experts. In addition, the respective State Governments have constituted Steering Committees for overall monitoring under the Chairmanship of the Chief Secretary. A multi-level institutional framework, including embedded teams at central, state and district levels were also put in place.

The selected pilot regions represent varying economic sizes and geographic spread across the country. The Surat Economic Region (SER) consisting of six districts viz. Surat, Bhaurch, Tapi, Navsari, Valsad and Dang, has been taken up as one of the pilot city-regions for the G-Hub initiative. Being one of the fastest growing regions of Gujarat and with its strategic advantages, SER is uniquely positioned to harness the immense potential for further accelerated growth. The Government of Gujarat, in close collaboration with NITI Aayog, the local administration and the World Resources Institute, developed the Economic Vision for Surat Economic Region. This economic vision for SER is strategically designed to complement and align with the overarching goals of *Viksit Gujarat@2047*.

This document is the outcome of extensive research, deliberations with many stakeholders across state ministries/departments, district authorities, industry associations and private stakeholders. It offers a comprehensive roadmap for the region's development based on the key economic growth drivers, detailed plans including projectizations as well as policy interventions and an implementation framework. It also emphasizes inclusivity, sustainability and quality of life.

The document is divided into several sections. The first section deals with a thorough analysis of Surat Economic Region's economic landscape, a SWOT analysis, and the possible projected growth for the region. Subsequently, the plan focuses on identifying the region's core endowments and growth drivers. Building on this, the plan further delves into sector-specific visions, project identification and prioritization, addressing potential bottlenecks and suggested policy interventions. The document concludes with an implementation strategy, encompassing institutional mechanisms to be put in place to ensure that the vision is realised seamlessly.

I would like to express my gratitude to all those who have contributed in the preparation of this document. I hope that the strategic roadmap outlined in this master plan would serve as a valuable guide to Surat Economic Region to unlock its full potential, create new opportunities, and contribute significantly to Gujarat's growth trajectory.

Dated: 22nd August, 2024


[B.V.R. Subrahmanyam]

Acknowledgement

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The Economic Master Plan of the Surat Economic Region is the culmination of 12 months of intensive work under the Growth Hub initiative for city regions, conceived and launched by NITI Aayog. The initiative draws inspiration from the vision given by Hon'ble Prime Minister's vision of *Viksit Bharat by 2047*. The Plan is aligned with the *Viksit Gujarat@2047* vision document of Government of Gujarat.

CEO, NITI Aayog who conceived and guided the development of the concept of developing city regions as growth hub played a key role in preparing the overall concept, approach and the structure of the Report.

The Steering Committee in the Government of Gujarat led by Chief Secretary of Gujarat and with key departmental heads from the state government guided the team in shaping, revising, developing and evolving the key recommendations of the report. They helped identify the pathway that they wanted the region to take and also set the aspirational goals.

The district administrations of all six districts within the Surat Economic Region, along with the Municipal Commissioner of Surat, played a crucial role in facilitating the collection of ground-level information. Their insights and feedback contributed to making the Report more contextual and tailored to the specific challenges and conditions of the region.

Several stakeholders from private and government sectors, including organizations and individuals, gave key suggestions which are reflected in the robustness of the Report.

WRI India extended invaluable support as knowledge partner in undertaking detailed examination of the sustainability and climate related aspects of the Plan.

Lastly, the team of the Managing Urbanisation vertical of NITI Aayog made this possible through their meticulous and detailed examination of varied issues, undertaking extensive stakeholder consultations, evolving project proposals, policy prescriptions and preparation of the final Report.

This Plan was prepared with a goal of being ambitious and practical with the flexibility to evolve in response to changing scenarios. It marks a new era of collaboration and cooperation among all stakeholders to realize the vision of *Viksit Bharat by 2047*.


(Anna Roy)
Principal Economic Adviser
NITI Aayog

List of Abbreviations

Abbreviation	Description
AI/ML	Artificial intelligence/Machine learning
APEDA	Agricultural and Processed Food Products Export Development Authority
API	Active Pharmaceutical Ingredient
AR	Augmented Reality
ASI	Annual Survey of Industries
B2B	Business-to-Business
B2C	Business-to-Consumer
B-leisure	Business-leisure
Bn	Billion
CAGR	Compound Annual Growth Rate
CEO	Chief Executive Officer
CEPI	Comprehensive Environmental Pollution Index
CETP	Common Effluent Treatment Plant
CoE	Center of Excellence
COP	Conference of the Parties
C-PACE	Central Processing Accelerated Corporate Exit
CPCB	Central Pollution Control Board
DC	District Collector
DESH	Development of Enterprise and Service Hubs
DFC	Dedicated Freight Corridor
DME	Delhi-Mumbai Expressway
DMIC	Delhi-Mumbai Industrial Corridor
DMO	Destination Management Organization
DoE	Department of Energy
DREAM City	Diamond Research and Mercantile City
EDC	External Development Charges
EGM	Empowered Group of Ministers
EMP	Economic Master Plan
EU	European Union
EV	Electric Vehicle
FDI	Foreign Direct Investment
FIMOI	Financial Modelling of Offshore wind in India
FPO	Farmer Producer Organization

Abbreviation	Description
FSI	Floor Space Index
FTA	Free Trade Agreement
FTWZ	Free Trade Warehouse Zone
FY	Financial Year/Fiscal Year
G&J	Gems & Jewelry
G2G	Government-to-Government
GDDP	Gross District Domestic Product
GDP	Gross Domestic Product
GHG	Greenhouse gases
G-Hub	Growth Hub
GI	Geographical Indication
GIDC	Gujarat Industrial Development Corporation
GIFT City	Gujarat International Finance Tec-City
GNFSU	Gujarat Natural Farming Science University
GoG	Government of Gujarat
GoI	Government of India
GPS	Global Positioning System
GSRTC	Gujarat State Road Transport Corporation
GVA	Gross Value Added
HSR	High-Speed rail
ICCC	Integrated Command & Control Centre
IDC	Infrastructure Development Charges
IEC	Information, Education, and Communication
IFOAM	International Federation of Organic Agriculture Movements
IIGJ	Indian Institute of Gems & Jewelry
INR	Indian Rupee
IoT	Internet of Things
ISEG	Institute for Sustainability, Employment and Growth
ITI	Industrial Training Institute
IWAI	Inland Waterways Authority of India
JAS	Japanese Agricultural Standards
JCI	Joint Commission International
JNPT	Jawaharlal Nehru Port Trust
KPI	Key Performance Indicator
KSM	Key Starting Material
kWh	kilowatt-hour

Abbreviation	Description
LCoE	Levelized Cost of Energy
LEZ	Low Emission Zone
LGD	Lab-grown diamonds
LID	Low-impact Development
LNG	Liquefied Natural Gas
MCM	Million Cubic Meters
MICE	Meetings, Incentives, Conferences, and Exhibitions
MMF	Man-made Fiber
MMR	Mumbai Metropolitan Region
MMTH	Multi-modal Transport Hub
Mn	Million
MNRE	Ministry of New & Renewable Energy
MoHUA	Ministry of Housing and Urban Affairs
MPI	Multidimensional Poverty Index
MRTS	Mass Rapid Transit System
MSME	Micro, Small, and Medium Enterprises
MW	Megawatt
NABH	National Accreditation Board for Hospitals
NAU	Navsari Agriculture University
NbS	Nature-based Solutions
NCONF	National Centre for Organic and Natural Farming
NH	National Highway
NHAI	National Highways Authority of India
NITI	National Institution for Transforming India
NMT	Non-motorized Transport
NPOP	National Programme for Organic Production
PCB	Pollution Control Board
PCPIR	Petroleum, Chemicals and Petrochemicals Investment Regions
PHC	Primary Health Center
PLI	Production Linked Incentive
PM	Particulate Matter
PM MITRA	PM Mega Integrated Textile Region and Apparel
PMU	Project Management Unit
PPP	Public-Private Partnership
R&D	Research and development

Abbreviation	Description
RE	Renewable Energy
RERA	Real Estate Regulatory Authority
RESCOs	Renewable Energy Service Companies
RoW	Right of Way
RTSOI	Responsible Tourism Society of India
S.U.R.E	Specifications for urban roads execution
SER	Surat Economic Region
SEZ	Special Economic Zone
SHPSC	State High Power Steering Committee
SIR	Special investment region
SMC	Surat Municipal Corporation
SME	Small, and Medium Enterprises
SOP	Standard Operating Procedure
SPV	Special Purpose Vehicle
SREDA	Surat Regional Economic Development Authority
STP	Sewage Treatment Plant
SUDA	Surat Urban Development Authority
SWOT	Strengths, Weaknesses, Opportunities, and Threats analysis
T&A	Textile & Apparel
Tn	Trillion
TOD	Transit-oriented Development
ToR	Terms of Reference
UAE	United Arab Emirates
UK	United Kingdom
ULB	Urban Local Body
UNDRR	United Nations Office for Disaster Risk Reduction
USA	United States of America
USD	United States dollar
USDA	United States Department of Agriculture
WDFC	Western Dedicated Freight Corridor
WHO	World Health Organization
WRI	World Resources Institute
\$	U.S. Dollar
₹	Indian rupee

Key Highlights

1. Introduction – cities as engines of growth

Cities are regarded as the engines of economic growth, serving as hubs for innovation, industry, and trade that accelerate national development. However, efficient urban planning and management are crucial to realizing their true potential. Urban local bodies (ULBs) should aim for inclusive, sustainable growth and focus on enhancing the quality of life.

Recognizing the crucial role of urban areas in shaping *Viksit Bharat by 2047*, the Hon'ble Prime Minister emphasized during a post-budget webinar in 2023 that

'... Urban planning will determine the fate of our cities in Amrit kaal and it is only well-planned cities that will determine the fate of India, ...'.

2. Growth Hub (G-Hub) initiative – A paradigm shift

The 'G-Hub Initiative' proposes a new approach for managing urbanization by going beyond urban boundaries to a regional approach, center-staging economic master planning and keeping sustainability and livability at the core of the process. It marks a pivotal step towards inclusive & sustainable development with a multi-sectoral approach, promoting cities as mega-growth hubs for the nation.

Instead of a reactive approach toward managing urbanization, this initiative attempts to introduce a proactive approach with economic strategy as a precursor to the spatial planning.

Surat was one of the four pilot cities taken up by NITI Aayog under the G-Hub initiative for the preparation of the Economic Master Plan (EMP).

3. Surat Economic Region – Towards a balanced spatial and sectoral growth

The Surat Economic Region (SER), comprising six districts in southern Gujarat, is centrally located between 2 major economic hubs of India, namely Mumbai and Ahmedabad. Although SER accounts for only 10.8% of the state's total area, it generates 25% of the state's GDP and has a per capita GDP of approx. \$4,586 (FY 2023), which is 1.2 times higher than the state average and 1.8 times higher than the national average.

Although SER boasts of significant economic strength, its growth is uneven, with the Surat district alone accounting for 62% of the region's GDP. Additionally, there is a sectoral concentration, with manufacturing making up over 55% of the region's GDP and employing approximately 45% of the workforce. These disparities highlight the urgent need for strategic economic planning to promote more inclusive and balanced growth across the region.

4. SER Economic Master Planning – Vision and Targets

At its core, the economic master planning of SER is guided by the *ViksitGujarat@2047* vision of 'earning well' and 'living well' while aligning with its growth target for a \$ 3.5-4 Tn economy.

By 2047, SER is projected to grow twentyfold, contributing over 35% of Gujarat's GSDP. This accelerated growth is expected to be driven by leveraging the region's existing endowments, aligning with global and local market demands and trends, and benefiting from the positive impacts of ongoing and proposed mega infrastructure projects.

5. Strategic Growth Drivers - Assessing the potential and shaping future growth

Based on extensive stakeholder consultations, in-depth analysis of growth potential, employment opportunities, and future demand projections, a set of key growth drivers for the 'earning well' theme has been identified, supported by complementary 'living well' components.

The roadmap outlined in the EMP, aligned with the state's goals and vision, ensures a holistic approach by addressing every facet of the economy, society, and livability. The plan focuses on nine key growth drivers and is structured on 4 pillars, viz. (a) sustaining and growing manufacturing through strategic interventions; (b) promoting the service economy through business & trading; (c) developing new growth avenues; and (d) creating an enabling ecosystem of lifestyle and learning, making SER an aspirational city region.

5.1 Sustaining and scaling up manufacturing

- **Position SER as a global Chemical hub and a major national Pharma hub**

SER has a competitive edge in the manufacturing of chemicals and pharmaceuticals at the national level. The EMP aims to capitalize on this strength and proposes projects and policies to develop SER into a global Chemical hub. It also has the potential to become a major national Pharma hub for which specific interventions have been recommended. The proposal aims to help achieve global size and scale with value-chain advancement while managing effectively the consequent environmental implications.

- **Streamlining the existing manufacturing ecosystem & venturing into high-value apparel and jewelry segments**

SER has a competitive edge in manufacturing Man-Made Fibre (MMF) and the processing (cutting & polishing) of natural diamonds at the global level. The EMP proposes to streamline the existing manufacturing ecosystem to increase productivity. Currently, the Textile & Apparel sector in SER focuses on low-value--high - volume manufacturing that also contributes to environmental pollution in the region. Meanwhile, although SER is a global leader in diamond processing, its presence in high-value segments such as jewelry (design, manufacturing, retail), lab-grown diamonds, etc. remains limited.

The EMP proposal aims to achieve global size and scale in both sectors by streamlining supply chains, providing market access to home-grown products, and attracting international brands. The focus is on transitioning from low-value to high-value segments and significantly expanding trade by leveraging SER's strategic location, positioning it as a global gateway for trade

and services. By providing a robust platform for products manufactured and sourced from other parts of the country, the EMP aims to position SER as a global gateway for trade and services. As B2B (Business-to-Business) and B2C (Business-to-consumer) ecosystems grow, new sectors are expected to emerge naturally.

5.2 Promoting the service economy through business & trading

The goal is to leverage SER's strengths by proposing projects and policies that will transform it into a global gateway for trade and services. To shift from inward-facing operations to outward-facing trade, the EMP proposal seeks to elevate the T&A and G&J sectors to a global scale by streamlining supply chains, enhancing market access for local brands, and attracting international players. The primary focus is on moving from low-value to high-value segments, and significantly expanding trade by capitalizing on SER's strategic location. The approach includes positioning SER as one of India's "gateways for trade & services" in the T&A and G&J sectors, with plans for further expansion to include other sectors. This vision can be realized through the establishment of "Bharat Bazaar" with dedicated zones for promoting B2B and B2C functions. The B2C zone is planned within the DREAM city at Surat, featuring facilities such as T&A and G&J souks and bourses, luxury malls, an artisan village, a museum, an experience center, expansion of an existing convention center, hotels, restaurants, an international boarding school, and more. The B2B zone is proposed in the HSR zone near Surat, with amenities including wholesale market blocks, warehouses, malls, retail spaces, and housing & care facilities. Additional business-friendly facilities and support services have been proposed in both B2B & B2C zones to create a conducive trading environment. The growth of T&A and G&J sectors in the region may need to be braced with ancillary capital goods around the SER region. By providing a robust platform for products manufactured and sourced from other parts of the country, the EMP aims to position SER as a global gateway for trade and services.

5.3 Developing new growth avenues

In addition to primary growth drivers, it is also essential to develop new avenues of growth. Three sectors identified are Tourism, Agriculture, and Real Estate.

▪ **Harness the unexplored opportunities in Tourism**

SER, despite having significant tourism potential, has not fully developed this sector. There are ample opportunities to promote tourism as a key growth driver, which could significantly boost GVA and create employment opportunities. The EMP recommends implementing a hub-and-spoke model for tourism development including a list of projects and policy interventions. The hub-and-spoke model is supplemented with well-connected nodes offering diverse travel options for all income groups, prioritizing projects that reduce travel time and ensure seamless movement between nodes within three hours. These proposals may help position SER as a business-led leisure

tourism destination.

A comprehensive set of interventions has been designed to enhance tourism in SER by leveraging three key regional assets: (i) business-led leisure tourism destination, (ii) eco and rural tourism, and (iii) experiential tourism highlighting natural, spiritual, and architectural heritage and culture. A hub-and-spoke approach is proposed to advance experiential tourism, with Surat serving as a business hub offering cruise tourism with well-planned circuits, multiple docking facilities, and Dang as an eco-tourism hub featuring wildlife and adventure tourism, homestays, and rural-based activities. Additionally, unique experiential tourism may include guided heritage walks and tours centered on Parsi culture and promoting indigenous art and festivals. To effectively manage tourism, emphasis has been placed on integrating green practices, skill development, technology, and robust institutional mechanisms to ensure sustainability and responsibility.

- **Leverage mega-infrastructure projects for real estate growth**

The EMP seeks to invigorate the real estate market, aiming to achieve a projected \$40 billion GDP contribution in the SER region. Enhanced connectivity, a robust job market, and substantial projected growth in manufacturing and services will drive this upward trend. This may be accomplished by demarking land between the high speed rail (HSR) and Delhi-Mumbai expressway (DME) corridors, with the HSR stations serving as the focal points for real estate development.

- **Tailored strategies to enhance the agricultural value chain in SER**

SER is poised to grow by 20 times during the next 25 years, largely powered by the growth of secondary and tertiary sectors. To improve productivity, predictability, and profitability, the EMP proposes the promotion of agro-ecological practices across the SER through cluster development and addressing supply chain and logistic issues in food processing by leveraging technology.

5.4 Creating an enabling ecosystem of lifestyle and learning

- **Bridge the skills gap for a future-ready SER**

SER is on a rapid growth trajectory, yet it faces a significant skills gap due to the limited presence of top-level educational, skilling, and research institutions. SER needs to evolve into a global skilling hub capable of meeting both regional as well as global demands. The EMP proposes cluster-based development of educational institutions, upgradation and expansion of existing facilities, sector-specific centers of excellence, and strong industry-academia collaboration to create a highly skilled and globally competitive workforce.

- **Enhance the healthcare infrastructure of SER**

Recent data highlights a shortage of healthcare facilities in SER. The demand

for quality healthcare is expected to rise substantially in the coming years. This underscores the pressing need to expand healthcare infrastructure, increase medical personnel, and integrate modern equipment and technologies. The EMP proposes a comprehensive and multi-faceted approach to strengthen the region's healthcare system.

▪ **Make SER a benchmark for sustainable living**

SER, a rapidly growing urban area, faces challenges affecting the quality of life of its inhabitants. Further, SER's targeted economic growth of 20 times should not result in environmental degradation and human health impacts. Enhancing sustainability and livability is key to making SER an aspirational place to live and work. By focusing on climate resilience, sustainable infrastructure, connectivity, and public health through collaborative efforts, SER can become a model of urban livability, ensuring long-term resilience and prosperity for its communities.

The EMP aims to make SER a model region with a strong support system by addressing environmental and climate risks holistically while improving the well-being of both people and nature. The sustainability strategy is driven by two key approaches: harnessing renewable energy and strengthening risk and disaster management with proposals for offshore wind projects, solar parks, hybrid energy parks, and floating solar panels. To enhance climate and disaster resilience, critical measures such as comprehensive disaster plans, multi-hazard forecasting systems, and robust disaster risk infrastructure are also recommended. In terms of livability, the key initiatives include: (i) creating an Edu-city in Surat's HSR zone, featuring private universities, Centers of Excellences, international schools, and research institutions; (ii) expanding and modernizing industrial training programs to supply skilled labor for key growth sectors; (iii) strengthening the healthcare infrastructure by establishing multi-specialty hospitals, trauma centers, and primary healthcare facilities for all segments.

6. From rapidly growing to a globally competitive city-region: Key interventions

The EMP presents a detailed blueprint for the region's growth, detailing recommendations for proposed projects with their possible locations, alongside several policy interventions. Additionally, it proposes an institutional framework to ensure efficient and seamless implementation.

7. Proposed implementation framework: To ensure efficient, effective, and time-bound outcome

A robust institutional framework is crucial for the systematic implementation of the proposed interventions. A three-tier institutional framework has been proposed which includes: (i) constitution of the Empowered Group of Ministers (EGM) chaired by the Hon'ble CM with representatives of state government cabinet ministers to approve broad policies and regulatory frameworks and monitor high-level performance and outcomes, (ii) constitution of the State High Power

Steering Committee (SHPSC) chaired by the CS to develop long-term strategic implementation plans aligning with national or state priorities and providing guidance to the implementing agencies, and (iii) establishing Surat Regional Economic Development Authority (SREDA) with official representation from all 6 districts in the region as the key responsible entity for the integrated regional development and implementation of the plan.

Under the SREDA framework, three new institutes and one existing agency are proposed for implementation, including the G-Hub Crack Unit, which will coordinate projects and streamline communication across stakeholders. A Destination Management Organization (DMO) is recommended for promoting regional tourism, while a Project Management Unit (PMU) will lead project structuring and financing. Additionally, the existing Surat ICCC can be scaled up and regional ICCCs established to centralize monitoring and enhance compliance across SER's industrial sectors.

The EMP may act as a rolling vision for SER's economic development, with regular reviews during implementation. While maintaining the core vision, targets, and focus areas, the project plans and policy reforms may be revised as necessary to stay aligned with the evolving conditions.

An aerial photograph of a city, likely in Asia, showing a wide river flowing through the urban landscape. Two bridges are visible: a smaller truss bridge in the middle distance and a larger, multi-lane highway bridge in the foreground. The city is densely packed with buildings, and the sky is blue with scattered white clouds.

1

Growth-Hub initiative: Planning for city-regions of the future

India needs globally competitive, environmentally sustainable, and inclusive cities. Negative externalities of inconsistent spatial and economic aspects of the planning process remain a major bottleneck to realizing the real potential of urban areas. 'Growth-Hub Initiative' presents a structured approach of harnessing the economic potential of growth through the preparation of economic master plans of city-regions as a precursor to spatial planning leading to a growth journey that is accelerated, inclusive, and sustainable.

1.1 G-Hub: A new approach to managing urbanization

India is home to the second largest urban system globally, accounting for 11% of the world's total urban population, as per World Urbanizations Prospects 2018 - United Nations. Nearly 31% of India's population lives in urban areas, a figure that is expected to rise to about 40% by 2036¹ and 50% by 2050². As of 2011, urban areas are estimated to contribute ~63% of GDP, which is projected to further rise to 75% by 2030³. As engines of growth, Indian cities are poised to play a key role in shaping the nation's economic growth story. Rapid urbanization could be beneficial, provided it aligns with the aspirations of the nation to achieve accelerated growth, employment generation, inclusive and sustainable development.

Typically, the mushrooming of unplanned urban sprawls, witnessed in urban areas results from an approach of urban planning that is largely focused on land use and meeting basic infrastructure needs as a reactive phenomenon. The process devoid of an economic vision and regional approach fails to present a long-term vision to realize the potential of urban regions. The need for a more pragmatic approach is apparent to harness the demographic dividend and realize the true potential of urban centers. In this context, the need and importance of reimagining the process of urban planning cannot be overemphasized.

In a post-budget webinar on 1st March 2023, the Hon'ble Prime Minister of India stated that:

"... Urban planning will determine the fate of our cities in Amrit Kaal and it is only well-planned cities that will determine the fate of India, ..."

For India to achieve the vision of Viksit Bharat by 2047, with a target of a \$30 trillion economy, two transformative shifts in traditional planning practices are essential. First, transitioning from city planning within municipal boundaries to a more holistic approach that acknowledges the interconnectedness of urban centers with their surrounding regions, emphasizing city-region planning. Second, developing an economic strategy for city-region development as a precursor to land-use planning at regional, city, and local levels.

Growth Hub, or G-Hub initiative introduces a proactive approach with city regions as the unit of economic master planning and follows a five-step process based on:

- **Identification of economic (and job) growth drivers:** Diagnosing and identifying key sectors that are expected to drive economic growth and create employment

opportunities.

- **Defining city endowments and global/national trends that are expected to impact the growth process:** Assessing the city's inherent strengths, advantages, and resources, while aligning with global and national trends that could influence the economy.
- **Quantifying resource needs:** Determining financial and human resources (including specific skill sets) that are required in various sectors to achieve the desired aspirations.
- **Identification of measures for boosting the business environment:** Creating a conducive ecosystem for business to thrive, promoting innovations and entrepreneurship.
- **Projectization of ideas/ Interventions:** Transforming ideas and interventions to well-structured actionable projects that can be implemented to drive economic growth. Also, identifying key policy interventions to realize the goals.

In sum, a synchronization of economic visioning with **“economy and job-creation led”** spatial/physical planning, along with a shift in the policy rhetoric from viewing cities merely as ‘engines of economic growth’ to ‘engines of inclusive development and sustainable growth’.

Under the G-Hub approach, the focus is on the big swings rather than end-of-pipeline corrective measures to serve the latent demand of the city-regions.



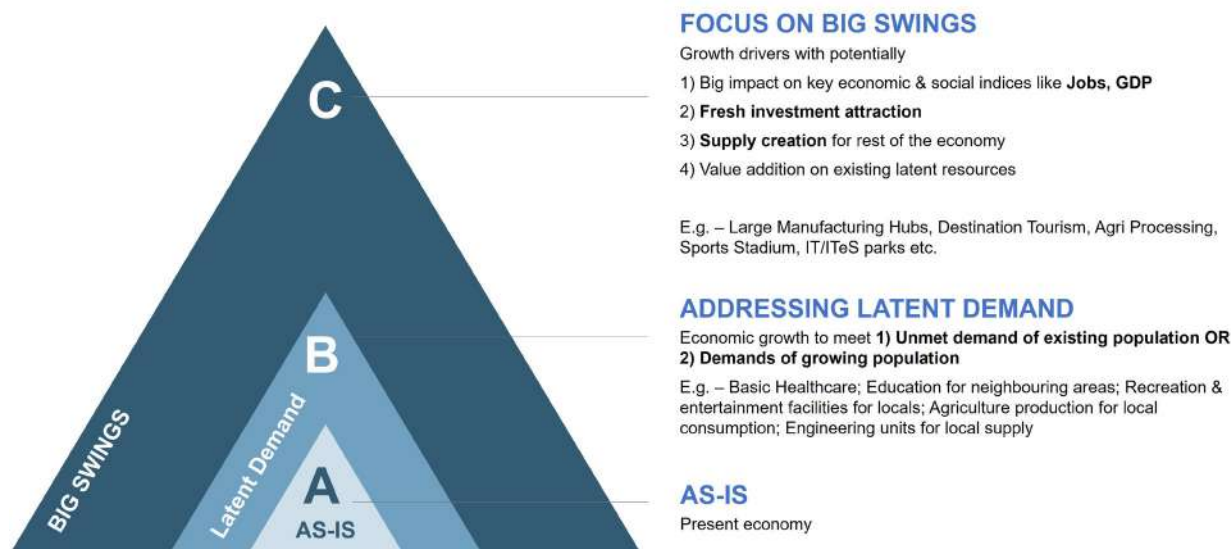


Figure 1. Strategic differentiators of the G-Hub initiative

1.2 NITI Aayog pioneered the G-Hub initiative and selected 4 pilot city-regions to develop process templates

NITI Aayog conceptualized the G-Hub initiative in 2023 and selected 4 city-regions to develop process templates. It was recognized that developing an economic growth strategy for each city-region was a unique exercise but the template would present a broad process that can be followed for similar initiatives across the country. Urban development is a state subject, so a collaborative approach was adopted in which pilot cities were identified in close consultation with the respective state governments, based on their willingness to undertake this new project. The intended outcome was to develop a strategic roadmap for promoting economic growth in selected city-regions as growth hubs.

NITI Aayog onboarded two knowledge partners for this initiative – ISEG Foundation and WRI India. The city regions selected, viz. Mumbai Metropolitan Region, Varanasi, Surat, and Visakhapatnam were representatives of different levels of growth. A multi-tiered team structure was also institutionalized to prepare the economic master plan an inter-sectoral and vertically integrated effort.

1.3 Multi-tiered team structure established

For implementing the project, a multi-tiered **institutional framework** was put in place:

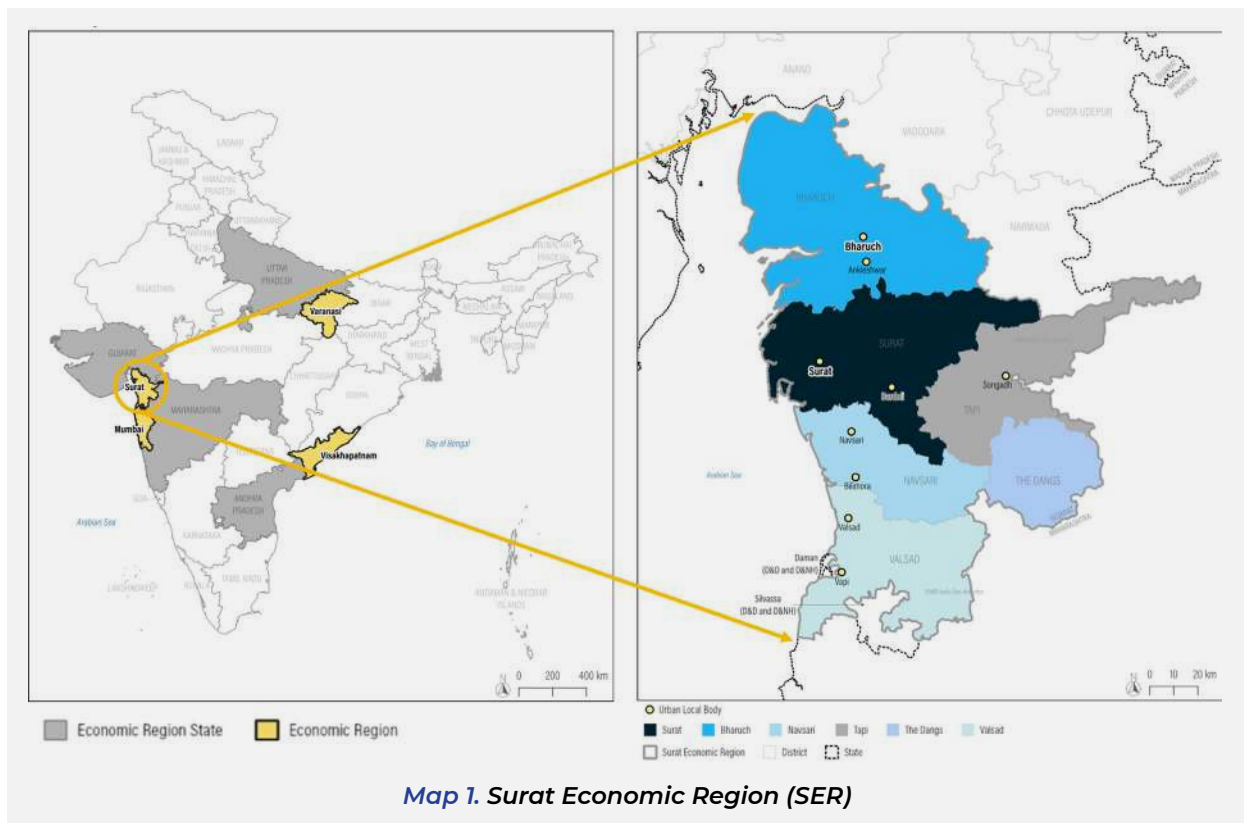
- **National level:** A National Steering Committee was constituted by NITI Aayog with representatives from MoHUA and domain experts.
- **State level:** The Government of Gujarat notified (a) Constitution of a Steering Committee, (b) Constitution of a G-Hub Crack Unit, (c) dedicated full-time personnel to work on the said initiative, and (d) Appointment of a Nodal officer for co-ordination, monitoring and smooth implementation. (Order No. UDUHD/MSM/e-file/18/2023/8053/DH Section, dated 15.09.2023).

- **City-level:** Officials of NITI Aayog and WRI India were positioned at Surat Municipal Corporation to closely work with city and district authorities.

(Details in **Annexure I**).

1.4 Determining the city-region for Surat

A framework for identifying the immediate economic catchment for the ‘city-regions’ was developed on the principles of contiguity, proximity economic reliability, axes of growth, logistics, connectivity, and complementarity. On these parameters, as well as extensive consultations with the State government, the SER was defined as including 6 districts, namely, Surat, Bharuch, Navsari, Tapi, Valsad & Dang.



1.5 Broad process template that guided the preparation of the EMP of SER

Based on a detailed examination of similar initiatives, NITI Aayog adopted a broad 5-stage process for the preparation of the EMP

1 As is economic, infrastructure and sustainability (net zero) diagnostics

- Current, sectoral and district level GDP
 - Historical growth rates
 - GDP Per capita
 - Employment
 - Land use
 - Investment Rate
 - Net zero benchmarking – Renewable energy, energy efficient buildings etc.
-

2 Top down economic, sustainability and physical infrastructure vision

- Projected GDP by 2035 and 2047
 - Frame top-down economic, sustainability and physical infrastructure vision
 - Set aspirations and economic benchmarking such as vision for zero slums
 - Analyse top-down investment required for achieving aspirations
-

3 SWOT and endowments analysis of the region

- Identify champion sectors, past economic drivers, delta growth
 - Identify top 10 growth drivers based on region's endowments
-

4 Detailing out top 7-10 economic growth drivers for the region

- Detailing of the top 7-10 economic growth drivers for the region with cost, infrastructure, connectivity, talent, investment drivers.
 - Examples - port city, tourism hub, aerocity hub, healthcare services hub, etc.
 - Identify investible projects and key KPIs
-

5 Implementation Framework

- Organizational and financial unlocks required and mile-stone planning for the short-listed growth drivers
- Prepare plan for targeted funding (multilaterals, municipal bonds etc.) for identified areas
- Leadership and administrative structure for the economic vision

Figure 2. Broad stages of Economic Master Planning

Further towards ensuring a balanced approach for evolving the EMP a three-pronged guiding principle was established:

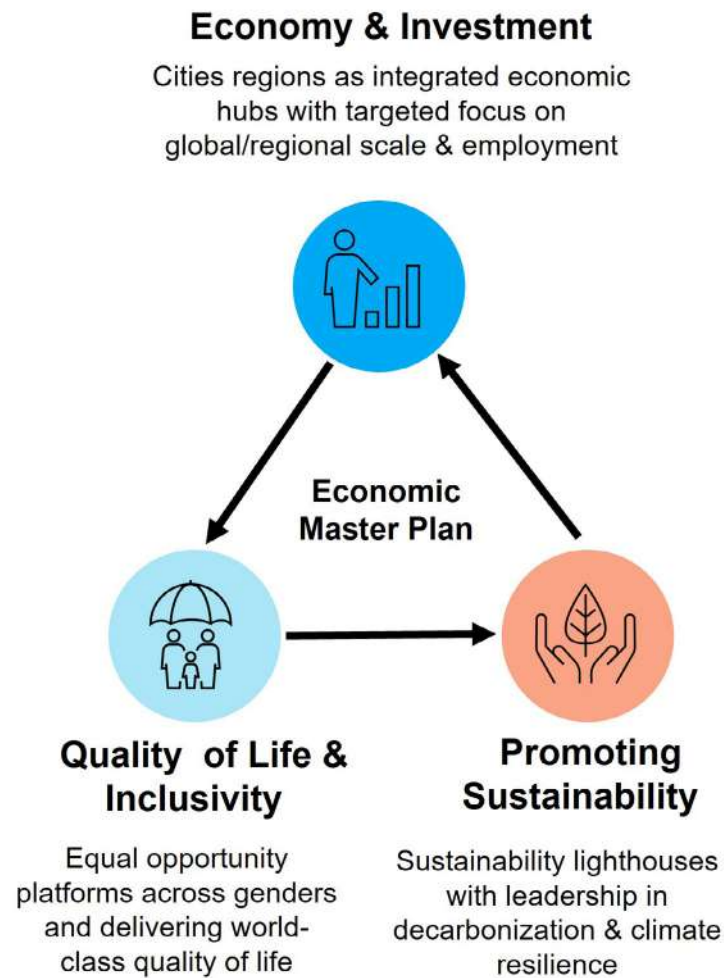


Figure 3. Guiding principle for evolving the economic master plan

Each city-region is unique in its geographical context, comparative advantages, and endowments. Therefore, a bespoke and curated EMP of SER has been developed based on the above broad process template.



2

**Surat is one of the
fastest-growing
cities but SER faces
regional and
sectoral disparities**

Surat is and may remain the nucleus of the region. However, it is pertinent to promote economic activities as per the district level endowments across SER to achieve balanced and inclusive growth. Presently manufacturing sector remains the single dominant growth driver

The SER encompasses the southern part of Gujarat, situated along the Gulf of Khambhat, and shares borders with Maharashtra to the south and Madhya Pradesh to the east. Strategically positioned on the West Coast, it is close to major economic hubs like Mumbai Metropolitan Region, Ahmedabad, Nashik, and Aurangabad, all within approx. 300 km radius.

With Surat as the nucleus of the region, the SER is spread across six districts: Surat, Bharuch, Navsari, Valsad, Tapi, and Dang, and has a geographical area of 21,217 sq. km. SER is currently estimated to be a \$72 billion (approx.) economy, with a population of 15.7 million and a workforce of 7.7 million (refer to **Table 1**). Surat Municipal Corporation (SMC) is the only municipal corporation in the region and there are 18 municipal councils, viz., Bardoli, Kadodara, Tarsadi, Mandvi, Bharuch, Ankleshwar, Jambusar, Amod, Navsari-Vijalpor, Bilimora, Gandevi, Vyara, Songadh, Valsad, Vapi, Paradi, Umargam and Dharampur (refer **Figure 4**).

Table 1. Economic and Demographic Indicators of SER and Gujarat (2023)

	SER	Gujarat
Population 2023	15.7 Mn (~22%)	72 Mn (5%)
Area (Sq. Km)	21,217 (10.8%)	1,96,244 (6%)
GDP (current prices, FY23)	\$ 72 Bn* (~25.6%)	\$ 281 Bn (~8%)
GDP per capita (current prices, FY23)	\$ 4,586* (1.17x)	\$ 3,910 (1.5x)
Workforce (FY23)	7.7 Mn* (22.6%)	34 Mn (6%)
Worker Population Ratio (FY23)	48.9% *	47.2%
Note: Figures in parenthesis are in relation to Gujarat (in SER) and India (in Gujarat) * Estimated figures		

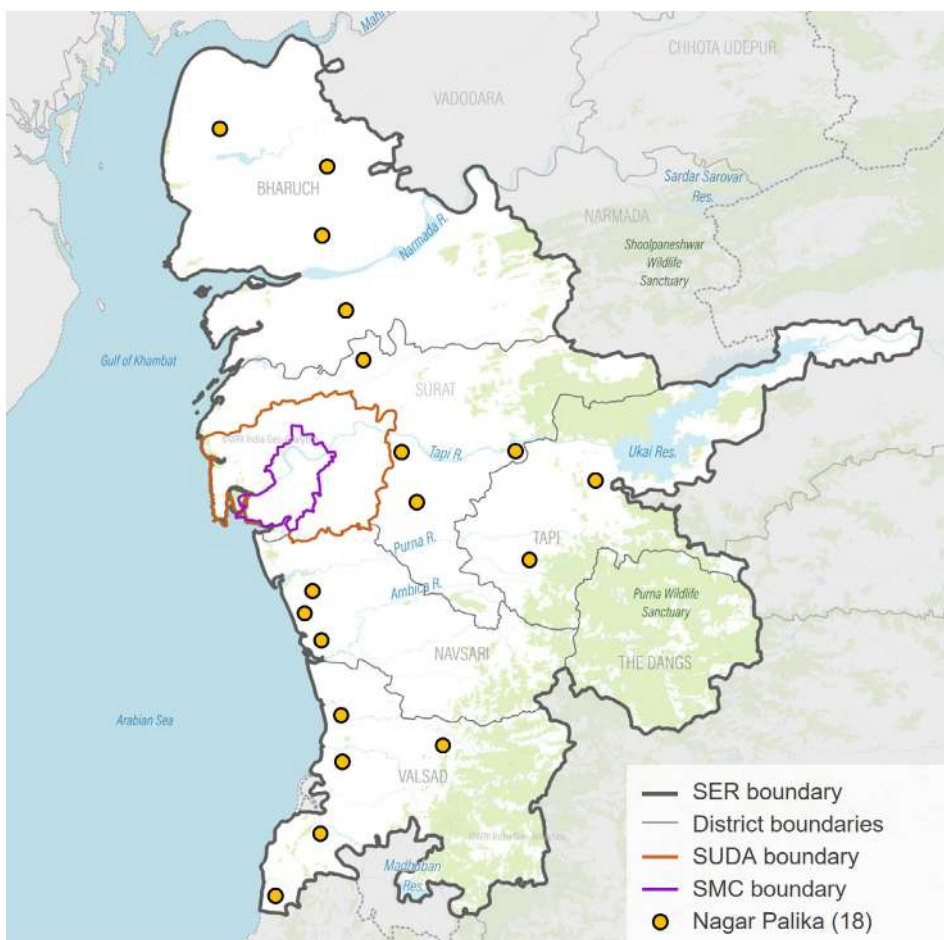


Figure 4. SER with major boundaries and municipal bodies

2.1 Key facts and figures of SER

- The region accounts for 25.6% of Gujarat's GDP and 22% of its population.
- The region has grown at 8.4% CAGR (FY 2014-22, real), which is higher than India's 6.4% CAGR during the same period.
- The region's per capita GDP stands well at approximately \$4,586 (FY 2023), 1.2 times higher than the state average and 1.8 times higher than the national average.
- As one of the leading industrialized regions, the manufacturing sector alone contributes nearly 55% of SER's GDP and 43% of employment. It has several manufacturing industries such as chemicals, petrochemicals, drugs and pharmaceuticals, textiles, gems and jewelry.
- The tertiary sector of SER accounts for nearly 38% of its GDP and 40% of employment (estimated), with key contributions coming from transport, storage, business, trade and hospitality (refer **Figure 5**). This sector has the potential to substantially grow over the years.
- Surat district is the primary economic driver of SER, with a GDP of approx. \$45 billion, accounting for 62% of the region's GDP, while the contributions of other districts are comparatively modest. Similarly, the job density is also concentrated in the Surat district (refer to **Figure 6**).

- Tapi and Dang districts, characterized by their large tribal populations and extensive forest cover, have a comparatively modest contribution to the region's GDP.
- Surat UA is the 9th most populous city in India⁴, and is projected to be the fastest growing city in the world by GDP between 2018 and 2035⁵
- Over the past decades, Surat city has expanded significantly, as reflected in a 184% growth in built footprint in the SMC area and 245% growth in the Surat Urban Development Authority (SUDA) from 1995 to 2015 (refer **Figure 7**).

The SER highlights regional as well as sectoral disparities, warranting targeted interventions aimed at balanced growth.



Figure 5. Sector-wise GDP and employment of SER, FY 2023 (estimated)

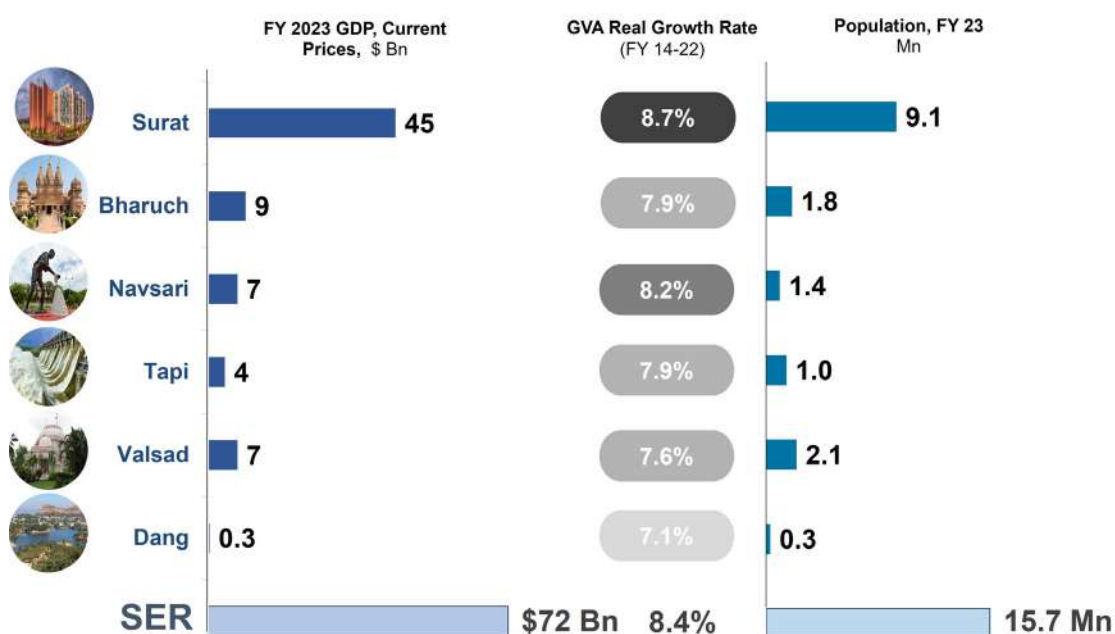


Figure 6. District-wise GDP and population, FY 2023 (estimated)

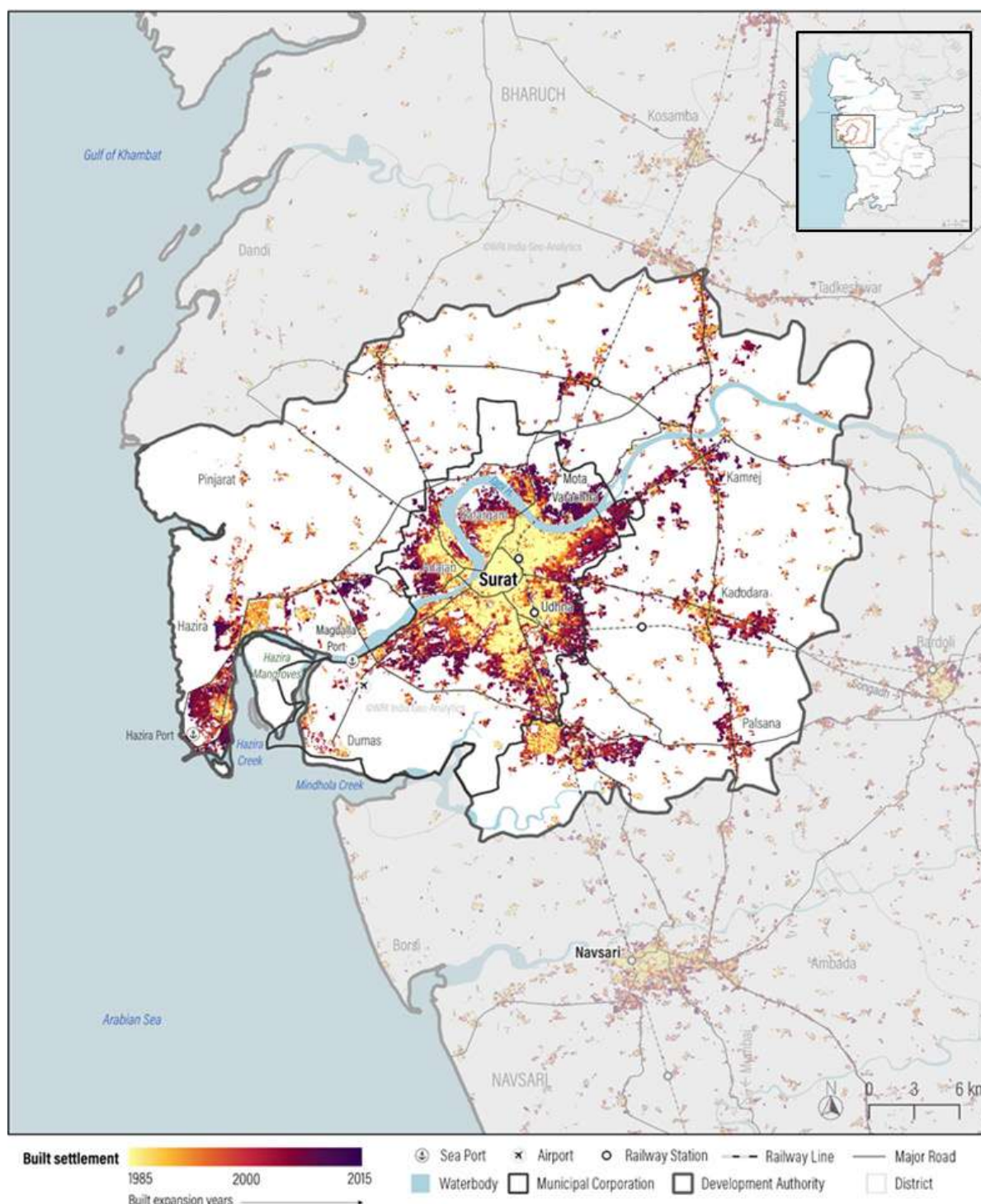


Figure 7. Built up expansion in Surat Municipal and Development area over the years

Source: World Settlement Footprint evolution 1985-2015, DLR

2.2 Key economic activities

The major sectoral contributors have been identified by analyzing key economic activities unique to each district. By focusing on these district-specific economic activities, specific contributors to the region's overall economic performance were determined.

Table 2. District-wise key economic activities

Districts	Existing economic activities
Surat	Textiles, gems & jewelry, basic chemicals, gas and distribution of gaseous fuels, MSME cluster, port & logistics
Bharuch	Chemical & chemical products, pharmaceuticals, medicinal chemical & botanical, gas & distribution of gaseous fuels port & logistics
Navsari	Agri/food processing, power-driven hand tools, textiles, gems & jewelry
Tapi	Agri/food processing, pulp, paper and paperboard, dairy products
Valsad	Chemical products; paper products and printing and publishing; tertiary sectors viz. trade, and hotels & restaurants; transport & storage, business services
Dang	Agriculture, forestry & fishing; wood products & cork; electricity, gas, water supply & other utility services; transport & storage, business services

2.3 SWOT Analysis

To prioritize economic activities that could drive growth in SER's economic visioning, it is essential to understand the key strengths and challenges of the region, as well as the major growth opportunities that need to be capitalized on.

The SWOT analysis undertaken to provide a comprehensive assessment of these factors presents the following position:

- **Strengths:** SER is a leader in sectors like textiles, jewelry, and chemical manufacturing. Surat city leads the way in sustainability with interventions towards electric vehicles and solar energy. SER also boasts a top-tier logistic network featuring high-speed rail, expressways, dedicated freight corridors, seaports, and an international airport.
- **Weaknesses:** Spatial and sectoral disparities are highly prevalent. SER has a high reliance on low-value manufacturing sectors, high GHG emissions from key industries, and unregulated growth of MSMEs and SMEs, limiting innovation and scale.
- **Opportunities:** SER is brimming with opportunities: prime real estate prospects on account of its strategic location, growing demand for education and skills, potential for sustainable agriculture with crops like rice, bananas, and mangoes, and a tourism boom waiting to happen with its stunning coastline, natural wonders, and rich heritage sites.

- **Threats:** SER grapples with stiff regional competition, falling short of the appeal of cities like Ahmedabad and Mumbai, and faces global rivals in textiles like Bangladesh and China. Additionally, SER is highly vulnerable to climate threats, like floods, heat stress, and extreme weather while pollution risks are eroding the quality of life and the overall business environment.



Figure 8. SWOT Analysis of SER



3

Vision and targets for SER

*The Economic Master Plan of SER has been aligned with the
Viksit Gujarat@2047.*

*The drivers have been identified to promote 'living well' and 'earning well'.
SER's endowments, global trends and mega infrastructure together create a
conducive environment for multiplying the per capita GDP 10 times by 2047.*

3.1 Viksit Gujarat@2047: an aspirational vision for the future

Viksit Gujarat@2047 aims for an economy of \$3.5-4 trillion from \$259 billion in FY22, with per capita income of over \$38,000. The vision is premised on developing an economy that allows all its citizens to achieve their aspirations for 'earning well & living well'. The EMP for the SER has been developed to achieve the same objective.

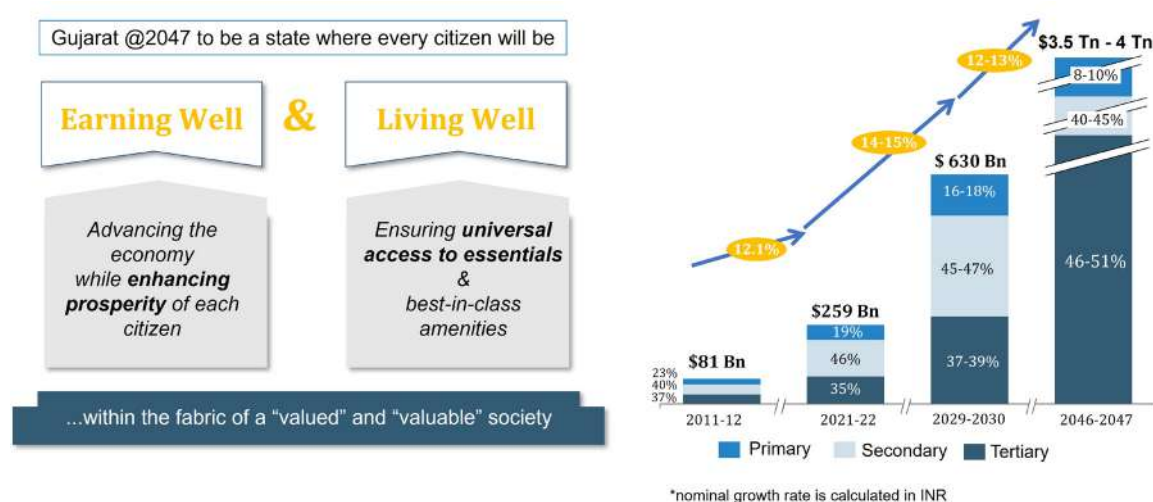


Figure 9. Vision and targets of Viksit Gujarat@2047⁶

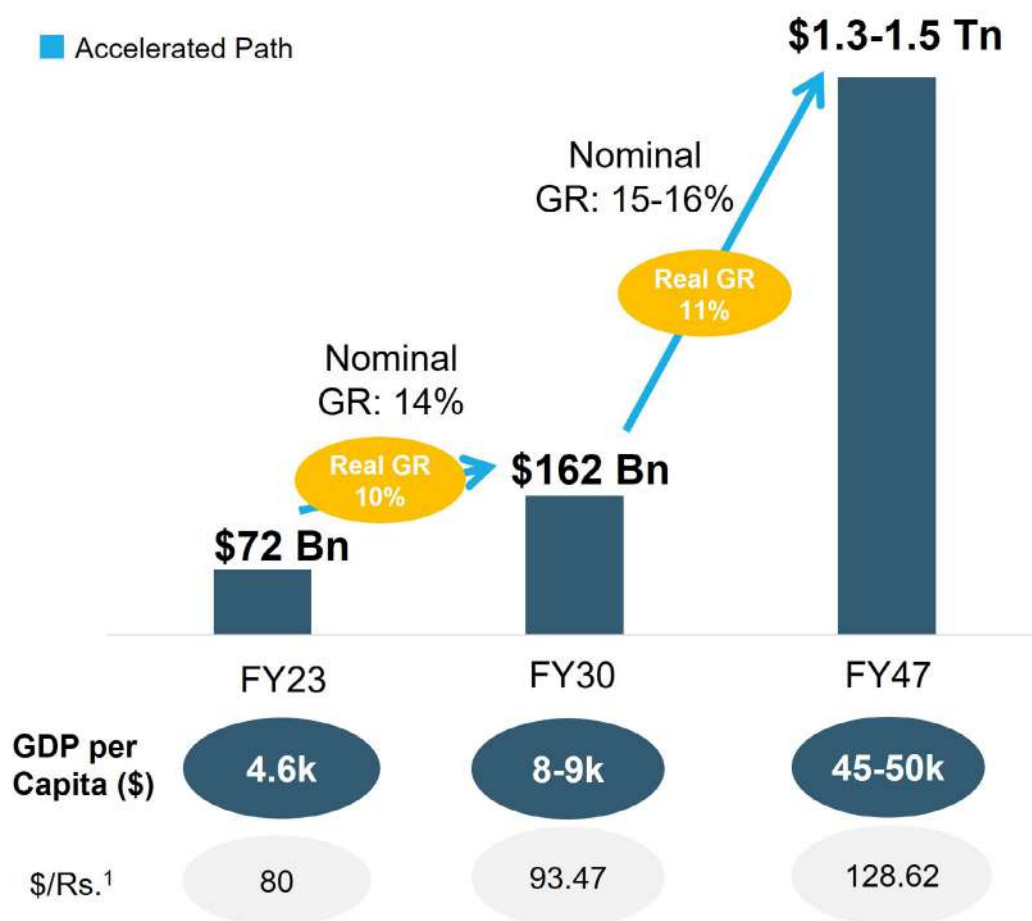
The key defining parameters of *Viksit Gujarat@2047* *inter alia* include:

- A healthier, more educated, and sustainable society with equitable access to all world-class amenities - clean environment, good quality air and water, sanitation, 24x7 electricity, 100% healthcare coverage, multidisciplinary education and skilling, and a secure society.
- The Services sector is envisioned to see a quantum leap, with the state emerging as the preferred destination for the knowledge economy, tourism, and financial services.
- The industrial sector is expected to continue to be the core strength of the state economy with high exports and a greater share of high-value-adding sectors.
- Gujarat@2047 is aimed to become even stronger as India's gateway to the Middle East and Europe, thereby emerging as one of the global trade hotspots. This will be powered by developing vibrant logistics corridors and port cities.
- A sustainable society to live in, with net-zero achievement by 2047.

3.2 SER envisioned to achieve a 20 times growth by 2047

By 2047, SER has the potential to grow by 20 times and contribute more than 35% to Gujarat's overall economic development. Achieving this goal requires a greater emphasis on employment-generating sectors, such as manufacturing and services.

While SER's current per capita GDP stands at approx. \$4,600, there is an ambitious target to reach over approx. \$45,000 by 2047. To realize this ambitious goal, SER needs to implement robust and coordinated planning efforts.



*growth rates are calculated in INR. Source: (MoSPI, 2023)

Note: 1- growth rates are calculated in INR

Figure 10. Economic targets of SER⁷

3.3 SER's contribution to the economy is dominated by the manufacturing sector

Manufacturing is the cornerstone of SER's economy, accounting for more than half of its total domestic product. The region's manufacturing sector is particularly dominant within Gujarat, contributing over 40% of the state's manufacturing gross value added. This trend is expected to continue in the future, with manufacturing estimated to contribute almost half of the GDP growth aspirations while adding about two million jobs by 2047. In line with Gujarat's broader economic development strategy, SER is poised to witness a significant increase in the contribution of the services sector to its overall economic growth. This expansion is anticipated to be driven primarily by sectors such as tourism, hospitality and other services as well as SER's development as a trading hub.

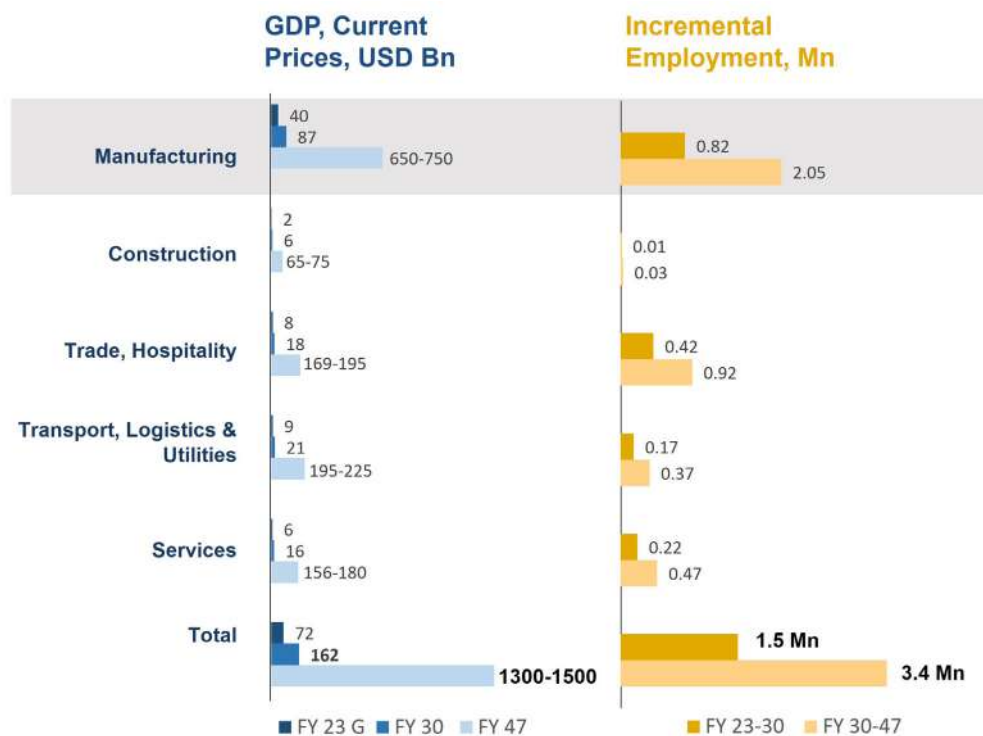


Figure 11. Projected sectoral GDP and incremental employment targets for SER

3.4 Enablers that support SER to achieve its goals

3.4.1 Endowments

Seven endowments have been identified that would help SER in its endeavor to become an advanced and growing region. Surat is a rapidly growing city with multiple endowments that can support regional growth. Surat has been known for diamond polishing and textile manufacturing for decades. Bharuch, Surat, and Valsad have a strong ecosystem of chemicals and pharma. Tapi, Dang and Navsari are rich in horticulture. The baseline analysis also indicated immense scope for harnessing untapped tourism potential due to the long coastline and presence of western ghats.

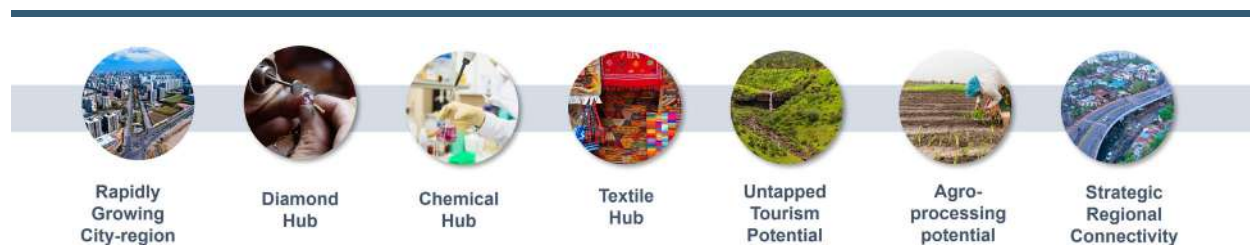


Figure 12. Endowments of SER

1. Rapidly growing city-region

- According to the projections by Oxford Economics (2018), Surat will be the fastest-growing city in the world in terms of GDP from the year 2019 to 2035. Surat's GDP is currently growing at a CAGR of 8.4% (FY 2014-22), which is much higher than that of Gujarat and India

-
- Surat city is Gujarat's 2nd most populous city⁴. The present city population is 6.6 million (with a district population of 9.1 million) and is expected to grow to approx. 11 million by 2035
- 2. Diamond hub**
- Surat region processes around 90% of the world's diamonds⁸
 - By 2027, India's gems and jewelry (G&J) exports are poised to reach 10% of the global market (\$100 billion)⁹
 - The existing base in Surat can be upscaled with design & brand building to capture a larger share of the global G&J market – '*Designed in India*' & '*Made in India*'
- 3. Chemical hub**
- By 2047, India is poised to capture ~12% of the global chemical market and become a ~ \$1 trillion chemical manufacturing hub¹⁰.
 - Gujarat is among the leaders in chemical manufacturing in India, and SER accounts for 70% of Gujarat's chemical GVA
 - The chemical Industry is well supported by Dahej and Hazira ports in the catchment area as well as the Mundra and JNPT ports in adjacent regions
- 4. Textile hub**
- Surat is the second largest textile hub in India, after Tirupur
 - It is the largest MMF textile hub of India (65%), and a major producer of polyester and nylon yarn (90%)
 - Surat is known for yarn, fabrics, sarees dress materials, and ethnic wear, but not for apparel
 - Surat has a GI Tag for its unique local Zari work
- 5. Untapped tourism potential**
- With a long coastline, beaches (Dumas, Ubhrat, Dandi, etc.), wildlife sanctuaries and national park (Dang and Navsari), eco and rural tourism (Dang, Navsari, Tapi), heritage trails (Parsi), local culture and festivals (Uttarayan, Saputara Monsoon Festival, Dang Darbar), rivers and dams (Tapi and Narmada), etc. SER has substantial assets for developing tourism.
 - Tapi, Navsari & Bharuch are listed as priority destinations in the Gujarat Tourism Policy, 2021-25
- 6. Agro-processing potential**
- The Surat-Navsari-Tapi belt is known for its agricultural produce like mangoes, sugarcane, chikoo, and banana
 - The presence of educational organizations such as Navsari Agricultural University, Veer Narmad South Gujarat University, etc. provides an eco-system of research and innovation

- The Gujarat Agro Infrastructure Mega Food Park, spanning 3 million square feet and operating on a plug-and-play model, offers a ready infrastructure for food processing

7. Strategic regional connectivity

- SER benefits from existing multi-modal strategic infrastructure projects
- Several infrastructure projects to further develop the logistics sector are underway, including the Hazira Port Expansion, Surat Airport Expansion, and Western Dedicated Freight Corridor (DFC). Further, with the Mumbai-Ahmedabad High-Speed Rail Corridor (Bullet Train), Surat will be just one hour away from Mumbai
- Multi-Modal Logistics Parks (MMLPs) are proposed at Dahej (Bharuch), along with Hazira, Bhatia, and Niyol in Surat

3.4.2 Trends

The endowments have been aligned with the following global, national, and sub-national growth trends to harness their maximum potential.



Figure 13. Global, national, and sub-national trends

1. India as a global manufacturing hub in select sectors

Proactive initiatives by the Government of India like the PLI (Production Linked Incentive) scheme to promote 'Make in India', the China+1 strategy, and targeted interventions to promote R&D in sectors like chemical and pharma, textiles, etc. present significant opportunities to strengthen its position as a global manufacturing hub.

2. Enabling Next-Gen Industrial Workforce

Strong industry-academia partnerships to sync skilling with evolving industry needs and develop a workforce that is being continuously trained.

3. Promoting Business-leisure travel

B-leisure travel, the blend of business and leisure, is reshaping the stay and spending behavior of business travelers, with exploring destinations beyond traditional corporate settings and the industry adapting to both professional and leisure needs.

4. The Green shift

Increasing opportunities and investments in decarbonization, renewables shift, and new technologies like battery storage, hydrogen fuel cells, and carbon capture & storage.

5. Rising Incomes & demographic shifts

The rising working-age population, rising incomes and increasing levels of consumption vis-à-vis savings can result in consumer spending increasing from \$750 billion in 2022 to \$4 trillion by 2030 in India.

3.4.3 Mega-infrastructure & connectivity projects

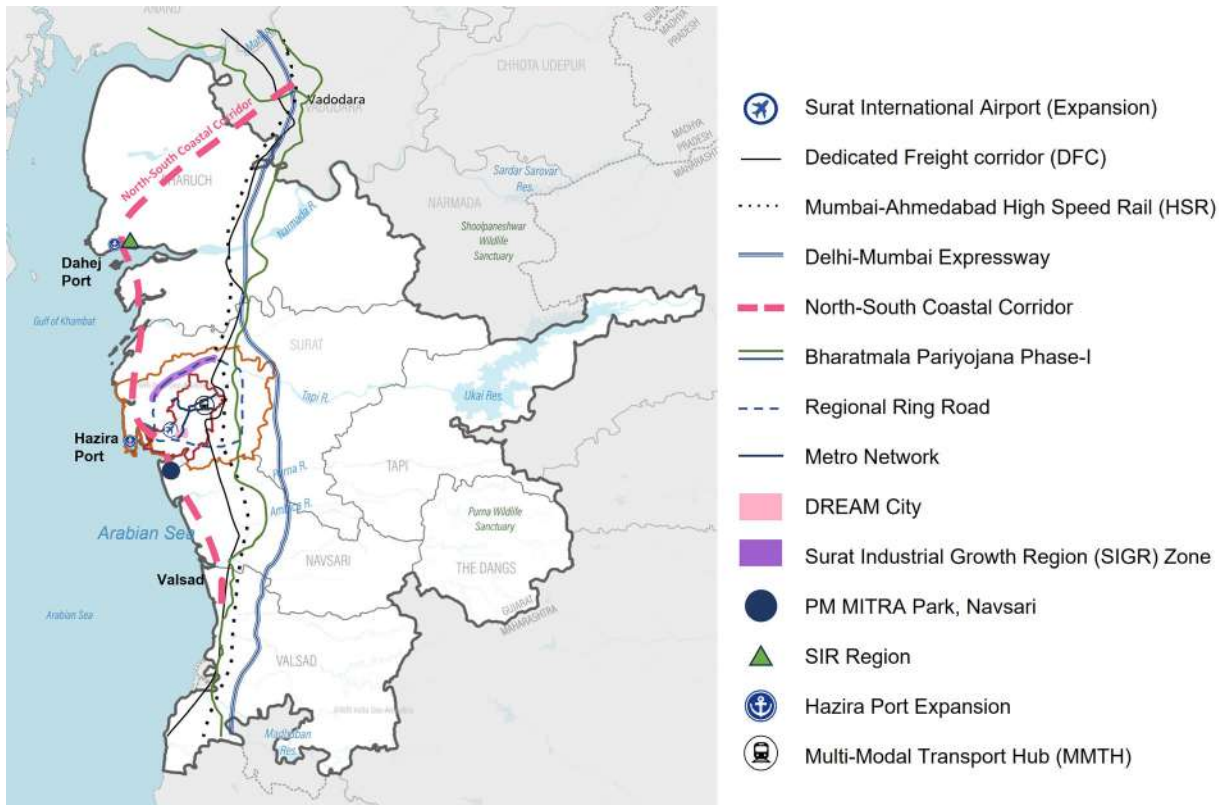
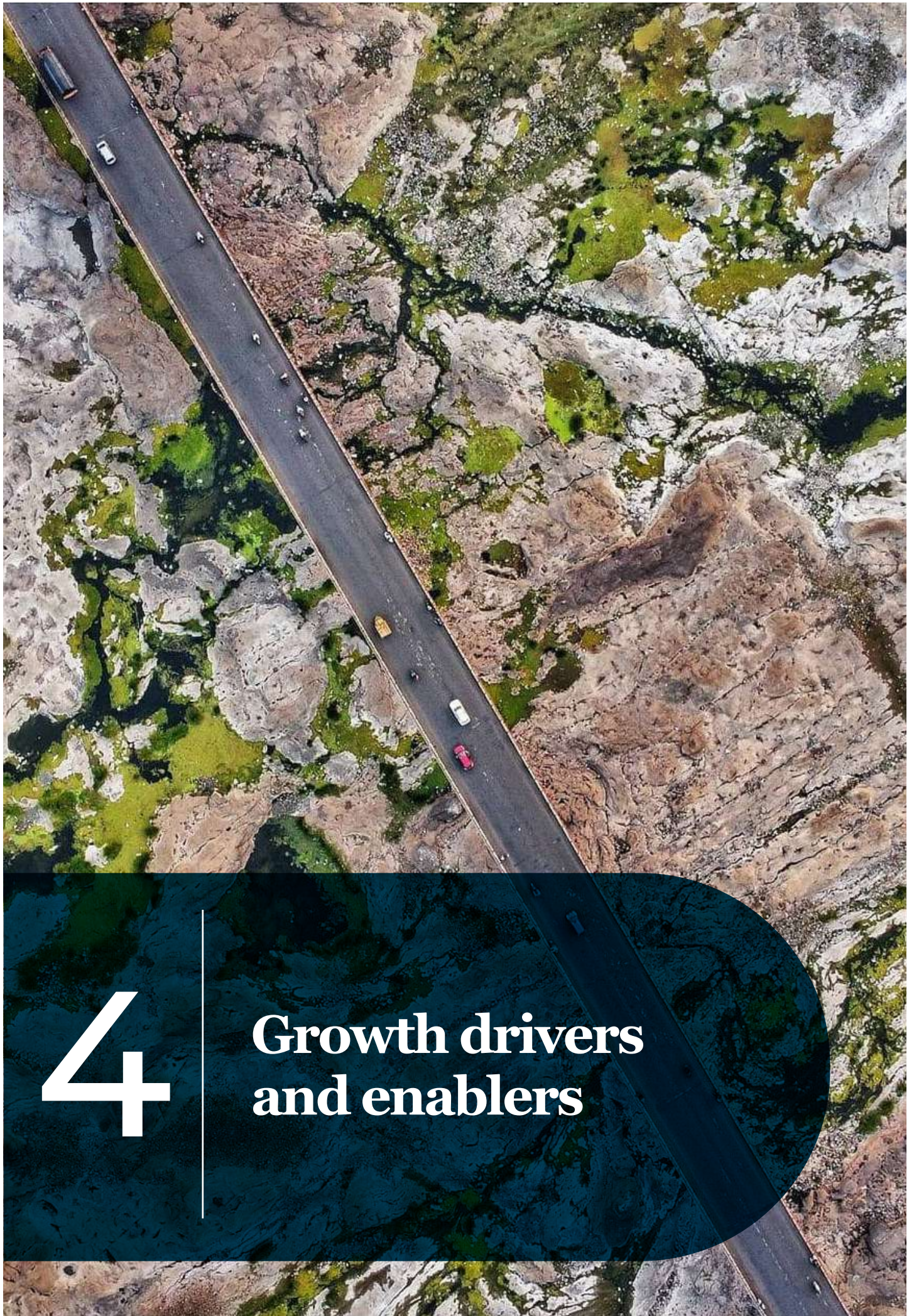


Figure 14. Ongoing and proposed mega infrastructure projects

Ongoing and proposed mega infrastructure projects will give a further boost to the growth process of the region. The location of Surat and projects like the coastal corridor, Delhi-Mumbai expressway, and Mumbai-Ahmedabad high-speed rail, are all set to be game changers provided they are leveraged effectively.

A detailed description of the existing and on-going infrastructure and connectivity projects is given in **Annexure II**.



4

Growth drivers and enablers

A holistic vision of SER has been developed, centering on key growth drivers aimed at transforming it from a rapidly growing city-region valued at approximately \$72 billion to be globally competitive with an ambitious target of \$1.5 trillion by 2047.

With the targeted transformation across various facets of SER, the growth drivers have been identified with the aim to achieve the twin goal of 'earning well' and 'living well' while aligning them with the vision outlined in *Viksit Gujarat@2047*.



Figure 15. Growth drivers as sieved from endowments

Aligned with the earning well theme, sectors with strong global demand, significant GDP contributions, and high job creation potential have been classified as **'primary growth drivers'**. The key sectors include Chemicals & Pharma, Apparel, and Jewelry. While Chemicals & Pharma will continue to bolster the manufacturing sector, a transition towards a service-oriented economy is expected, driven by business and trade opportunities in Apparel and Jewelry.

In addition to these core sectors, **'new avenues for growth'** were identified. These emerging sectors - Tourism, Real Estate, and Agriculture - were chosen based on regional endowments and their future potential for GDP contribution, aligning with broader trends and visionary targets. Together, these sectors (both primary and new avenues), form a balanced pathway to sustainable economic expansion.

The *living well* theme has been fundamental towards achieving the aim of enhancing social, environmental, and economic well-being, which are classified as **'enablers'**. These components are crucial for supporting the growth drivers and include Higher Education and targeted Upskilling, Advanced Healthcare, Sustainability (including

renewable energy), and Livability. By fortifying these areas, a robust foundation can be created that underpins and drives sustainable growth.

All growth drivers and enablers together are expected to propel SER into a thriving **\$1.3 - 1.5 trillion economy by 2047**, generating an additional ~ **2 million** jobs.



Figure 16. Focusing on the specific growth drivers and enablers through G-Hub will therefore transform SER from 'Rapidly growing' to 'Globally Competitive'



5

Strategic
interventions for
primary growth
drivers

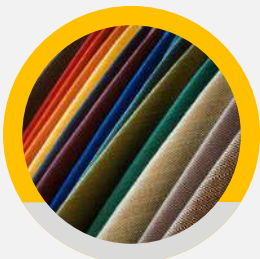
For the chemical and pharma sector an expansion in manufacturing is proposed to achieve size & scale. In case of the other two primary growth drivers a transition to a high productivity ecosystem with focus on developing the trade and commerce is proposed.

Box 1. Primary growth drivers



Chemical & Pharma

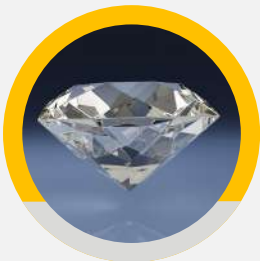
Aim to achieve global size & scale in production



Textile & apparel

Aim to bring value addition and grow service sector by

- (i) positioning SER as a 'Gateway of trade', and**
- (ii) streamlining the existing manufacturing ecosystem**



**Gems & Jewelry
(particularly Diamonds)**

The background of the slide is a photograph of three Erlenmeyer flasks in a laboratory setting. The flask on the left contains an orange liquid, the middle one contains a blue liquid, and the one on the right contains a yellow liquid. The flasks are slightly out of focus, with the middle one being the sharpest. They are sitting on a light-colored surface, possibly a lab bench.

5.1

Chemical and Pharmaceutical

The Economic Master Plan (EMP) envisions SER to be a Global Chemical Hub and recommends a set of measures that can enable the sector to achieve 15 times growth by 2047. In addition, measures are being proposed to make SER a major national pharma hub.

The chemical industry is a cornerstone of modern economies, producing a diverse array of products essential for sectors like agriculture, pharmaceuticals (pharma), and electronics. It provides building blocks for several downstream industries, such as textiles, papers, paints, varnishes, soaps, detergents, pharmaceuticals, etc. It plays a significant role in the global economy, contributing substantially to GDP and supporting substantial job creation. Characterized by significant sunk investments in research and development, the industry drives innovation in material science and sustainability. However, it also faces much more risk of environmental degradation, leading to an increased need to focus on the adoption of sustainable practices.

5.1.1 Current Scenario of the Chemical & Pharma Industry

The global chemical industry is led by major players like China, the European Union, and the United States. China dominates with a 44% share of global chemical sales, followed by the EU at 14% and the US at 11%. **India ranks 6th** contributing 2-3% of total production, roughly valued at **\$113 billion** (refer to **Figure 17**).

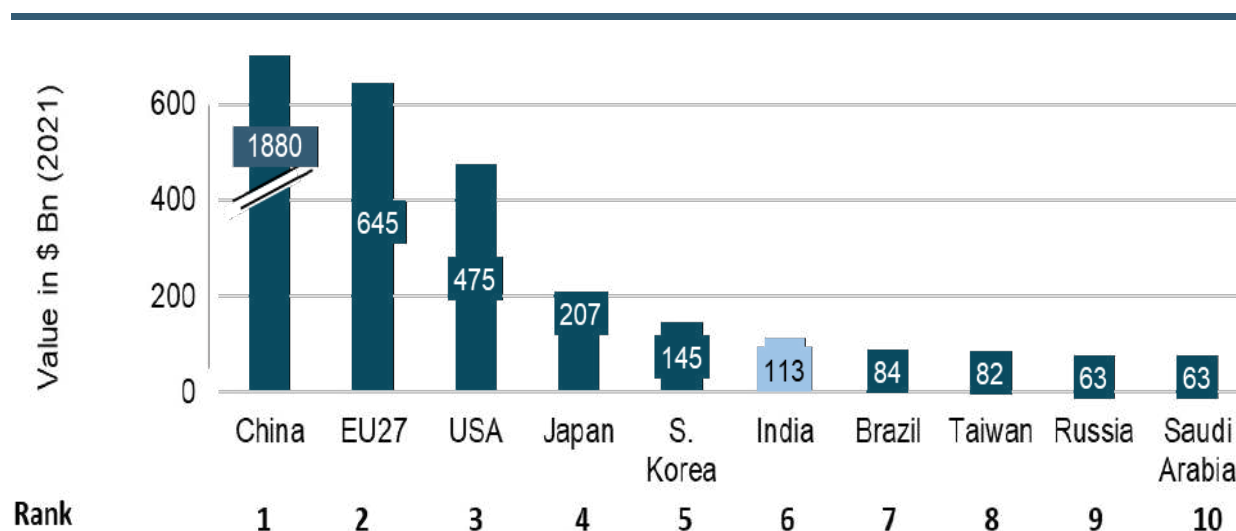


Figure 17. Global Chemical production 2021¹¹

India with a growth rate of **5% p.a.** during 2012-22 was slightly below the global average of 6% but much less than some better-performing countries like Saudi Arabia and China¹¹ as shown in **Figure 18**.

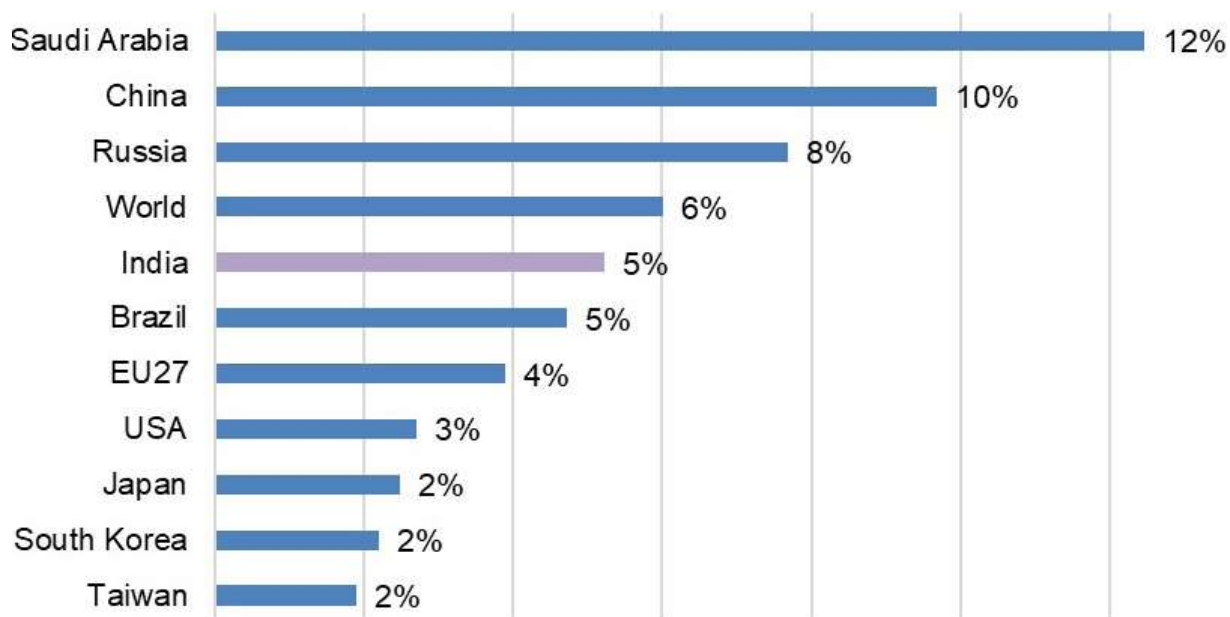


Figure 18. Compound Annual Growth Rate (2012-22)¹¹

India is grappling with a chemical trade deficit, largely driven by the rapid rise in imports, which is growing at a CAGR of 10%, surpassing the more stable export growth at 8%.

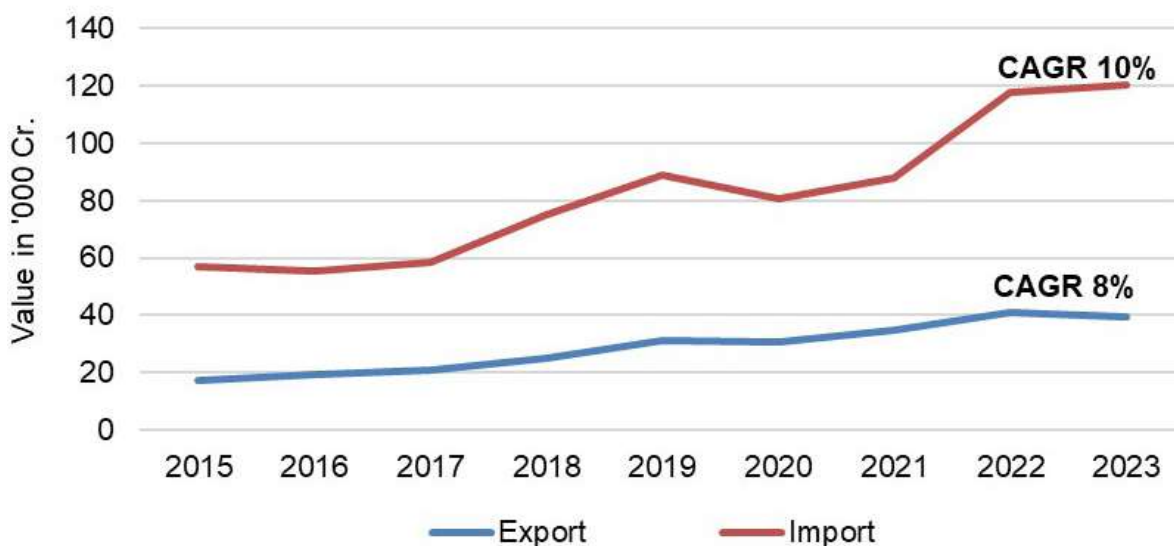
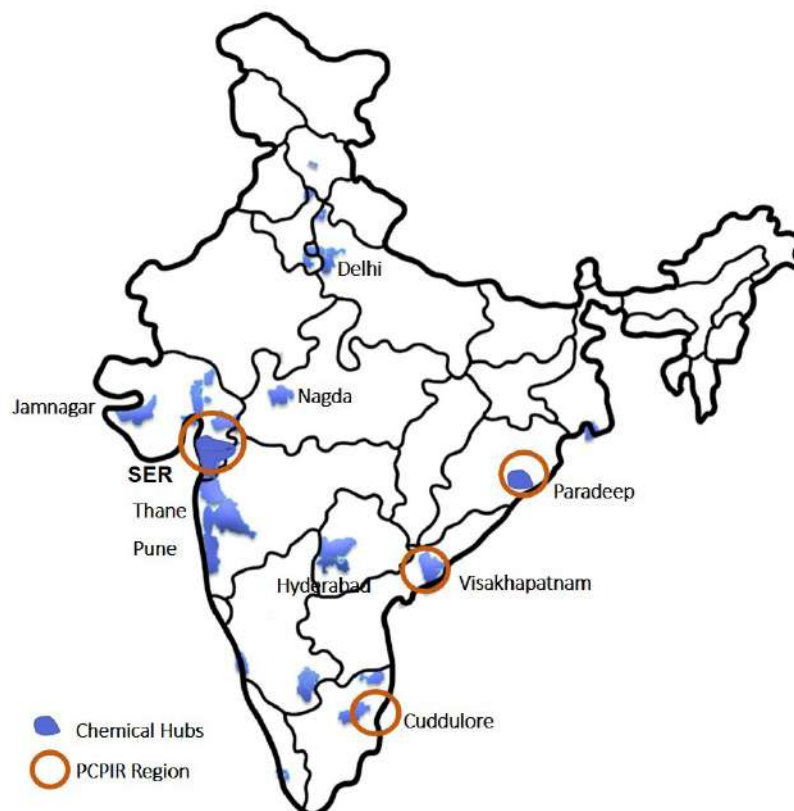


Figure 19. National Chemical Imports and Exports¹²

In 2007, the Government of India (GoI) announced the Petroleum, Chemical, and Petrochemical Investment Regions (PCPIRs) policy to promote chemical production.

Box 2. PCPIRs shaping the landscape of Chemical Industry¹³

- The PCPIRs were aimed to promote the growth of the Petroleum, Chemicals and Petrochemical sectors in an integrated and sustainable manner. Launched by the Indian government in 2007, the PCPIR policy aims to enhance efficiency through production projects, public utilities, logistics, Co-siting, shared infrastructure, environmental protection facilities, residential areas and administrative services.
- Under the policy, each PCPIR was proposed to have a refinery /petrochemical feedstock company as an anchor tenant. The central government wants to ensure the availability of external physical infrastructure linkages to the PCPIR including connectivity through railways, roads, ports, airports, and telecom as well as provide the necessary funding to make such projects viable, pursuant to the Viability Gap Funding (VGF) and budgetary support for the creation of these linkages through respective Ministries.
- Under this policy, 4 PCPIRs were notified:
 1. Gujarat- Dahej
 2. Andhra Pradesh- spread from Visakhapatnam to Kakinada
 3. Odisha- Paradeep
 4. Tamil Nadu- spread from Cuddalore to Nagapattinam



Map 2. Spatial distribution of chemical clusters in India
(Note: The map is for illustrative purposes only)

Gujarat dominates the Indian chemical and pharma sector, accounting for **34% and 28%** of India's chemical and pharma GVA respectively as per the Annual Survey of Industries (ASI) 2019-20.

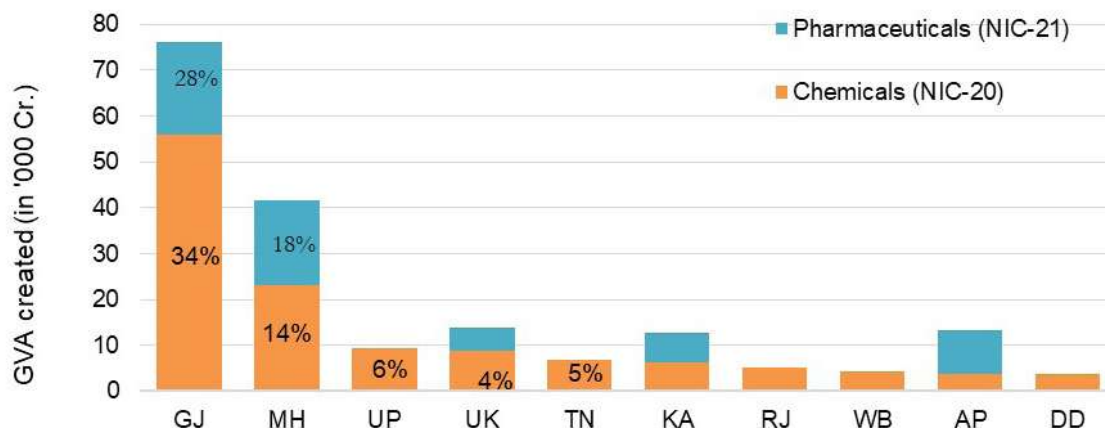


Figure 20. State-wise Chemical GVA contribution¹⁴

Major manufacturing districts of Gujarat are in Bharuch, Surat, Vadodara, Valsad, Ahmedabad, and Kutch. Each district specializes in different segments, from petrochemicals and fertilizers in Vadodara and Bharuch, to basic chemicals in Ankleshwar and Vapi, and salt-derived chemicals in Kutch. The region houses numerous companies and SMEs, contributing significantly to both state and national exports. Strategic initiatives and industrial zones like Dahej SEZ further enhance Gujarat's role as a leading chemical manufacturer.

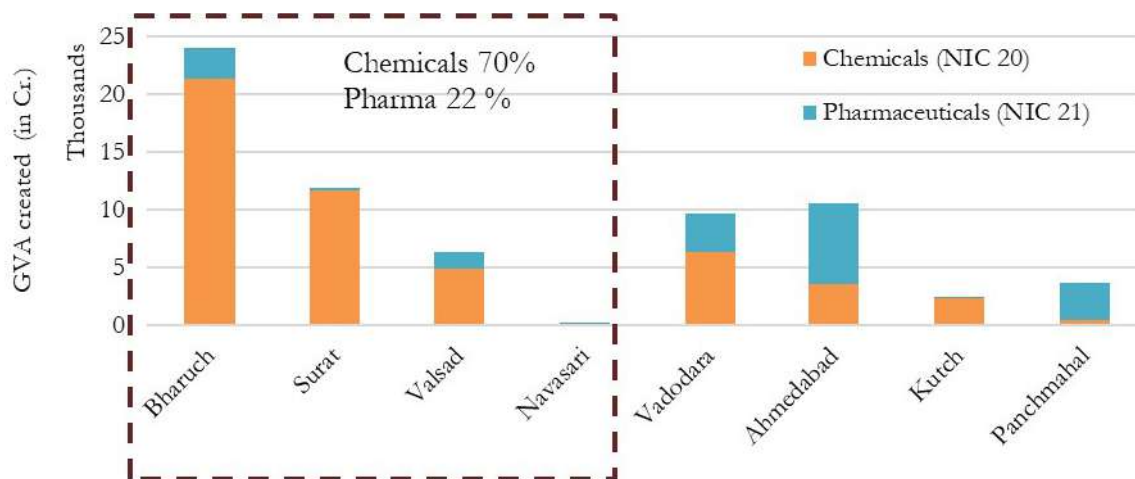


Figure 21. District-wise Chemical & Pharma GVA creation¹⁵

With three of Gujarat's leading chemical manufacturing districts, SER is the leading chemical hub in the state. Bharuch tops the list, followed by Surat, and Valsad ranks fourth. Together, these districts contribute **70%** of the state's chemical GVA. SER also accounts for **22%** of the state's pharma GVA¹⁵. The presence of port infrastructure - Dahej and Hazira ports - and an extensive network of pipelines give SER a locational advantage to promote the manufacturing ecosystem in this sector.

Jobs in Chemical Industry by Village/Town
Surat Economic Region

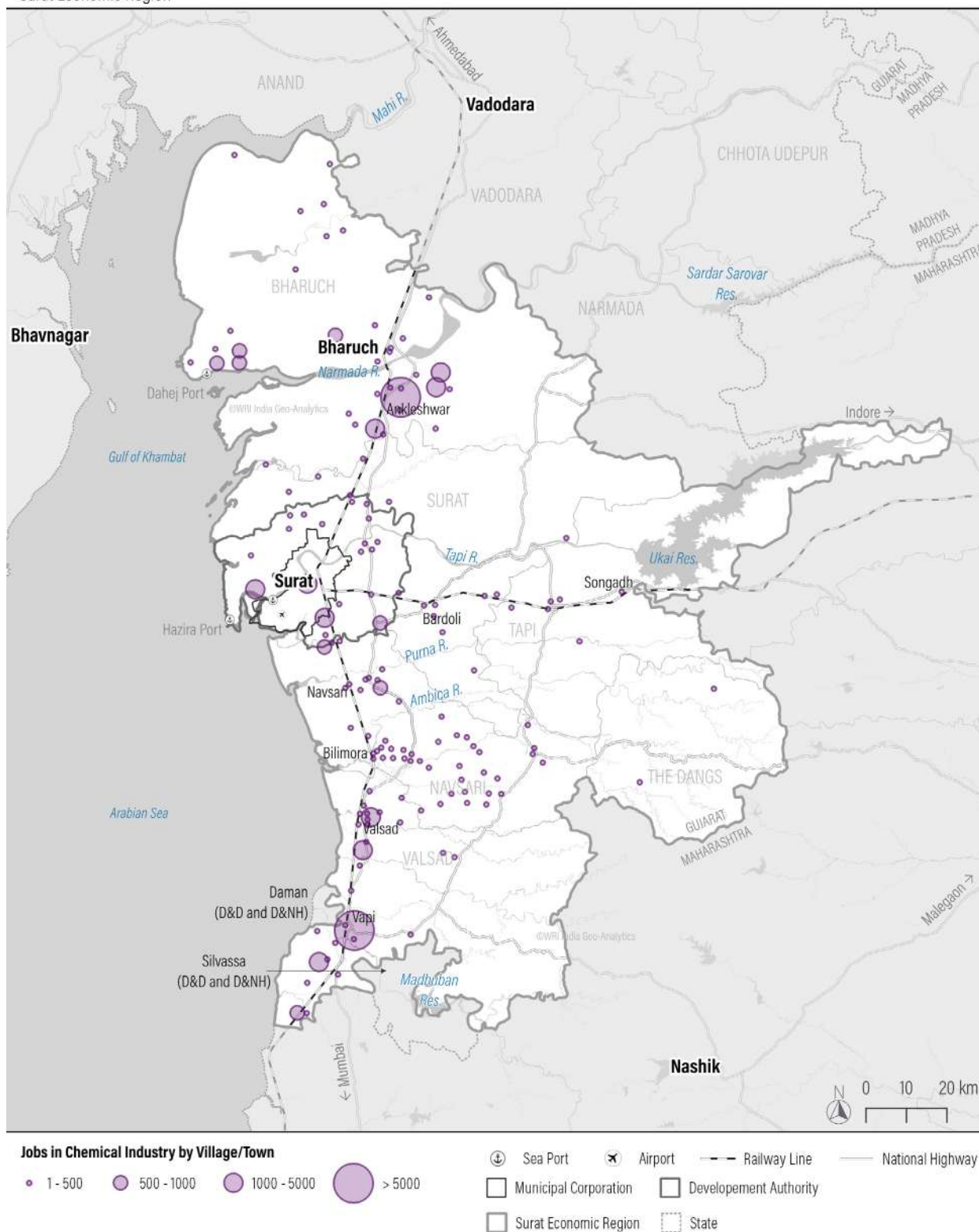


Figure 22. Spatial distribution of Chemical cluster in SER¹⁷

The upstream segment of the chemical & pharma industry is highly capital-intensive and results in relatively few job opportunities, whereas the downstream segment is

linked to significant job creation. Clusters such as Ankleshwar, Vapi, Sachin, and other clusters along the National Highway-48 are concentrated in the downstream segment of the chemical and pharma industry. In contrast, the upstream and midstream segments are concentrated at Dahej PCPIR, as illustrated in **Figure 22**.

The region while having a robust ecosystem also presents key gaps. **Box 3** gives the details of the existing infrastructure.

Box 3. Existing ecosystem in SER

1. Dahej PCPIR

- The Ministry of Environment, Forest and Climate Change (MoEF&CC) has granted Environment and Coastal Regulation Zone (CRZ) clearance for an area of 44445.18 hectares after excluding forest land i.e. 853.41 hectares for the development of PCPIR.
- Gujarat PCPIR is under implementation at Dahej in Bharuch district, over an area of 453 sq. km. The PCPIR has been notified under the Gujarat Special Investment Region (GSIR) Act, 2009. At the national level, the PCPIR leads with the highest investment, despite 60% unutilized land, implying scope for further growth.
- There are no major global companies in the PCPIR, and M/s ONGC Petro additions Ltd. (OPaL), as the anchor tenant, has set up a dual feed cracker complex with a production capacity of 1.1 MMTPA.
- Other production units are Reliance Petrochemical Complex, Petronet LNG Limited, Hindalco Industries Ltd, BASF Styrenics Pvt. Limited, Gujarat Alkalis and Chemical Limited, etc.

2. Ankleshwar

- Ankleshwar cluster, spread over 11.31 sq. km, is one of the most prominent MSME chemical clusters in SER, with close to 1,200 MSME units, of which 600 are chemical units, manufacturing various types of chemicals, like dyes, pigments, insecticides, specialty chemicals, petrochemicals, pharmaceuticals, and paints¹⁷.

3. Vapi

- The cluster houses several large-scale and MSME units, manufacturing various types of chemical products. There are 300+ chemical manufacturing units located in Vapi, out of which 277 units are presently operational. Most of these manufacturing units have been operational for the last 20 years.
- Some of these are leading large-scale industries like Aarti Industries Limited, Bayer Vapi Private Limited, Gujarat Polysol Chemicals Limited and etc.¹⁸

4. Other industrial estates include *Paloni* (6.9 sq.km), *Jhagadia* (12.0 sq.km), *Bharuch* (0.6 sq.km) and *Palej* (1.2 sq.km). There is enough capacity of effluent treatment available in the above clusters including Common Effluent Treatment Plant (CETP) with marine discharge facilities; Treatment, Storage and Disposal Facility (TSDF) with incineration facility, etc.

5. Upcoming Bulk Drug Park, Jambusar

It is a major project that would supply essential inputs such as APIs, KSMs, and raw materials needed for pharmaceutical manufacturing, enabling Gujarat to further improve its standing in the pharma sector. Spread over a total land area of 2015 hectares, it would provide easy access to world-class common infrastructure facilities for bulk drug units. In addition, the productivity and efficiency of the units would be enhanced through access to common infrastructure like water; CETP with marine discharge facility; Common steam supply facility; TSDF; common solvent recycling facility and other paraphernalia¹⁹.

SER's chemical production and exports are heavily concentrated in basic chemicals, which are often highly polluting and low-value adding. To correct this imbalance, SER must pivot towards specialty chemicals, upgrading value chains and developing more advanced, higher-value products.

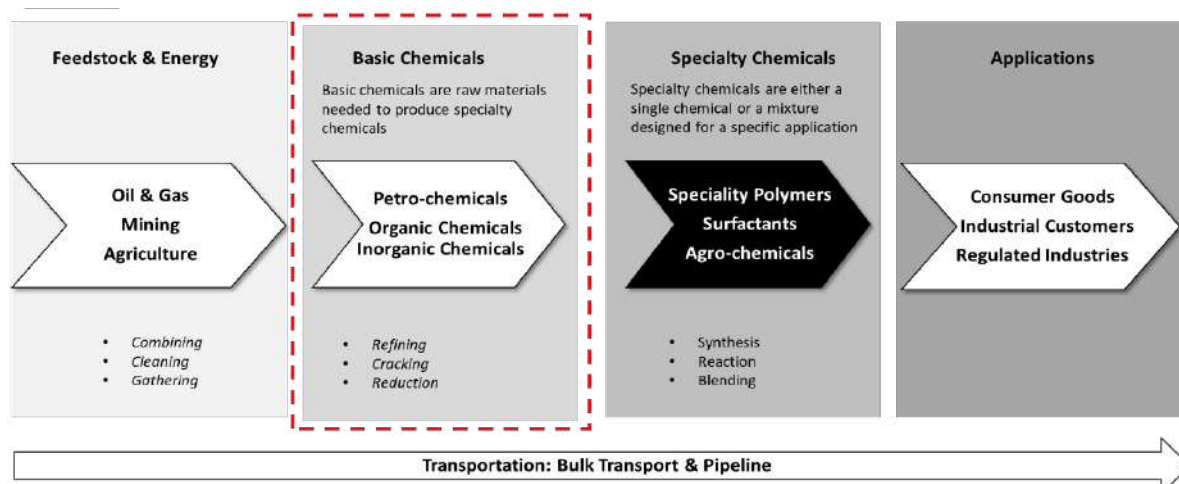


Figure 23. Broad Value Chain for the Chemical Industry

5.1.2 Opportunities

The global chemical industry is expected to grow at a rate of 3% annually for the next 25 years, propelled by increasing demand in emerging markets and advancements in technology.

India's chemical demand is projected to grow at a strong 9-10% annually over the next 25 years, surpassing the global average of 3% (refer to **Figure 24**). Rising domestic demand is expected to provide a significant boost to the sector. Though India remains a mid-size player in the chemical sector at the global level, through strategic

initiatives and support from international trends like the “China+1” policy, India is well-positioned to expand its global market share from the current 2-3% to approximately 12% by 2047.

India’s per capita chemical consumption remains low compared to the global average. However, its large population, rising per capita income, and increasing demand from end-use industries make India an attractive market for the growth of the chemical sector.

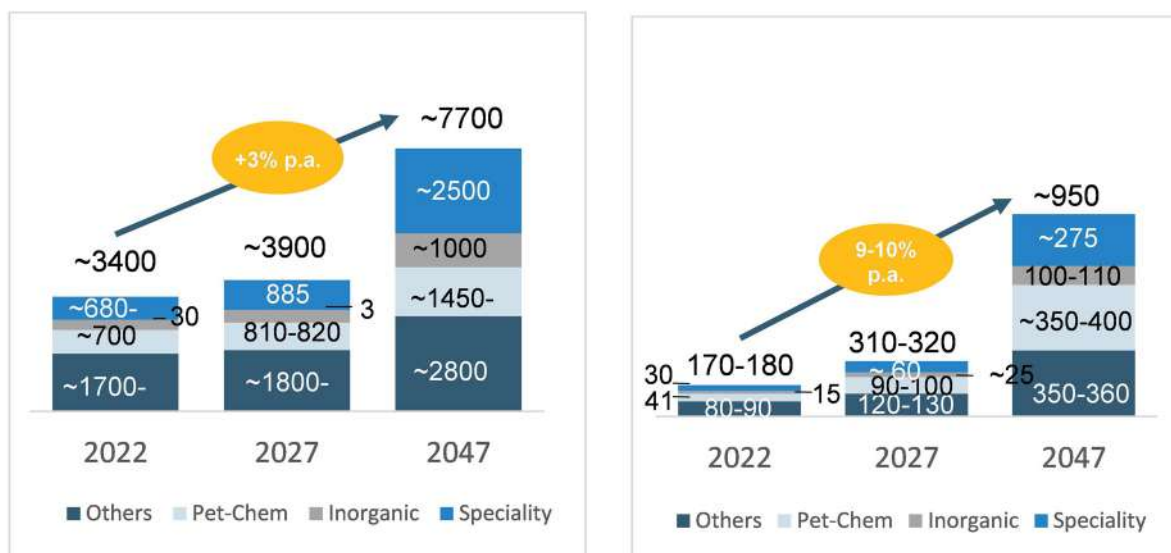


Figure 24. Chemical Demand in \$ billion: A) Global; B) National¹⁰

Viksit Gujarat@2047 positions the chemical sector as a cornerstone of its industrial strategy, aiming to establish the state as a leading global chemical hub. The strategy focuses on building global-scale production capabilities, attracting anchor investors, and creating a vibrant MSME ecosystem. Emphasis is placed on sustainable growth, with a green-led approach at the core of all development initiatives.

By leveraging these opportunities, through strategic planning and interventions, SER is well poised to enhance its global competitiveness and realize its potential as a global chemical hub.

5.1.3 Inadequate size and scale compared to the global major remains the biggest challenge in SER

Despite a history of being a chemical hub, SER has not been able to scale up its chemical industry to match the output, efficiency, and market reach of leading global hubs, thereby limiting its integration into the global chemical supply chain.

a. Capacity not at global scale

SER requires the significant presence of major global chemical companies, which typically drive large-scale production, innovation, and global market access. Without these key players, SER’s chemical industry remains largely focused on the domestic market, with limited integration into international supply chains.

Box 4. SER in comparison with other global leading chemical hubs

Parameters	Ludwigshafen Chemical Park, Germany	Jurong Island Chemical Park, Singapore	SER, Gujarat
Area (sq.km)	10 ^a	32 ^b	230
Land utilization percentage	95%	100%	~40% of manufacturing zone
Investment (bn \$)	86	36.5	9
Cracker capacity for feedstock for downstream industries (in MMTPA)	2 ^a	>1.5 ^c	1.1 ^d
Air Quality Index	64 (Moderate) ^e	40 (Good) ^e	Average-136 Peak- 205 (Poor) ^f
Anchor investor	 BASF (private firm)	 Shell Energy (private firm)	 OPaL (Public sector)

* MMTPA (Million ton per annum)

Source:

a- BASF SE, Ludwigshafen, 2023, Chemical Parks in Europe

b- Jurong Island: Creating A World-Class Energy and Chemical Hub 2021, Centre for Liveable Cities

c- Shell Energy and Chemicals Park Singapore, 2023

d- OPaL 2023

e- Air Quality Index (AQI), 2023 <https://www.aqi.in/>

f- Ankleshwar AQI is considered for 2022 from Action taken report, 2023 GPCB

b. Inability to integrate into the global supply chain

Infrastructure limitations, outdated technologies, high import duties, and the absence of major global players have limited the integration of SER into the global supply chain, leading to a production mix that is more inward-focused with low-value additions. As shown in Figure 25, India's higher import tariff on chemicals compared to countries like the U.S., EU, China, and UAE increases raw material costs, potentially undermining its position in the global market.

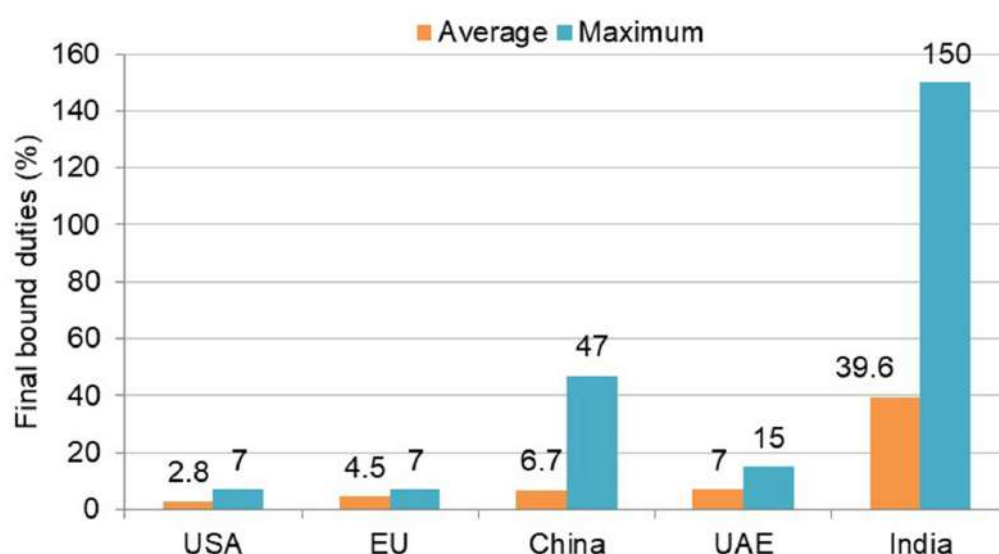


Figure 25. Country-wise import tariff on Chemicals²⁰

c. Absence of global manufacturing leaders

None of the top 10 chemical companies have a presence in SER. Presently ONGC Petro Additions Limited (OPaL) is the anchor tenant and is the major source of feedstock for the downstream industries in the region.

d. Environmental consequences

The environmental degradation caused by the chemical sector in SER is well-documented. A projected 15-fold growth of the sector, as outlined in the EMP may face the concerns of stakeholders such as local communities, environmental groups, and government entities. However, as noted in **Box 4**, global chemical hubs have significantly mitigated environmental degradation while achieving a much larger scale of production. SER requires monitoring and compliance with its extant environmental norms. As the region besides having stringent norms also has the necessary infrastructure in place (refer to **Annexure III**).

e. Lack of quality Human Resource

Despite a large network of ITIs, the chemical sector in SER struggles with the availability of skilled labor largely on account of an uneven alignment between the courses offered and the industry's needs. Additionally, the region lacks the aspirational infrastructure required to attract senior management.

5.1.4 Achieving 15 times Growth to Position SER as a Global Chemical and a Major National Pharma Hub – the Approach

The EMP aims to capitalize on the manufacturing strength of chemicals & pharmaceuticals and develop SER into a Global Chemical Hub through increased production and value-chain advancement while being cognizant of mitigating environmental implications. The chemical industry of SER can adopt a strategic, multi-pronged approach centered on transitioning from shifting gears to becoming a high-value production ecosystem as represented in **Figure 26**.

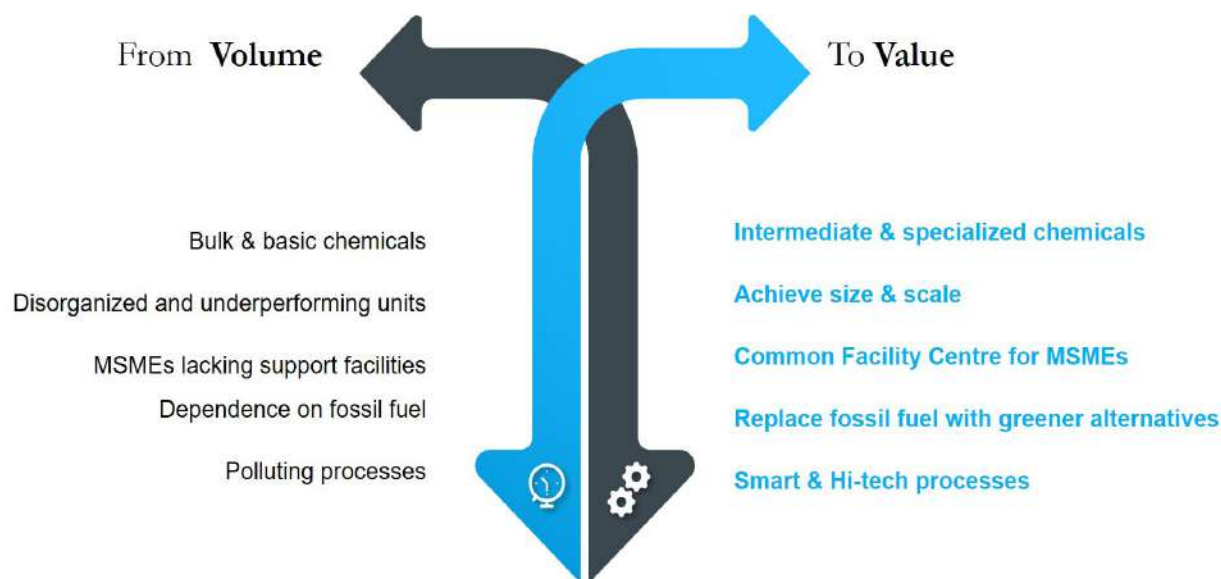


Figure 26. Approach for Transition

EMP proposes a targeted approach on the following lines to meet the goal of making SER a global chemical hub:

- **Attract global chemical leaders as anchor investors to build a specialty chemical ecosystem and integrate with the global supply chain:** Leverage unutilized land in Dahej PCPIR to build global-scale capacities, create global standard common infrastructure facilities within the PCPIR, offer targeted incentives, and foster a favorable business environment to attract leading global chemical companies.
- **Streamlining the MSME industries:** Develop clusters on a plug-and-play model aimed at increasing efficiencies, and productivity while meeting environmental fall-out. Also, develop common infrastructure facilities such as CETP, quality control certification centers, laboratories, steam boilers, fire safety systems, emergency response rooms, roads, drainage, pipelines, open spaces, power and other paraphernalia, etc. in all the industrial estates.
- **Enhancing Infrastructure:** Developing critical infrastructure, including a Free Trade Warehouse Zone (FTWZ), common-user jetties, establishing an air freight station, enhanced port capacities and connectivity, and multi-modal logistic parks, to optimize operations and reduce costs.
- **Environmental Management:** Scale up the Integrated Command and Control Centre (ICCC) of Surat to leverage it as a robust center for environmental monitoring and compliance of entire SER.
- **Skill Development:** Establish and reinvigorate training centers to cultivate a workforce equipped to meet the future demands of the chemical industry.

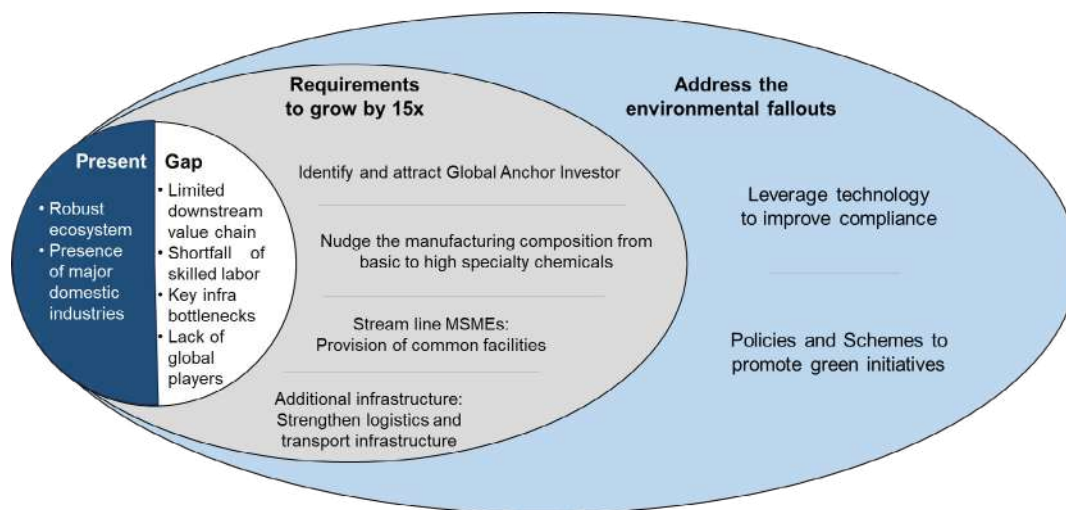


Figure 27. Through strategic planning, SER can aspire to become a Global Chemical Hub by growing 15x

A list of projects and policy interventions are being proposed to achieve the above goals. Of the total number of projects proposed, a select few are reflected in Figure 28. The details of all the interventions are given in **Annexure IV**.

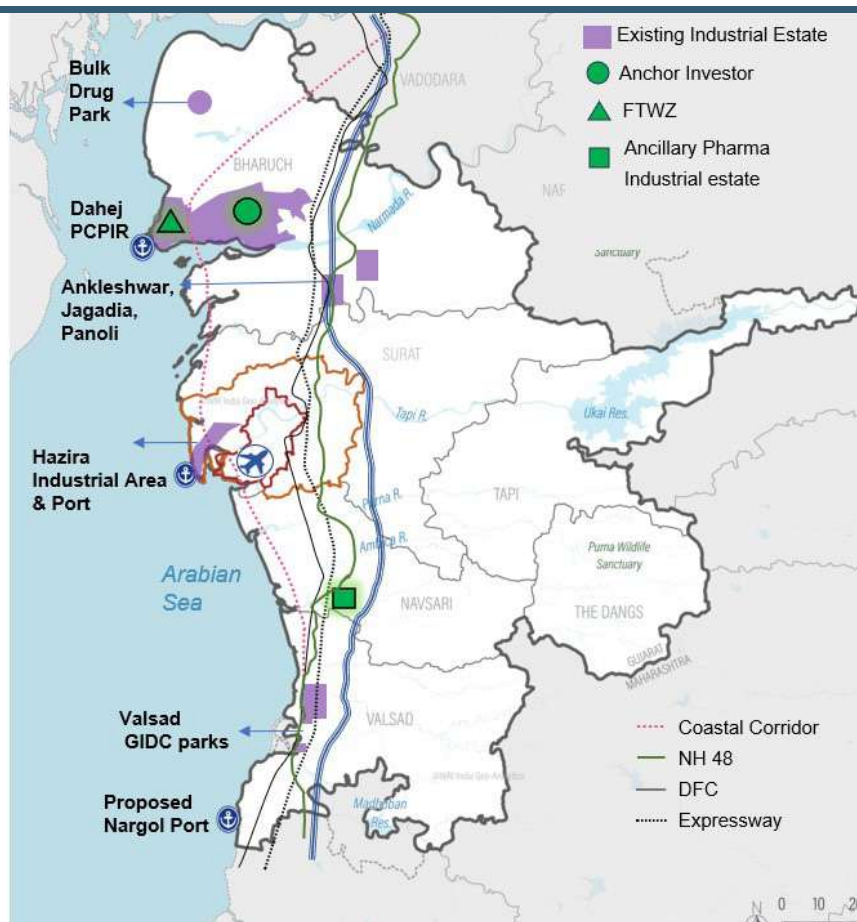


Figure 28. Spatial distribution of Existing and Proposed Projects



Textile & Apparel



Gems & Jewelry (particularly Diamonds)

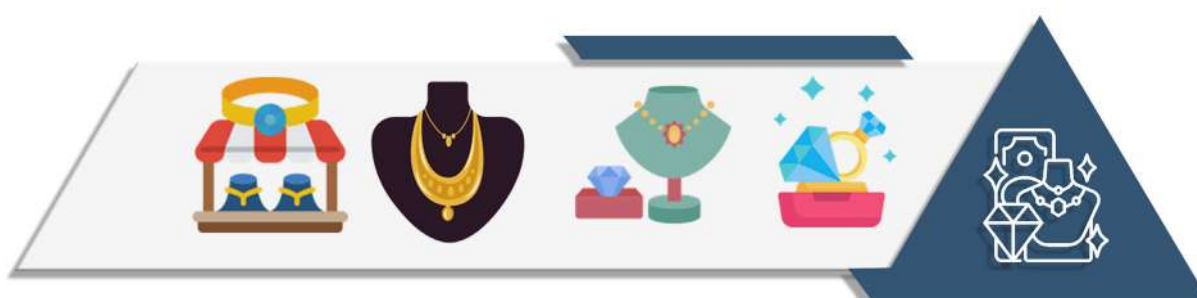


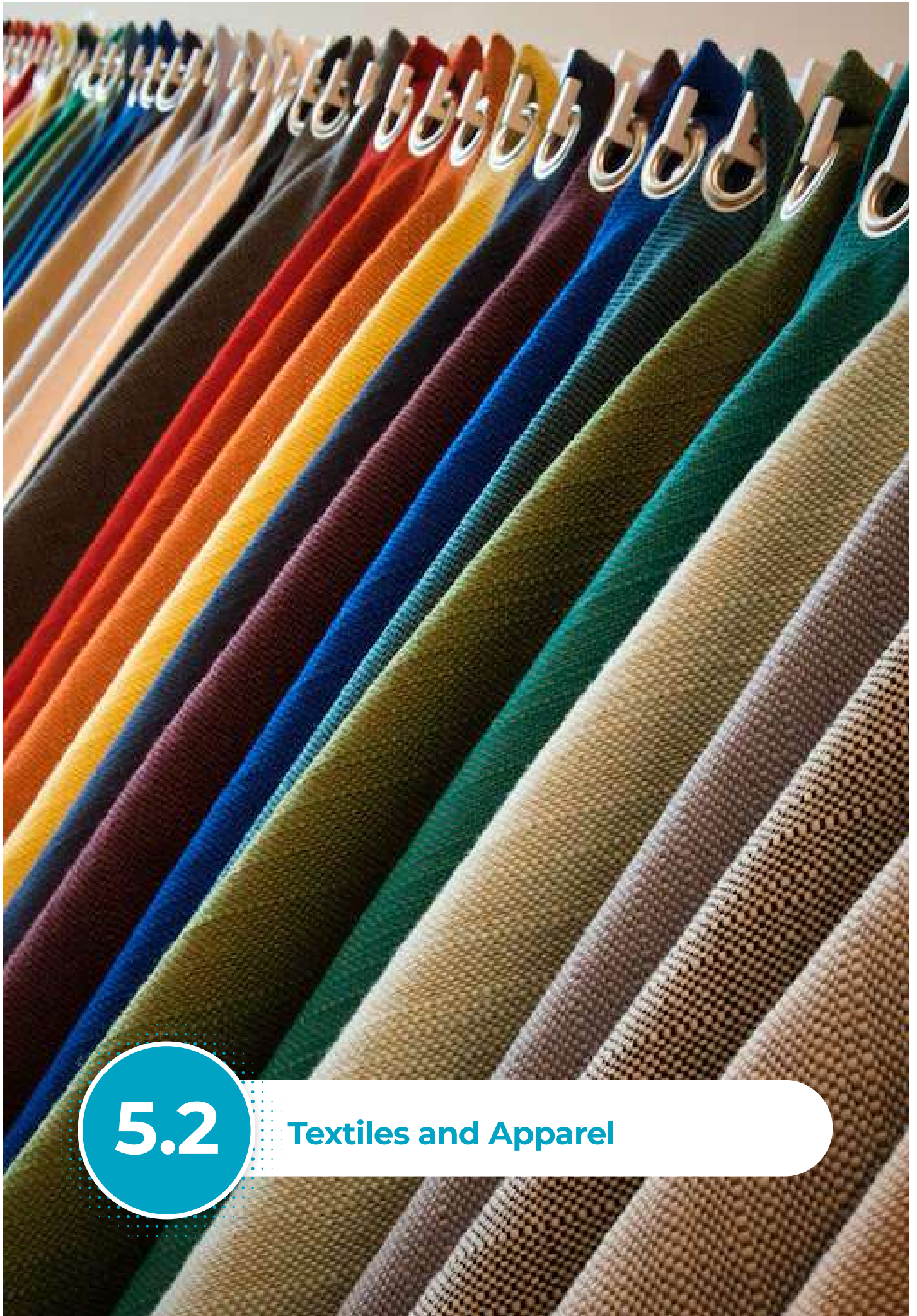
The Textile & Apparel (T&A) and Gems & Jewelry (G&J) sectors form the backbone of the SER's economy, contributing to the GVA besides being a major source of employment generation. Both sectors have the potential to be primary growth drivers for the future economic growth of the region.

To harness the full potential of both sectors, the following two-pronged strategy has been recommended to leverage the existing ecosystem and become a new growth avenue of the future

- 1. Streamline the existing manufacturing ecosystem, enabling SER to scale up production and achieve significant growth in terms of quality, size, and scale.*
- 2. Leverage the locational and infrastructural advantage of the region to position SER as a 'global gateway for trade and services.'*

The aim is to transition SER as a global hub for commerce that becomes the window to the world with access to produce from various clusters in the country, enhance market access for local brands, and attract international players. Through the development of business-friendly facilities, support services, development of ancillary capital goods industries in close vicinity, the region is expected to provide a robust platform for products manufactured and sourced from other parts of the country, initially for T&A and G&J and gradually expand to other goods.





5.2

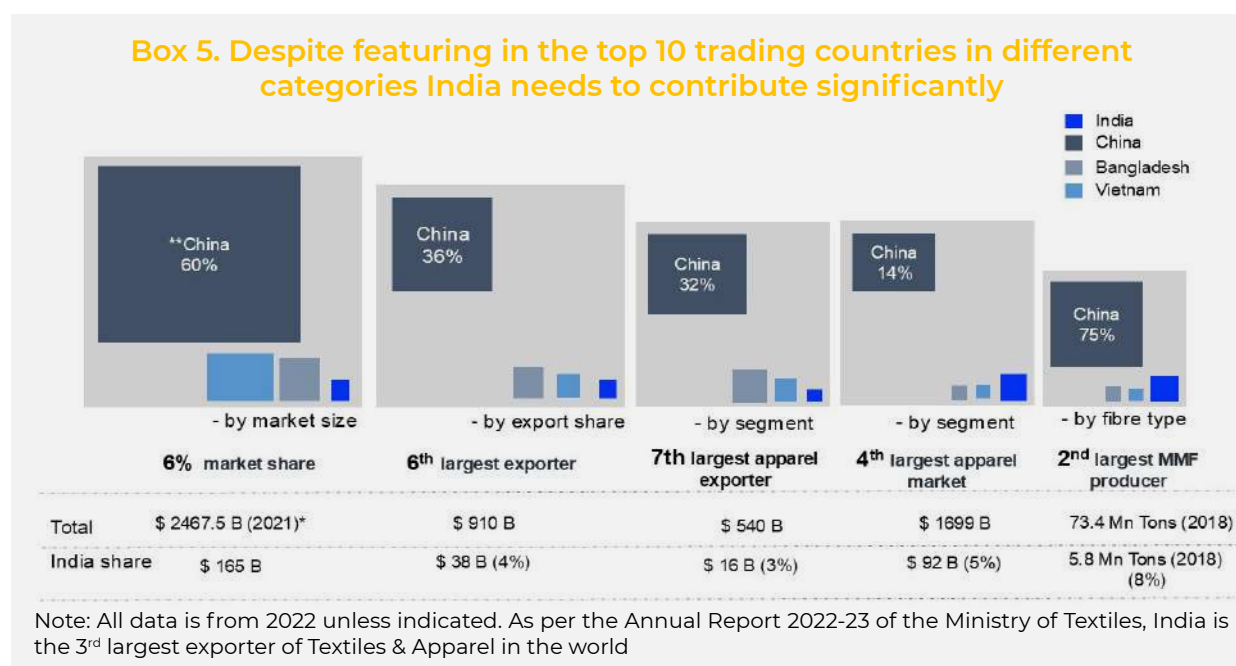
Textiles and Apparel

SER has a competitive edge in Man Made Fiber (MMF); however, the sector is currently into low value- high volume manufacturing and contributes to the overall environmental degradation of the region. The EMP aims to reinvent the sector and position SER as a global gateway of trade and commerce.

The textile & apparel sector is incredibly diverse and culturally significant. The sector is also representative of a highly integrated global value chain. It contributes to the primary as well as the secondary sectors, with substantial value addition across several stages of processing. Over time, technological advancements have led to the development of products that go beyond the traditional consumption patterns. The modern textile industry provides applications in diverse fields like agriculture, sports, packaging, building construction, waste management, etc. While the sector provides livelihoods to various categories of workers, particularly women; it also has adverse environmental implications necessitating close monitoring and management.

5.2.1 Current scenario of the T&A sector

Global T&A trade was around \$ 910 billion in 2021 and is expected to grow at a CAGR of 4% to reach \$ 1.2 trillion by 2030²¹.



China, the European Union, the USA, and Asian countries like India, Bangladesh, and Vietnam are prominent countries in the sector. As indicated in **Box 5** China remains the major leader in all aspects of the sector, while India does feature in the top few countries but its share remains small and much less than the leader.

T&A is one of the oldest and most highly diverse manufacturing sectors of India offering a wide spectrum of products ranging from traditional handloom, handicrafts, wool, and silk to mass-produced apparel as well as technical textiles. A robust value chain exists catering to the demand for fiber, yarn, fabric, made-ups, and apparel. There is a presence of many organized textile industries using capital-intensive technology for spinning, weaving, processing, and apparel manufacturing for mass production as well as a large base of MSMEs.

The T&A sector contributes approx. 2.3% of the GDP, 13% of industrial production, and 12% of exports²². It is the second largest employer in the country providing direct employment to about 45 Mn people and 100 Mn people in allied industries²².

The sector has been growing over the years despite challenges primarily on account of strong domestic demand and has reached an estimated value of approx. \$ 161 billion in 2022²¹. As depicted in Figure 29 the industry is upbeat about the prospect of growth in the T&A sector.

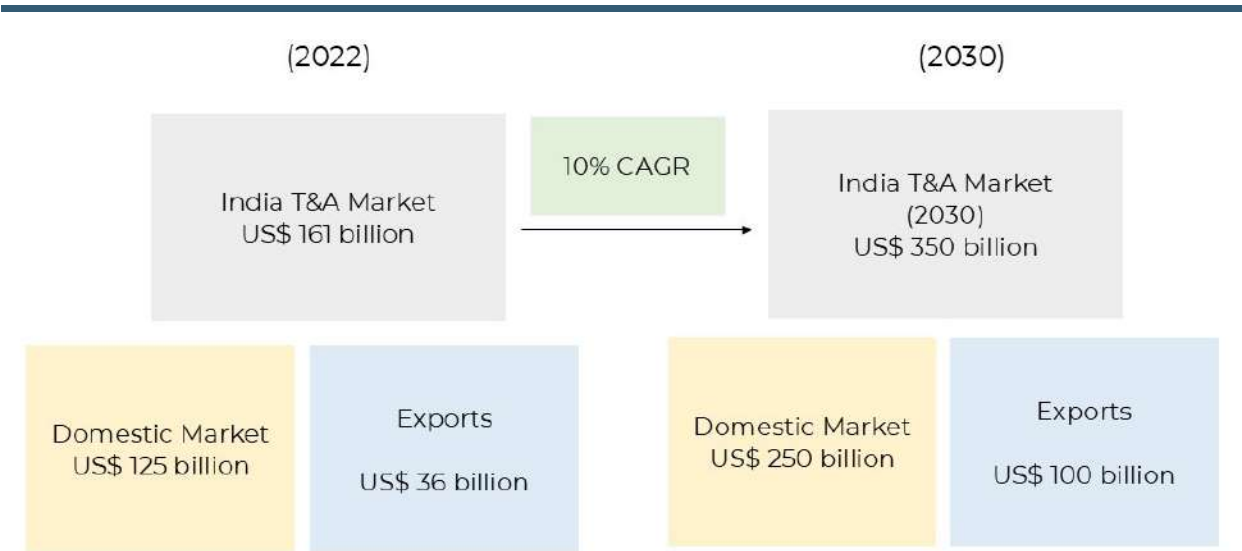
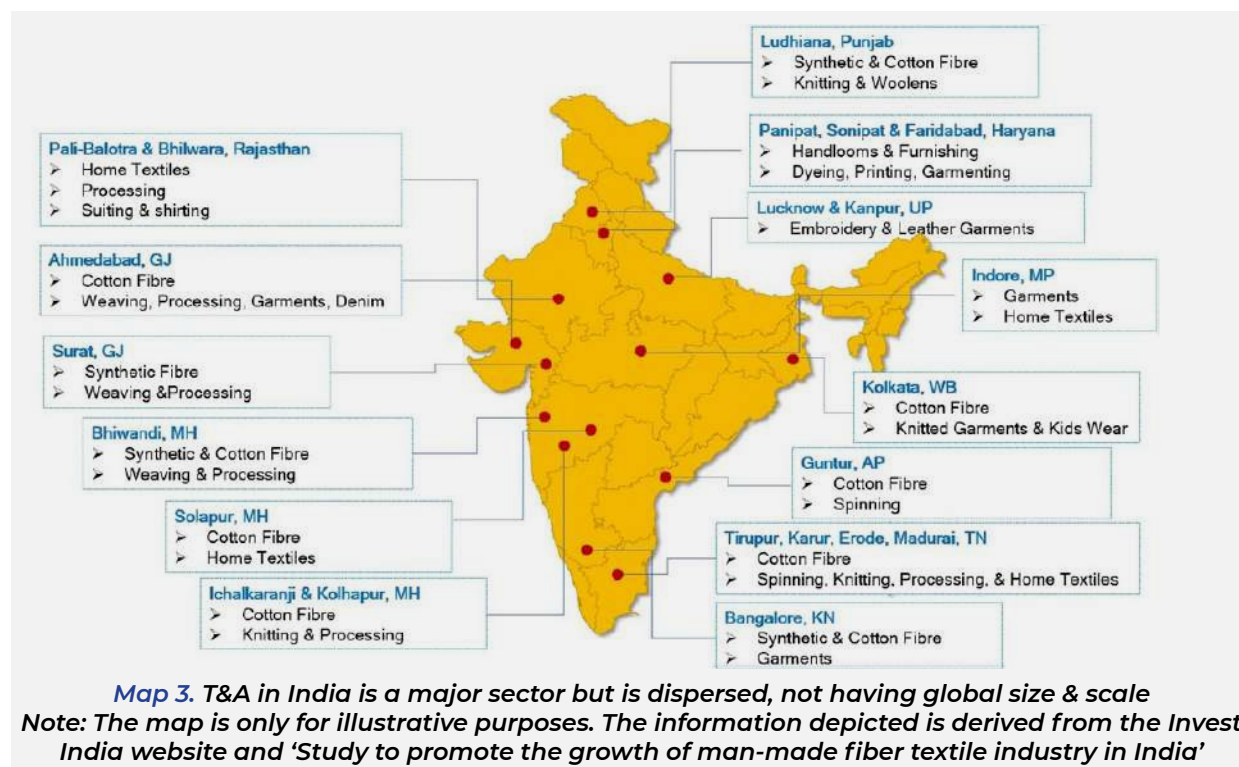


Figure 29. India has ambitious targets to grow its T&A market by 2030²¹

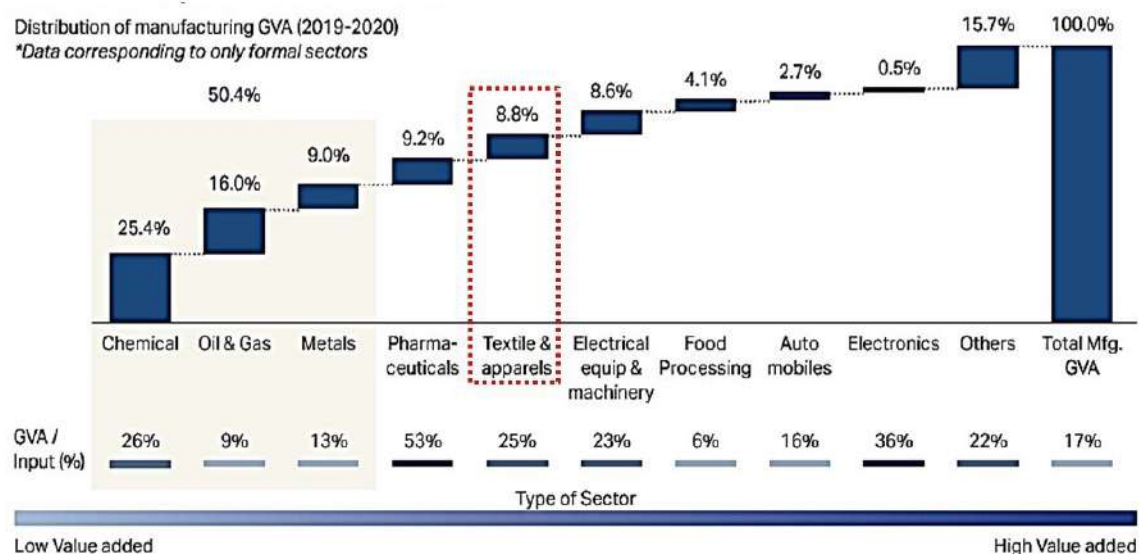
At approx. 75% share, India's T&A market is dominated by domestic trade. The major export destinations for India are the USA, EU-27 and UK, which account for about half of total exports²³. Despite the endowments, growth and prospects, India continues to face difficulties in achieving the global size and scale. Production, processing, value-addition, and wholesale are spread across the country. Major apparel manufacturing hubs in the country are located in Tirupur, Ludhiana, Kolkata, Vishakhapatnam, and Bengaluru. Gujarat is a major cotton sourcing hub in addition to Maharashtra, Telangana, Andhra Pradesh, Tamil Nadu, and Madhya Pradesh. The major wholesale hubs include Surat, Delhi, Mumbai, Kolkata, and Jaipur among others.

India's MMF textile value chain comprises large-scale producers and a highly fragmented downstream industry comprising spinning, weaving, knitting, and processing units. Bhiwandi, Bhilwara, Ludhiana, Panipat, Surat, Tarapur, Tirupur

and Erode have emerged as the major clusters for processing of MMF textiles. The Government of India has initiated a PLI scheme for MMF apparel, MMF fabrics & 10 segments of technical textiles with an INR 106.83 billion outlay aimed at achieving size and scale in the manufacturing sector²².



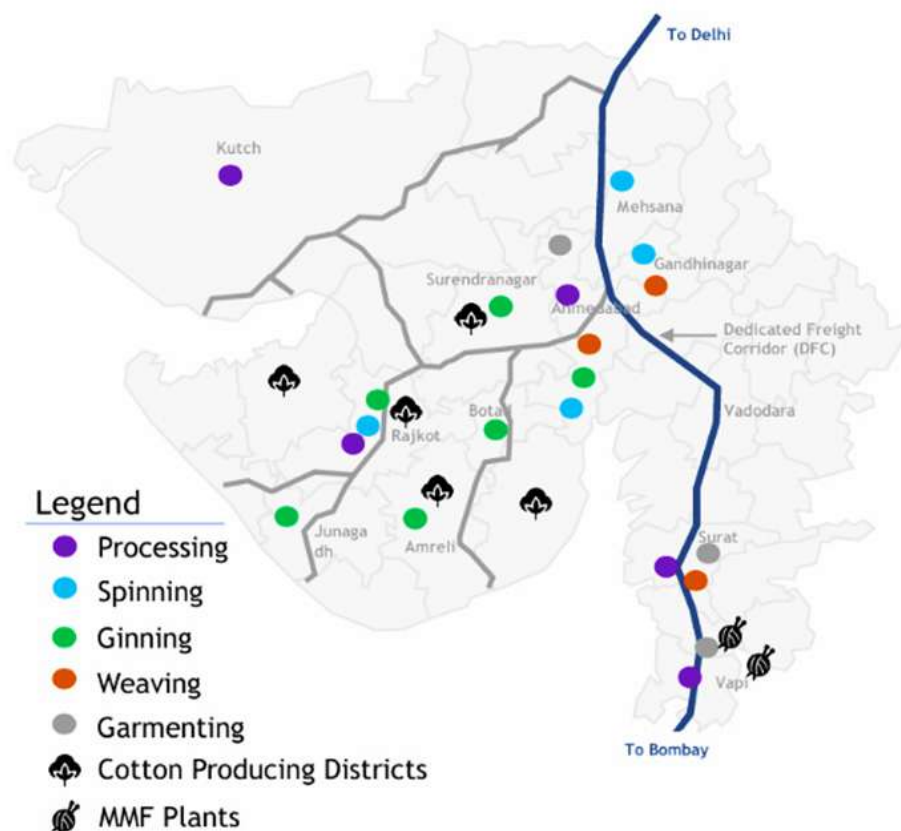
Within India, Gujarat has a significant presence in the T&A sector and is known by multiple epithets like the “Textile State of India”, the “Manchester of the East” and the “Denim Capital of India”. It is estimated that the state boasts of India’s 37% cotton production, 65% denim production, and 25% technical textile output.



Source: Socio economic Review Gujarat, 2022-2023, Annual Survey of Industries 2019-2020.

Figure 30. T&A contribution to Gujarat's economy

Gujarat is the largest producer of synthetic fiber in India. The domestic MMF industry mainly comprises two components i.e., polyester and viscose of which about 50% is produced in Gujarat. Despite this predominance in the Indian context, T&A is not the leading sector when it comes to contribution to the Gujarat state's GDP. At 8.8% manufacturing GVA (2019-2020), T&A is far behind the GVA contributions of sectors like chemicals, oil and gas.



Map 4. Gujarat T&A landscape

Source: Development of Mega Textile Park at Vansi, Navsari, Industrial Parks & Infrastructure, Vibrant Gujarat, GoG, 2024

Gujarat has a robust manufacturing ecosystem, with 19 textile parks and 3 apparel park SEZs in districts of Bhuj, Ahmedabad and Surat. Also, the state has a strong presence of premier academic institutions like Ahmedabad Textile Industrial Research Association (ATIRA), Man-made Textile Research Association (MANTRA), National Institute of Fashion Technology (NIFT), Apparel and Leather Technics (ALT) Training College, National Institute of Design (NID) and the Surat Education and Research Society.

The state currently has 350+ engineering colleges, 41 polytechnics, and 770+ Industrial Training Institutes (ITI)²⁴.

SER is characterized by a high-volume yet low-value T&A sector as compared to other clusters in India. Refer to **Map 4**, The region is endowed with an extensive ecosystem of textile manufacturing as per South Gujarat Textile Processors Association:

Textile mills > 500	MMF share in state > 65%
Dyeing and printing units > 1,000	Synthetic yarn production ~ 90% of India
Garment factories > 5,000	Known for embroidery, printing & dyeing
Weaving units ~ 30,000	GI Tag- Surat Zari embroidery
Process houses ~ 450	Employment of ~1.6 million
Wholesale markets ~ 200	MMF share in state > 65%
~ 95% units are MSMEs	Synthetic yarn production ~ 90% of India

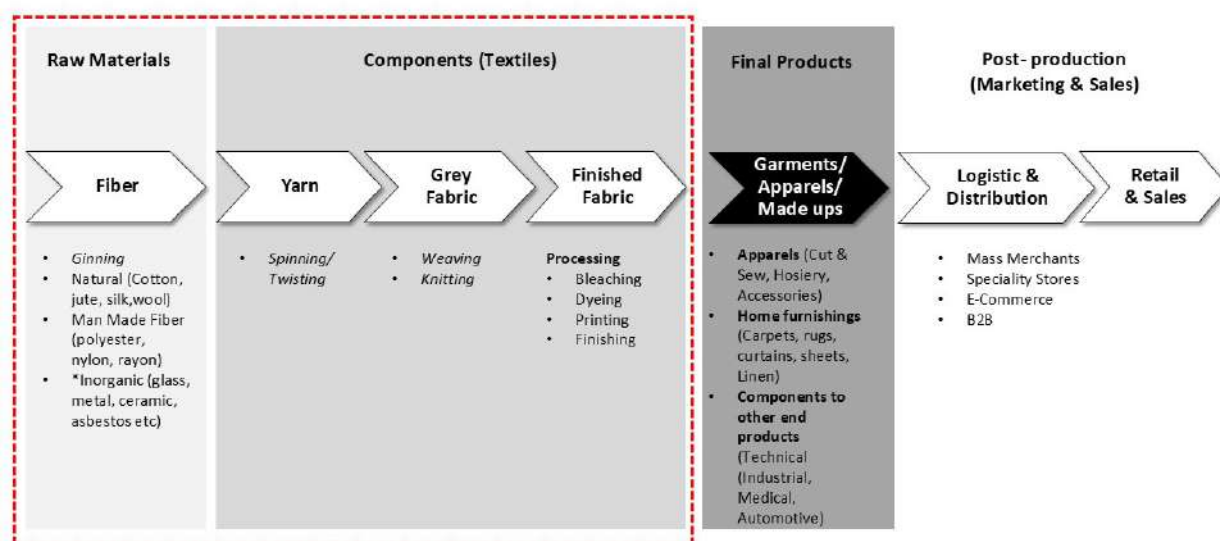


Figure 31. SER dominates domestically in Fiber, Yarn & finished fabric

Source: South Gujarat Textile Processors Association, SGCCI

A major T&A dominated industrial area, the Surat apparel park SEZ is saturated. Inspired by the 5F vision of the Hon'ble Prime Minister- Farm to Fibre to Factory to Fashion to Foreign - Gujarat Industrial Development Corporation (GIDC) is developing the Mega Textile Park at Vansi, Navsari. This park is to be developed with assistance under the PM MITRA^a scheme of the Ministry of Textile, Government of India.

^a Under the PM MITRA scheme, Government of India along with state governments establishing 7 PMMITRA Parks with the aim of developing entire value chain (from farm to fashion) and enhancing exports. Of these, 1 mega-textile park is proposed in the Navsari district of SER. The Mega Textile Park will be developed in Vansi village of Jalalpore Taluka in Navsari district in area of 1142 acres (~ 4.6 Sq Km).

Viksit Gujarat@2047 has envisioned T&A amongst 'Industry of the future' with a focus on:

- Building presence in the global value chain
- End-to-end manufacturing ecosystem
- Driving cluster-based growth
- Establishing a vibrant MSME ecosystem
- Carbon-neutral manufacturing processes
- Workforce trained in new-age skills

5.2.2 Several factors present opportunities for growth of the T&A sector in India

- Geo-political developments can boost India's chance to become a preferred manufacturing destination. China has been the 'factory' of the world for decades, dominating the global T&A trade. In recent years, there has been a noticeable shift in this trend, with several countries seeking to relocate their sourcing. Vietnam and Bangladesh have benefitted from this shift so far and India needs to capitalize on its production capacity and attract leading manufacturers to set up bases in India.
- Production of high-value apparel offers significant opportunities for growth. Of about \$ 1200 billion global T&A market, the '**apparel**' segment has the largest share (~60%) and is the fastest growing @8% CAGR as depicted in **Figure 32**. Apparel is currently the largest exported category in India's exports, followed by home textile and yarn with 16% and 13% share respectively. However, the global export share of India in the apparel segment is 5% only. This opportunity needs to be exploited by developing clusters of apparel manufacturing.

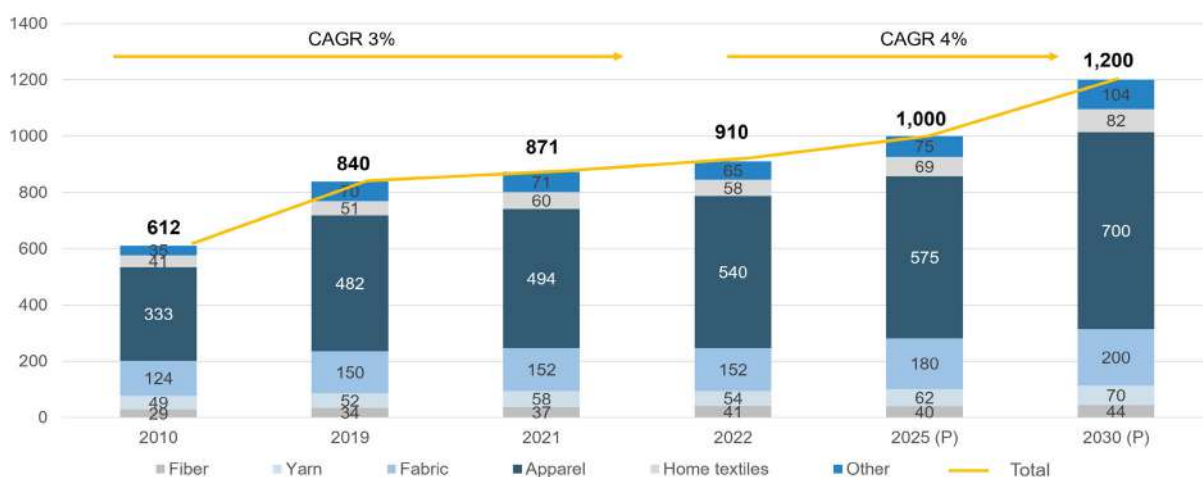


Figure 32. Global T&A market (\$ Bn) ²¹

- India can tap into the huge potential of technical textiles. The global technical textiles market is estimated at \$ 212 bn in 2022 and is expected to reach \$ 274 billion by 2027, growing at a CAGR of 5.2 percent during 2022-27²⁵. India is the 5th largest producer of technical textiles globally. India's trade of technical textile products has been steadily growing and the country has been a net exporter.

However, there is a significant disparity in size and scale compared to the leading countries.

- Technical textiles in India focuses on Packtech, which is primarily a low-value and low-technology product. Manufacturing capabilities need to be created in high-value technical textile categories like Indutech, Mobiltech, Sportech, Meditech, Buildtech, etc.
- India needs to focus on promoting trading to improve its standing in the global T&A sector. Highly dispersed manufacturing clusters and a lack of global scale trading hubs in the country significantly impede its potential to effectively get integrated in the global value chain. Besides increasing mass manufacturing capabilities, creating necessary ecosystems for firms to trade and distribute their inventories in minimum time and with maximum profits is critical. Trade hubs that can integrate the supply chains on a hub and spoke model can help this process. Supply chains encompass the entire production process, and firms aiming to participate in global supply chains can look towards such trading hubs as key locations to produce, add value, or simply trade. The comparative advantage of these hubs lies in their ability to concentrate a wide spectrum of supply chains within a single geographic area. This concentration creates economies of scale and network effects that firms can leverage. Each firm that integrates into a supply chain through a trading hub enhances the efficiencies that make the hub increasingly attractive.
- Coastal cities with global and hinterland connectivity are rapidly becoming advanced trading hubs. Dubai and Guangzhou are global benchmarks in this regard. Creating similar trading hubs in prominent coastal cities of India can bridge the gap between production and global export while serving as critical points of access to global supply chains.

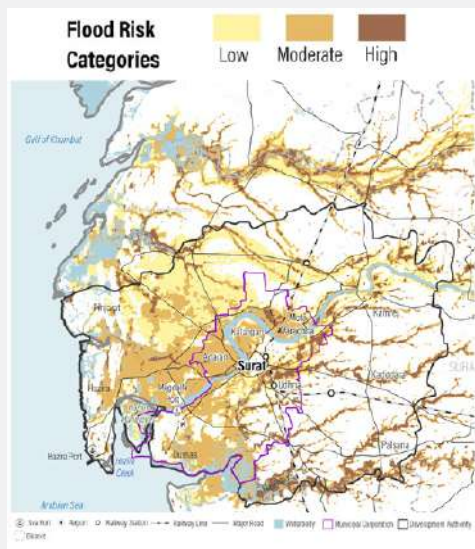
These are essential next steps to boost India's prospects in the T&A sector.

5.2.3 Streamlining the T&A manufacturing ecosystem in SER

SER has a wide ecosystem and historic existence of the T&A sector. It needs to compete with national and global majors in the apparel sector. This potential remains unharnessed primarily due to the nature of its manufacturing units, lack of alignment with global trends, environmental concerns and lack of skilled workforce.

- a. There is absence of large-scale units for apparel production. Fragmented downstream industry dominated by the MSMEs face the typical issues as in other sectors such as lack of scale and efficiency; inadequate infrastructure including worker housing, common facilities; lack of innovation; environmental degradation largely due to non-compliance; etc. Moreover, most of these units are concentrated in core city of Surat, which besides being a sub-optimal use of a growing urban center is also exposed to several environmental distress including exposure to flood risks, facing groundwater depletion and logistical maneuverability issues. (refer **Box 6**)

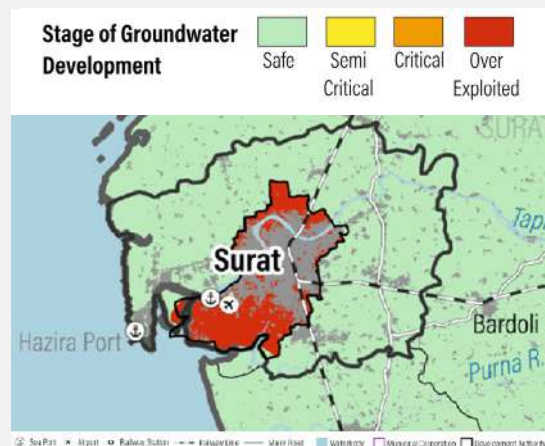
Box 6. Adajan, Mota Varacha, Katargam & Udhna face moderate to high flood risk while the core city's underground water tables are over-exploited



Note: Map is not to scale

*Source: <https://journals.sagepub.com/doi/full/10.1177/0956247813495002> |

Map data: WRI India using IMD, CWC, WRIS, SRTM, ESA World Cover and multiple sources detailed in Annexure B.



Note: Map is not to scale

*Source: WRI using Central Ground Water Board Annual Reports for 2017, 2020 and 2022

- b. There is minimal presence in high-value segments and production largely catering to domestic low-value demand for apparel that is not aligned with global trends. SER is primarily focused on the mass production of yarn and fabric; apparel is restricted to niche areas that do not cater to global fashion. International major players and large subcontractors in apparel segments are not present in the region.
- c. Due to the lack of environmental compliance there are significant concerns about environmental degradation caused by the manufacturing sector. As the T&A production and processing involves the use of various types of chemicals, dyes, pigments, etc., proper treatment and disposal of solid and liquid waste is a challenge given that the ecosystem is highly fragmented and dispersed across SER.
- d. Like every other sector, the lack of skilled labor that can upscale value addition remains a challenge. Labour engaged in the sector is migratory in nature and largely unskilled, which leads to overall costlier operations. Despite the presence of many research organizations and a network of skilling institutes (Industrial training Institutes etc.), the skill sets remain disconnected from industry demands. Moreover, Surat is on the right path but has not yet

become an aspirational city that highly skilled individuals would choose above the rest of the cities to work and live.

The EMP proposes that the existing T&A manufacturing ecosystem of the SER needs to be streamlined based on the baseline study that indicates the competitive advantage of SER in textiles and MMF. By overcoming the extant challenges and developing the PM Mitra at Navsari the manufacturing sector can be streamlined to increase productivity, efficiency and ride up the value chain.

Based on a detailed examination of the endowments, global, national and regional trends, as well as the comparative advantage of SER, the EMP proposal includes:

- (a) Development of PM MITRA,
- (b) Streamlining of the existing MSME operations to bring in higher efficiencies. The list of interventions is in **Annexure V**.



5.3

Gems and Jewelry Sector

SER is known globally for its expertise in natural diamond processing (cutting and polishing). Currently, the sector focuses on low-value segments of natural diamond processing rather than on high-value segments such as international standard jewelry retail and manufacturing (including silver, gold, natural diamonds, lab-grown diamonds etc.). The EMP aims to revitalize the sector by streamlining the existing manufacturing ecosystem through technological interventions in jewelry design, manufacturing and metallurgy. This approach enables local businesses and MSMEs to achieve global level quality, size and scale in production.

The Gems and Jewelry (G&J) industry is a vital pillar of the modern global economy, transforming raw materials such as precious metals, diamonds, gemstones, and other minerals into high-value and exquisite products. In India, this industry is one of the oldest and most significant sectors, making a substantial contribution to the nation's economy and global trade.

5.3.1 Current Scenario of the G&J Sector

I. The global G&J Industry

The global outlook projects G&J sector to be on a growth path, with more than 50% of global trade consisting of natural diamonds²⁶.

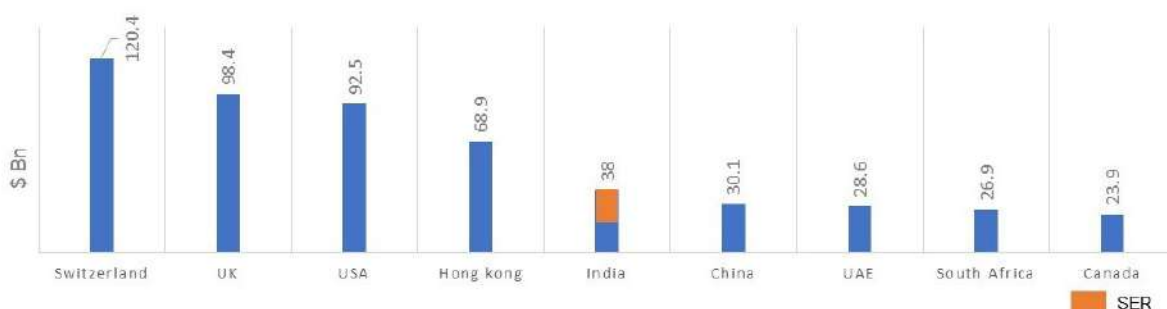


Figure 33. India ranks 5th globally in G&J exports, with a market share of 4.7% in FY22²⁷

Despite its rich heritage in jewelry craftsmanship and being regarded as a global hub for the production, processing, and export of gems and jewelry, India remains a medium player in the low-value segment²⁶.



Figure 34. India has a limited presence in the high-value segment of global exports (FY22-23)²⁶

The G&J market is highly concentrated, within 5 countries - the UAE, Switzerland, USA, China, and Belgium, accounting for 78% of global imports¹². The key sourcing hubs for raw materials include Russia, Canada, Botswana, Brazil, Tanzania etc. Jewelry manufacturing & retail are the largest and most value addition segment within the G&J sector, where the brands play a key role. The United States and the European Union are home to the world’s largest and most influential jewelry brands, shaping the market at the global scale⁹.

II. India’s Treasure Trove: The Crucial Role of the Gems & Jewelry Sector in National Prosperity

The G&J sector contributes approx. 7.5% of India’s overall GDP and 14% of its total merchandise exports²⁸. The Indian G&J market was valued at \$78.5 billion in FY21²⁸, with gold jewelry, dominating the market, accounting for a 66% share²⁹.

Government of India has set the target of tripling G&J exports from \$38 Bn to \$100 Bn by 2027⁹.

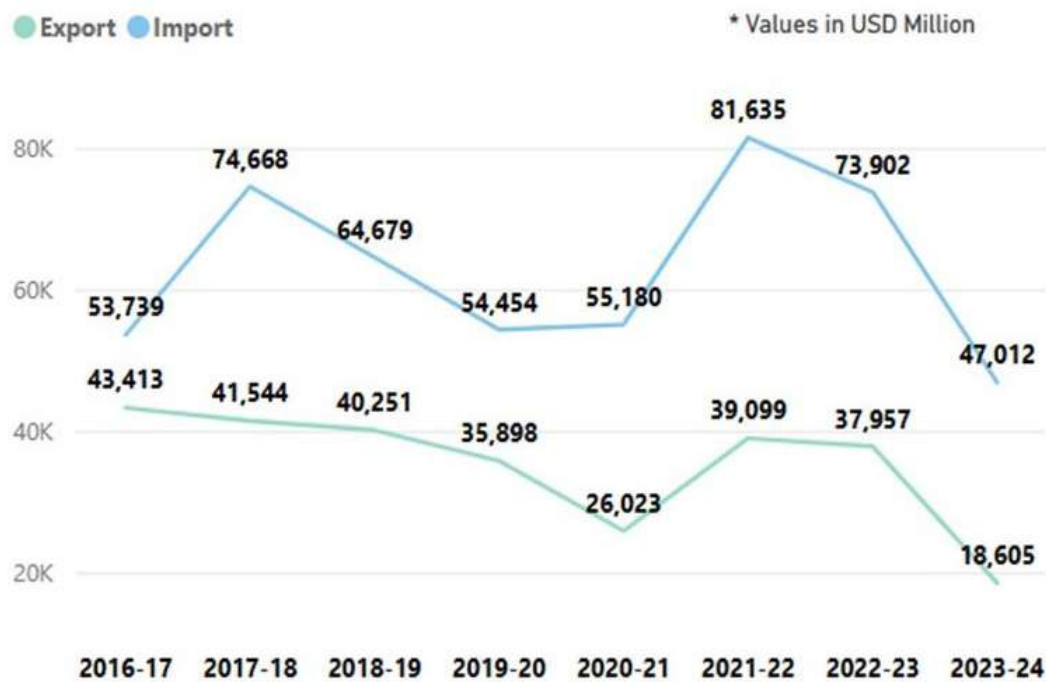


Figure 35. Export & import stats related to the gems & Jewelry sector of India¹²

For FY22-23, key export markets for India’s G&J sector include USA (33.4%), Hong Kong (23.4%), UAE (15.9%), Belgium (6.2%), Singapore (3.5%), and Israel (3.2%)⁹

In 2022, India ranked 1st in the export of cut and polished diamonds, 1st in silver jewelry, and 7th in gold jewelry²⁶.

During FY22-23, cut and polished diamonds accounted for the largest share of exports (58.8%) in the G&J segment, followed by gold jewelry (25.1%), silver jewelry (7.8%), and lab-grown diamonds (4.5%)²⁷.

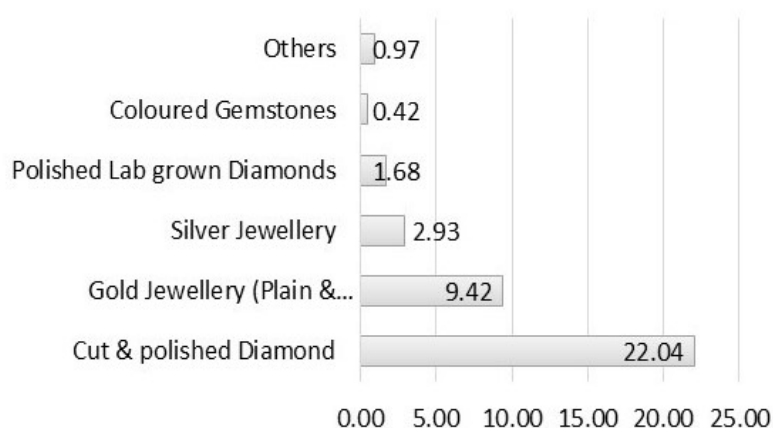


Figure 36. India Gems & Jewelry exports between April 2022 - March 2023²⁷

India's diamond industry holds a dominant position globally, with a 95% share in cut and polished diamonds, 90% of which are processed in Surat³⁰. The major jewelry manufacturing hubs in India include Jaipur, Mumbai, Delhi NCR, Kolkata, Rajkot, Thrissur, and Hyderabad³¹. Mumbai and New Delhi are the primary wholesale and retail hubs.



Figure 37. India Gems & Jewelry Imports (\$ billion) between April 2022- March 2023

In FY2022-23, India imported \$74 billion worth of G&J while exporting \$38 billion, resulting in a trade deficit of \$36 billion¹². The primary imports include gold, rough diamonds, and silver. Notably, India imported 800 tons of gold in this fiscal year¹². The gold consumption is highest among the middle-income group in India. The G&J sector employs over 5 million people in India⁹. Availability of skilled labor at low costs in this sector has helped in establishing the country as a manufacturing hub for the G&J sector.

III. Gujarat, a key player in India's G&J value chain

Gujarat plays a pivotal role in India's G&J sector, offering a diverse and comprehensive ecosystem. This sector in Gujarat has a presence across the entire value chain, from raw material sourcing to the manufacturing of finished products.

The state hosts several key clusters for G&J activities, including Surat, Rajkot, Bhavnagar, & Ahmedabad. Gujarat accounts for almost 9 out of 10 polished diamonds in India & also accounts for 80% of the country's diamond exports³².

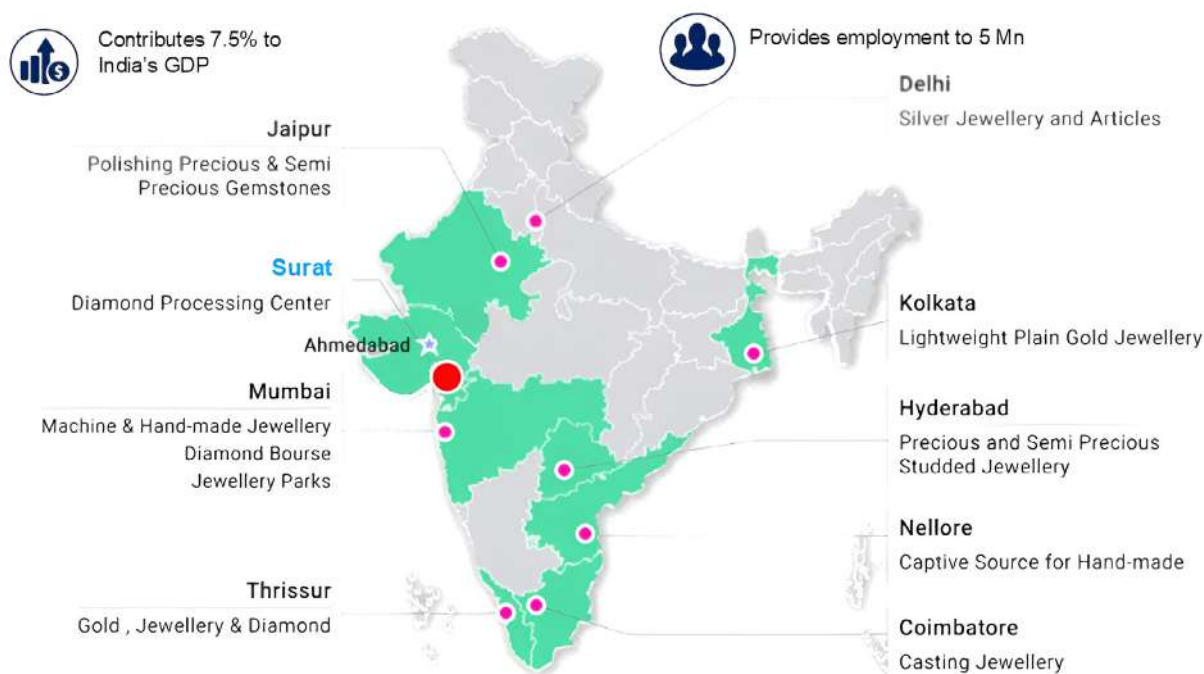


Figure 38. SER as the largest producer of cut & polished diamonds has a dominant position in the G&J cluster in India. (Note: The map is for illustrative purposes only)

The state is home to a large pool of skilled craftsmen, whose expertise significantly contributes to the high quality and distinctiveness of Gujarat's G&J products. Furthermore, Gujarat houses prominent educational institutions in the sector, such as the Indian Diamond Institute (IDI) and the International School of Gems & Jewelry (ISGJ).

IV. SER is a global hub for natural diamond processing and exports

Surat is globally recognized for its robust ecosystem in natural diamond processing and related industries. Often referred to as the "Diamond City," Surat has gained international prominence for its expertise in cut & polished diamonds, lab-grown diamonds (LGDs), and silver jewelry.

SER contributes significantly to India's diamond exports, mainly in cut and polished diamonds, accounting for about 53% of India's total diamond exports³⁰. The region processes around 90% of the world's natural diamonds and approximately 25% of the global lab-grown diamonds³⁰. The region hosts around 6,000 diamond-cutting and polishing units, with approximately 70% being MSMEs³³. The units are mostly concentrated in the Mota Varachha area. These units employ over 1.5 million people³². Surat benefits from the presence of skilled manpower and a good presence in booming lab-grown diamond industries (Green Lab, Limelight and Cupid, etc.)

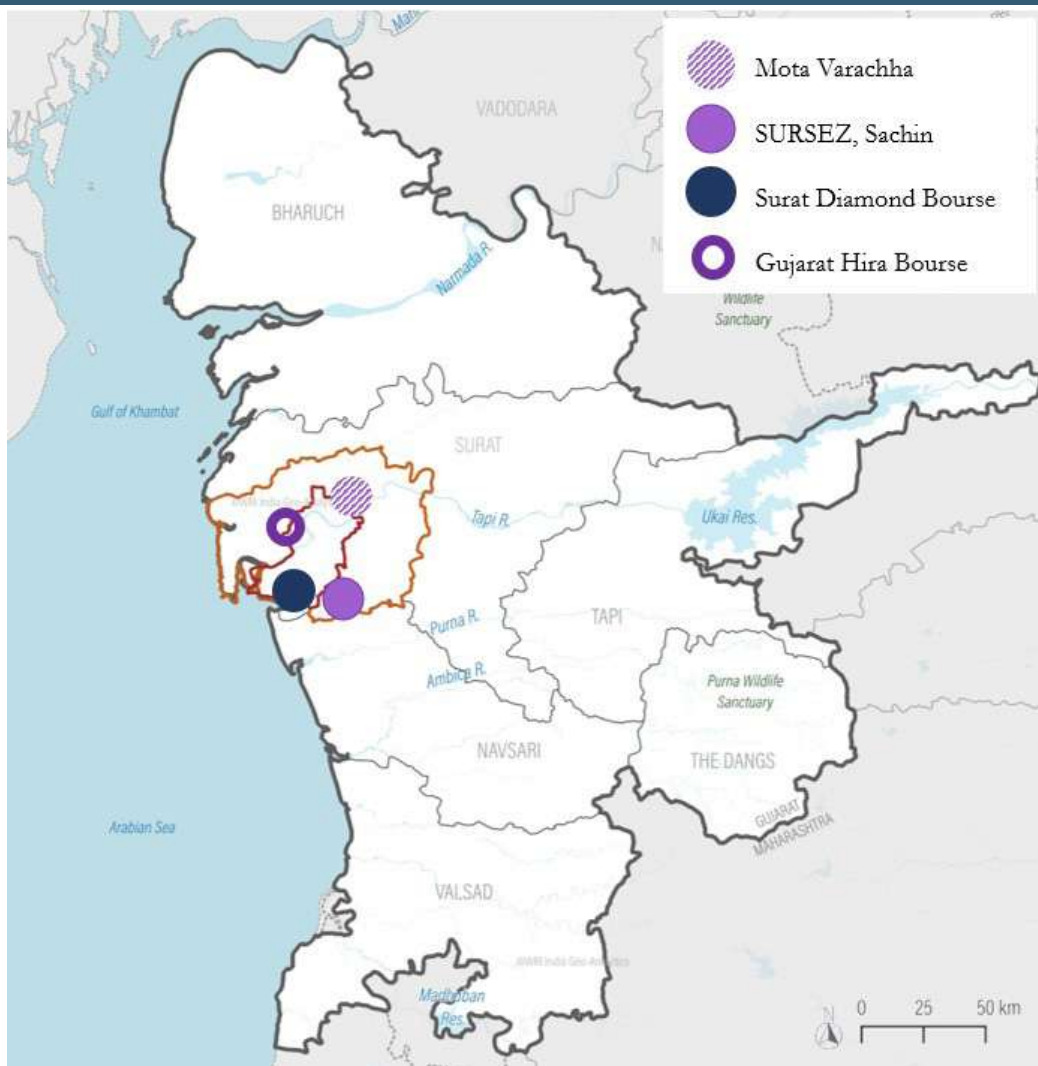


Figure 39. SER as the largest producer of cut & polished diamonds has a dominant position in the G&J cluster in India

Strategic Infrastructure of SER: The development of Special Economic Zones (SEZs), Gems & Jewelry Parks, and bourses in SER has significantly contributed to the growth of the G&J sector.

A. Surat Diamond Bourse (SDB): Located in DREAM City, Surat, the SDB is the world's largest office building and a premier trading hub for G&J. The Bourse spread over 36 acres (0.1 Sq Km), consolidates the diamond trading process by bringing together importers, traders, cutters, polishers, and certifiers, making it a global attraction and a catalyst for economic growth in the region³⁰.



Surat Diamond Bourse



Gujarat Hira Bourse



SURSEZ, Sachin

B. Gujarat Hira Bourse (GHB): Situated in Ichchhapore, Surat, the GHB Park includes a trading hub, convention center, and essential infrastructure, covering 247 acres (1 Sq Km)³⁰.

C. Surat SEZ (SuRSEZ): Located in Sachin GIDC, Surat, SuRSEZ hosts over 250 units representing various industry segments, including jewelry making, diamond processing, engineering, textiles, textile machinery, and pharmaceuticals. Manufacturers setting up units in SuRSEZ are eligible for various incentives³⁰. The zone spans around 124 acres (0.5 Sq Km).

D. Indian Diamond Institute: Located in Surat, the Indian Diamond Institute offers educational and training programs, along with gemological laboratory services, further strengthening the region's position as a leader in the diamond industry.

E. Connectivity: The region is well-connected, with an international airport, proximity to the Hazira port, and a comprehensive transportation network, making it an attractive destination for investors and manufacturers. The region's proximity to the India-Middle East Economic Corridor (IMEC) and India's Free Trade Agreements (FTAs) with various countries (e.g., UAE, Australia, Indonesia) further enhance SER's appeal.

SER stands out as a vital hub for the global diamond industry, supported by a strong infrastructure, skilled workforce, and strategic location.

5.3.2 Broad value chain of G&J Sector in SER

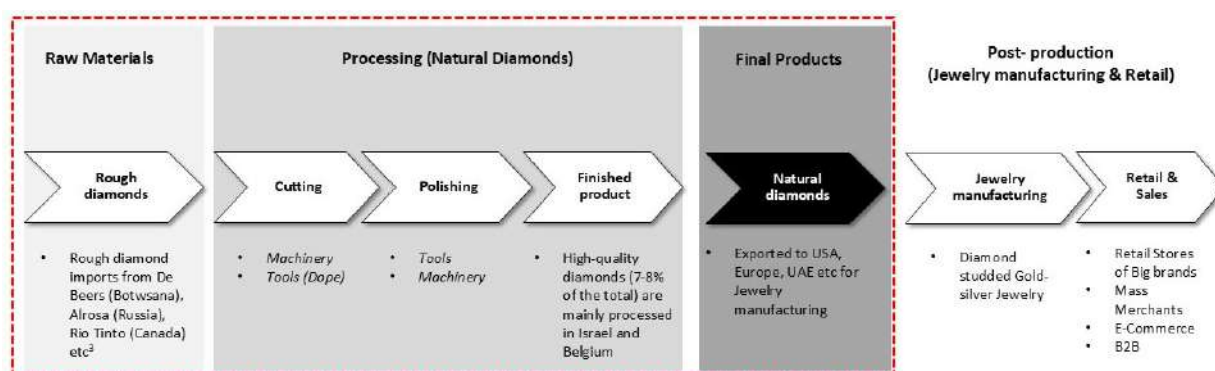


Figure 40. SER dominates in natural diamond processing but lacks in Jewelry manufacturing & retail

Source: Surat jewelry manufacturers association (SJMA)



Figure 41. SER presence in G&J Chain

Despite having a rich ecosystem and a long-standing presence in the G&J sector, Surat is unable to compete with global industry players. The global retail jewelry sector is dominated by major brands. Unfortunately, SER lacks the presence of large global brands, limiting its ability to establish a stronger foothold on the global stage.

5.3.3 Several factors present opportunities for growth of the G&J sector in India & SER

The demand for gems and jewelry, both globally and locally, is projected to grow in the coming years, offering India & SER an opportunity to increase its share in the global market.

- **Global market growth:** Factors such as the expansion of the middle class, rising disposable incomes, increasing demand for lab-grown diamonds, diamond studded jewelry (in silver and gold), and branded jewelry contribute to this growth. China and India are anticipated to be the fastest-growing markets due to favorable demographic and economic factors.
- **High-value segments:** There is a pressing need to venture into high-value segments such as jewelry retail and manufacturing (including silver, gold, and lab grown diamonds). Despite India's relatively low global export share in various jewelry segments ~6% in gold jewelry, ~1.4% in imitation jewelry, and ~25% in lab-grown diamonds there is potential to capture a larger market share. Leveraging existing infrastructure, expanding jewelry offerings, and attracting leading jewelry manufacturers to set up operations in India can significantly enhance India's global market presence. The trend of "China + 1" is expected to support this expansion.
- **Global-Scale Trading Hubs:** To strengthen its position in the global G&J sector, India must develop global-scale trading hubs. Upgrading jewelry manufacturing capabilities and creating efficient ecosystems for rapid supply and profitable trade is crucial. Establishing trade hubs with integrated supply chains and economies of scale will attract major firms, boost efficiency, and improve India's global prospects.
- **Government Support:** The GoG has designated the G&J sector as a key focus area for development.
- The **Viksit Gujarat @ 2047** vision document further highlights G&J as a priority sector, emphasizing the need for formal training programs and the attraction of new talent to drive innovation.

Table 3. Global and National Scenario of gems & jewelry sector

Commodities	Global (\$ Billion)	India (\$ Billion)	Projection
Gems & Jewelry market	300.4 (2021) 395.74 by 2027 ^a	78.5 (2021)	India to reach 100 \$ Billion by 2027 ^d
Gems & Jewelry export	300.4 (2021) 395.74 by 2027 ^a	38 (FY22-23)^b Global contribution 4.7% (Rank 5)	India to reach 100 \$ Billion by 2027 ^d

Commodities	Global (\$ Billion)	India (\$ Billion)	Projection
Cut & polished diamonds export	85.41 (FY21-22) (Major Importers - US, Hongkong, China, UAE, Belgium, Switzerland, Israel) ^c	26.33 (FY21-22) – Constitutes 59% of India's G&J exports (India share country wise – USA 52.1%, Hongkong 42.5%, China 34.7%, UAE 32.3%, Belgium – 43.8%) ^c	36 US\$ Billion export potential^c (Potential Markets -Switzerland, UK, France Italy) ^c
Lab-grown Diamonds Export	6.11 (FY21-22) China produces 56% of global production, India 15% (2019) ^c	2.12 (FY21-22) – 4.5% of G&J Export (India share country wise – USA 67%, Hongkong 14%) ^d	Globally \$ 15 billion by 2035^d - (Potential markets -China, Thailand Korea, Germany, Vietnam) ^c
Gold & Diamond Jewelry Export	54.03 (FY20) (Major importers- Hongkong, Switzerland, UAE, USA, China) ^c	5.4 (FY20) (India Share country wise – UAE 34.4%, USA 23%, Hongkong 7.2%) ^c	(Potential markets - China, France, Singapore, UK, Japan, Italy) ^c
Silver Jewelry Export	10.28 (FY21-22) (Major importers – USA, Hongkong, Germany, UK, France) ^c	3.37 (FY21-22) – 7.8% of G&J Export (India share country wise – Hongkong 68.9%, USA 20.7%, Germany 3%) ^c	3.4 \$ Billion Export Potential^c (Potential markets – Germany, UK, France, China, Italy) ^c

Source: a - Precision report, b - GJEPC Report, c - Unleashing export potential GJEPC, d - PIB

Leveraging these opportunities will be crucial for SER to enhance its global competitiveness and realize its potential as a leading Jewelry hub.

5.3.4 Challenges

For the SER to realize these opportunities and consolidate its position as a global jewelry hub, certain inherent challenges would need to be addressed:

a. Output not aligned with global market demands:

- While SER excels in diamond cutting and polishing, it has a limited presence in high-value segments like jewelry manufacturing, retail, lab-grown diamonds etc.
- The region falls short in meeting the high-value global and domestic demand for gold and silver jewelry.
- There is a notable absence of a dedicated jewelry trading bourse hindering its competitiveness.

b. Absence of global players:

- Major international jewelry retailers and manufacturers are not present in SER, limiting its global influence.

c. Export/ Import bottlenecks

- Unlike Mumbai and Delhi, SER encounters export/import (including customs procedures) delays.
- Although Surat is renowned for its diamond industry, it has yet to establish itself as a major player in the global jewelry market.

d. Human resource constraints

- Although there is sufficient skilling infrastructure (ITIs), these institutes are not aligned with modern industry needs.
- The region also lacks Centers of Excellence offering specialized courses that meet global standards in areas such as precious metallurgy, jewelry design, manufacturing, and modern technologies such as AI & ML. Skill requirements and course curricula are outdated, failing to keep up with evolving industry demands.
- There is a shortage of aspirational infrastructure for workers and senior management, which hampers the recruitment and retention of talent.
- The workforce is primarily migratory and unskilled, leading to higher operational costs. Moreover, Surat is yet to be developed as a desirable location for highly skilled professionals.

e. Fragmented Manufacturing ecosystem:

- The G&J manufacturing sector in SER is hindered by its fragmented structure, with many units primarily focused on natural diamond processing rather than diversified, high-value jewelry production. The sector lacks essential capabilities, including advanced design skills, expertise in metallurgy, and access to high-end machinery/software, which are critical for meeting global market demands.
- The G&J sector of SER is also dominated by MSMEs that struggle with issues like lack of scale, efficiency, and inadequate infrastructure, including worker housing and common facilities.
- The lack of alignment with global trends restricts the sector's growth and limits its appeal to major international players.

Addressing these challenges will be crucial for SER to enhance its global competitiveness and realize its potential as a leading jewelry hub.

The EMP recommends a comprehensive set of proposals aimed at enhancing value in the G&J sector, intending to achieve high GVA & increase employment opportunities

To transform SER as a global jewelry hub by 2047, it can adopt a strategic, multi-pronged approach centered on:



Figure 42. Volume to value transformation

Based on a detailed examination of the endowments, global, national and regional trends, as well as the comparative advantage of SER, the EMP proposes the existing ecosystem operations are streamlined to bring in quality & higher efficiencies. The list of interventions is at **Annexure V**.

5.3.5 Streamlining the existing manufacturing ecosystem, enabling SER to scale up production and achieve significant growth in terms of quality, size, and scale

The textile industry is one of the oldest and the most widespread industries in Surat. It is mainly engaged in the activities of yarn production, weaving, processing as well as embroidery. This industry creates employment for low and semi-skilled labour but at the same time is not highly promising in terms of value addition. This has not been the case with peer countries. This is due to various reasons, such as scattered units, polluting processes, limited product portfolios that cater largely to low-value domestic markets, and more.

For SER to retain its historic position in textiles and take it to a greater height, streamlining the existing fragmented and low-value manufacturing to high-value manufacturing is required. This will not only add more jobs to the region but also help in global branding.

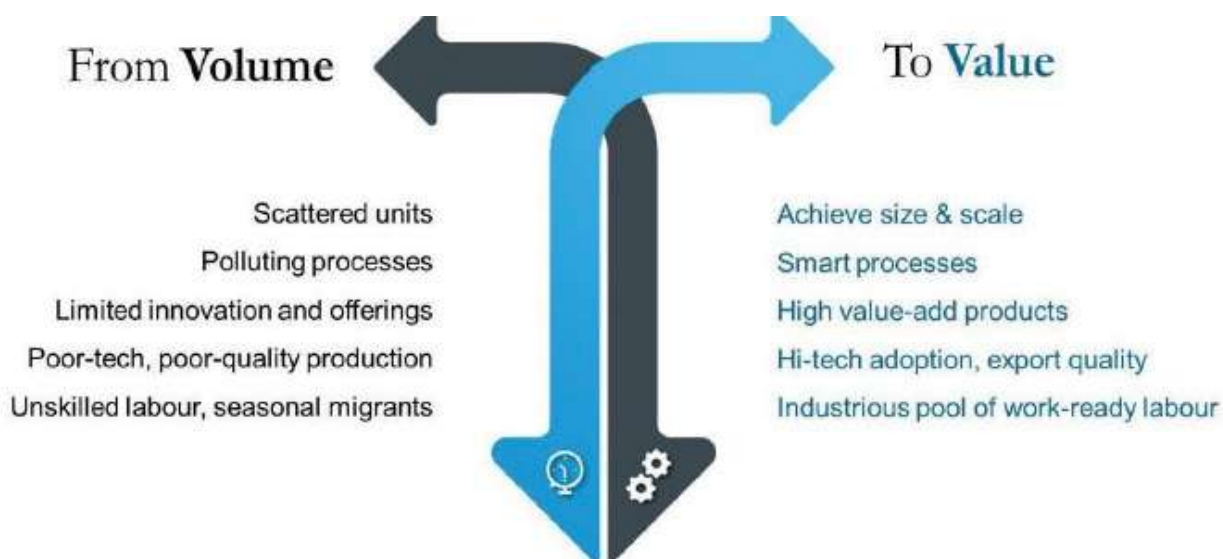


Figure 43. Manufacturing needs to shift gears from high volume to high value

Graphic Source: www.presentationgo.com

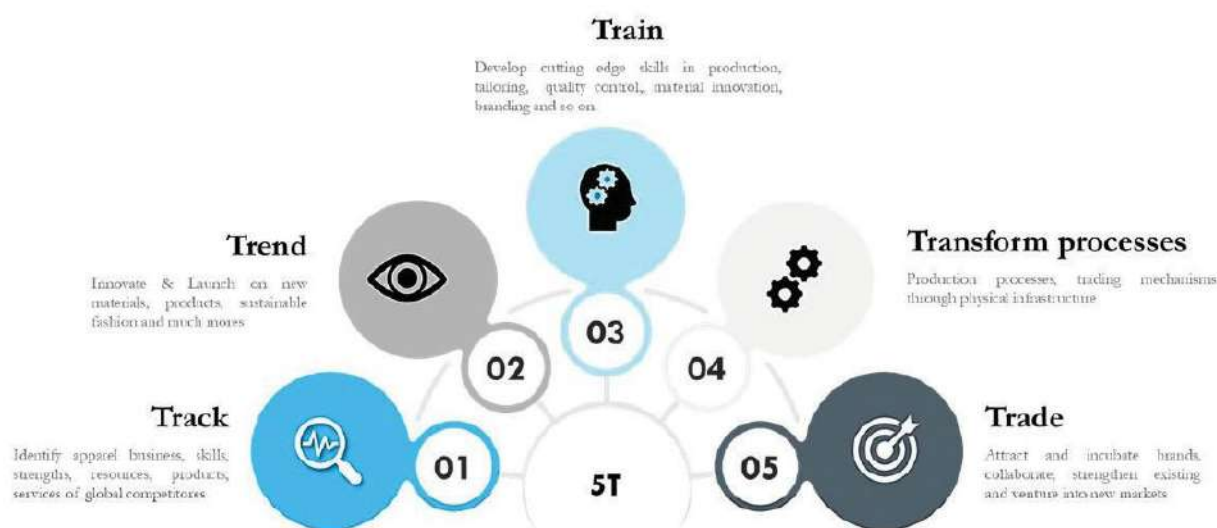


Figure 44. 5T strategy to transition the sector to a higher growth trajectory

Source: Created based on inputs from NID Ahmedabad

This will need a 5T approach- Track, Trend, Train, Transforming processes and Trade (refer to **Figure 44**). At State and SER levels, consistent global demand tracking is required so that the policies and incentives can be oriented toward these trends. Accordingly, an industrious pool of labour needs to be created to produce competitive quality products. To manage the environmental fallouts, processes need to be transformed. Lastly, the port proximity must be harnessed to enable global trade. A robust ecosystem needs to be created to enable the above-mentioned functions. (refer to **Figure 45**).

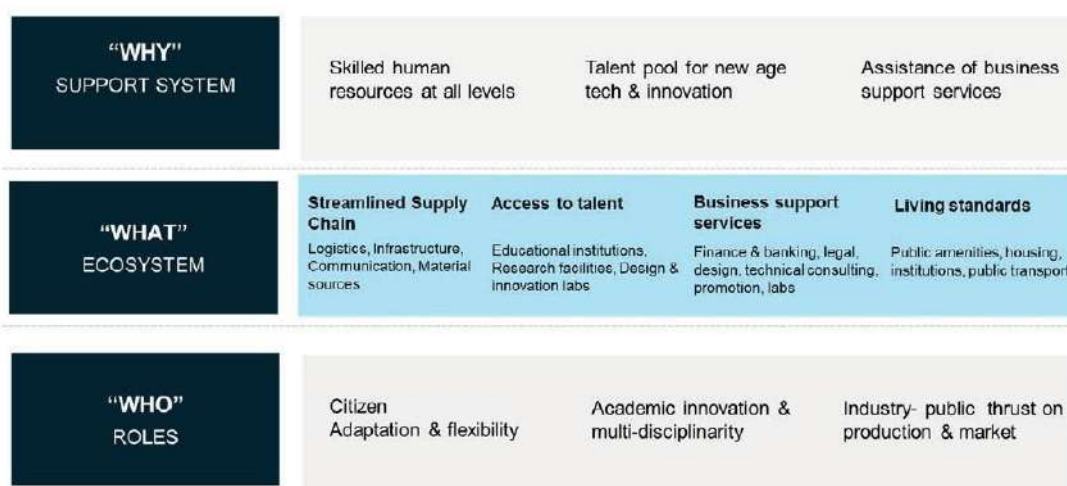


Figure 45. Streamlining the ecosystem to achieve the transition from high-volume to high-value businesses

Source: Created based on inputs from NID Ahmedabad

It is proposed that to bring more size, scale, and efficiency to the operation of MSMEs, a smart 'plug and play' facility can be developed in the vicinity of the city where they are currently operating. Therefore, an industrial park (750 acres ~ 3 Sq Km) for MSMEs has been proposed at Talangpore near Sachin GIDC at an average distance of 20 km from the city core. This will cater to both sectors (T&A and G&J). A brief description of the proposed intervention is as below:

- **Infrastructure:**
 - Large plots for big players
 - Sheds for MSMEs
 - Mega- common facility centre with
 - CETP
 - Common Boiler
 - Testing and certification
 - Warehouses
 - Business support centre
 - Roads and other support infrastructure for the estate
- **Facilities for workers**
 - Dedicated e-bus service for transport to labour
 - Rental housing for workers, particularly women
 - Creche and school for children
 - Basic amenities- water, sanitation, healthcare

The potential locations of all the proposed activities are depicted in **Figure 56**.

5.3.6 'Bharat Bazaar' - the trading gateway to India

Despite India's extensive production capabilities and global standing in both sectors G&J and T&A, the absence of a major trading hub remains a major drawback. Currently, both global and domestic value chains remain linear underlining the need for a strategic shift to a hub and spoke model as depicted in **Figure 46**.



Figure 46. Domestic value chain is largely linear in the absence of a trading hub on a global scale

In addition to scaling up manufacturing, India also requires a conducive ecosystem to support trade and export of goods. Guangzhou, a coastal city in Southern China, serves as a prime example of how a city can become a global trade gateway for multiple sectors, including electronics, textiles, apparel, and more. This transformation has significantly boosted China's economy by making Guangzhou both a showcase and a center of trade.

India currently lacks a comparable trading hub. The markets are dispersed and do not facilitate procurement and the Indian businesses need to travel abroad to procure raw materials, products, and services at the necessary scale, increasing production costs and limiting growth. **An ecosystem for B2B & B2C needs to be created to cater to global & regional markets.**



Figure 47. Need to shift from linear to 'hub & spoke' model of trade and services

To achieve the *Viksit Gujarat@2047* vision, it is crucial that the State aims to brand and promote sectors where it has a comparative advantage, for example, the T&A and G&J. SER can leverage its locational advantage, multiple mega infrastructure connectivity projects, and an existing ecosystem to develop a service-led growth model which is dominated by trade and commerce. By strengthening the infrastructure and providing a robust platform for products manufactured and sourced from across the country, SER can position itself as a leading global hub. Achieving this will require building a strong ecosystem that includes manufacturing, skilling, innovation, infrastructure development, trade facilitation, and effective branding and promotion.

Proposed Approach for SER:

The EMP proposes to establish SER as a value-added trading hub for various goods. To begin with, the focus is proposed on the T&A and G&J sectors, where the region already has a well-established ecosystem. In the future, other categories such as electronics, furniture etc. can be easily added to it. With the China+1 strategy and replicating the Guangzhou and Dubai model, India has an opportunity to offer the Global South a unique B2B and B2C alternative. **Box 7** and **Box 8** provide a snapshot of the Guangzhou and Dubai model of trade.

SER has the potential to establish itself as the fashion capital of India. The proposed approach can also enable to raise the market status of SER in the long run.

Dedicated B2B and B2C zones are proposed to be developed in SER as depicted in **Figure 48**.



Figure 48. Proposed approach for establishing SER as a global gateway of trade and services in T&A and G&J sectors

SER can become a leading B2B and B2C hub through a strategic plan that, *inter alia* needs to include a suitable incentive package, fiscal and non-fiscal.

It is proposed that based on incentives offered from globally recognized economic zones like GIFT City, Guangzhou, and Dubai; a similar incentive package may be developed for Bharat Bazaar that would offer a competitive edge by fostering an environment conducive to business growth, innovation, and international trade. By adopting and customizing these incentive structures, SER can attract significant foreign direct investment (FDI), boost local enterprise growth, and establish itself as a key player in both B2B and B2C markets.

A comparable incentive structure, inspired by those offered by several renowned organizations, is detailed in **Annuxure V**.



Figure 49. Potential location of B2B & B2C zones

Dovetailing B2B & B2C functions; SER shall act as the “Gateway of Trade & Commerce” that offers retail, wholesale, and associated services using a hub-and-spoke model.

The B2B ecosystem of Guangzhou is well documented as indicated in **Box 7**

Box 7. How Guangzhou became a major trading hub

Guangzhou, located in southern China at the northern edge of the Pearl River Delta, has evolved into a prominent global trading hub, often referred to as China’s “Southern Gate” or “Gateway.” It serves as the core city of the Guangdong-Hong Kong-Macao Greater Bay Area and the Pan-Pearl River Delta Economic Zone and is a pivotal hub along the Belt and Road Initiative.



Figure 50. Hub and spoke trading model of Guangzhou

Note: Arrows are indicatively shown to represent the connectivity of Guangzhou with manufacturing zones

Source: <https://www.wedoimport.com/wholesale-markets/other-wholesale-market/>

Guangzhou hosts over 50 wholesale markets for a wide range of products, including jewelry, apparel, gifts, bags, fabrics, shoes, hotel supplies, auto parts, beauty products, electronics, phone accessories, toys, watches, and eyewear. These products are manufactured in various parts of China and then transported to the Guangzhou region. Major importers include the USA, Europe, India, African nations, and Southeast Asian countries.

beauty products, electronics, phone accessories, toys, watches, and eyewear. These products are manufactured in various parts of China and then transported to the Guangzhou region. Major importers include the USA, Europe, India, African nations, and Southeast Asian countries.

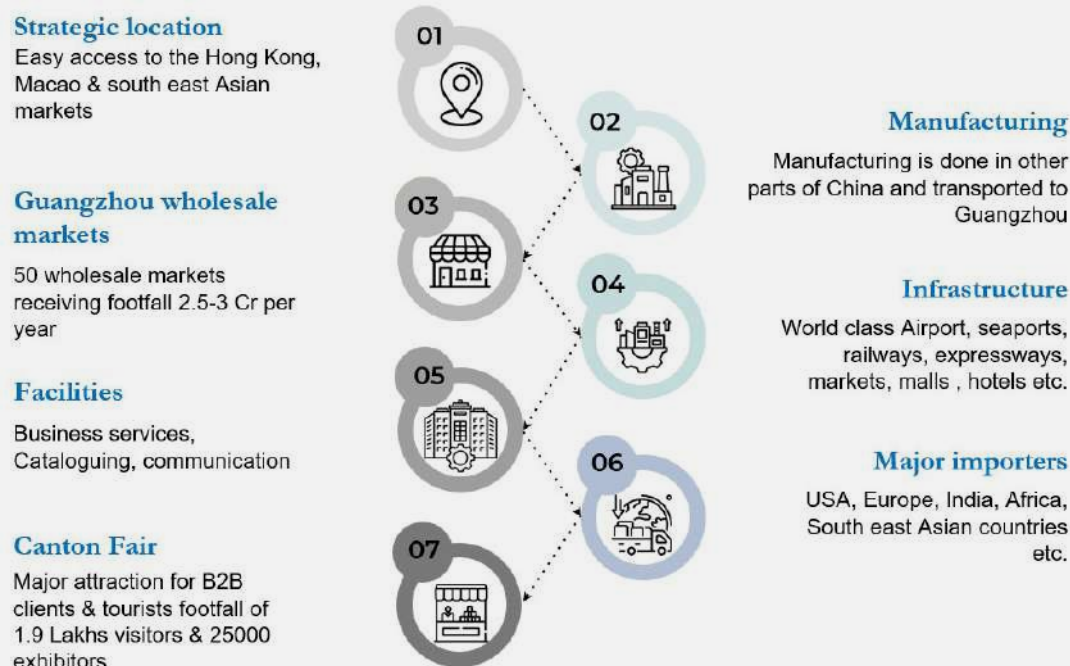


Figure 51. The robust trading ecosystem and multiple offerings in Guangzhou make it a go-to trading destination

Guangzhou's transformation into a leading trading hub has been shaped by several key factors over its rich history of more than two millennia:

- Nestled on the Pearl River, Guangzhou enjoys direct access to the South China Sea, making it a prime port for maritime trade.
- Free Trade Zones: Modern developments, such as free trade zones, provide tax incentives and streamlined customs procedures, drawing in multinational corporations.
- Robust Manufacturing: Products manufactured throughout China are efficiently transported to Guangzhou, which is well-connected to factories in the hinterland, bolstering its role as an international trading hub.
- Canton Fair: Since 1957, the Canton Fair has been hosted in Guangzhou, attracting buyers from over 215 countries and regions, further cementing its status as a global trading hub^b.

These geographic, fiscal, and non-fiscal factors have established Guangzhou as a significant trading hub on the coast of South China.

^b <https://news.cgtn.com/news/3d3d514d32676a4d31457a6333566d54/index.html>



Figure 52. Benchmark – Guangzhou wholesale Markets & Dubai Dragon Mart

The establishment of a B2B trading ecosystem in SER would need the following measures:

1. **Development of Infrastructure** to support B2B activities.
2. **Creation of a support ecosystem** by planning and establishing logistics, trunk infrastructure, and ancillary industries.
3. **Enhancement of MSME clusters** by streamlining existing MSME clusters to improve productivity and establishing new clusters to feed into the hub necessary products where currently there remains a gap in production capacity in the country.
4. **Addressing skilling needs** to meet the industry's requirements to support growth.
5. **Providing incentives** to create an investor-friendly environment & attract major players

In this perspective, a **B2B zone** is proposed near HSR which can provide an end-to-end ecosystem to sustain and flourish wholesale function at a global scale with the following salient features:

- End-to-end business services from trade, cataloging, and communication to e-commerce
- **Facilities:** Wholesale market blocks, warehouses, malls & retail space
- **Hospitality & Support Facilities:** Premium 5-star hotels, business hotels, restaurants, housing, care facilities, hospitals, green spaces
- **Connectivity:** Improve transit through multiple bespoke services, including shuttle services, metro rail, helipads, vertiports etc. to cater to different needs.
- Seamless connectivity with DREAM city, airport & major manufacturing clusters of India
- **Area** – 2000 Acres ~ 8.1 Sq Km (approx.)
- **Estimated Project cost** ~ \$ 1 Bn

More detailed information is included in Annexure V. A conceptual 3D view of the B2B zone is presented in Figure 53



Figure 53. Conceptual 3D view of proposed B2B Zone at HSR Zone, Surat

To effectively become a 'gateway of trade & commerce, it would be pertinent to focus upon the retail segment. A B2C trading hub is proposed to be established to position SER as the fashion capital in both T&A and G&J. Dubai's retail ecosystem has been taken as a benchmark to arrive at the proposal for SER. A snapshot of Dubai's retail is in **Box 8**.

Box 8. Dubai's retail ecosystem

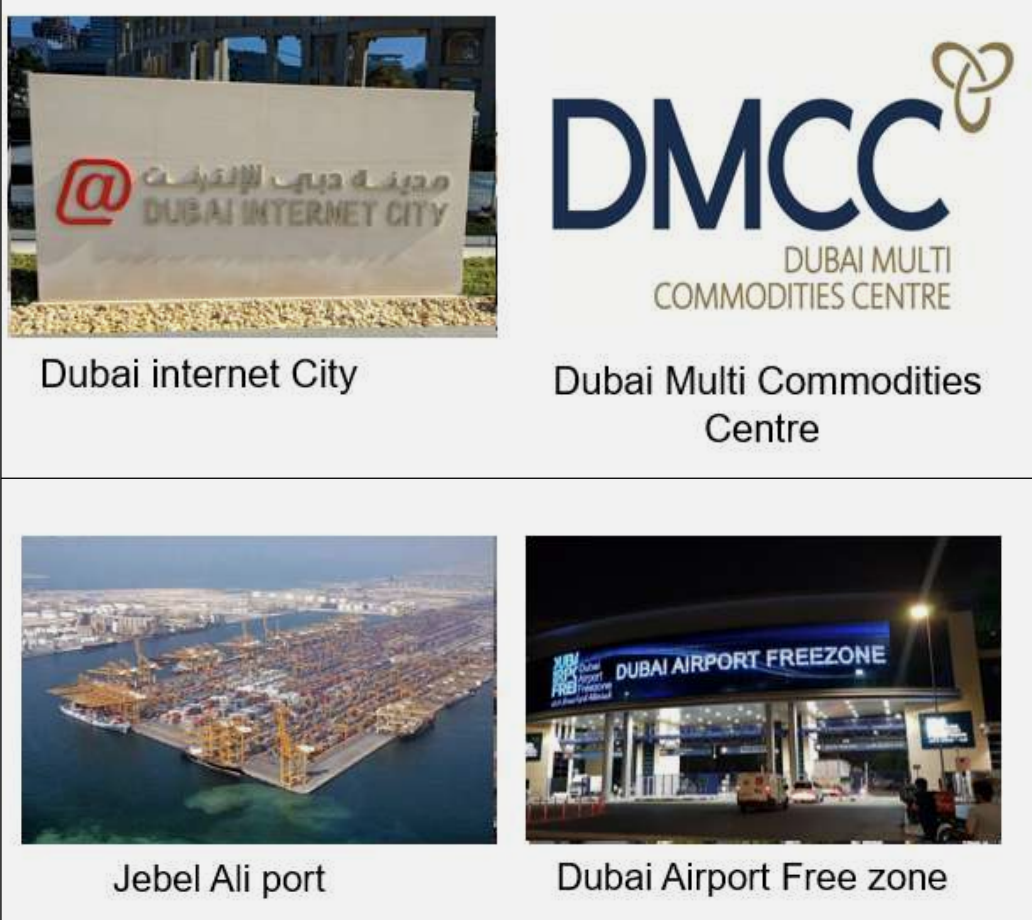
Dubai has become a global benchmark of the retail ecosystem. It is a vibrant and dynamic city known for its blend of luxury shopping and innovative e-commerce solutions. Dubai is renowned globally for its upscale retail experiences, attracting millions of tourists annually. The city hosts a diverse array of global and regional brands, from luxury labels like Hermes and Richard Mille to popular consumer brands like Nike and Adidas³⁴. The retail sector is a significant contributor to Dubai's economy, creating over 2,50,000 jobs and driving substantial economic growth.

Dubai's free zones are special economic areas designed to attract foreign investment and boost economic activities. These zones operate under more liberal regulations than the mainland, offering unique benefits to businesses.

Advantages

- Tax-free environment with a dollar-based economy
- High standard of living and luxury amenities
- Efficient logistics and global trade opportunities
- Proximity to Europe, and Africa via ports like Jebel Ali

Notable Examples:



Dubai Internet City: A hub for tech companies.

Dubai Multi Commodities Centre: Specializes in gold, diamonds, metals, tea, and food grains.

Jebel Ali Port: A major logistics and trade hub.

Dubai Airport Free Zone: Facilitates efficient movement of goods.



Figure 54. Benchmark – Dubai gold souk & Dubai textile souk

In case of SER following measures would help create a thriving retail ecosystem:

1. Improving ease of doing business
2. Developing retail spaces catering to different segments
3. Establishing a state-of-the-art convention center for exhibitions, fashion shows, and networking events
4. Creating SER as a hub through a well-curated initiative in a public-private partnership mode where global brands are incentivized to establish a base in SER
5. Creating the necessary ecosystem for promoting Indian brands
6. Providing an incentive mechanism to create an investor friendly environment & attract major players

The B2C zone is proposed to be located at **DREAM City, Surat** with the following salient features:

- **Facilities:** G&J souk, textile & apparel souk, jewelry bourse, textile & apparel bourse, an artisan village, experience centre, museum, upgradation of the existing convention center, luxury malls, retail spaces, premium 5-star business hotels, restaurants, IB school, green spaces, public spaces, etc.
- **Connectivity-** Seamless connectivity with B2B zone via shuttle services, metro rail, helipads, vertiports etc.
- **Area** - 310 acres (~ 1.3 Sq Km approx.) (Note: The total area of DREAM city is 1683 acres ~ 6.8 Sq Km)
- **Estimated Project cost** ~ \$ 3Bn

More detailed information is given in **Annexure V**. A conceptual view of the B2C zone is presented in **Figure 55**.



Figure 55. Conceptual 3D view of proposed B2C Zone at DREAM City, Surat

Potential locations of all the proposed B2B and B2C zone activities are depicted in the **Figure 56.**

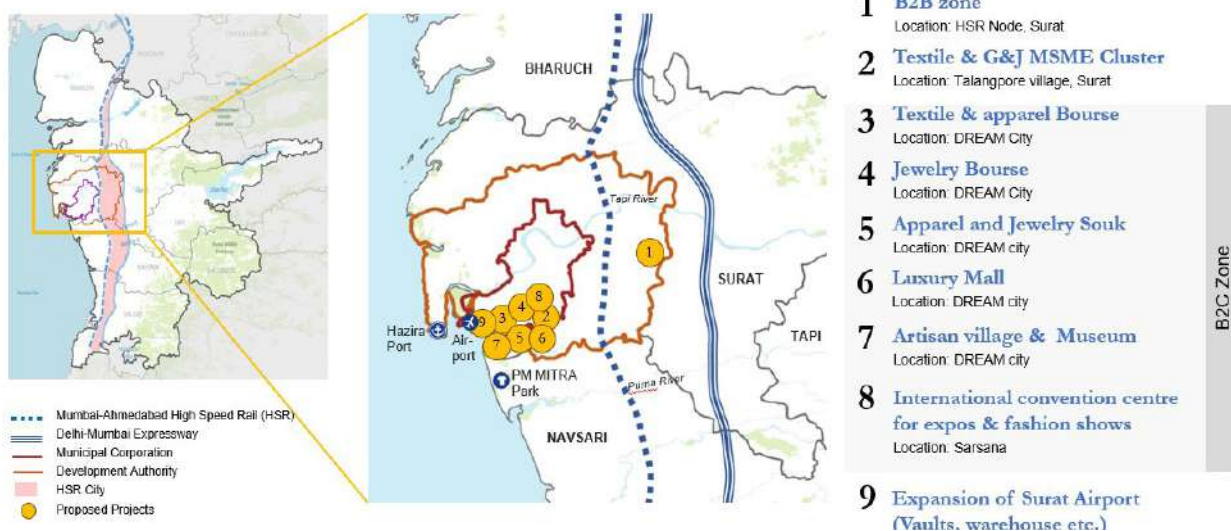


Figure 56. Proposed location of projects

5.3.7 Meeting the skilling needs of the industry

Both the T&A and G&J sectors need skilled artisans and professionals. Moreover, with the proposed ‘Bharat Bazaar’, SER can become a leading B2B and B2C hub. Shortage of skilled workforce and the need for continuous training and upskilling can be a challenge. This cannot be left to market forces.

Specific and focused interventions in both sectors are the need of the hour. A non-exhaustive and illustrative list of skilling interventions is presented in **Box 9**.

Box 9. Streamlining the ecosystem to achieve the transition from high-volume to high-value businesses

1. e-Learning Applications for Artisans:

- Develop mobile apps with bite-sized lessons for on-the-go learning. Enable diamond artisans to access educational content anytime, anywhere, fostering continuous skill development.
- Establish online platforms connecting Surat’s industries with international experts. Facilitate virtual masterclasses, collaborative projects, and mentorship programs to provide a global perspective on craftsmanship.
- Develop educational games and interactive learning modules focused on the diamond industry. Gamify the learning process to engage a younger demographic and make skill development enjoyable and accessible.

2. Virtual Reality Simulators:

- a. Develop a cutting-edge virtual reality (VR) simulator to train artisans. Allow trainees to practice intricate diamond cutting, embroidery, and garment techniques in a simulated environment, enhancing skills in a risk-free setting.

3. Diamond /Jewelry/ Textile Design Courses:

- a. Integrate artificial intelligence into design courses. Offer personalized systems that adapt to individual learning styles, ensuring a comprehensive understanding of design principles and trends.
- b. Launch an apprenticeship program in collaboration with local businesses. Provide hands-on training and mentorship opportunities for aspiring artisans, fostering real-world skill development.
- c. Introduce courses on sustainable practices in manufacturing. Train artisans on eco-friendly techniques in textile processing and ethical sourcing to meet the growing demand for sustainable and responsibly produced diamonds.

4. Blockchain-Based Certification System:

- a. Implement a blockchain-powered certification system for sector industry skills. Ensure transparency and global recognition of skill certifications, making SER's workforce more attractive to international employers.

5. Talent Exchange Program:

- a. Establish exchange programs with international research & development centers to promote cultural exchange and skill development. Allow artisans to experience different industry practices, expanding their skill sets and global perspectives.
- b. Create a mentorship network connecting experienced industry professionals with emerging talents. Facilitate knowledge transfer, skill development, and career guidance to nurture the next generation of leaders.
- c. Introduce research fellowships to attract scholars and scientists to explore novel applications. Support projects contributing to scientific understanding and technological advancement in the sectors.

Source: Inputs from Amresh Panigrahi, National Institute of Design, Ahmedabad (2023)

Sector-focused skilling infrastructure interventions are proposed in Edu-city. The details are in the **Education and Skilling** section.

5.3.8 Policy interventions to bolster growth in SER

T&A sector:

- **Import duties on raw materials:** To make the price point of the commodities manufactured in India globally competitive, the input costs need to be optimized. Few large firms produce a significant amount of the synthetic raw materials that are consumed by the T&A sector in India. Various stakeholders have raised a need to rationalize applicable duties on synthetic raw materials.
- **Skilling:** There are multiple skill development schemes at national and the state level like *Samarth 2.0*, *PMKVY 2.0 & 3.0*, and *Gujarat Mukhyamantri Bhavishya Lakshi Kaushal Vikas Yojana*. A thorough convergence and scaling up of interventions are required to address skill gaps in the sector with a greater focus on industry-academia connect.

G&J sector:

- **Resolve Customs Bottlenecks:** Stakeholders in Surat face significant challenges related to customs procedures, particularly in the G&J sector. These issues impact various aspects of the trade, such as transporting G&J products for global exhibitions, importing raw materials like lab-grown diamonds, and exporting finished products. Unlike in Mumbai and Delhi, where customs clearance can be completed within a day, Surat's processes are slower and more cumbersome. This delay not only hampers the efficiency of businesses but also puts Surat at a competitive disadvantage in the global market. Streamlining these customs procedures is crucial for enhancing the city's trade capabilities and ensuring that it can compete effectively with other major global hubs

5.3.9 Planning and implementing support ecosystem- logistic & trunk infrastructure, ancillary industry

To develop a robust B2B and B2C hub for the T&A and G&J sectors, enhancing logistics and trunk infrastructure across Surat is crucial. This includes leveraging key transport routes such as the Western Dedicated Freight Corridor, Hazira Port, Delhi-Mumbai Expressway, Regional Ring Road, and Outer Ring Road. Upgrading Surat Airport will also be necessary to support these activities.

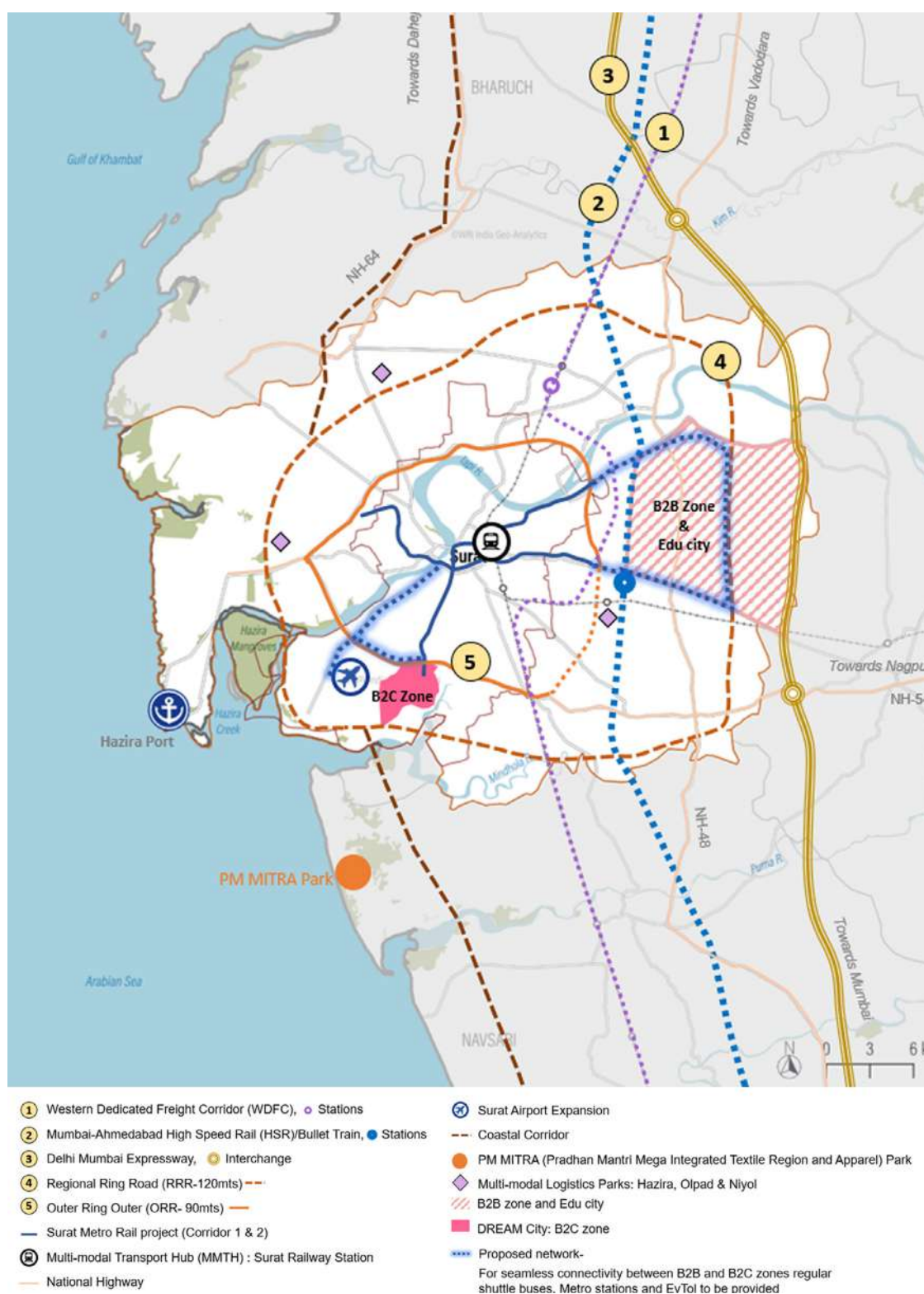


Figure 57. Proposed connectivity interventions to enable the functioning of 'Bharat Bazaar'

The proposed Multi-Modal Logistics Parks (MMLPs) at *Hazira*, *Olpad*, and *Niyol* will facilitate efficient goods storage & movement. For seamless connectivity between the B2B zone at HSR Surat and the B2C zone at DREAM City Surat, regular shuttle buses, metro lines with stations, and an EVTOL network with vertiports should be established.

5.4 Capital Goods & Ancillary Industry

To establish a comprehensive B2B and B2C hub for the T&A and G&J sectors, the GoG and the GoI need to focus on developing not only the capital goods sector but also essential ancillary industries such as packaging, paper-related materials, printing & dyeing, and metal products, etc. These industries are vital for completing the ecosystem, enabling SER to become a global hub in these sectors.

Proposed approach

To address current challenges and capitalize on emerging opportunities, a strategic and coordinated approach is necessary. This involves developing a robust ancillary industry ecosystem in and around SER, leveraging a cluster-based model. This model will enhance India's competitive edge by creating specialized clusters across various industries, including packaging, printing & dyeing, paper-related materials, metal products, and medical devices.

Moreover, it is vital to establish connectivity linkages between these clusters and SER. These linkages will facilitate the smooth movement of goods, services, and information, ensuring that all components of the ecosystem work in unison. With the strengthening of these connections, SER can improve supply chain efficiency, reduce costs, and enhance the overall effectiveness of its B2B and B2C zones.

Proposals

1. Cluster Development:

- Establish new clusters within SER and strengthen existing clusters across India with a focus on key industries like packaging, printing, & metal products, etc.

2. Connectivity Linkages:

- Develop and enhance transportation, communication, and digital infrastructure to establish strong linkages between clusters and the SER. To enable the seamless flow of goods and services, enhancing operational efficiency and reducing logistical challenges.

3. Technology Adoption:

- Prioritize the adoption of automation, digitization, and sustainable practices within the capital goods and ancillary industries to align with global trends and standards.

By implementing these proposals, SER can transform its *Bharat Bazaar* into a globally competitive powerhouse, reducing reliance on imports, boosting exports, and driving sustainable economic growth. The establishment of connectivity will further enhance the integration and efficiency of these industries, ensuring that SER's growth drivers are well-positioned for future success.

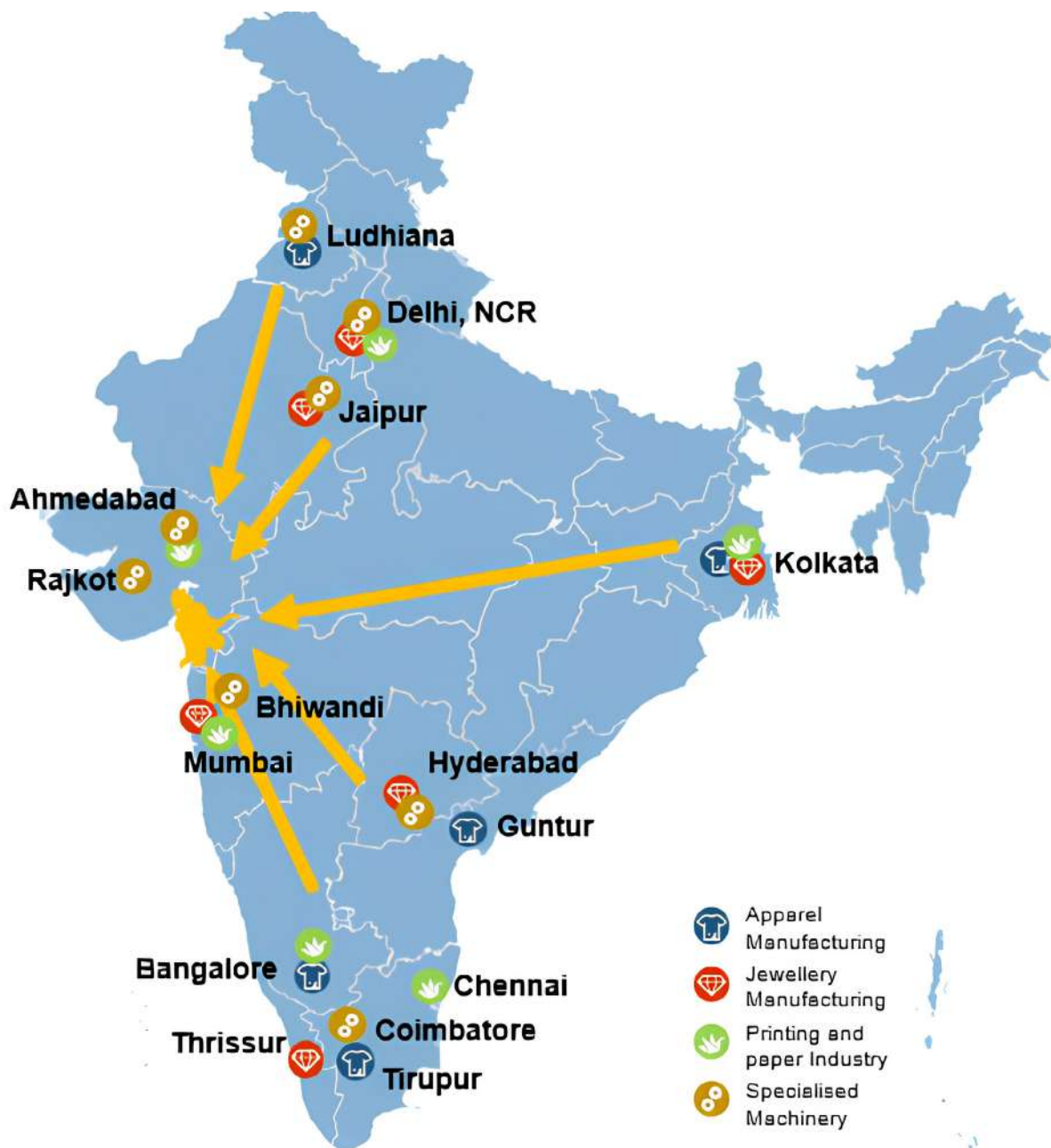


Figure 58. Building domestic supply chains of existing capital goods clusters within India

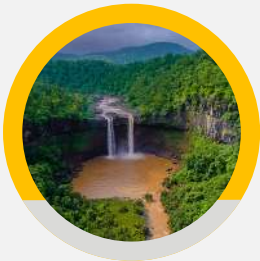


6

Developing new
avenues of growth

A set of emerging growth avenues have also been identified as part of the EMP. The tourism sector is envisioned as a major source of income and employment by capitalizing on SER's natural and cultural assets. SER's prime location and connectivity infrastructure can be leveraged to ensure real estate growth by establishing it as a premier destination for high-end living. Additionally, promotion of natural farming practices to enhance sustainability and support the well-being of local farmers

Box 10. New Avenues of Growth



Tourism

Leveraging SER's natural and economic aspects to develop a holistic & tourism sector that becomes a major source of income and employment in the region



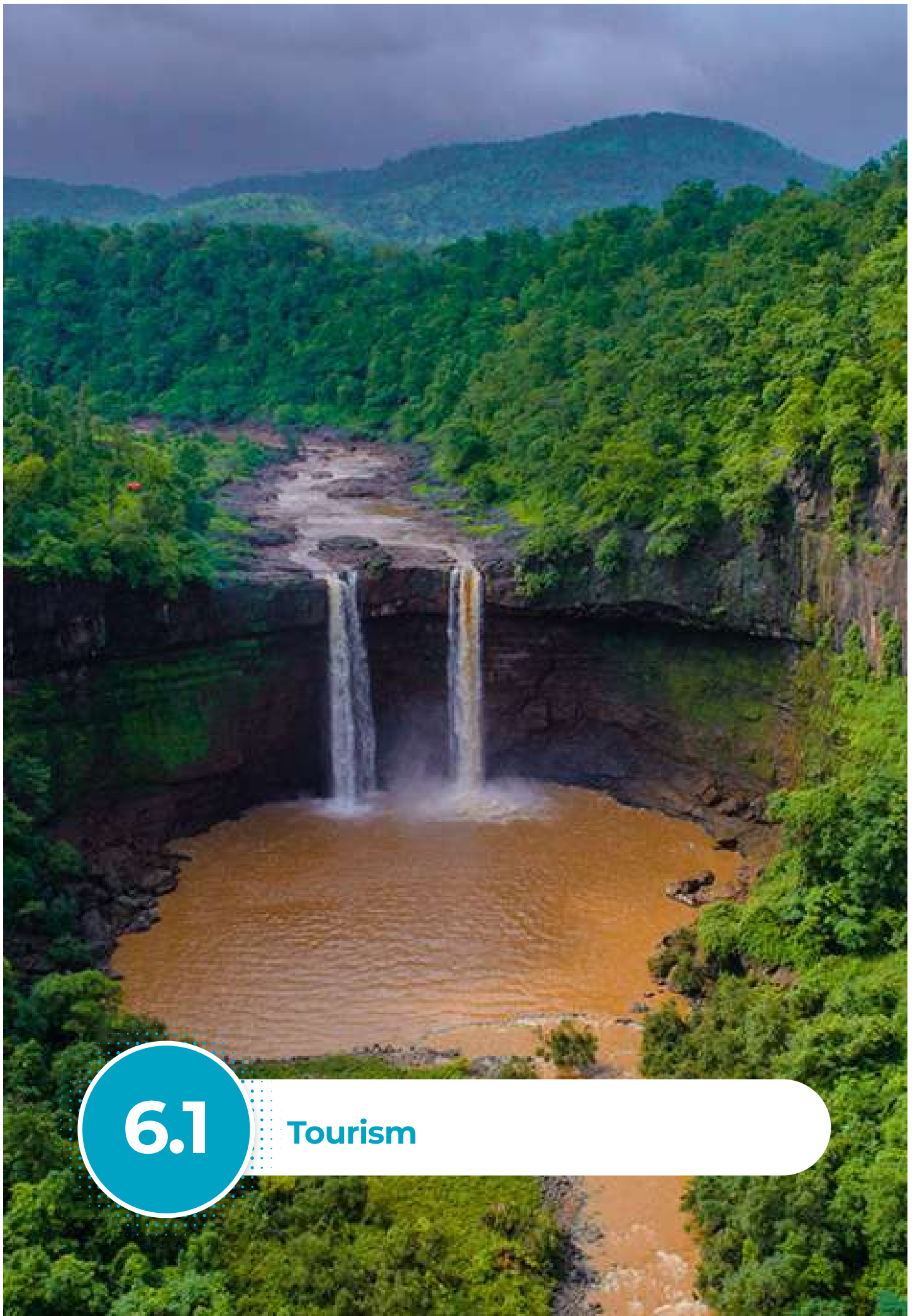
Real Estate

Utilizing the locational advantage of SER, position it as a viable alternative for high-end living & high-quality living space with all amenities



Agriculture

Promote natural farming practice that supports farmers' well-being and sustainability



6.1

Tourism

SER has not leveraged its immense tourism potential and there remains significant opportunities to develop tourism as a major growth driver that would contribute substantially to the GVA, create jobs and help position SER on the global arena. At the same time, it is necessary to develop tourism in a manner that is responsible, sustainable and inclusive for the native population. The EMP proposes a hub-and-spoke model to develop the tourism sector in SER and give suggestions on managing tourism

Gujarat ranked 5th in tourist arrivals in 2022, accounting for 7.5% of domestic tourists and 20.7% of foreign tourists ³⁵.

Viksit Gujarat@2047 aims to make Gujarat among the top three tourist destinations in India and transform the state into a prominent global tourism hub. The Vision aims at enhancing the share of international tourist visits, boosting the contribution of tourism to the State's GVA and Gujarat's share of India's tourism GDP, and extending the average length of stay for visitors.

SER can become a key destination for achieving the goals of *Viksit Gujarat@2047*. The region is endowed with several key attractions including a ~200km coastline³⁶ several hill stations, two wildlife sanctuary, a national park, numerous beaches, heritage buildings, and ecotourism sites such as campsites, lakes, and botanical gardens. Despite these diverse attractions, it presently records low tourist footfall. Among the six districts of SER, only Surat at the 6th position³⁷ features in the top 10 districts of Gujarat recording annual tourist footfall. As an economic hub in the region, business can be one of the major hooks for attracting visitors. Coupled with its natural endowments and rich heritage, SER could be positioned as a tourist destination by making business-led tourism a key plank. The EMP recommends that the region adopts a hub-and-spoke approach for increasing tourist footfalls, extending average lengths of stay, and optimizing expenditure by strategically building a linked network of numerous tourist sites around key major hubs.

In addition to developing tourist sites, there is a need to leverage South Gujarat's vibrant heritage and culture to create unique experiences to attract tourists, where timeless traditions, rich history, and contemporary luxuries come together to create a symphony of unforgettable experiences across both hubs. Hence, **experiential tourism** has been recommended as a separate segment.

The details of this approach is presented in **Box 11**.

Box 11. Hub and Spoke approach to develop the tourism sector in SER

Developing tourist sites, addressing connectivity issues through bespoke projects, creating experiences premised on the local heritage and history, and focusing on the development of soft skills form part of this approach. Additionally, key interventions to ensure responsible and sustainable tourism have been proposed. The approach is as follows:

1. Identification of the key tourist attraction centers around which hubs can be developed

- Existing tourism endowments of the region including cultural & heritage sites, ecotourism sites, beaches, etc.
- Leveraging existing endowments to unlock their full potential (vast coastline, adaptive transformation of heritage sites)

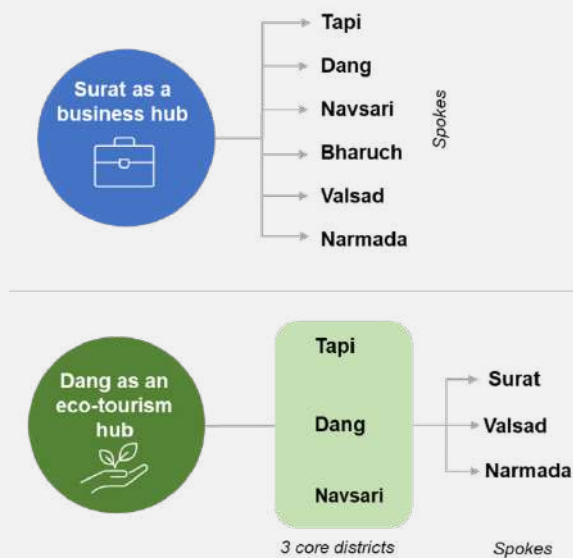
2. Planning new projects and experiences complementing existing attractions to increase footfall and time spent by tourists

- Introducing new activities/experiences (eg. rural tourism with tribal-based lifestyle experiences, development of homestays; cruise tourism; theme parks)
- Develop amenities or services (hospitality, recreational facilities)
- Supplementary activities to enhance visitor experience, encourage longer stays, and cater to a broader range of interests and preferences. (eg. curated / signature events such as art & craft exhibitions, cultural festivals, food festivals, and retail experiences)

3. Enhance the tourism sector through skill development and improved connectivity

4. Implement a structured strategy catering to various tourist demographics

Based on this approach, two hubs have been identified to promote tourism in SER–



Narmada, adjacent to SER, can serve as a key spoke for both tourism hubs, potentially benefiting the region by accommodating tourist spillover and enhancing the overall visitor experience.

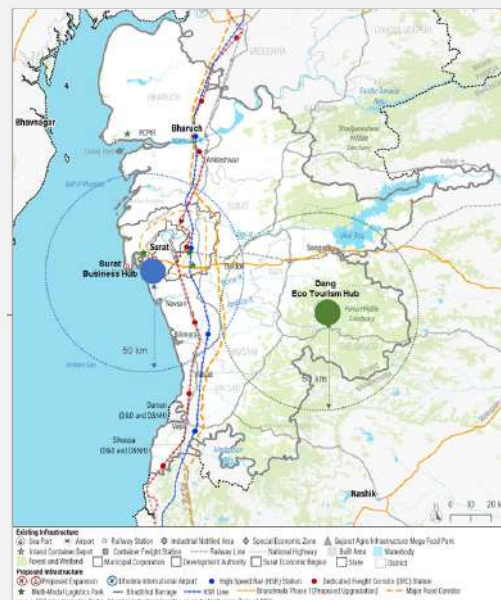


Figure 59. Hub and spoke approach

6.1.1 Surat as the business-led tourism hub

Through strategic planning and implementing key interventions, Surat with its existing endowments and bustling business environment can become a dynamic tourism destination catering to different segments of tourists. Visitors coming to Surat for business will have an option to extend their stay to explore various tourist attractions, combining work with leisure. The following projects are proposed to position Surat as the business-led tourism hub of SER:

A. Cruise Tourism

By leveraging the vast coastline of the region, a hop-on hop-off cruise service is proposed. This service will feature a 3–4-day cruise travel with docking points (inclusive of cruise terminal) every 24 hours. Each cruise terminal will offer activities targeting tourists within a 2-hour radius and will be linked to other regional tourist hubs, giving visitors the opportunity to explore and spend additional days at various destinations.

Box 12 gives details of the project.

A policy would be a prerequisite to ensure that the potential of this initiative is realized while ensuring that the interests of all stakeholders, viz. government, private and public are promoted and safeguarded. The policy should present a regulatory regime under which private participation is enabled in a transparent and predictable manner, necessary safety and operational conditions are mandated and user-related issues are addressed with the overarching aim of promoting tourism.

B. Beach Hotels for high-spending tourists

Two beach hotels are proposed near the docking facility at Ubhrat and Tithal beach. Offering a wide range of facilities and amenities for high-end tourists seeking leisure, relaxation, and adventure by the sea. The hotels can be proposed on similar lines like the Kleopatra Beach Hotel in Türkiye and Marina Bay in Singapore.

C. Other resorts & hotels catering to different segments of visitors

15-20 hotels and resorts, including both premium and budget options, with a total of 1,000-2,000 keys, are proposed near the airport, DREAM City, beaches, and other major tourist attractions in SER. These establishments will cater to all visitor segments and offer various accommodations, including rooms, suites, and dorms.

D. Disneyland Theme Park - First Disneyland of South Asia

South Asia does not have an international-level theme park. SER has the necessary endowments for developing the first major global theme park. The location near Ubhrat beach has been identified for the theme park for this premier destination project. Discussion should be initiated with Disney World USA for the development of the theme park.

E. Beachfront Development

For Suvali, Ubhrat, and Tithal Beaches, multi-activity zones at regular intervals are proposed, featuring promenades or walkways and dedicated cycling lanes. These areas will be enriched with public art and cultural spaces, retail and souvenir shops, along with a variety of restaurants creating vibrant environments to enhance the visitor experience.

At Nargol Beach in Valsad, nature-based tourism activities can be the primary emphasis, including guided nature walks, birdwatching tours, and mangrove exploration excursions. Interpretive centers with informative displays and signage can be established, alongside eco-trails. Workshops and seminars led by naturalists and experts will offer educational tours about local ecology and biodiversity.

Policy recommendation: To further enable the projects, the Tourism Policy of Gujarat can be modified as and when required to enable the provision of land on lease for categories such as hotels/ resorts /theme parks, etc.

Box 12: Cruise Tourism - Hop-on, hop-off cruise services

Two circuits are proposed for cruise services that will connect Surat with major destinations.

Circuit 1- Connecting Surat with destinations from west Gujarat and Diu, with a unique experience at each docking point.



Circuit 2- Connecting Surat with major tourist hubs such as Mumbai and Goa will help attract major traffic to SER

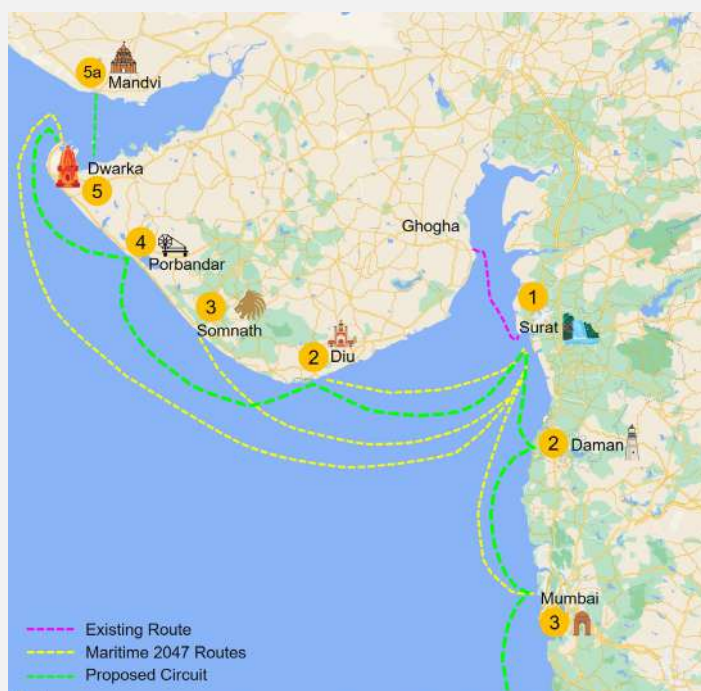


Figure 60. Suggestive Route for Cruise Tourism

A cruise terminal in SER can be built near Hazira Port or Ubhrat Beach. All docking facilities should be developed under the Sagarmala Programme.

6.1.2 Dang as the eco and rural tourism hub

The districts of Dang, Navsari, and Tapi can serve as the core of the eco and rural tourism hub in SER. These areas have the potential to become premier destination for eco-conscious travelers, providing authentic experiences while safeguarding nature and supporting rural livelihoods. Rich in natural beauty, Dang features lush forests, diverse wildlife, and is the only district in Gujarat with hill stations, while Navsari and Tapi provide picturesque landscapes, serene rivers, and vibrant flora.

A. Wildlife, forest and eco-tourism

SER is endowed with **natural heritage** nestled in the Western Ghats of the Sahyadri range. It is home to significant wildlife and nature reserves, including the Purna Wildlife Sanctuary in Dang and the Vansda National Park in Navsari as detailed in **Box 13**.

Box 13: Details of Purna Wildlife Sanctuary, Dang and Vansda National Park, Navsari³⁸

What we found	Purna Wildlife Sanctuary, Dang	Vansda National Park, Navsari
Area	160.84 sq. km	24 sq. km
Existing key activities	Eco-camping, trekking, walks, mountain biking, site seeing, safari (private vehicles)	Eco-camping, trekking, walks, site seeing
Wildlife	11 species of Owls (including an endangered Forest Owlet), Spotted Deer, Woodpeckers, etc.	Leopards, Hyenas, Spotted Deer, Four-horned Antelopes, etc.
Nearby Attractions	Don Hill Station, Saputara Hill Station, Pandava caves in Anjani Kund , Girmal Waterfall, Gira Falls, Mayadevi Temple, Kosmal Falls, etc.	Waghai Botanical Garden, Gira Falls, Interpretation Center, Mahal Forest
Lodging	Mahal Campsite, at the entrance to the sanctuary	Kilad Eco-tourism Campsite

Despite such rich resources, the tourist footfall remains low and primarily concentrated during summer weekends. The absence of organized safari experiences, campsites, trails, etc. reduces the options for exploring these sites. EMP proposes that projects aimed at attracting tourists with different tastes and interests are put in place that help with the exploration of wildlife sanctuaries, hill stations, water bodies, and other eco sites.

- **Organize Open Jungle Safari experiences:** Organize open jungle safaris in Purna wildlife Sanctuary and Vansda National Park in line with Jim Corbett National Park, Uttarakhand; Gir National Park, Gujarat.

-
- **Develop Don Hill station:** Dang has Saputara and Don Hill stations. While Saputara is already famous for its hiking trails, paragliding, lake boating, ropeway rides, and gardens, Don has recently gained attraction. Enhance eco-tourism and adventure activities can make Don a prominent weekend getaway destination.
 - **Develop Ukai Reservoir and surrounding areas:** The villages of Thuti, Jamki, and Narayanpur in Uchchhal taluka offer significant potential for adventure and water sports, with the Ukai reservoir set amidst picturesque hills, serving as a popular weekend destination for one-day picnics. Water sports, adventure activities, and guided nature treks can be developed to potentially capitalize on Ukai's rich biodiversity and attract tourists.
 - **Promote adventure tourism:** Enhance existing hiking and trekking trails such as Karanjawa Trail, Dang (5.3 km); Kala Amba Trek, Navsari (5.6 km); Ukai Reservoir Trail, Tapi (18.8 km), etc., including promotion and provision of basic facilities to attract adventure tourists. Upgrade existing eco-campsites such as Mahal Eco Campsite, Dang; Devinamal Eco Campsite, Ahwa; Ambapani Eco-Tourism Site, Tapi; etc., or introduce new premium eco-resorts with quality facilities and amenities and ensure proper marketing through online platforms.
 - **Develop supporting infrastructure and facilities:** Develop wellness spa and yoga centers, establish visitor centers near eco-tourism sites, and provide facilities for vehicle rentals to enhance visitor experiences.

B. Rural-based experience tourism: Experience daily life and traditions of rural South Gujarat

Gujarat Tourism Policy 2021-25 offers a wide spectrum of offerings including rural-based experience tourism. The villages in Dang, Navsari, and Tapi districts have significant scope for rural tourism with tribal-based lifestyle experiences. Notable villages include Dandi, Don, and Thuti, where the local populations are predominantly tribal communities such as the Dangi, Bhil, Kukanas, Konkani, Warli, and Kotwalias.

The State Government can promote rural tourism by offering curated packages to tourists to experience rural areas through:

- Homestays, with good amenities
- Taking local rides and visits to the villages and nearby attractions
- Developing programs around local art and handicraft activities, such as bamboo work of villages of Dang
- Offer the tourists to experience local cuisine through innovative means like masterclasses to tourists by local community chefs, food trails, preparation of local dishes by tourists in rural authentic settings, etc.
- Participate in traditional cultural activities and festivals, such as Dang Darbar (a tribal festival of Dangis)
- Learn about the way of life of local villagers
- Mango plantation and orchard tourism in Valsad can be developed as a tourist spot

Policy recommendation: It is recommended that Gujarat Tourism should notify policies to promote adventure, eco-tourism, and rural homestays, on the lines of National Strategy for Adventure Tourism, 2022; National Strategy for Eco-Tourism, 2022 and National Strategy for Promotion of Rural Homestays - An Initiative towards Atmanirbhar Bharat, 2022. These policies include regulations, governance, management, and monitoring mechanism for compliance with various adventure sports, eco-tourism activities, etc.

6.1.3 Create Experiential Tourism

A. Adaptive transformation of heritage sites

SER has several heritage buildings, most of which are abandoned or in dilapidated condition. Some notable historic locations are Makaipul, Songadh, and Udvada which offers significant potential for heritage experiences, showcasing the region's rich cultural legacy.



Islamic Heritage building,
Rander, Surat



Dilapidated Heritage buildings,
Surat



Abandoned Majestic Hotel,
Udvada beach, Valsad

Figure 61. Few examples of existing heritage structures in SER^a

These sites could be easily converted into tourist hot spots which not only increases the tourist footfall but also provides a boost to locals. It is thus proposed that:

- Adaptive reuse of these heritage buildings should be promoted to develop heritage villages, hotels and restaurants, artisan museums and studios, libraries, and cultural centers.
- Restoration of heritage areas undertaken to create event venues and experiential spaces such as exhibition centers, sounds & light shows, etc.
- Steps for restoring and redeveloping heritage sites that balance conservation with commercialization and promotion-
 - i. Formulate a scheme for the restoration of heritage sites
 - ii. GoG to identify sites with heritage buildings
 - iii. Conduct feasibility studies
 - iv. Lease out to private players on long-term for use and maintenance

Vadnagar, Ahmedabad, and Vadodara heritage conservation models are good examples that can be replicated in SER.

^a Picture credits in sequence: 1. Sahapedia; 2. Lukman E Mansuri; 3. Manisha Mondal/ThePrint

Box 14: Inappropriate preservation efforts can diminish the essence of heritage sites – A case of Songadh Fort

Songadh Fort, a 16th-century structure situated in Songadh, Tapi, has recently undergone restoration. The entrance and walls of the fort have been renovated.

Despite the recent restoration, there is still no access road to the fort, basic amenities such as drinking water, streetlights, and toilets are lacking. Additionally, there are significant safety and security concerns, and the absence of signage and informational resources further hampers accessibility. The inadequate preservation of heritage structures also presents a challenge, highlighting the need for comprehensive SOP for development and maintenance projects of heritage sites.

Before^b



After



Figure 62. Songadh Fort before and after the restoration work

A comprehensive policy with clear SOPs can be notified by the State Government after due consultation with the wider stakeholders for the restoration of sites in a manner that enhances the rich heritage in an authentic manner. Also, the restoration work should be done by professionals with adherence to heritage standards

B. Tourism circuits- GoG can explore and develop diverse circuits, including religious circuits (Parsi, Jain, Buddhist), food trails, artisan and tribal circuits, etc. EMP proposes developing a Parsi circuit to highlight the rich heritage and cultural contributions of the Parsi community in the region (refer to **Box 15**).

^b Picture credit: Gopi Vishrolia, 2021

Box 15: Parsi (Zoroastrianism) Circuit

The Parsi circuit can offer guided heritage walks and tours that highlight Parsi culture, landmarks, cuisine, crafts, and philosophy enhanced by technology. Recognizing that only the Parsi community is permitted access to certain religious sites, the Circuit is designed with sensitivity to the community's sentiments and traditions.

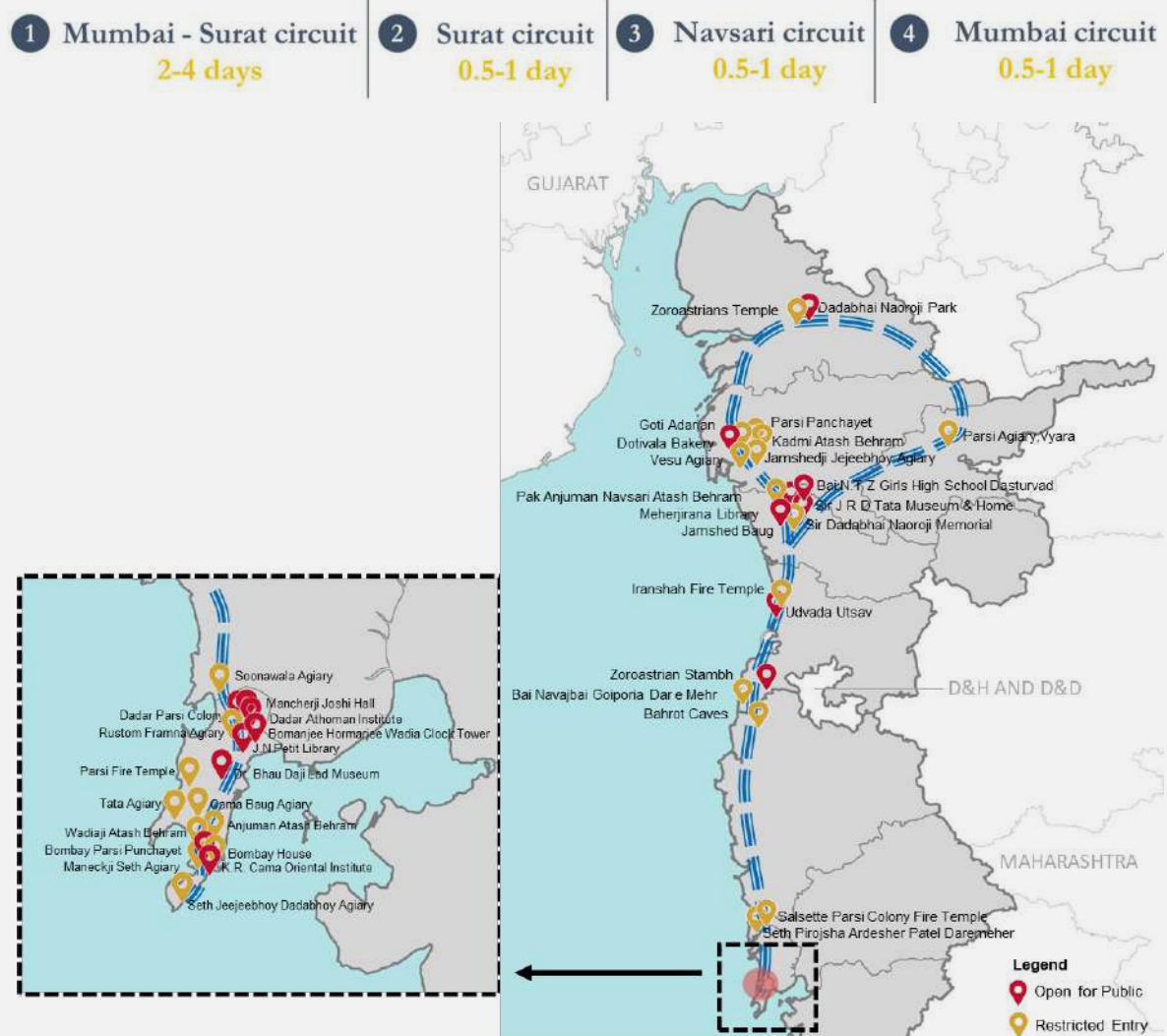


Figure 63. Parsi trail connecting Mumbai-SER

Detailed information on the Parsi Circuit is available in **Annexure VI**.

C. Art, Culture & Festivals

South Gujarat stands out for its dynamic blend of art, culture, and festivity, where traditional and modern influences converge seamlessly. This includes the region's vibrant festivals and events, such as Dang Darbar and Saputara Monsoon Festival. Additionally, South Gujarat is renowned for its rich art and cultural traditions, including bamboo craft, Warli paintings, and Kahadya Dance. EMP proposes scaling up these intangible heritages of SER, which can further enrich the cultural tapestry of the region and offer immersive experiences to visitors.

- Dang can be the center of tribal and cultural festivals with the adjoining tribal areas of Madhya Pradesh and Maharashtra.
- Create a cultural heritage village that promotes indigenous art and dance forms through commercialization and tourism integration.
- **Festivals & events:** Promote Dang Darbar, Saputara Monsoon Festival (Megh Malhar) Tapi Utsav and other local festivals on a wider platform. Scale up the existing annual kite flying festival, Uttarayan, in Surat with the integration of safety and sustainability measures.
- **Promote indigenous culture like Bamboo in Dang:** Covering an area of 3,547 sq km, bamboo is distributed across 15 districts in Gujarat, with the highest concentrations located in the southern districts of Valsad, Dangs, Surat, and Narmada (Forest Survey of India, 2021).
- Bamboo is widely used in various applications, including construction, arts and crafts, furniture, and household items. The name “Dang” in Gujarat means “bamboo,” reflecting the district’s deep-rooted connection to this versatile plant. Strategies to make Dang a bamboo hub are detailed in **Box 16**.

Box 16: Strategies for Bamboo Hub in Dang

Strategy 1: Bamboo Hub in Dang

To promote SER’s cultural heritage and create economic opportunities for the local community. This hub will serve as a center for artisans, wellness, education, and ecological tourism, leveraging the abundant bamboo resources in Dang. Proposed activities include a bamboo-based craft village and artisans’ center, wellness resorts and ayurvedic retreats, workshops, and educational programs. A bamboo trail linking the hub with existing trails and bamboo-rich areas such as the Waghahi botanical garden, bamboo-themed accommodations, and an interpretation center can also be developed.



Bamboo themed accommodation



Bamboo craft



Bamboo culinary

Figure 64. Examples of bamboo used in various activities

Strategy 2: Annual week-long Dang Bamboo Festival

A national event on world bamboo day (18 September) to highlight the ecological, cultural, and economic significance of bamboo. The festival aims to bring together people from across the country to explore and celebrate bamboo’s diverse uses in design, architecture, cuisine, art, and more.

6.1.4 Managing Tourism

A. Making SER the model for responsible tourism in India

Unplanned tourism can result in undesirable outcomes, as evidenced by examples from other tourist destinations.



Nilgiri, Tamil Nadu



Agra, Uttar Pradesh



Manali, Himachal Pradesh

Figure 65. Example of unplanned tourism

Picture Credits: a. Mongabay-India; b. DownToEarth; c. Yash Handa

To make tourism responsible, sustainable and viable, EMP proposes that the following is mandated:

- **Green building practices-** Promote vernacular architecture and green building practices. Example: Hunnarshala Foundation
- **Carrying capacity-based planning-** Assess and implement the carrying capacity of eco-sensitive areas on the lines of the Lakshadweep model.
- **Waste and water management-** Establish waste reduction and recycling programs in tourism destinations including provisions for recycling facilities, minimizing the use of water through reuse and recycling where possible, use of water-efficient technology, etc. Example, recycling: SERI (Pune) & Surat
- **Green Certifications-** Encourage tourism businesses to obtain certifications (e.g., Green Globe, EarthCheck) that recognize sustainable practices in areas such as energy efficiency, waste management, and community engagement.
- **Information, Education, and Communication (IEC) campaign-** For creating awareness, understanding, and acceptance of sustainable tourism amongst all stakeholders.

B. Leverage technology - Making tourism hassle-free and enjoyable

Providing an enriching experience is key to making SER a tourist destination and technology offers several opportunities that could be leveraged to enhance the tourist experience. It is recommended to:

- **Set up *phygital* tourist facilitation centers** to offer information, assistance, and resources for visitors and ensure smooth navigation of a location or event.
- **Deploy Augmented Reality (AR) applications** at key sites and in museums to provide immersive historical overlays of ruins or landmarks, including interactive storytelling with characters popping up on screens.

-
- **Social media integration:** Use platforms like Instagram, Facebook, or X for promoting tourist destinations, live events, and user-generated content sharing.
 - **Drones:** Provide aerial views of tourist attractions for a unique perspective and offer virtual immersive tours for remote or hard-to-access locations.

C. Development of soft skills to enhance the tourist experience

Generic skilling programs for various service providers engaged in different areas at tourist sites in addition to specialized skilling courses need to be established. Some indicative suggestions are:

- **Local guides:** Multilingual guides and facilitators with good knowledge of the place and its history
- **Drivers:** Trustworthy and well-spoken drivers and transportation providers
- **Hotel and accommodation staff:** Well-spoken and multilingual hotel staff such as front desk staff, concierge, housekeeping, etc.
- **Retail and souvenir shop staff:** Product knowledge, sales techniques, customer service, cross-cultural communication, etc.
- **Local artisans:** Training on business management skills, product design, marketing, and quality control to improve the marketability of their craft
- **Water and other adventure sports trainers:** Well-spoken and certified sports trainers

D. Branding & Promotion

Branding and marketing with the aim to develop a strong destination brand that captures the unique identity, culture, and attractions of SER while creating the mystique that motivates people to visit. This can be effectively achieved through storytelling and content creation.

- **SER as a boutique destination for curated/signature events:** curation of events throughout the year to maintain a dynamic and engaging cultural calendar. Identifying and utilizing various locations across SER for these events is also crucial, ensuring that each venue enhances the experience and showcases the region's diverse cultural offerings.
- **Develop stories and experiences on unique subjects to promote tourism:** An authentic narrative fosters emotional connection with travelers, builds loyalty, and creates memorable experiences. Leveraging SER's stories and folklore as marketing tools can document and share cultural and historical tales, enriching visitors' journeys. These stories can be developed on local cuisine, sites, customs, etc.
- **Creating brand recall:** Effective promotion can be accomplished through targeted advertisements and marketing materials. For instance, the "Khushboo Gujarat ki" campaign successfully highlights the state's various theme-based circuits. Engaging content across multiple platforms, including social media, blogs, videos, and virtual reality, can further boost visibility.

E. Projects to ensure seamless connection between nodes

The hub-and-spoke approach can only work if the nodes are adequately connected offering alternative means of travel to suit different income segments. Although many significant infrastructure projects are already proposed and underway, bespoke projects with the objective of optimizing travel time to ensure that tourists can move between different nodes effortlessly and preferably under three hours. While these projects would need to be carefully planned based on technical feasibility, project structuring, etc. some suggestions are:

- **Airways:** Develop small airports with single runways and helipads and introduce heli taxis or charter planes for air travel.

Circuit 1 Surat > Valsad > Mumbai

Circuit 2 Surat > Navsari > Dang

- **Railways:** Connect all tourist locations with railway lines based on feasibility and upgrade the existing Billimora-Waghai (Navsari to Dang) heritage train, which passes through the vicinity of Vansda National Park for tourism purposes.
- **Waterways:** River cruises in the Tapi and Narmada rivers (IWAI has planned cruise developments in these rivers) ³⁹.
- **Roadways:** Build dedicated roads connecting key nodes, provision of e-buses/charter buses (e.g., connect DREAM City, HSR & airport), pedestrian walkways, and cycle tracks in all urban areas

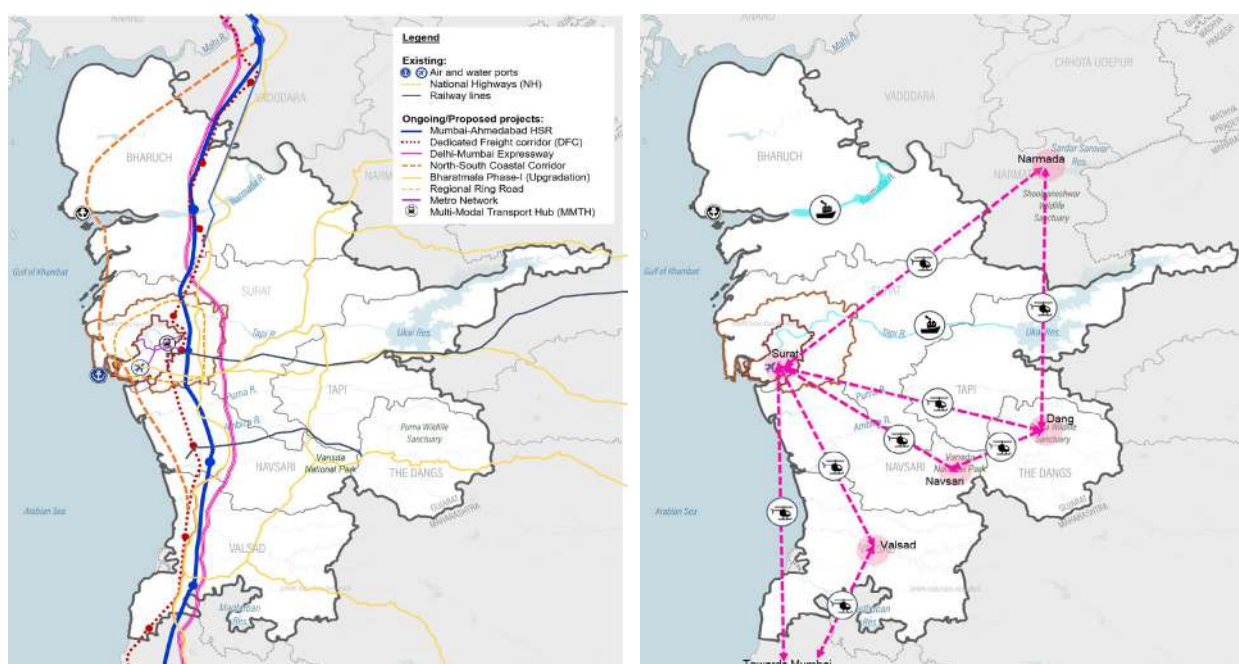


Figure 66. Existing and proposed transportation network

F. Develop functional zones - differentiated approach to facilitate segmented tourism

While zoning is a common concept in spatial planning, in the context of tourism adequate zoning to facilitate and promote segmented tourism is not common in the Indian context. Designated tourist sites in SER are proposed to position tourism as a major driver of economic growth. Major tourist sites should be categorized and designated into zones based on their similar characteristics, with each zone encompassing several tourist spots. This approach aims to maximize benefits for local communities while ensuring the preservation of natural resources, fostering sustainable development, and enhancing the overall tourism experience in the region. An indicative zoning is proposed which needs to be further examined and notified for SER (refer **Box 17**).

Box 17: Functional Zoning Strategy

Zoning Categories

A. Coastal zone

1. Surat Cruise Terminal
2. Theme Park
3. Beach tourism
4. Wellness tourism
- 11 Premium hotels & resorts proposed

B. Eco & wildlife zone

Silent or low-decibel zone

5. Wildlife, adventure and rural
6. River tourism
4. Wellness tourism
- 12 Premium resorts & eco-campsites proposed

C. Heritage zone

Adaptive reuse of heritage sites, Parsi (Zoroastrianism) Circuit, Craft village

D. Festivals & Events zone

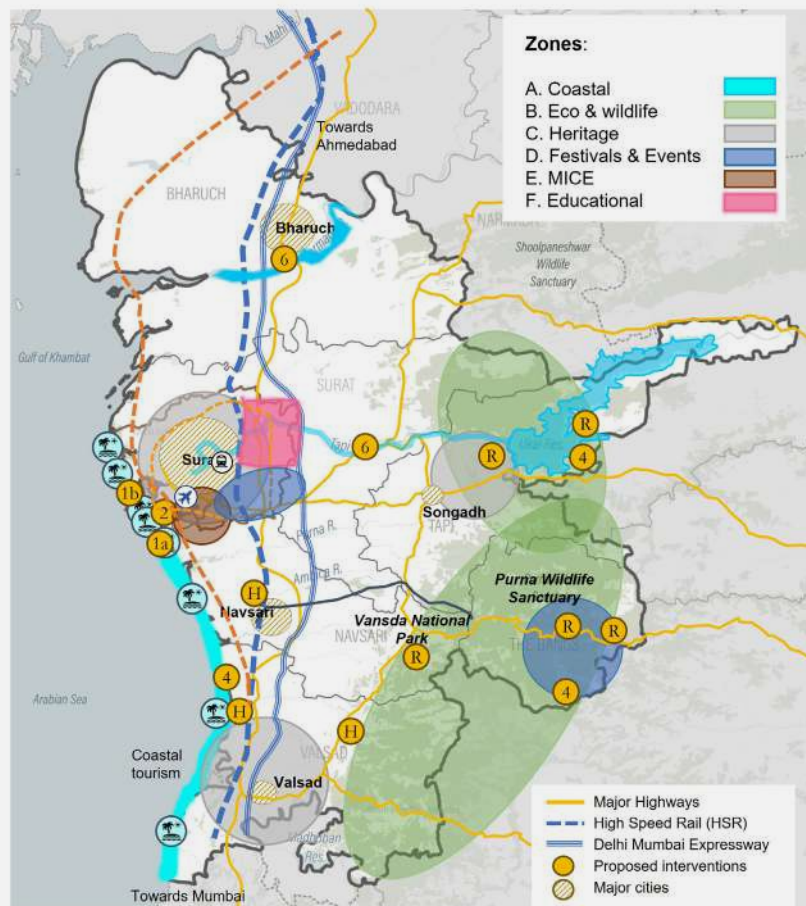
- Cultural festivals, bamboo festivals
- Boutique events and entertainment

E. MICE zone

Convention centers, conference halls, and exhibition spaces.

F. Edu-city zone

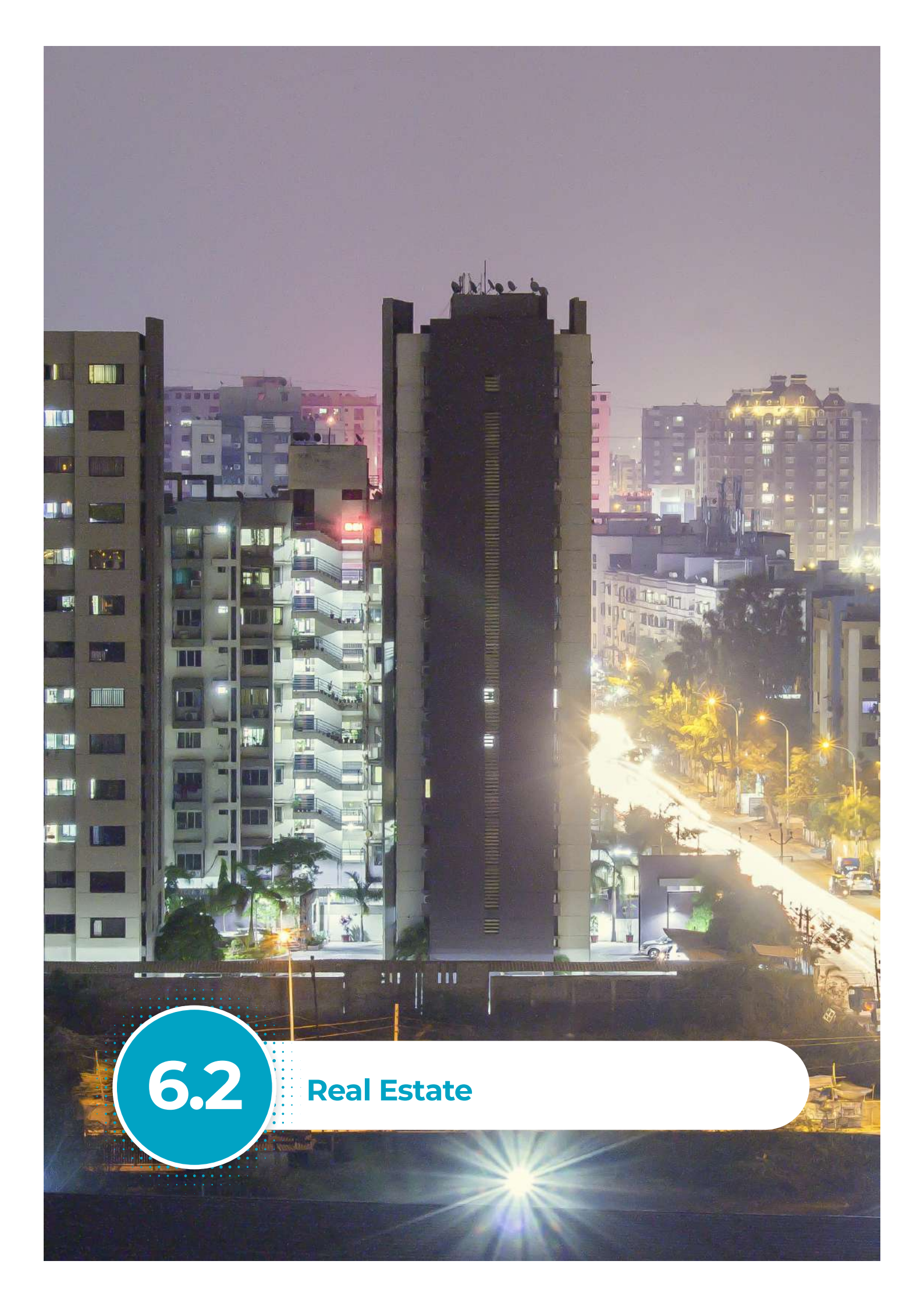
Educational institutions, museums, heritage centers, etc.



G. Destination Management Organization (DMO) for Tourism Development in SER

Currently, the absence of strategic planning and management of tourist destinations leads to untapped profit potential. A Destination Management Organization (DMO) is being proposed as a regulatory intervention to promote and manage tourist resources tasked to develop, promote, and streamline tourism activities across SER. For effective on-ground implementation, DMO can be set up as an empowered body, with the allocation of a dedicated operational budget from central and/or state governments.

Detailed information on DMO is available in the **Institutional Framework** section. A detailed list of projects and policy interventions proposed is listed in **Annexure VI**.



6.2

Real Estate

The EMP seeks to invigorate the real estate market, driving substantial economic growth in SER. This will be accomplished by demarking land between the HSR and DME corridors, with the HSR stations serving as the focal points for real estate development.

6.2.1 Real Estate - a prominent sector in India in terms of GDP contribution and employment generation

Real estate is a key global industry with significant economic impact across various sectors. In India, it ranks highly among employment generators, employing 18%⁴⁰ of the workforce, after agriculture. The sector is projected to grow from \$200 billion in 2021 to \$1 trillion (approx.) by 2030⁴⁰. Retail, hospitality, and commercial real estate are also expanding rapidly, supporting India's growing infrastructure needs.

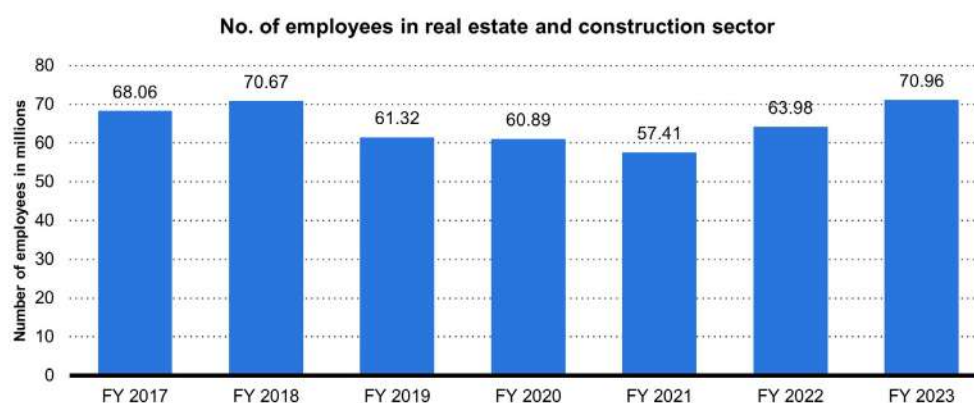


Figure 67. Employment contribution to the Real estate sector⁴⁰

By 2047, India's real estate market is expected to reach \$5.8 trillion, contributing 15.5% to GDP, up from the current 7.3%. In FY23, the residential property market hit a record high with home sales valued at ₹3.47 lakh crore (\$42 billion), a 48% increase from the previous year. This growth was driven by strong demand in the mid-income, premium, and luxury segments⁴¹. In 2023, real estate developers in major urban centres completed about 5,58,000 homes, with sales reaching nearly 3,79,000 units, a 36% year-on-year increase.

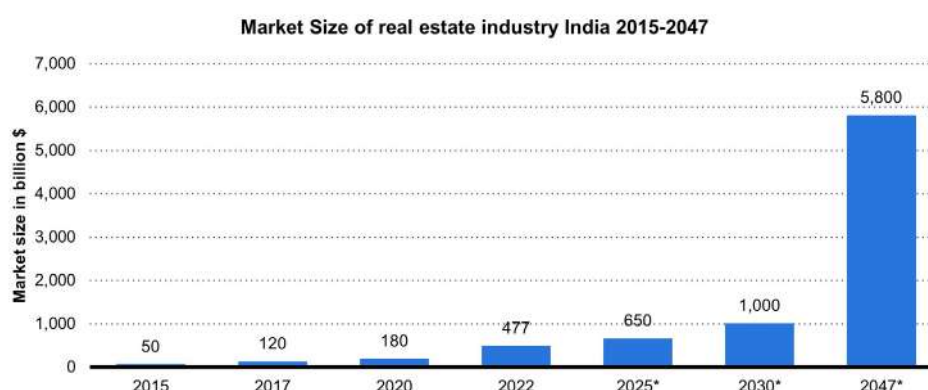


Figure 68. Market Size in India⁴²

As of 2024, approximately 1,24,740 projects are registered under RERA in India, with Gujarat ranking among the top three real estate markets⁴³.

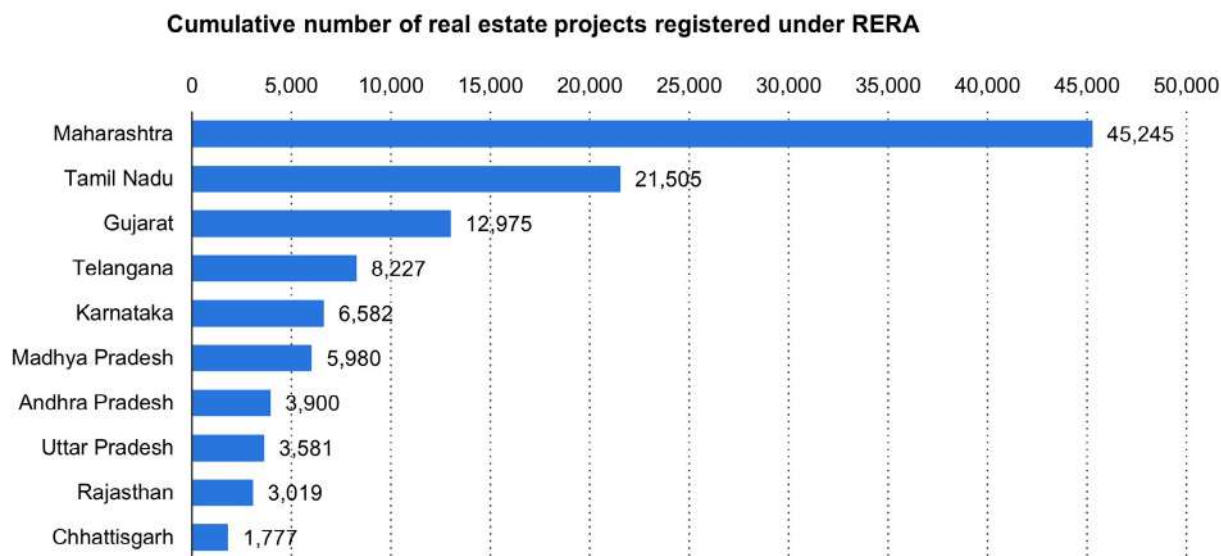


Figure 69. Real estate projects under RERA

6.2.2 Affordable but premium markets of Gujarat

The real estate and construction sector in Gujarat contributes about 12% to the state's total GVA⁴⁴, with an estimated market size of Rs. 2.8 lakh crore as of 2022⁴⁵. This market is expected to grow at a CAGR of 12-15%, as per ICRA estimate, highlighting its increasing economic significance.

Several factors are driving this growth:

- **Higher Per Capita Income:** Gujarat's per capita income is about 37% above the national average, supporting strong real estate development.
- **Infrastructure Focus:** The state government is prioritizing infrastructure, with major projects like the DMIC impacting approx. 62% of Gujarat's area.
- **New-Age Initiatives:** Innovative projects such as the Financial Hub at GIFT City, Dholera City, and Dream City, etc. are paving the way for modern urban growth.
- **Emerging Markets:** Rapid development in tier 2 & tier 3 cities is expanding the market.

Gujarat's primary housing markets include Ahmedabad, Gandhinagar, Surat, and Vadodara. Ahmedabad, notably, has been recognized as the most affordable real estate market among tier-one cities according to the Knight Frank Affordability Index.

The *Viksit Gujarat @2047* vision emphasizes that growing real estate demand will be largely driven by the residential sector. The urban population is expected to increase from about 32 million in 2024 to over 60 million by 2047. A key goal of Gujarat's 2047 vision is to expand organized real estate beyond industrial and service parks to meet the rising demand for residential spaces.

6.2.3 Growing sector in SER due to high urbanization rates

Surat stands as the most prominent real estate market in the SER region, boasting an urbanization rate of nearly 80% and contributing approximately 16% to the state's GDP. According to Oxford Economics, Surat is forecasted to be one of the fastest-growing cities globally between 2019 and 2035.

Alongside Surat, Navsari and Vapi are recognized as emerging economic centers in Viksit Gujarat @2047 vision. The rapid population growth over recent decades has fueled a surge in construction and expansion of built-up areas. While major developments between 1985 and 2015 were concentrated within the city's core, recent RERA projects are predominantly clustered around the SUDA region.

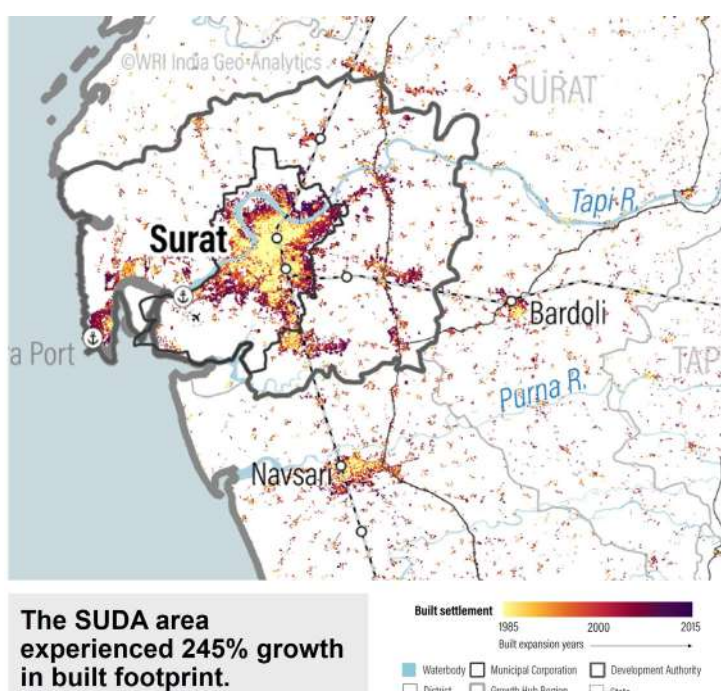


Figure 70. Built footprint map between 1985-2015

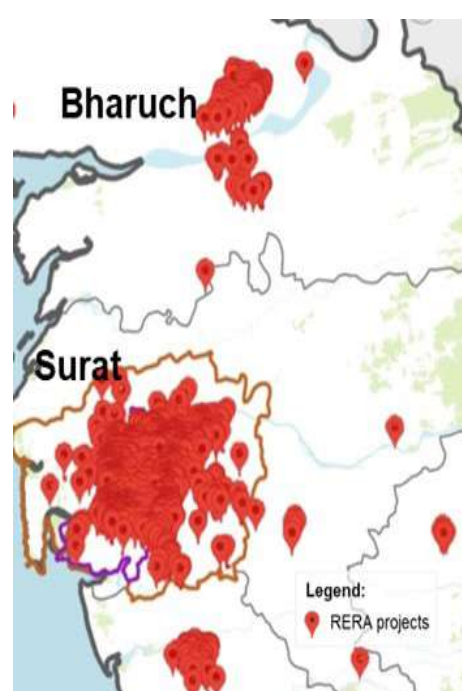


Figure 71. RERA Projects

Residential real estate comprises around 41% of the total registered portfolio. The SER region also holds a strategic advantage with four HSR stations. The HSR is expected to significantly reduce travel time between Surat, a key area in SER, and Mumbai, the nearest major city, to just 1 hour. This makes the areas surrounding the HSR stations highly attractive for individuals commuting to Mumbai, presenting a competitive alternative to the Mumbai real estate market.

In addition, future demand for residential real estate in the SER region is expected to be driven by:

- **Strong Job Market:** The region hosts several major industries, including textiles, diamond cutting and polishing, and pharmaceuticals. Surat also has a thriving startup ecosystem, with numerous incubators and co-working spaces fostering entrepreneurship and innovation.

-
- **Enhanced Connectivity:** The DME and the HSR enhance connectivity throughout the region, boosting the potential for real estate monetization.
 - **Future Growth:** The Growth Hub initiative forecasts significant expansion in the manufacturing and tertiary sectors in South Gujarat, which is anticipated to drive high demand for residential real estate in the SER region.

6.2.4 Proposed Approach for Transformation

To capitalize on the potential of existing pipeline infrastructure projects like the HSR and DME, and to support future growth and high urbanization levels, it is essential to prioritize high-quality, sustainable real estate development. The development strategy should consider the following:

- Close proximity to major urban centers and transport nodes
- Availability of large areas for greenfield development
- Proximity to educational institutions
- A compact city model with all major amenities within a 15-minute reach
- Incorporation of nature-based solutions and the development of low-emission zones
- Adoption of innovative processes such as the Tender SURE model for basic infrastructure
- Consider different segments of housing, viz. rental, service apartments, affordable housing etc.

6.2.5 Proposal - HSR city development a 'Sustainable Green Field township'

The area marked on the map between the HSR line and DME covers approximately 760 km² and is largely undeveloped. This area is expected to benefit from excellent connectivity within the state and across India in the coming years. The four HSR stations (Bharuch, Surat, Navsari & Valsad) in the region have the potential to be developed into multimodal transport hubs, recognized as "Growth Nodes" at the epicenter of real estate development.

Two sustainable greenfield townships, each spanning 500 acres (2 Sq Km), are proposed to be planned in the HSR zone near Antroli station, Surat. These townships will be designed with robust connectivity to the core city and surrounding major areas.

To attract major real estate players, incentives such as additional developable FSI or capital subsidies should be offered.

Future scaling: The areas around other stations will be developed based on demand, feasibility, and land suitability analysis. This development may not be limited to residential real estate, with the HSR zone earmarked for future expansion.



Figure 72. HSR City and Growth Nodes

The following concepts are recommended for consideration while planning the Townships which are aimed to be sustainable and green:

- **15-Minute City Model:** Ensure that all major amenities, such as entertainment and shopping essentials, are within a 15-minute reach. Enhanced walkability should be a key focus to make it effective.
- **Promote Nature-Based Solutions:** Integrate nature-based solutions into policies and regulatory frameworks. Emphasize ecosystem restoration and conservation during the township's development.
- **Low Emission Zone:** Designate the township as a low emission zone with car-free areas. Propose internal connectivity through non-motorized transport (NMT) options.
- **Integrated Multi-Modal Public Transport:** Enhance external connectivity by incorporating integrated multi-modal public transport systems.
- **Comprehensive Urban Infrastructure:** Adopt a comprehensive urban infrastructure development approach based on the principles of the Tender SURE (Specifications for Urban Road Execution) model.



6.3

Agriculture & Allied

To improve productivity, predictability, and profitability of the agriculture sector, the EMP proposes promoting agro-ecological practices in SER by establishing suitable crop clusters and addressing supply chain and logistic issues in food processing by upgrading the Mega Food Park and leveraging technology.

6.3.1 Promoting SER as a Natural Farming Hub

Gujarat, a state rich in agricultural diversity, benefits from eight distinct agro-climatic zones that create ideal conditions for cultivating a wide range of crops, vegetables, and fruits. It is a leading producer of key crops like tobacco, cotton, groundnut, rice, wheat, jowar, bajra, maize, tur, and gram. Agriculture contributes significantly to the state's economy, with a GVA share of 15.9% in 2022-23⁴⁶. Notably, the CAGR for Gujarat's agriculture and allied sectors' GVA, at 9.7%, surpasses the national average of 5.7% between 2011 and 2021⁴⁷.

6.3.2 Tailored strategies to enhance the agricultural value chain in SER

SER is poised to grow by 20 times during the next 25 years largely powered by the growth of secondary and tertiary sectors. To improve productivity, predictability, and profitability, we propose promoting agro-ecological practices across SER through cluster development and addressing supply chain and logistic issues in food processing by leveraging technology.

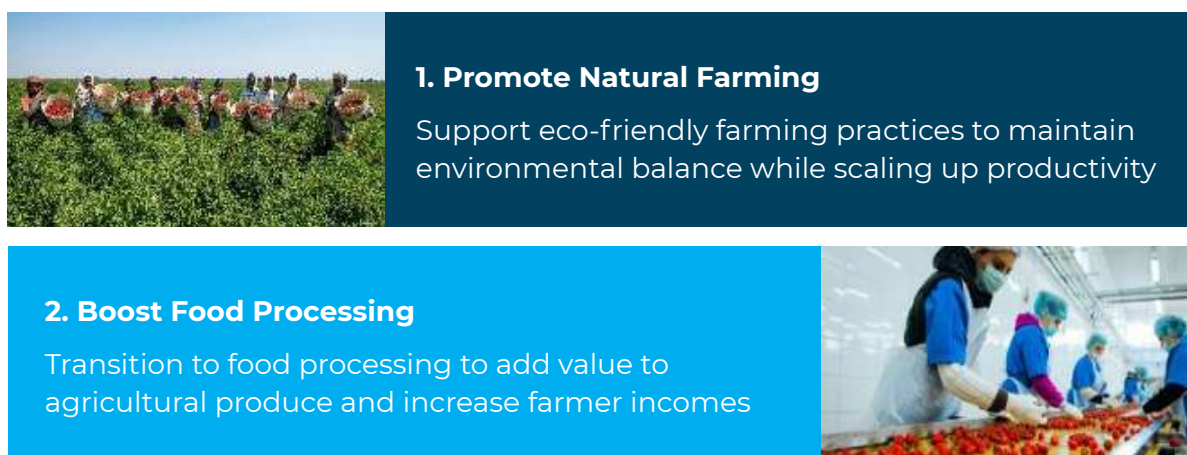


Figure 73. Approach for agriculture in SER

Gujarat is committed to promoting sustainable agricultural practices, with over 7 lakh farmers already adopting natural farming and more than 10 lakh receiving training in these practices. Further, SER offers key opportunities to promote Natural Farming. A key achievement of this initiative is the Dang district, recognized as Gujarat's first '100% organic district'. Additionally, the region's comparatively lower use of chemical fertilizers—except in Surat—points to healthier soil, making it ideal for natural farming. The existing cropping patterns in the region also align well with natural farming practices, creating further opportunities for sustainable agricultural growth.

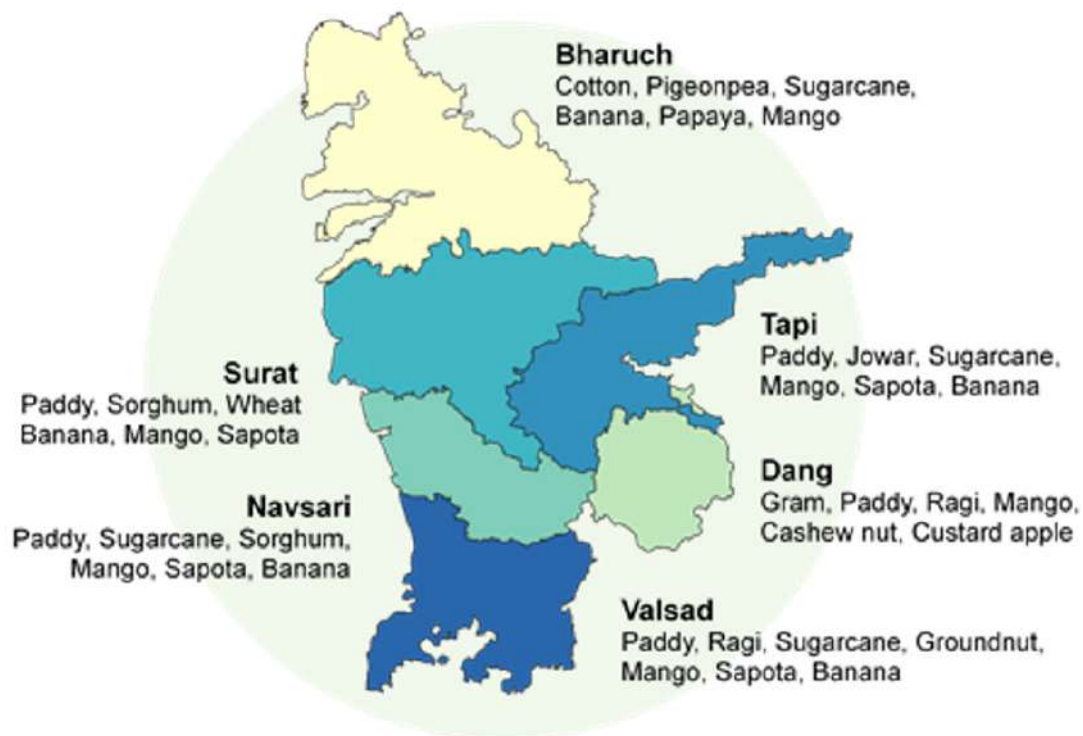


Figure 74. Ideal crop mix for Natural Farming in SER

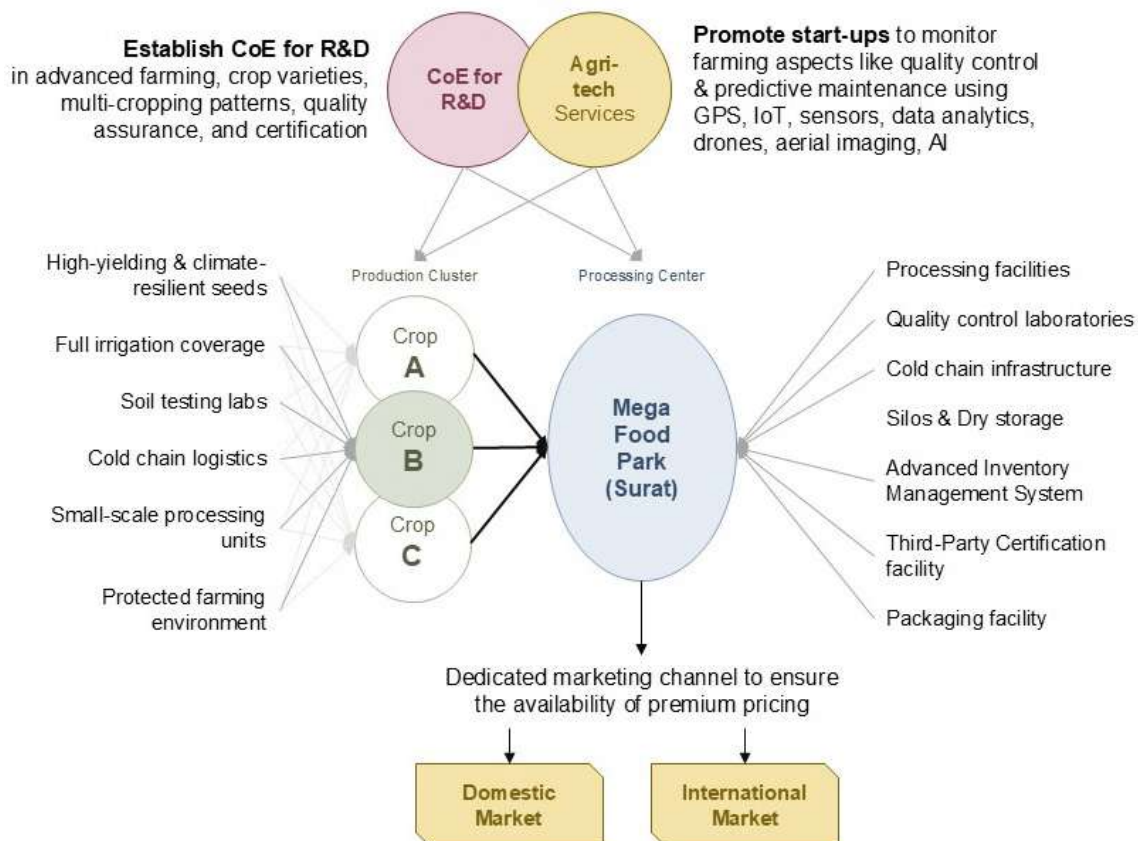
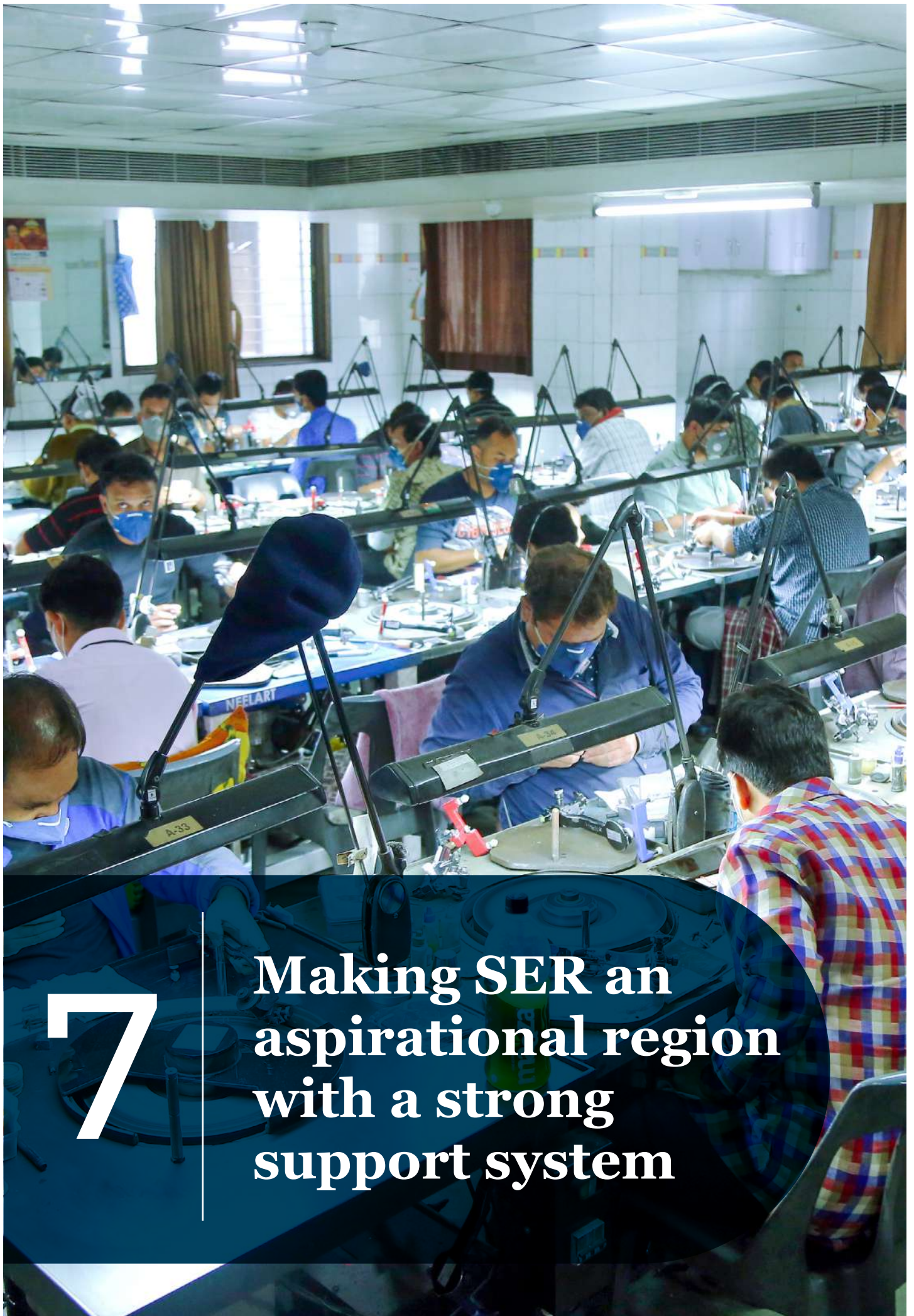


Figure 75. Targeted efforts to boost Productivity, Profitability, and Predictability in the agri-sector

Figure 75 above presents the overall ecosystem that is proposed to be put in place to transform the agriculture sector of the region into an efficient economic activity with the potential of transforming the sector into a new avenue of growth. The proposed approach leverages the existing endowments, addresses key challenges and recommends targeted solutions for inclusive and sustainable growth in the sector.

The proposed interventions (refer to **Annexure VIII**) begin by establishing production clusters for high-demand and export-oriented crop varieties that are well adapted to local soil and climate conditions. These clusters will supply raw produce to the Mega Food Park in Surat for processing, branding, and retailing. A dedicated marketing channel will be introduced to secure premium pricing for chemical-free, healthy food products. A dedicated Center of Excellence will drive research, innovation, and entrepreneurship across the entire value chain, fostering a thriving start-up ecosystem that delivers cutting-edge agri-tech solutions for every stage of the supply chain, from farm production to storage, processing, and transportation.



7

**Making SER an
aspirational region
with a strong
support system**

Transforming SER into an aspirational place to live and work requires a robust foundation with top-tier education, healthcare, and skilling facilities. These key enablers will drive the region's growth, attracting talent and ensuring a high quality of life for all residents.

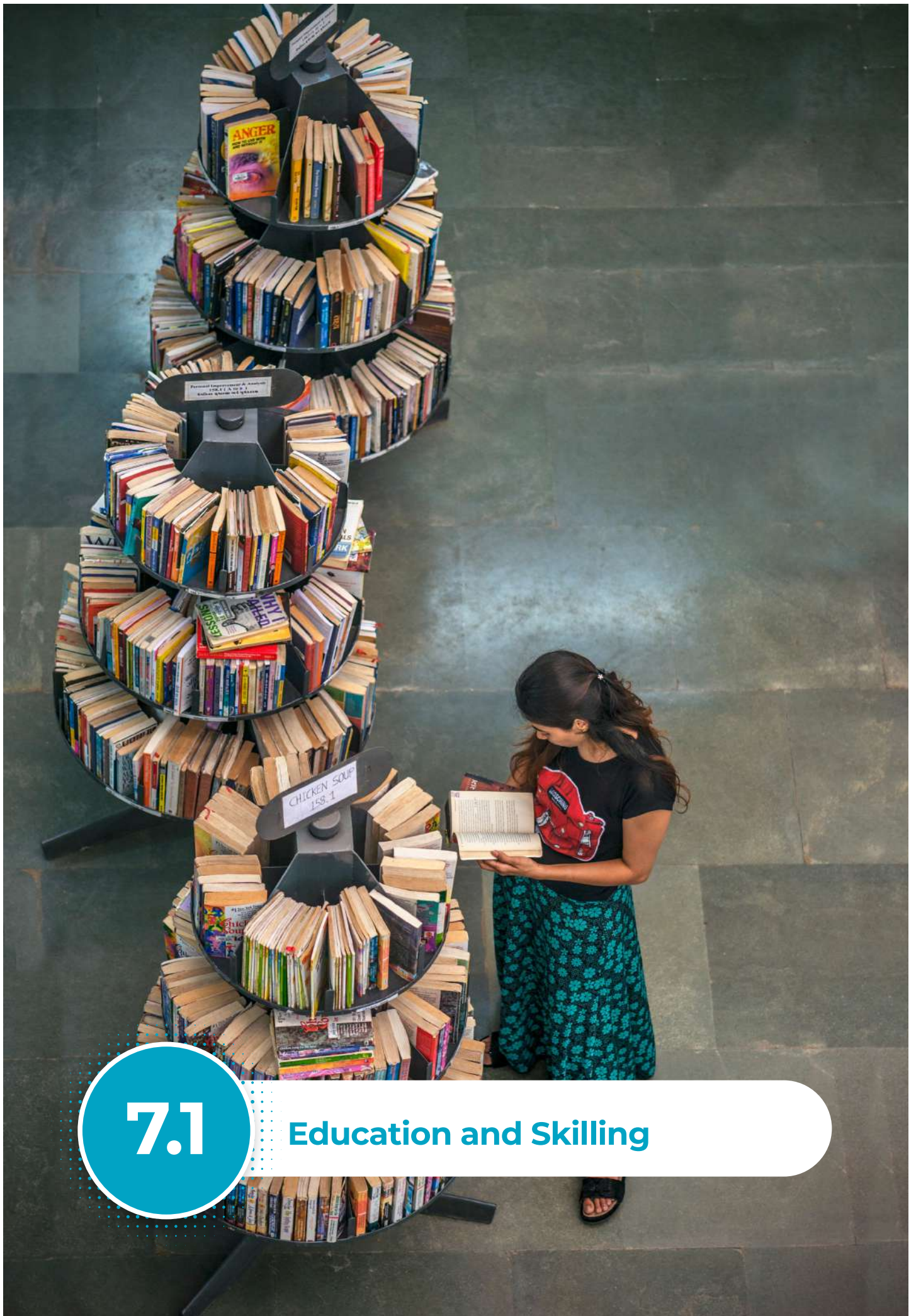
Box 18. Enablers



Education & Skilling



Healthcare



7.1

Education and Skilling

The EMP proposes advanced education facilities in the SER region, aligned with the 'Living Well' vision of Viksit Gujarat@2047. Enhanced educational infrastructure and provision of specialized training will help to meet regional and global needs of skilled workforce & manpower.

Global Outlook on Sector and Major Trends

The global education and skilling sector holds the potential to unlock around \$23 trillion of global GDP by 2025 through essential education reforms. However, by 2030, a significant global talent shortage of 85 million is expected⁴⁸.

Significance of India

India's education and skilling sector is vital for the nation's economic and social goals. Despite progress in expanding educational access, challenges persist in quality and relevance. With 35-40 million students projected to need higher education by 2030, India must upgrade its infrastructure and curriculum to global standards⁴⁹. Additionally, the skilling ecosystem must evolve to prepare the workforce for emerging industries and future demands.

Significance of Gujarat State

Gujarat, a leading industrial state, faces difficulties in education and skilling, with only 3% of the population aged 15 years and above in formal vocational training. Despite its manufacturing strength, Gujarat lacks top-tier educational institutions and specialized skilling facilities. Closing these gaps is crucial for sustaining economic growth and enhancing competitiveness.

Significance of SER

SER is positioned to emerge as a key industrial center for chemicals, a major trading hub for textiles, and a prominent destination for gems and jewelry, however, it confronts a substantial shortage of skilled workers. Based on data from NSDC (2017) for the State of Gujarat, the additional manpower requirement for the **Table 4**. Considering the requirements of top educational and research institutions SER can transform into a global skilling hub to meet regional needs and position it as an export hub for skilled labor by 2030.

Table 4. Additional manpower requirement in the region by 2030

S.No	Sectors	Additional Workforce requirement	Technical Skills Required (Specific to SER)
1	Textile	78000+	Textile dyeing, printing, finishing, garment manufacturing, automation in textile machinery
2	Chemical	22000+	Process expertise, Automation & Analysis, Sustainability focus
3	Mineral Processing & Fabrication	6500+	Diamond cutting, polishing, jewelry making, Computer-aided design for jewelry design
4	Healthcare	18000+	Medical technicians, nurses, paramedics, healthcare IT
5	Logistic & Transportation	62000+	Supply chain management, logistics planning, warehousing

Proposed Approach for Transformation

The transformation of the SER into a premier educational and skilling hub requires a holistic and sector-wide approach. The strategy should focus on creating a symbiotic relationship between education, industry, and research across various sectors. Key elements of this approach include:

- Sector-Specific Centers of Excellence (CoE's)
- Integration of Education, Industry, and Research
- Development of an Edu-city
- Comprehensive Skilling and Upskilling Programs
- Public-Private Partnerships (PPPs) and Policy Support

Proposals

- 1. Cluster-Based Educational Development:** An Edu-City in the HSR zone of Surat will house private universities, CoEs, international schools, and research institutions. The campus will be designed to support multidisciplinary learning, fostering collaboration across various fields, and creating an ecosystem that attracts top talent and leading academic and industry partners. The key components of the EDU-City is given in **Table 5**.

Table 5. Components of EDU-City (Area- 500 Acres, Estimate Project Cost- \$2Bn)

Type	Component
Educational	Institutes/Centres of Excellence for Skilling (50 Acres)
	Private College (20-25 Acres)
	International Board School (8-10 Acres)
	Niche Branding Institute (4-5 Acres)
	Offsite centers for major international skilling institutes
Entertainment	Mall & Retail space
	Community centres
	Multi sports Hub
	Premium 5-star hotels
Supporting Infrastructure	Dedicated areas for Service apartments
	Rental Housing
	Elder housing
	Care Hostels

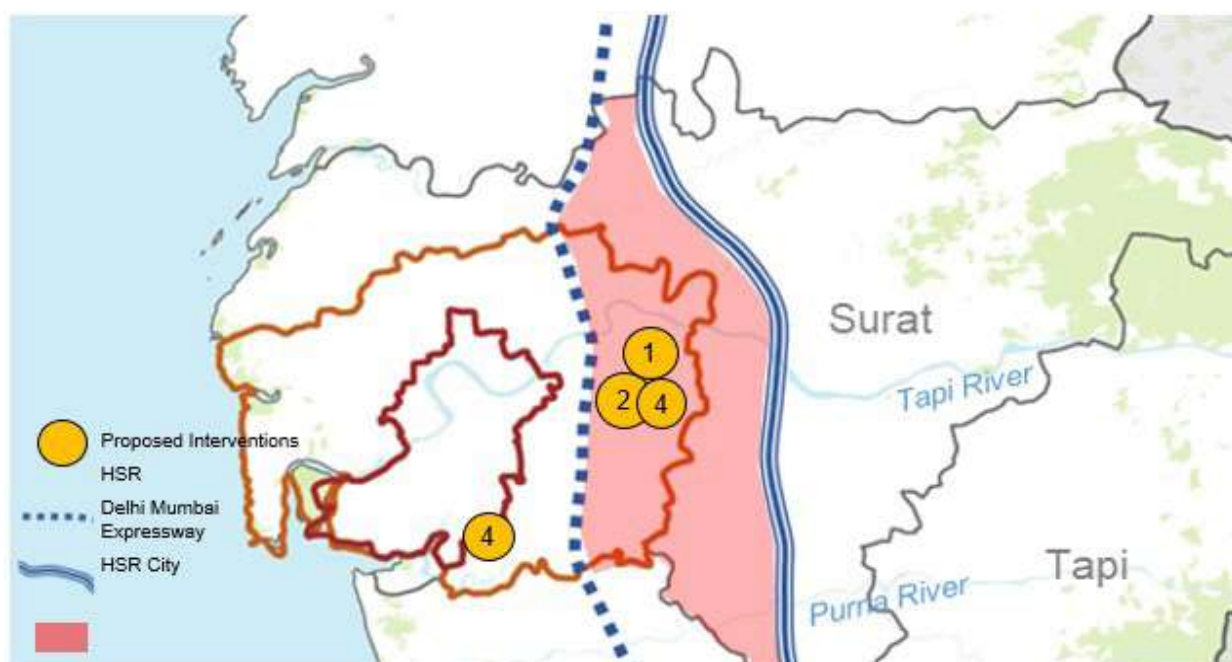


Figure 76. Landscape of Education and Skilling Infrastructure



Figure 77. Conceptual 3D view of proposed EDU-City in HSR Zone, Surat

2. **Policy Interventions:** Introduce flexible school fee regulation policies to attract anchor investors and international educational institutions. Additionally, promote Public-Private Partnerships (PPP) in setting up public schools and skilling centers across SER.
3. **Upgrade and Expand:** Revise the curriculum of the 80+ existing ITIs to align with global dynamics and modern industry needs, with a special focus on integrating modern technologies and trends. Establish specialized labs, studios, and workshops for key sectors such as textiles, gems & jewelry, chemicals, and tourism. The skill requirements and course curricula should be regularly re-evaluated to meet evolving industry demands.

4. Industry-Academia Collaboration: Foster collaboration between academic institutions and industry players to create demand-driven courses, internships, and apprenticeships, ensuring graduates are industry-ready and equipped with practical skills. The skill requirements and course curriculum should focus on integrating modern technologies (such as AI and ML) and be regularly re-evaluated to meet evolving industry demands.

5. Infrastructure Development: Develop supporting infrastructure such as housing, healthcare, and entertainment within educational clusters. Establish strong connectivity linkages between these clusters and major industrial hubs within SER to facilitate seamless integration of education and industry.

By implementing these proposals, the SER can emerge as a leader in education and skilling, catering to both regional and global demands. This transformation will not only enhance the quality of life within the region but also contribute significantly to India's economic growth by creating a highly skilled and globally competitive workforce.



7.2

Healthcare

The Economic Master Plan aims to propose comprehensive health facilities in the SER region, aligned with the 'Living Well' vision outlined in Viksit Gujarat@2047. Enhanced access to healthcare will be ensured by increasing the bed-to-population ratio in underserved districts and by providing healthcare services to workers

India needs an additional 2.4 million hospital beds to reach the WHO-recommended ratio of 3 beds per 1,000 people. Currently, the country has only 0.6 beds per 1,000 population, whereas countries like China have 4.3, and the European Union has 4.6. India has an estimated 70,000 hospitals, with nearly 63% of them in the private sector⁵⁰.

In Gujarat, there are 12 doctors per 10,000 population⁵¹, compared to 39 in countries like Germany, the UK, and Australia⁵⁰. Additionally, there is a 52% shortfall in Primary Health Centers (PHCs) in the state.

Despite a higher GDP per capita of \$4,865 in the SER region, cities like Mumbai and Ahmedabad are still preferred destinations for healthcare services.

The SER region currently requires over 3,200 additional hospital beds, and this demand is projected to increase nearly 13-fold by 2047, with a need for over 12,000 beds by 2030 and more than 42,000 by 2047 as per *Viksit Gujarat@2047*. While the region has 2.8 beds per 1,000 population, only Surat and Navsari are performing well in terms of healthcare infrastructure. The SER region has just four multi-specialty hospitals with a total bed capacity of only 1,750, which is a critical shortfall.

Furthermore, there are no Joint Commission International (JCI) accredited hospitals in the SER region, whereas Ahmedabad has two, and Gandhinagar has one. In terms of (National Accreditation Board for Hospitals & Healthcare Provider) NABH-accredited hospitals, there are around 20 within a 100-kilometer radius and an additional 17 within 200 kilometers.

Healthcare amid environmental challenges

Extreme heat events in the region have become more frequent, severe, and prolonged, leading to 36,167 deaths over the past 12 years⁵². A health risk analysis of air pollution in 2019, revealed that it was responsible for 2,914 premature deaths⁵³. According to the Clean Air Action Plan, transboundary air pollution accounts for 36% of health risks, followed by industrial emissions (24%) and the transport sector (13%).

In Surat, 36,167 deaths were reported over 961 summer days from 2001 to 2012, with a mean daily mortality rate of 37.6 ± 9.4 during this period, as outlined in the Heat Action Plan (2018).

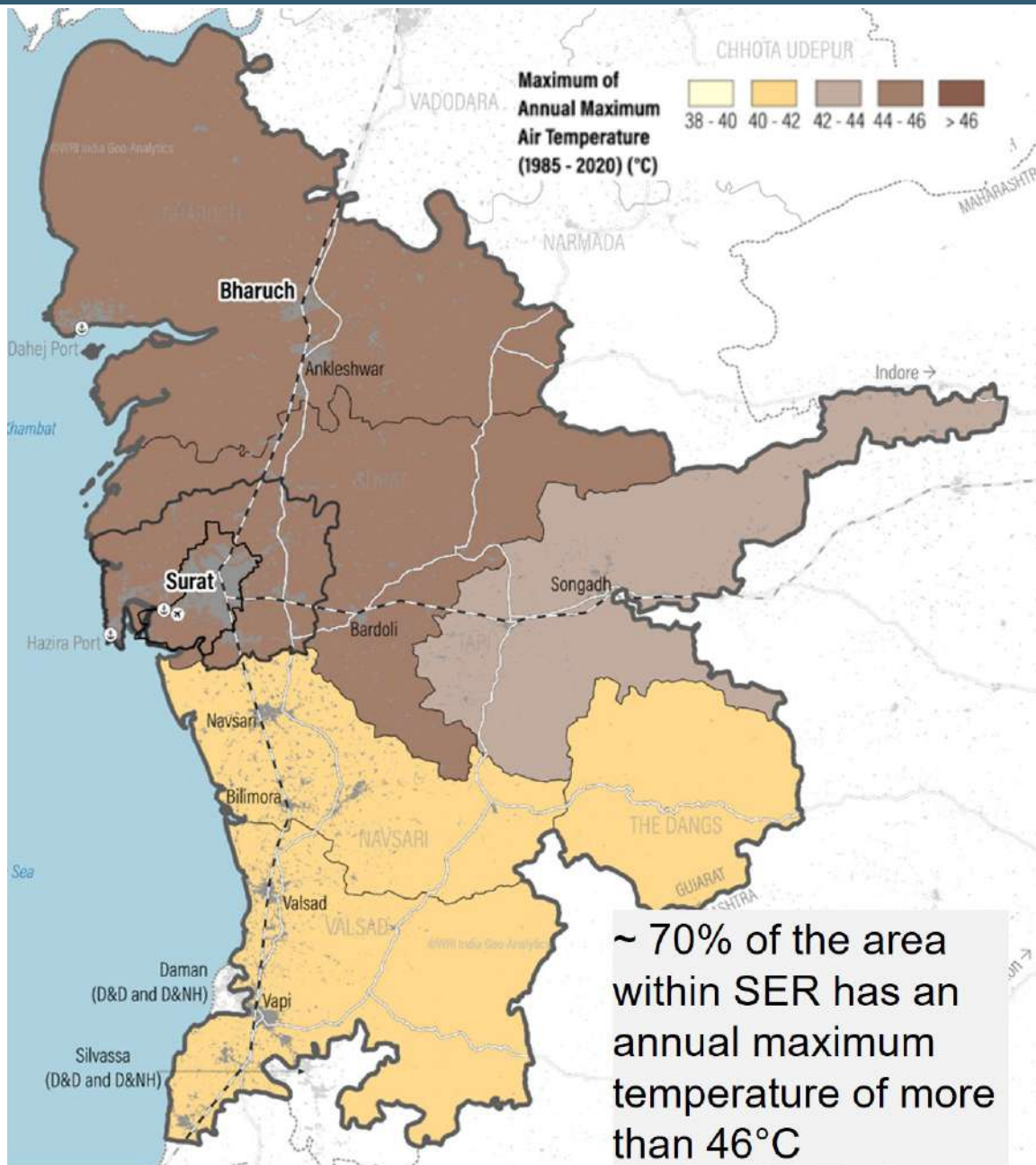


Figure 78. Maximum Air temperature in SER

These findings underscore the urgent need to increase the number of healthcare staff, adopt modern equipment and technology, and enhance healthcare infrastructure.

Proposed Approach

The primary focus of the proposal is to enhance the health landscape in the region to meet the rising demand. Based on identified gaps, risks, and projected needs, the following key recommendations have been outlined:

- Development of multi-specialty hospitals
- Establishment of trauma centers
- Provision of healthcare facilities for workers

Proposals

- **Multi-Specialty Hospital in Surat:** To increase the number of hospital beds in the region and align with other interventions, two private multi-specialty hospitals are proposed around Surat city. One hospital, with approx. 450 beds, are planned for the HSR Zone, while the other, with about 300 beds, is proposed near Dream City. Each facility is to be located on 8-12 acres, with an estimated project cost of \$25 million. To meet the requirement of the region additional beds may be added in the coming year.
- **Multi-Specialty & Trauma Center in Bharuch:** A multi-specialty hospital with a trauma center is proposed near Bharuch, with a capacity of approx. 300 beds. The recommended location is 15 acres near the PCPIR Bharuch, with an investment of \$10-12 million.
- **Healthcare Facilities for Workers:** With the increase in manufacturing there is a need for equitable distribution of healthcare facilities across the region to ensure 100% coverage for workers.

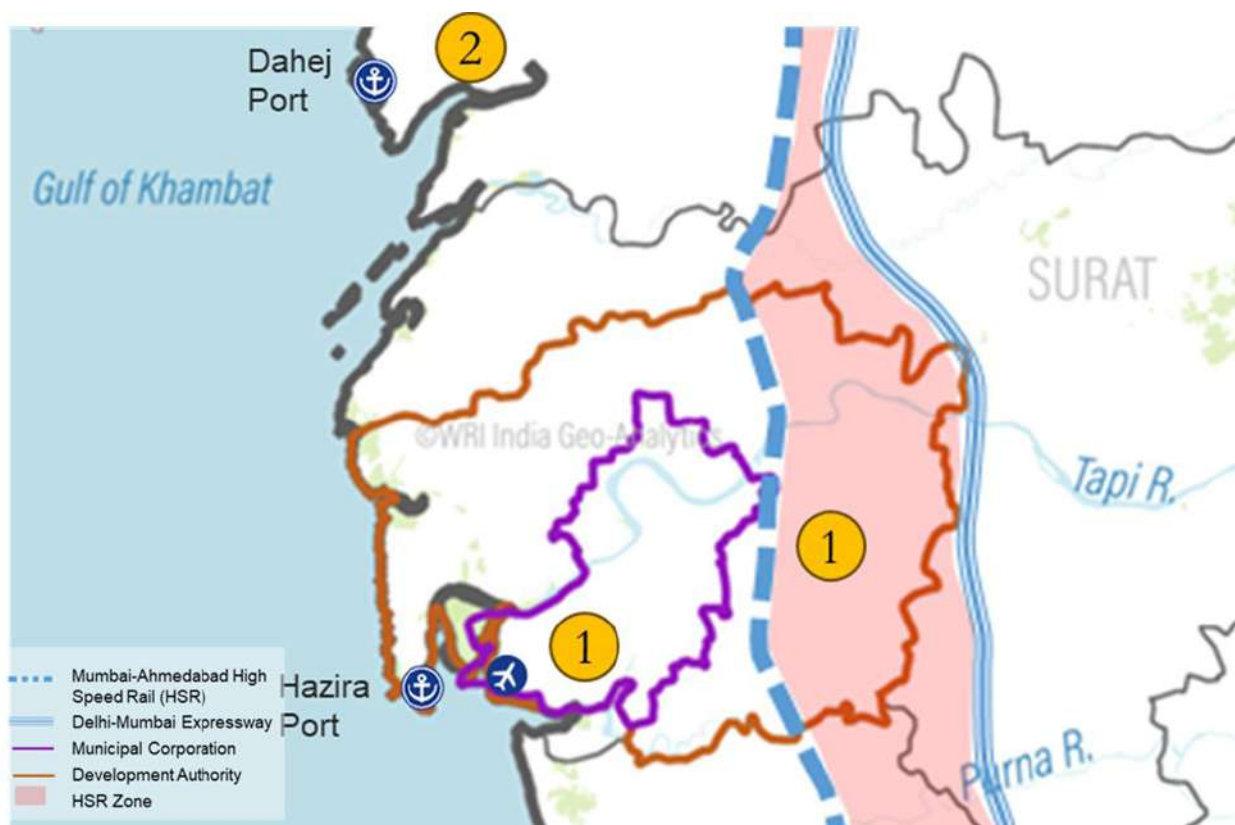
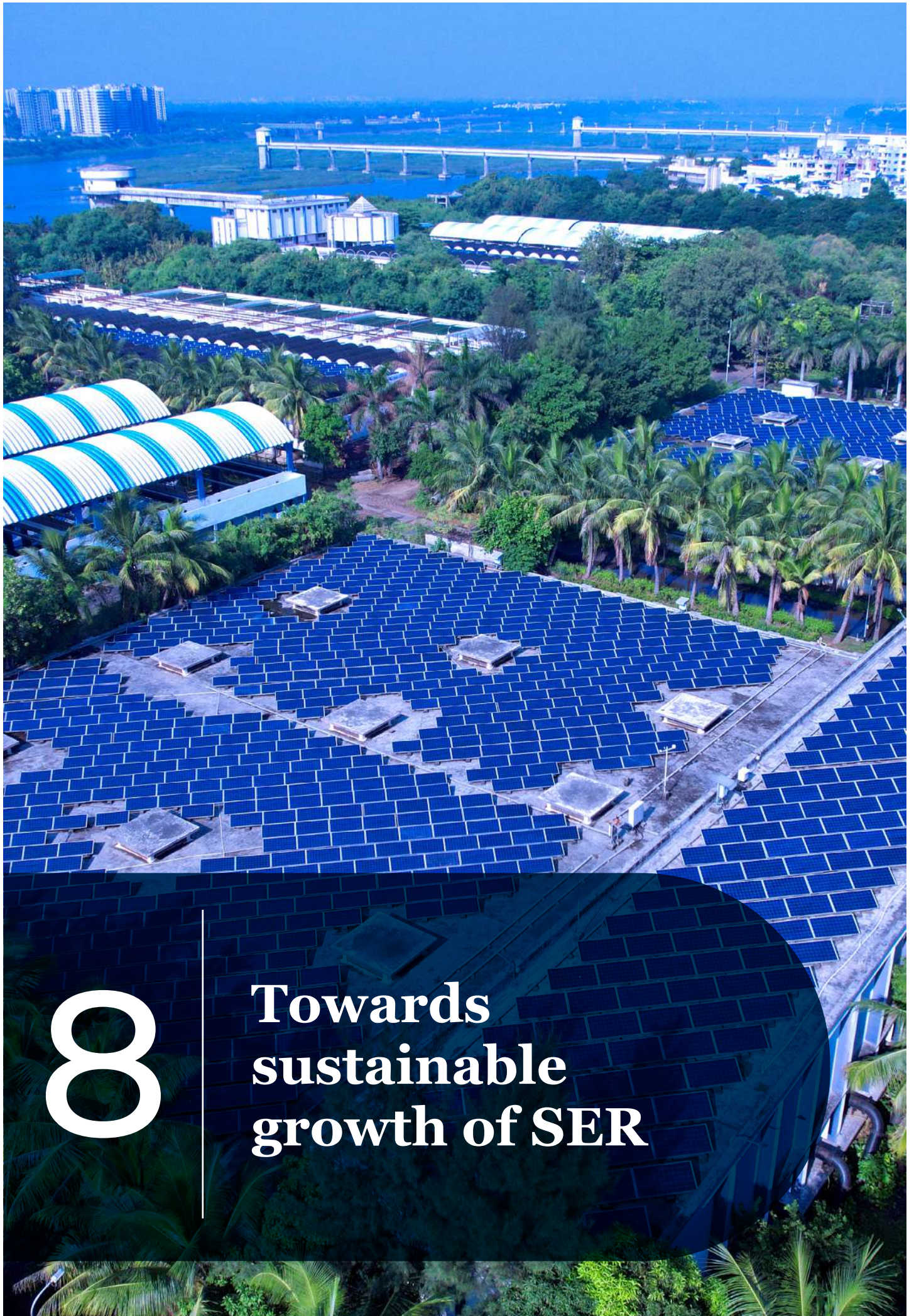


Figure 79. Proposal of Health care sector



8

**Towards
sustainable
growth of SER**

While addressing environmental and climate risks in a holistic manner, there is a need to focus on implementation involving effective monitoring and regulation to plug gaps. The resultant impact on enhancing the health and well-being of both people and nature would be crucial in achieving the goal of 'Living Well' as enshrined in Viksit Gujarat@2047.

To realize *Viksit Gujarat@2047* of 'living well', SER needs to prioritize sustainability and enhance livability as a key defining parameter. These efforts would be vital for achieving a greener earth, ensuring the well-being and improving resilience of the people.

Surat city has taken steps towards environmental sustainability but these need to be scaled up for the entire SER. Therefore, initiating steps towards (a) having plans & institutions (such as energy efficiency cell, resilience strategy, heat action plan, etc.), (b) targeting 100% treated wastewater (TWW) by 2035, (c) enabling proactive adoption of renewable energy, and (d) being early-mover in electric vehicle (EV) implementation, are some of the key steps which may be prioritized for SER.

Viksit Gujarat@2047 center stages the growth of the manufacturing sector to achieve the targeted growth of both GDP and employment. However, within this sector, industries like chemicals and textiles, are also two major sources that contribute to greenhouse gas (GHG) emissions in the state.

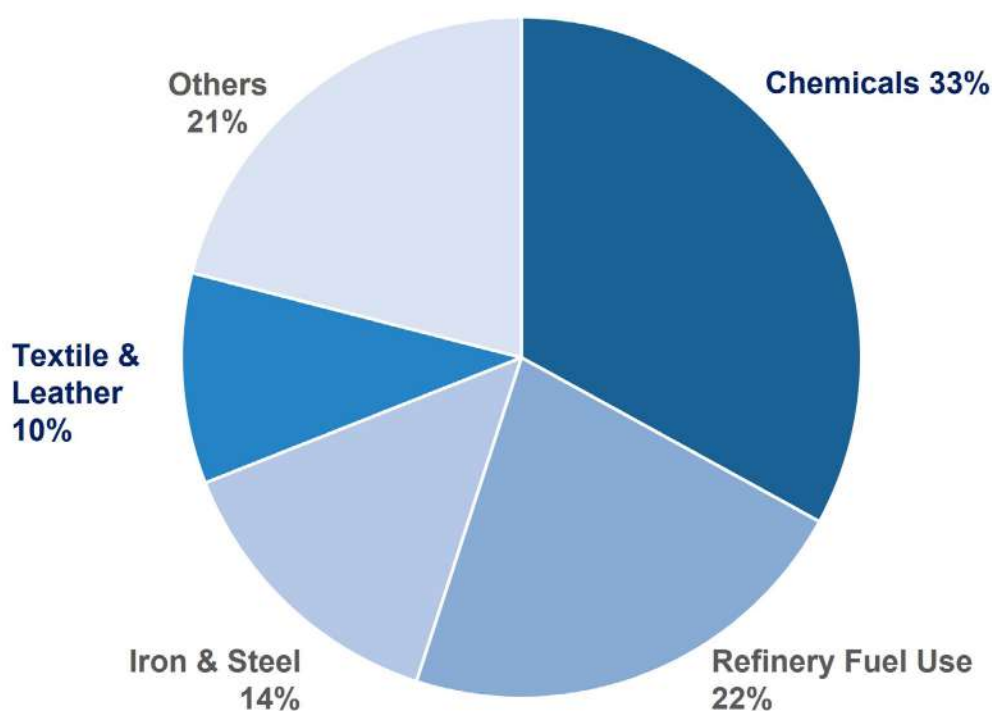


Figure 80. GHG Emissions Trend by Top Industries in Gujarat (2018)⁵⁴

The EMP of the SER aims at achieving about 20 times growth of the economy and without a considered plan to ensure sustainability, this could lead to increased

congestion, degraded environment, increased pollution, and unmanageable waste, etc. Additionally, disaster and risk management issues would also need to be addressed to strengthen SER's resilience against both manmade and natural hazards, safeguarding the future of the region while fostering sustainable development. It is for this purpose, that sustainability under the 'living well' component remains crucial in the SER economic planning. The two main themes covered under sustainability are: (i) leveraging clean power and energy, and (ii) risk and disaster management.

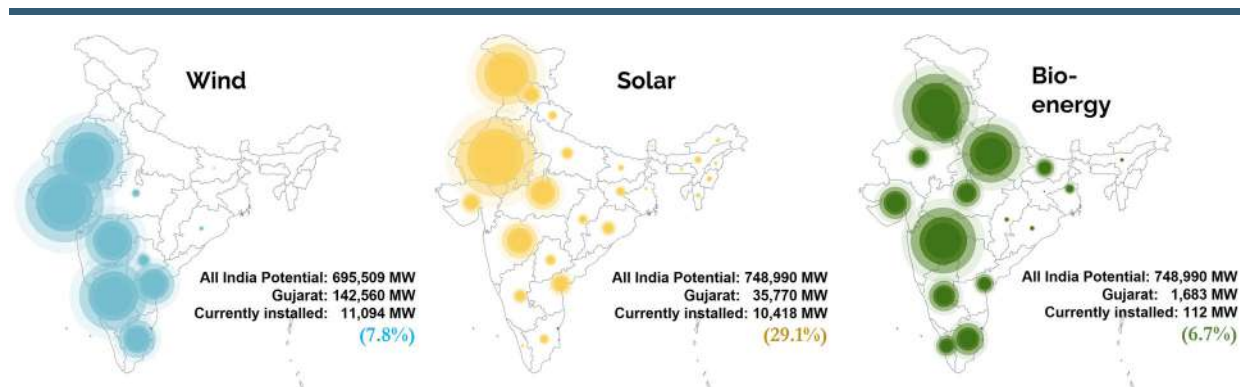
8.1 Leveraging clean power and energy

Investing in clean energy (renewable energy) is crucial for reducing GHG emissions, slowing the pace of climate change, mitigating its adverse effects, helping curb environmental degradation, enhancing energy security, and supporting sustainable economic growth. This shift is essential for creating a healthier planet and ensuring a stable climate for future generations.

a. Renewable Energy (RE) presents significant potential in Gujarat

At COP26, the global commitment to achieve net-zero emissions by 2050 was affirmed, with India setting 2070 as the target year. India also aims to meet 50% of its energy needs through renewable energy by 2030 and 90% by 2047.

Gujarat, holding the second-highest renewable energy potential in India after Rajasthan, is focused on expanding its renewable energy potential. Under the *Viksit Gujarat@2047* initiative, the state is committed to reaching net-zero carbon emissions by 2047 through significantly boosting its renewable energy and clean energy capacity. The plan includes expanding projects in wind, solar, and wind-solar hybrid technologies to maximize its renewable energy resources.



Gujarat also has a minor RE potential of hydro – 590 MW and small hydro – 202 MW

Figure 81. Gujarat RE potentials: highest in wind, 6th highest in solar and 4th highest in bio-energy⁵⁵

b. SER would need to maximize its potential for RE capacity to help Gujarat achieve the net-zero target of *Viksit Gujarat* by 2047

While Western Gujarat boasts a substantial renewable energy capacity, SER's installed capacity is comparatively modest, accounting for only 1% of the state's total, highlighting an opportunity for SER to expand its renewable energy footprint.

However, SER has the opportunity to significantly boost its renewable energy share, and increase its current capacity from 30% to approximately 60% by 2047. Several renewable energy projects are already in the pipeline to support this growth (**Table 6**).

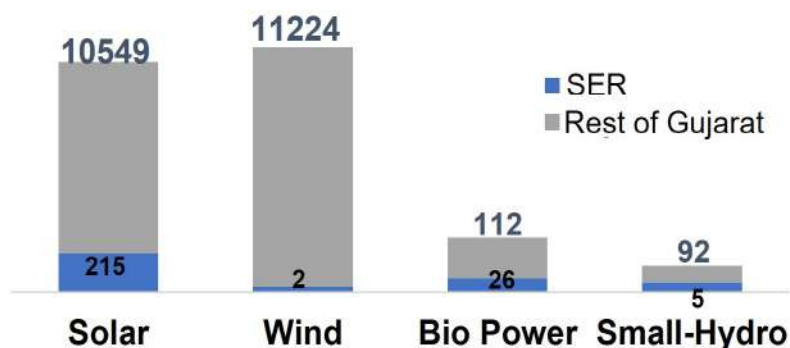


Figure 82. Energy produced by RE (MU) in Gujarat and SER⁵⁵

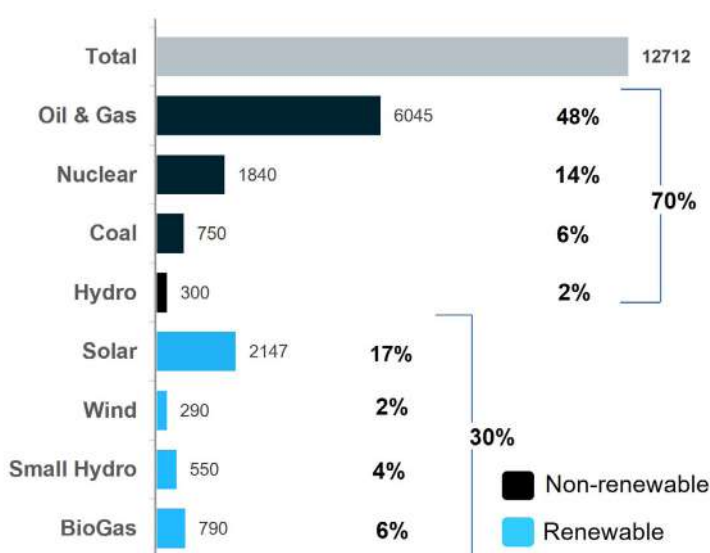


Figure 83. Power capacity currently installed in SER (MW)⁵⁵

Table 6. Existing pipeline of RE projects in SER

	RE Projects	Capacity (MW)	Investment (\$ million)
•	Solar park, Bharuch	250	120.41
•	Hybrid park, Bharuch	500	662.24
∅	Gandhar Solar, Bharuch	20	270.91
∅	Kawas Solar, Surat	56	11.64
∅	Tapi Pumped Hydro Energy Storage System	2400	1380.76
• Projects announced in <i>Viksit Gujarat@2047</i> ∅ Other proposed projects/under implementation			

c. In the Economic Master Plan for SER the following projects for RE are proposed:

1. Off-shore wind power plants

Offshore wind provides an effective way to produce electricity and has a high capacity utilization factor. Gujarat has been identified as one of the two states in India, where offshore wind will be explored in the next 5 years⁶. Global research suggests that due to the growing challenges in securing land for renewable energy projects, offshore projects despite their higher costs may be a viable option (see **Box 19**). Gujarat has substantial potential for source and SER could consider developing captive plants utilizing offshore wind technology.

Box 19: Installation cost for offshore wind projects

The global average installed cost of offshore wind energy projects has declined significantly, making it a more financially viable option. From 2010 to 2021, capital costs for offshore wind projects fell by over 41%, indicating a substantial reduction in expenses. This decrease in capital costs has made offshore wind energy a more appealing investment, reflecting the evolving trends in renewable energy development.

Country	Installed Cost per MW		LCoE per kWh (Levelized cost of electricity)	
	USD million	INR crore	USD	INR
UK	3.385*	25.02	0.054 [#]	4.32
Germany	3.5*	25.88	0.047 [#]	3.85
Denmark	2.05*	15.16	0.041 [#]	3.2
USA	3.4**	26.72	0.058 [#]	6.9

*Source: GWEC Global Wind Report; *Wind Europe Financing and Investment Trends 2021 Report; ** US DoE Wind Market Reports 2022*

The installed costs and Levelized Cost of Energy (LCoE) for offshore wind energy projects vary across different markets due to technical specifications, geographical location, and other factors.

Currently, offshore wind development in India is planned without incorporating storage components, as outlined in the MNRE strategy paper^a. Therefore, offshore wind storage is not being considered at this stage. Given that offshore wind turbines are situated in deep waters, the generated power is first transmitted to an offshore substation before being relayed to an onshore substation. Storage options would only become feasible once the power reaches the onshore substation.

^a Preliminary assessment by MNRE suggest offshore prospects in India along the coastline of the states of Tamil Nadu, Gujarat, Maharashtra, Kerala, Karnataka and Goa. Under the FOWIND (Facilitating Offshore Wind in India) project, a roadmap was developed for offshore wind development in India, with a focus on the states of Gujarat and Tamil Nadu.

Estimated LCoE for Gujarat's Offshore Wind Projects: A FIMOI Initiative (Financial Modelling of Offshore wind in India)

Parameter	Unit	Gujarat		
		2020	2025	2030
Turbine Capacity	MW	4.2	15	15
Capacity Factor*	%	36		
Project life	Years	25	27	30
Capital Expenditure	INR crore per MW	24.39	20.75	14.64
Operating Expenditure	INR crore per MW per year	0.714	0.464	0.379
LCoE	INR per kWh	14.4	11.2	7.8

Source: Cost estimations of first offshore windfarms in India (coe-osw.org)

The estimation exercise carried out as part of FIMOI considers:

- Declining trend in capital expenditure levels
- Usage of wind turbines of capacity up to 15 MW over the coming years
- Technological evolution is expected to push the operational life of projects up to 30 years from commissioning

Taking all these variables and trends into consideration, the estimated LCoE arrived at by FIMOI shows a clear downward trend. LCoE is expected to reach levels acceptable to the end consumers by the end of this decade.

Two off-shore wind energy projects each of 500 MW are proposed for Surat and Bharuch by 2047. To support these projects, there is a need for improved surveying, the development of local supply chains, skilled labor, and grid upgrades.

2. Solar power park

These are captive plants with significant development potential. To meet a 24/7 energy demand, it is estimated that around three times the current solar energy capacity will be needed. Therefore, in addition to the existing and planned solar projects in SER, a new 400 MW solar park is proposed in Bharuch. Furthermore, a hybrid model combining solar with either pumped storage or battery storage is recommended for a four-hour duration.

If land availability poses a challenge, alternative solutions would need to be considered. For instance, installing ground-mounted solar panels in agricultural fields could benefit both energy production and agriculture. These panels can provide shade, cooling crops and vegetation during the day while keeping them warmer at night, potentially increasing farmers' income.

3. Hybrid Park

Hybrid energy sources are effective in managing peak-time energy demand. Combining solar power with hybrid systems such as wind, battery, and hydro can offer up to 4 hours of storage. A 100 MW hybrid park is proposed in Bharuch. If land procurement challenges arise, innovative alternatives like those explored for solar parks would need to be considered.

4. Floating or canal-based solar projects

Floating and canal-based solar projects offer innovative solutions for harnessing solar energy while conserving valuable water resources. SER, with its water bodies like the Tapi and Narmada rivers, is well-positioned for such initiatives. A floating solar project is proposed on the UKAI dam at Tapi. Additionally, a second floating solar project is planned for the Narmada River, though its feasibility requires further detailed assessment.

5. Waste-to-energy plants

Waste-to-energy plants offer significant benefits by reducing landfill waste, creating usable by-products, contributing sustainable electricity to the grid, and lowering emissions from waste management. Four waste-to-energy plants, each of 5 MW, are proposed at multiple locations across SER. It is important to note that a strong waste collection system is required to ensure proper disposal and better segregation. Further, a PPP model can be considered to build these plants.

Table 7. Proposed RE projects

Sl no.	Project	Capacity (MW)	Location
1	Off-shore wind power plants	2*500	Surat and Bharuch
2	Solar power park	400	Near Aladar, Bharuch
3	Hybrid (solar+wind) park	100	Near Samoj, Bharuch
4	Floating or canal-based solar projects	2*5	Tapi and Narmada River
5	Waste to energy plants	4*15	Surat & Bharuch Landfills and/or STPs

Note: The proposed locations are tentative and subject to change

Figure 84. Locations of proposed RE projects

In the EMP of SER, the following policy interventions are recommended to realize the goals set for the RE sector

1. Policy support to install solar rooftops at MSME cluster level

India is home to 63.3 million MSMEs, with 31% engaged in manufacturing⁵⁶. These manufacturing units consume 25% of the industrial sector's energy. Advancing clean energy measures within the MSME sector could significantly contribute to India's clean energy transition.

The government can play a pivotal role by aggregating demand for MSME solar rooftops at the cluster level across SER. Additionally, Renewable Energy Service Companies (RESCOs) can be enlisted to implement solar rooftop projects with minimal upfront costs.

2. Implement green building techniques

Green building techniques such as green roofs and reflective surfaces on rooftops are already suggested in the Surat Heat Action Plan. These can be extended to heat stress and flood-resilient building design codes, integrating green-blue-grey-infrastructure, and nature-based solutions. The guidelines can be drafted by the Government of Gujarat, on similar lines as the Green Roof Policy of Ahmedabad and Telangana, and implemented by Local Authorities.

8.2 Risk and Disaster Management

The region faces a wide range of man-made and natural risks, making it highly vulnerable to environmental challenges and climate hazards such as flooding, heat stress, and groundwater depletion. Additionally, industrial activity in the region contributes to negative externalities, including GHG emissions, unsustainable



extractive practices, and pollution of air, land, and water. Mitigating these impacts is essential to ensure long-term social welfare and environmental sustainability.

Some major environmental and climate risks affecting SER are:

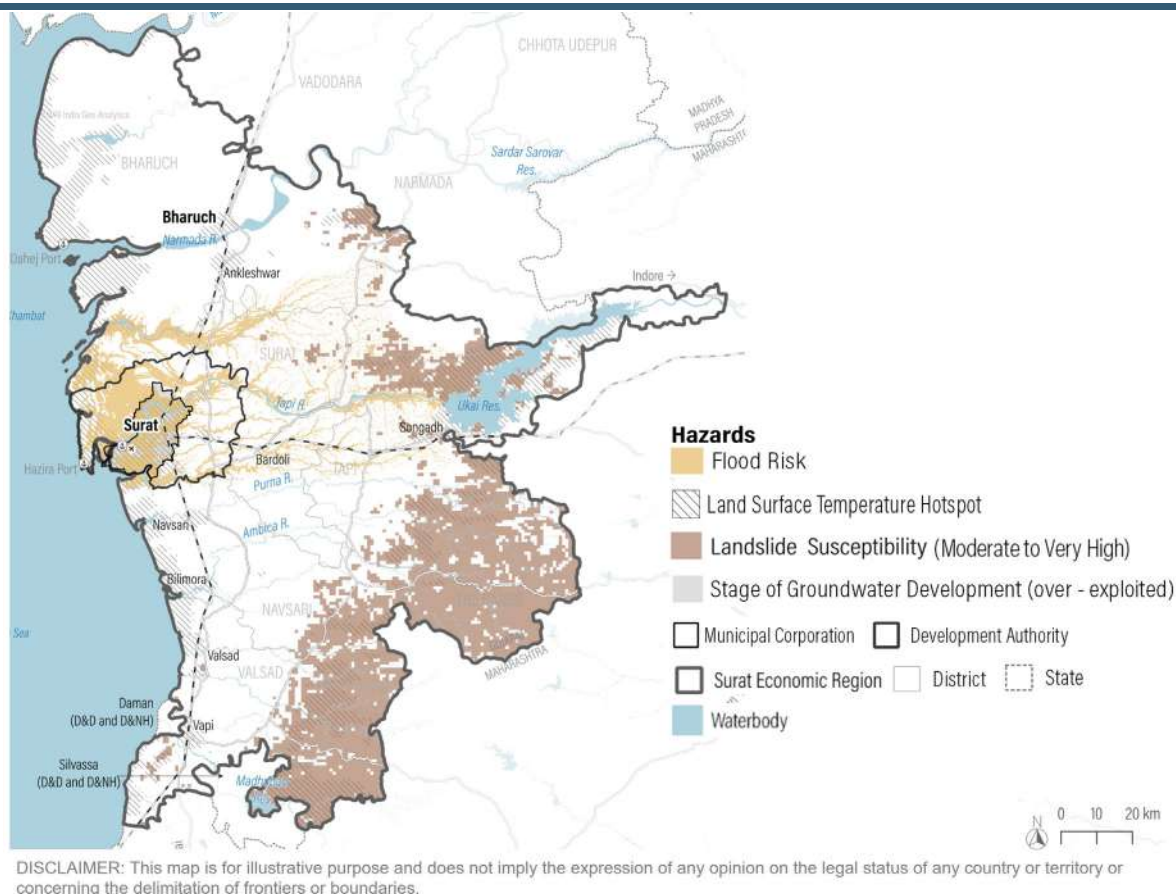


Figure 85. SER vulnerable to multiple environment and climate hazards

Source: Processed by WRI India using IMD, CWC, WRIS, SRTM, ESA World Cover and several other multiple sources

A. Climate Hazards: SER is vulnerable to extreme weather events like flooding, heat stress, rising temperatures, increased storm intensity, and shifting rainfall patterns. The region also experiences significant environmental stress, including air and water pollution, unmanaged waste, and degraded land.

B. Groundwater Depletion: More than 60% of the SER suffers from chronic^c drought^d, with rainfall deficits occurring approximately once every five years^e. Over 70% of the population and jobs within the Surat Municipal Corporation (SMC) area are impacted by groundwater overexploitation^b.

^b Processed by WRI India using Central Ground Water Board Annual Reports for 2017, 2020 and 2022

^c Areas with more than 20% chance of annual meteorological drought probability are referred as 'chronically affected' as per IMD.

^d Processed by WRI India using Annual Rainfall between 1985 to 2020 (Yearly Gridded Rainfall, IMD)

^e As per IMD gridded rainfall data, between 1985-2020, annual met-drought probability in the SER is an average 26% and above.

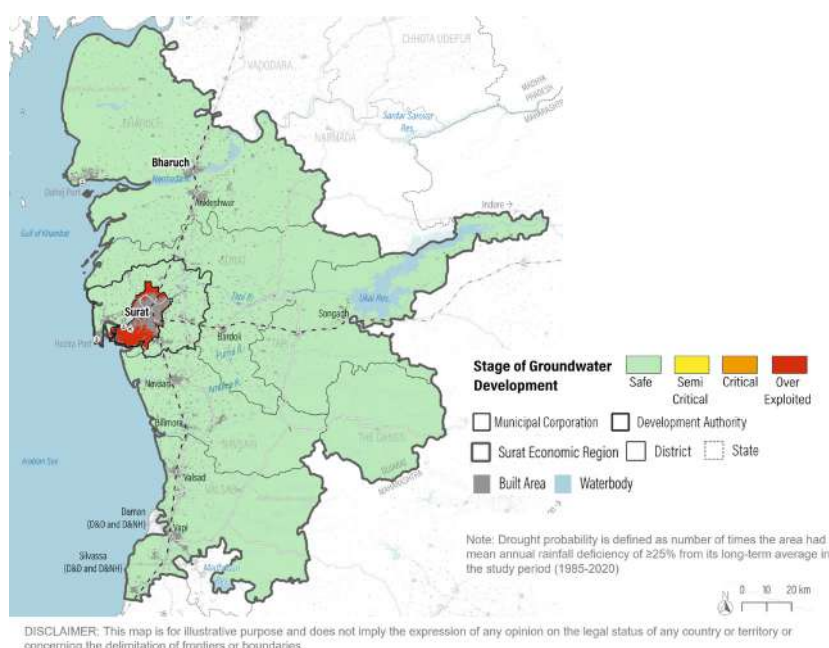


Figure 86. Groundwater development stage (2022)

Source: Processed by WRI India using Central Ground Water Board Annual Reports for 2017, 2020 and 2022

C. Air Pollution: More than 95% of SER is exposed to air pollution levels beyond the permissible limits set by the Central Pollution Control Board (CPCB)^f. The high concentration of PM_{2.5} particles poses significant health risks across the region.

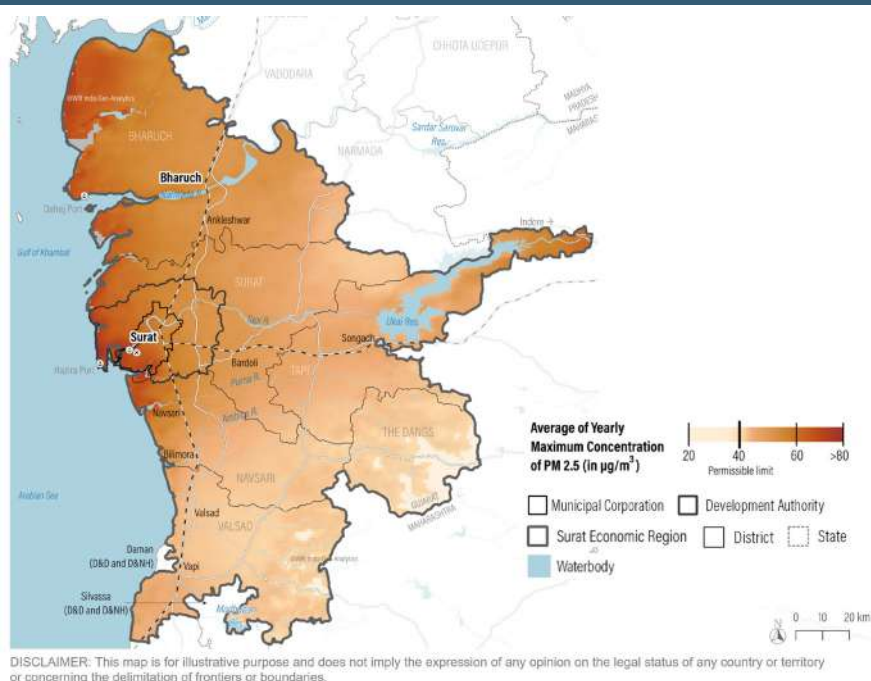


Figure 87. Concentration of PM 2.5

Source: Processed by WRI India using Monthly Surface PM 2.5 (1998-2021) (Atmospheric Composition Analysis Group, Washington University)

^f Processed by WRI India using Monthly Surface PM 2.5 (1998-2021) (Atmospheric Composition Analysis Group, Washington University)

Table 8. Summary of population susceptibility to environment and climate hazards in SER

Districts/ Region	Heat	Flood	Water Stress*	Landslide Susceptibility	Air Pollution
SER					
Surat					
Bharuch					
Tapi					
Navsari					
Valsad					
The Dangs					
High susceptibility					
Moderate susceptibility					
Low-susceptibility					
Not Available/ Not Computed					

*Water Stress is computed based on stage of groundwater development and meteorological drought probability

D. Flooding and Water Stress: Surat, in particular, is highly susceptible to flooding, while Surat, Bharuch, and Tapi face significant water stress. Additionally, the eco regions of Dang, Tapi, and Valsad are prone to landslides, posing a serious threat to these areas.

Ensuring environmental sustainability in SER

Strategic interventions are critical to addressing these environmental and climate challenges effectively. The focus should be on minimizing the adverse impacts on the economy and the well-being of residents. The EMP recommends the following key measures for ensuring environmental sustainability:

- **Comprehensive plans for environmental degradation and disaster management**

Each region must integrate disaster mitigation plans into its broader land-use policies and master planning efforts. This will ensure that risks are managed holistically within the city/region's development framework.

- **Multi-Hazard forecasting, early warning system study and project identification**

Effective disaster management requires systematic data collection and risk assessment to detect, analyze, and forecast hazards. Timely, accurate warnings from official sources are crucial to keep the public informed. Preparedness at all levels, as outlined in UNDRR guidelines, is key to ensuring an effective response to hazards.

- **Developing resilient infrastructures**

Building resilient infrastructure, such as electric grids, water supply systems, sewerage lines, and street networks, is essential to prevent disruption during climate-related events.



9

Making SER livable

Improving livability – making SER an aspirational region that retains its best, attracts the best, and promotes inclusive development of all segments of the residents

SER has several rapidly developing urban area facing significant challenges that impact the quality of life of its residents. The growth of city-regions with a human lens entails ensuring improvement in the livability of all segments of the population while making SER an aspirational place to live and work to attract talent from outside of the region.

SER geographically has some challenges which over time have got exacerbated by the nature of the economic activity in the region. Therefore, today it not only has to contend with extreme heat and floods but also air pollution⁵⁷. Approximately 70% of SER experiences annual maximum temperatures exceeding 46°C⁵⁸, resulting in severe urban heat island effects and associated health risks. High pollution levels, particularly in urban areas, are exacerbated by vehicle emissions, posing serious threats to public health and the environment.

While ensuring that economic growth there is need to adopt sustainable practice that help in abating the consequent environmental degradation is an integral part of the EMP, taking affirmative action through enhanced urban infrastructure to effectively address other aspects in order to improve livability, is also key part of the proposals.

The current urban infrastructure with inefficient transportation systems, inadequate public spaces, and insufficient green areas, present systems that lack integration and resilience, that lead to further intensification of various environmental challenges. Additionally, the focus on inclusive growth necessitates programs and policies that address the needs of all segments of the population. There is an urgent need for affordable and inclusive housing that meets the diverse needs of the populace, alongside sustainable urban development practices.



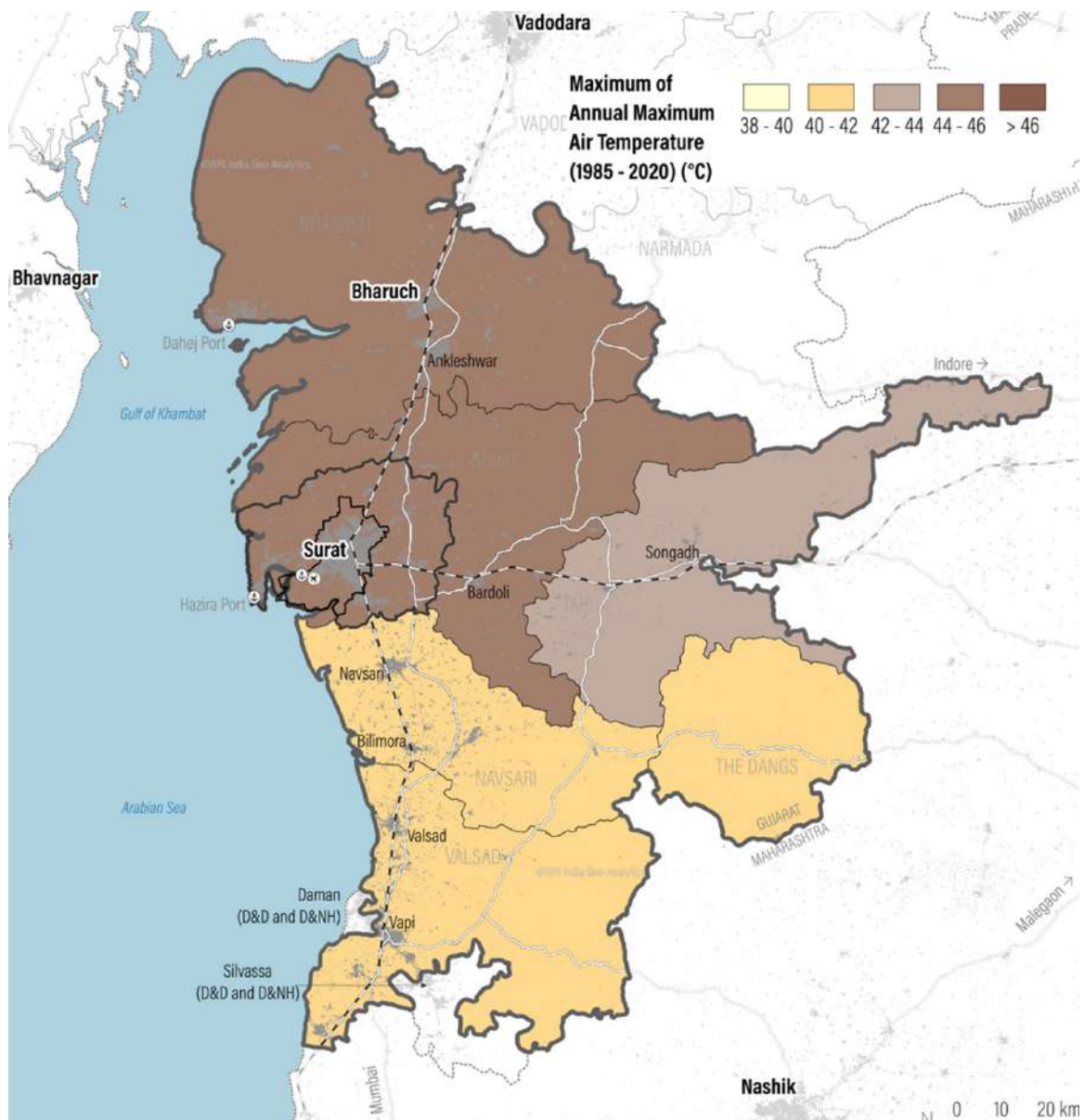


Figure 88. Maximum Air temperature in SER

9.1 Making SER a benchmark for sustainable living

While there are multiple definitions and concepts related to the idea of “livability”, many are closely linked to the United Nations Sustainable Development Goals (SDGs). For the purpose of this report, livability is broadly used to refer to people’s satisfaction with their surrounding physical conditions and their interaction with the environment. The drive to improve livability extends beyond enhancing the well-being and satisfaction of the residents; it also aims to attract new talent and investment, thereby strengthening the region’s position in the global competitive landscape.

Although there is no single globally accepted metric for measuring livability, the final output might refer to certain indices such as the EIU Global Livability Index, and the World Happiness Index, and adapt existing concepts like the “Livability

Standards in Cities” (developed by MoHUA) to incorporate emerging frameworks like Environmental, Social, and Governance (ESG) assessments. These frameworks and metrics, though theoretical, are crucial as they provide benchmarks or guiding principles to steer SER’s development in the right direction, influencing sectors beyond those covered in the EMP.

The EMP aims to make SER an aspirational region which not only ensures that all segments of the population can benefit from its growth but also attracts global and national businesses, employment opportunities, and tourists. To achieve this, SER must excel in livability metrics, creating a thriving urban area that ensures holistic development. The proposed interventions are designed to create a region that not only draws residents and businesses but also sets a benchmark for sustainable urban living. Through collaborative efforts and a commitment to these strategies, SER can transform into a model of urban livability, ensuring long-term resilience and prosperity for its communities.

The EMP seeks to define the entire spectrum of livability in a holistic manner and proposes a comprehensive, multi-dimensional approach to address this aspect of urban living, with a focus on climate resilience, sustainable infrastructure, connectivity, and public health.

9.2 Making SER greener, smarter, and more inclusive

This section presents detailed interventions toward making SER an aspirational region that retains its best, attracts the best, and promotes inclusive development of all segments of the residents.

9.2.1 Climate Action and Urban Greening to improve quality of life

Designate Low Emission Zones (LEZs): Establish LEZs in high-risk areas with targeted approaches such as clean air zones and emission-based vehicle restrictions.

Expand Urban Green Spaces: Increase the number of green spaces, promote green roofs, and develop interconnected blue-green corridors across SER.

Implement Nature-Based Solutions (NbS): Integrate NbS into urban planning to address climate risks, enhance cooling, and manage stormwater effectively.

9.2.2 Public Space and Connectivity Improvements

Complete Streets Policy: Adopt a complete streets policy that includes dedicated lanes for various modes of transport, street furniture, and safety measures.

Public Transport Integration: Strengthen public transport networks with integrated fare systems, last-mile connectivity, and partnerships with local institutions.

Placemaking Programs: Initiate placemaking programs and historic preservation efforts to enrich public spaces and promote cultural heritage.

9.2.3 Housing and Sustainable Development to foster inclusivity

Affordable and Inclusive Housing: Develop targeted housing strategies that provide affordable and rental housing options. Promote inclusive policies that ensure all residents have access to safe and sustainable living conditions.

Green Building Practices: Encourage the adoption of energy-efficient designs, sustainable building materials, and practices in new housing developments to reduce environmental impact.

Urban Infrastructure on Tender SURE Model: Implement the Tender SURE (Specifications for Urban Road Execution) model to ensure comprehensive urban infrastructure development, with coordinated utilities and high standards for construction and maintenance.

10

**Regulatory &
governance
framework to
achieve the
transformation
of SER**

A robust implementation framework will be crucial for the success of the plan by ensuring that the objectives are met efficiently, effectively, and in a time-bound manner. Without a clear and systematic implementation strategy, even the most well-intentioned plans can fail, resulting in inefficiencies, wasted resources, and unachieved objectives.

The EMP under the G-Hub initiative introduces a novel approach to drive economic development across key sectors, catalyzing regional prosperity. This plan encompasses a range of projects and policy measures that will require an overarching mechanism for operationalization through multi-stakeholder efforts. For making SER approx. \$1.5 trillion economy by 2047, as envisaged in the EMP, it is crucial to have a robust and responsive institutional mechanism, adopt an outcome-oriented holistic approach, carefully selection of the most suitable project structuring mode, and address the enablers that promote “Living Well” with inter-generational equity beyond the economic aspects. G-Hub initiatives bring in a paradigm shift in urban planning by adopting a regional approach through an economic lens. This would require revisiting the extant institutional mechanism, breaking the silos, and having outcome-oriented overarching bodies.

This chapter presents an indicative framework designed to facilitate the implementation of the proposed EMP for SER covering all essential components.

10.1 Institutional Framework

The core institutional structure proposed features a three-tier framework, with a constitution of new institutions at the regional level.



Figure 89. Core institutional framework

The Surat Regional Economic Development Authority (SREDA) will play a pivotal role by performing an overarching and coordinating role being responsible for the integrated regional development including 6 different districts. It would have official representation from all 6 districts in the region, including Surat Urban Development Authority (SUDA) and other development authorities in the region and all Urban Local Bodies (ULBs).

The primary responsibility of SREDA will include coordinating regional infrastructure development, overseeing project development companies, and assisting in project structuring and implementation. It will also play a key role in regional marketing and investment promotion, ensuring alignment with regional goals through inputs to city master plans and pre-approval processes. Additionally, the authority would guide the implementation of city growth plans and manage regional planning, including transportation planning, to support sustainable development.

SREDA would need to have its own income stream. It is proposed that this may *inter alia* include External Development Charges (EDC)/Infrastructure Development Charges (IDC)/Transit Oriented Development (TOD) charges or any other developmental charges in designated Command Areas; a pre-approved percentage of stamp duty collections in designated Command Areas and all proceeds from disinvestment/monetization projects or land auctions, among others.

To streamline implementation, it may be suggested to establish three new institutes under SREDA and strengthen one existing agency, as outlined **Figure 90**.



Figure 90. Key implementation framework

The G-Hub Crack Unit may act as the initial touchpoint for all project-related inquiries, issues, and coordination efforts, ensuring streamlined communication and quick resolution of challenges. It will be responsible for coordinating across different departments, agencies, and stakeholders, conducting regular progress monitoring with detailed reporting on KPIs and milestones, and overseeing the allocation of resources, including financial, human, and technical resources.

Destination Management Organization (DMO) is a specialized entity focusing on promoting and managing tourism at a regional or local level. Its primary role is to create synergy and convergence in the efforts of all the stakeholders by coordinating marketing efforts, developing tourism infrastructure, and promoting partnerships among local communities, businesses, government and private agencies.

For sustainable management and inclusive tourism growth, a DMO is being proposed to be set up and operationalized covering the administrative jurisdiction of SREDA. The key responsibilities of the DMO would include (i) destination marketing by creating and maintaining a compelling brand image for the destination and promotion, (ii) fostering stakeholder coordination and cooperation among Government agencies and private sector, (iii) visitor experience management by providing customer and information services, (iv) develop long-term strategic plans and advocate for policies and regulations for tourism development and sustainability, (v) crisis management to address emergencies or crises that may impact tourism, such as natural disasters or health outbreaks.



Figure 91. DMO Operating structure

A **Project Management Unit (PMU)** will be established to lead ground-level implementation through effective project structuring and financing. Its key responsibilities will include conducting feasibility assessments, developing business models, and actively engaging stakeholders. The PMU will determine the most suitable

project structures, whether Government-to-Government (G2G), Public-Private Partnership (PPP), or private sector-led. Additionally, it will develop comprehensive financial plans, covering budgeting, and projections, and identifying diverse funding sources such as public funds, private investments, and grants. The PMU will also ensure that all legal and financial agreements comply with local laws and conduct thorough due diligence to meet regulatory standards.

The existing **Integrated Command and Control Centre (ICCC)** of Surat Smart City can be scaled up for SER & new regional ICCC can be developed at the major industrial estates such as Dahej, Ankleshwar, Sachin & Vapi. The Surat ICCC will serve as the headquarters, receiving and monitoring data from all regional ICCCs.

Currently, ICCC of Surat gathers real-time data from various departments and the citizens, that can be scaled up for hazard and pollution control measures in the region. Automated sensors transmit a wide range of datasets to the ICCC for analysis, supporting informed decision-making. Operating within the framework of the Pollution Control Authority, the ICCC is crucial for driving innovation, refining regulatory practices, and tackling emerging environmental challenges. Depending on technical feasibility and financial viability, multiple regional ICCCs could also be established across SER under SREDA to ensure centralized monitoring and regulation of the industrial sector, thereby enhancing overall compliance.

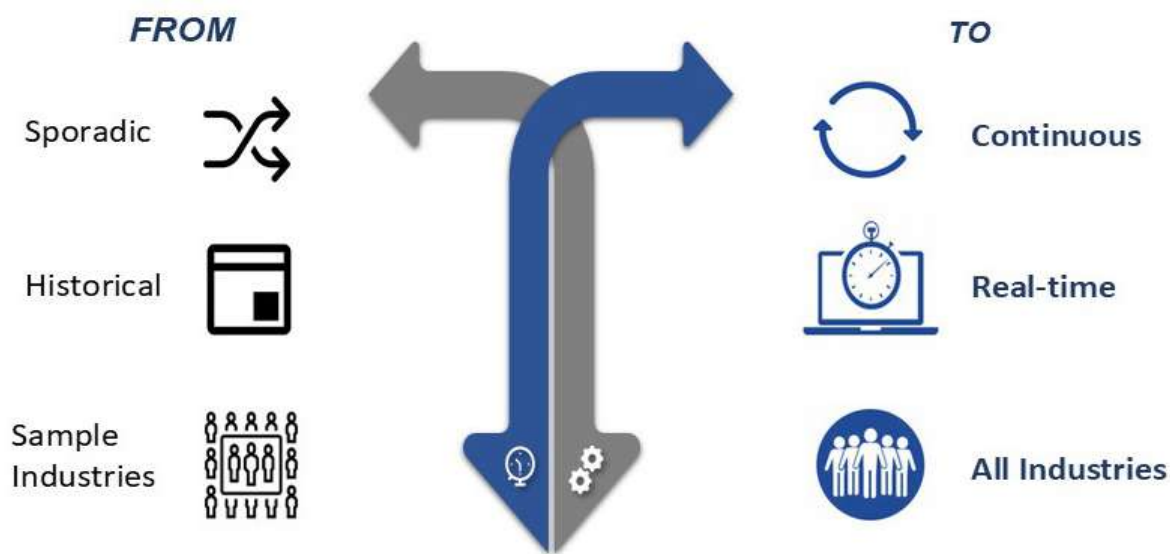


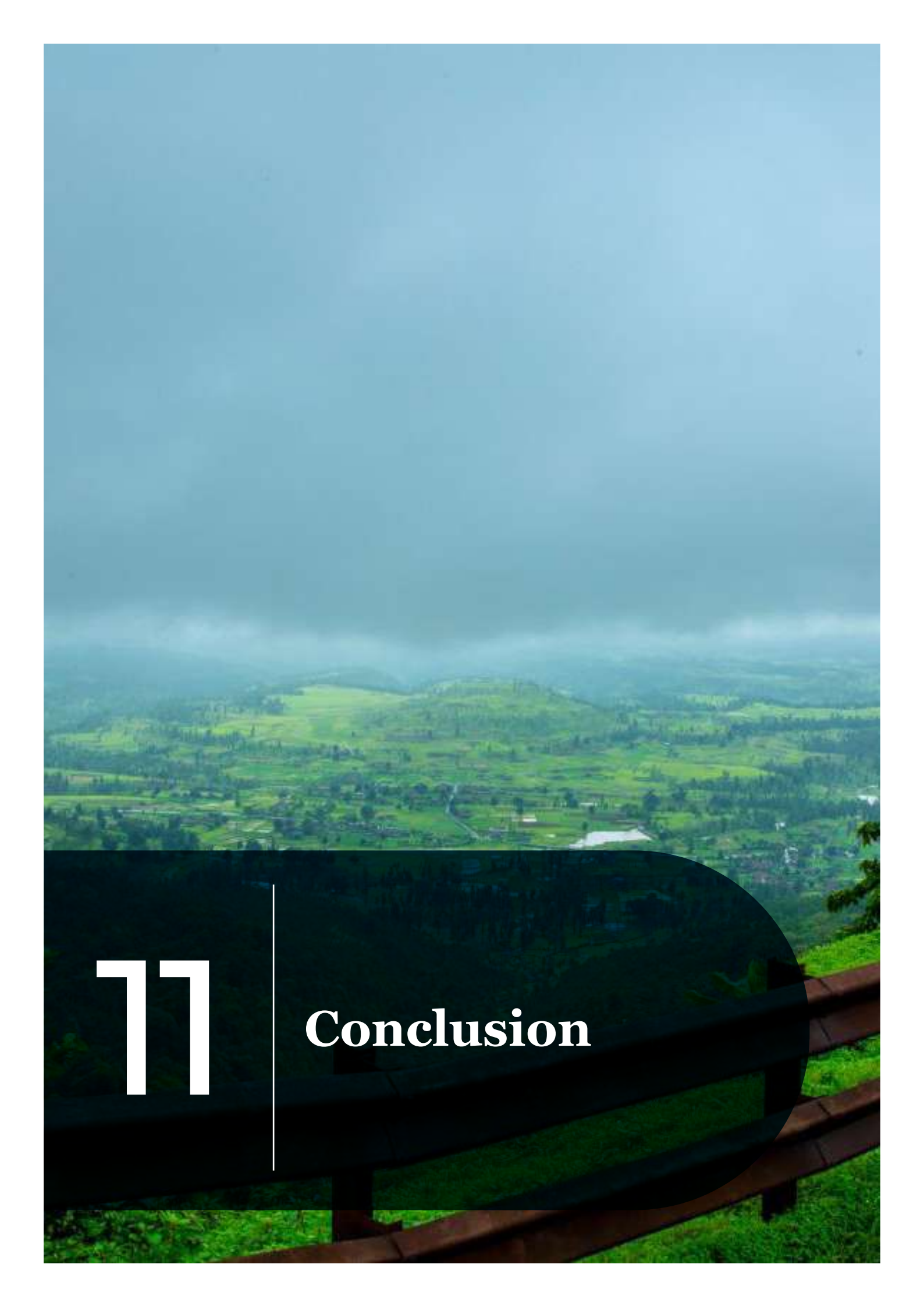
Figure 92. Scaling up the functions of Integrated Command and Control Centre

10.2 Monitoring Framework

The plan is built around participatory monitoring, engaging key stakeholders such as State Governments and Development Authorities, and reinforcing the principles of cooperative federalism. It may be suggested to develop project-specific trackers to enable real-time progress updates, ensuring continuous monitoring. Additionally, an online dynamic dashboard can be created, offering information at different levels of

granularity to cater to different users, including the Hon'ble Chief Minister, relevant ministers, SHPSC members, departmental heads, SREDA, DCs, and others. This dashboard will facilitate efficient decision-making and ensure accountability across all levels of governance.

The plan will serve as a rolling vision for the region's economic development activities, undergoing reviews at regular intervals throughout the implementation phase with enabling frameworks and processes for course correction. While the core vision, targets, and key focus areas will remain consistent, project planning aspects and policy reforms will be updated as necessary to adapt to changing circumstances and ensure ongoing relevance.



11

Conclusion

Hon'ble Prime Minister during the launch of 'ViksitBharat@2047: Voice of Youth' in 2023 underlined the importance of the times that we live in, stating that '*this is the period in the history of India when the country is going to take a quantum leap*', towards becoming *ViksitBharat@2047*⁵⁹, with the ambitious goal of building a \$30 trillion economy. However, achieving the ambitious growth targets while ensuring that it remains holistic and inclusive would demand a bottom-up approach. In this context, special focus needs to be given to cities as these are traditionally regarded as growth hubs.

The EMP for SER is a pioneering attempt to introduce a transformative shift in India's existing development planning practices for the urban centers and their surrounding areas. The plan is expected to deliver several positive outcomes, including achieving balanced growth, reducing regional disparities in infrastructure, employment generation, equitable resource access, optimum utilization of land and natural resources, and ensuring better-planned infrastructure connectivity. At its core the plan is guided by *ViksitGujarat@2047* and outlines a clear roadmap for SER's future. It aims at transforming SER's economy from 'Rapidly Growing' to a 'Globally Competitive' region through a set of tailor-made strategic proposals.

The EMP outlines several proposed projects and policy recommendations for the Surat Economic Region, summarized in **Box 20**.

Box 20. Proposed projects & policy interventions

Proposed Projects

Infrastructure & Sectoral Projects

Chemical (8)

- FTWZ
- Additional tank farm
- Enhance port capacities
- Common-user jetty
- Hazira port connectivity with rail
- Multi-modal logistic park
- North-South coastal road
- Improving the liveability condition of chemical hub

Pharma (2)

- Develop Air Freight Station
- Ancillary Industrial estate

Textile & Apparels (1)

- Integrated T&A MSME Cluster

Healthcare (3)

- Multi Speciality Hospitals (2)
- Hospital & Trauma Centre, Bharuch (1)
- Healthcare Facility For All

Infra & Connectivity (2)

- Helitaxis/ eVTOL/ Charter planes/ Vertiports
- Airport expansion (vault, warehouses, etc.)

Tourism (14)

- Surat cruise terminal
- Premium beach hotels in 2 beaches and multiple budget-friendly hotels & resorts
- Disneyland theme park
- Beach front development in 3 beaches
- Wildlife and adventure tourism development in Dang, Navsari and Tapi
- Ukai Reservoir
- Rural-based experience tourism in Dang
- Development of Don hill station
- Adaptive reuse of heritage buildings
- Parsi (zoroastrianism) circuit
- Curated cultural festivals
- Boutique events
- Develop Dang as a bamboo hub with proposed trails and annual bamboo festival
- Upgradation of existing Billimora-Waghai (Navsari-Dang) heritage train
- River cruises in Tapi & Narmada rivers

Sustainability (5)

- Multi-Hazard forecasting and early warning system
- Off-shore wind power plants (2)
- Hybrid (solar+wind) park
- Solar power park
- Floating or canal-based solar project

4 development zones

A. Bharat Bazaar, HSR Zone Surat – B2B (7)

Sectors: Textile & Apparel (T&A), Gems & Jewelry (G&J)

- Wholesale market blocks (10)
- FTWZ (1)
- Malls & Retail space
- Business hotels & restaurants
- Housing, Hospitals & Care facilities
- Bus and truck terminals (2)

B. Bharat Bazaar, DREAM City – B2C (9)

- T&A and G&J souk (2)
- T&A and G&J bourse (2)
- Artisan village, experience center & museum
- Luxury malls & retail space
- Business hotels & restaurants
- Upgradation of existing convention center
- IB school

C. Edu-city '15 min concept' (5)

- Institute of excellence
- Private college
- Reputed schools
- Residential townships
- Sports academies and stadiums

D. Townships in HSR Zone

- Residential townships
- Sports academies and stadiums

Proposed locations of the proposed projects

Chemical

- 1 Anchor Investor
- 2 Free Trade Warehouse Zone
- 3 Additional Tank farm
- 4 Enhance port capacities and common user Jetty
- 5 Multi-Modal Logistic Park

Textile & Apparel

- 6 Textile & Apparel MSME cluster
- 7 Textile & Apparel bourse

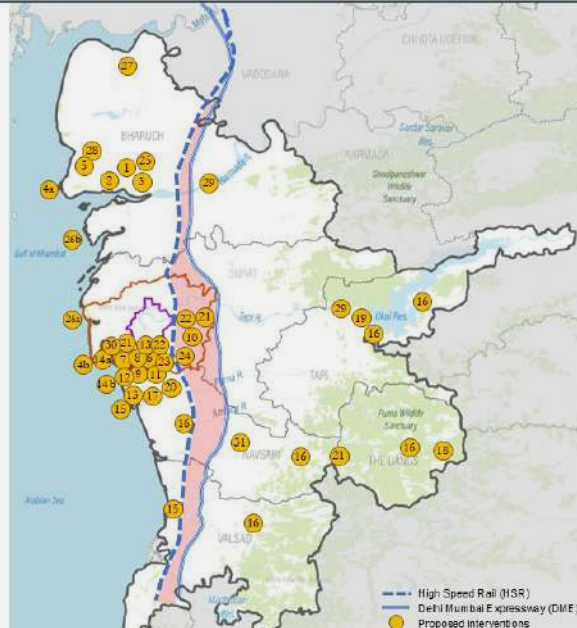
Gems & Jewelry

- 8 Jewelry Bourse

Cross-cutting

- 9 Apparel & Jewelry souk
- 10 B2B Zone
- 11 Artisan village & Museum
- 12 Luxury Malls
- 13 Expansion of Convention centre & Airport

* Tentative - Subject to change



Tourism

- 14 Docking Point
- 15 Beach Hotels
- 16 Hotels & Resorts
- 17 Disneyland Theme park
- 18 Don Hill Station
- 19 Development of Ukai Reservoir
- 20 Parsi Irani Zoroastrian Experience Center
- 21 Bamboo Hub

Education

- 22 EDU-City HSR
- 23 International Baccalaureate (IB) School

Healthcare

- 24 Multi Speciality Hospital
- 25 Multi- speciality Hospital & Trauma Center

Renewable Energy

- 26 Off-shore wind power plants
- 27 Hybrid (solar+wind) park
- 28 Solar power park
- 29 Floating or canal-based solar projects

Pharmaceuticals

- 30 Develop Air Freight Station
- 31 Ancillary Industrial estate

Proposed Policies/ Reforms

Chemicals (4)

- ICCC of Surat to be designated as the nodal monitoring entity for SER to ensure environment compliance by leveraging technology to monitor and levy penalties with PCB as the appellate
- Establish **Centre for Processing Accelerated Corporate Exit (C-PACE)** at state level (INDEXTb) on similar lines of C-PACE at Ministry of Corporate affairs.
- Incentivize the production of **Green chemicals** and focus on **energy efficient fuels**



State Govt. to request for early passage of the **DESH bill** and **Draft India REACH (Chemical Management and Safety) Rules**

Overarching Incentives for B2B & B2C zone (Illustrative)

- **Trade license** – Single-window clearance and single trade license for facilitating different types of activities
- **FDI** - 100% FDI and ownership by the foreign entities
- **Lease** - Long-term lease and financial support for establishing infrastructure
- **Subsidy** - Capita subsidy for one-time support and other subsidies for operating expenses
- **Tax benefits** - Income tax exemption for a certain period and repatriation of profits.
- **R&D** - One-time support for establishing R&D institutes



Note- At national level

Textiles & Apparel (2)



Rationalize **duty structure** on synthetics (MMF) raw materials Samarth 2.0, PMKVY 2.0 & 3.0 to address **skill gaps**, with a greater focus on Industry-Academia connect

Gems & Jewelry (1)

- Resolve **custom bottlenecks** - Surat stakeholders face customs issues in G&J trade, unlike Mumbai and Delhi where it's done in a day

Tourism (6)



Cruise Tourism Policy comprising of regulatory and safety framework to address the quality and regulatory gaps

- Gujarat Tourism to promote **adventure, eco-tourism and rural homestays**, in lines with National Strategies for Adventure Tourism, Eco-Tourism, and Rural Homestays, 2022.
- Requisite policy regulations on **assessing carrying capacity** for eco-sensitive areas on the lines of Lakshadweep model.
- Tweaking in Tourism Policy of Gujarat: provision of **land on lease** for categories such as hotels/ resorts /theme park, etc.
- Scheme for restoring and redeveloping **heritage sites**
- **Include zoning for regions** comprising several destinations in the Gujarat tourism policy

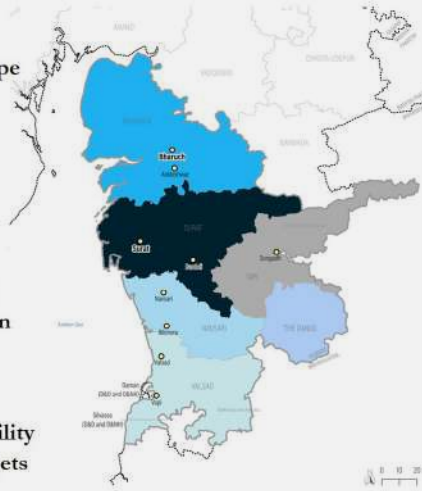
Education (1)

- **Non-restrictive fees** regulation norm for Schools

This plan outlines the region's future growth trajectory focusing on priority interventions. However, flexibility will be key to navigating unpredictable shifts and uncertainties while ensuring the core objectives and vision are achieved. By staying committed to the three principles of the EMP, viz. economy & investment, promoting sustainability, and quality of life & inclusivity as the underlying long-term goals and at the same time ensuring flexibility to adapt to changing market forces, technological advancements, and social demands makes this plan to remain relevant for building a society that is pro-people, pro- planet and pro- prosperity.

In summary, SER can be the main driver for meeting the aspirations of Viksit Gujarat @ 2047, provided it...

- ✓ *Transforms* its manufacturing landscape by shifting gears from volume to value
- ✓ *Leverages* the potential of untapped sectors
- ✓ *Develops* as a living and wellness destination for talent
- ✓ *Reinforces* its leadership in sustainability to achieve net-zero targets



By 2047, SER can be

-  A global major of specialized chemicals
-  A global destination of trade in textiles, apparels, gems & Jewelry
-  Centre of Global South for design & retail of luxury jewellery
-  An aspirational city-region with state-of-the-art education & skilling facilities, hospitality & healthcare for attracting talent
-  Experiential tourism hub with deep roots in culture and heritage
-  A lighthouse for sustainable development



Project Team

Managing Urbanization Vertical – NITI Aayog

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Team Members

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- Ms. Anshika Gupta, Specialist
- Mr. Arunava Dey, Research Officer
- Mr. Gangala Sandeep Kumar, Young Professional
- Mr. Anchal Saxena, Young Professional
- Ms. Tsomo Wangchuk, Young Professional
- Ms. Swati Pradhan, Young Professional
- Mr. Prasanna Arun Bhangdia, Young Professional
- Mr. Kaustubh Srivastava, Young Professional
- Mr. Akshat Thakore, Young Professional

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Annexures

Annexure I

Multi-tiered institutional framework

I. National Steering Committee at NITI Aayog

Chairperson:

- Shri B.V.R. Subrahmanyam, CEO, NITI Aayog

Members:

- Prof. Dr. O.P. Agarwal, Dean, Indian School of Public Policy & Senior Fellow, NITI Aayog
- Dr. Shirish Sankhe, Institute of Sustainability, Employment and Growth Foundation (ISeg)
- Representative of MoHUA of the rank of Joint Secretary or above
- Mr. Madhav Pai, CEO, India Resources Trust (functionally known as WRI India)
- Ms. Anna Roy, Principal Economic Adviser, Managing Urbanization Vertical, NITI Aayog (Member Convener)

Terms of Reference (ToR):

Providing advisory on:

- Identifying the city-regions to be covered under the said initiative
- Designing of the methodology and template for the economic growth strategy for Growth Hubs
- Designing the structural arrangements to implement the initiative in each city/state
- Processes to be followed for implementing the strategy in the Growth Hubs
- Monitoring the progress in each Growth Hub
- Based on learnings from the pilot phase, finalize the blueprint for scaling-up the interventions for other identified city regions

II. State level Steering Committee

Table 9. State level steering committee members

S.No.	Designation	Position
1	Chief Secretary, Government of Gujarat	Chairman
2	Additional Chief secretary / Principal secretary, Finance Department, Government of Gujarat	Member

3	Additional Chief Secretary/Principal Secretary, Industry and Mines Department, Government of Gujarat	Member
4	Additional Chief Secretary/Principal Secretary, Urban Development and Urban Housing Department, Government of Gujarat	Member
5	Secretary (Planning), General Administration Department, Government of Gujarat	Member
6	Secretary (Economic Affairs), Finance Department, Government of Gujarat	Member
7	Municipal Commissioner, Surat Municipal Corporation	Member
8	Chief Executive Authority, Surat Urban Development Authority	Member
9	Collector, Surat	Member
10	Officer on Special Duty, Urban Development and Urban Housing Department	Member
11	External expert decided by chairman	Member

Table 10. G-hub crack unit

S.No.	Designation	Position
1.	Additional Chief Secretary/Principal Secretary, Urban Development and Urban Housing Department, Government of Gujarat	Chairman
2.	Municipal Commissioner, Surat Municipal Corporation	Member
3.	Chief Executive Authority, Surat Urban Development Authority	Member
4.	Collector, Surat	Member
5.	Deputy Municipal Commissioner, Surat Municipal Corporation	Member
6.	City Engineer, Surat Municipal Corporation	Member
7.	Chief Town Planner, Surat Municipal Corporation	Member

IV. 3-4 full time personnel to work on the G-Hub initiative

State government constituted the G-Hub crack unit

V. Nodal officer in the Government of Gujarat

Additional Chief Secretary/Principal Secretary, Urban Development and Urban Housing Department, Government of Gujarat

Annexure II

Mega-infrastructure projects in SER

The details of the existing and on-going infrastructure and connectivity projects are given below:

(i) Connectivity and Logistics

- **Road**

Major national highways such as NH-53, NH-48, NH-64 and state highways pass through Surat. Ongoing road infrastructure projects include:

1. Dedicated freight corridor (Partially operational)

Gujarat contributes 38% of the total length of the Dedicated Freight Corridor (DFC) in the government's plan to link major cities, including Delhi, Mumbai, Kolkata and Chennai in different phases. Western DFC (WDFC) is 1506 km long and extends from Jawaharlal Nehru Port (JNPT) near Mumbai to Rewari-Dadri near Delhi and traverses through the states of Uttar Pradesh, Delhi NCR, Haryana, Rajasthan, Gujarat, and Maharashtra, ultimately linking Dadri in the Delhi NCR to Jawaharlal Nehru Port (JNPT) near Mumbai.

The WDFC currently operates across 938 km from Dadri to Sanand, 244 km from Makarpura to Gholvad and 77 km from Gholvad to Vaitarna; the 138 km Sanand-Makarpura section is about to be operational (India Briefing, 2024).

2. Delhi-Mumbai Expressway (Partially operational)

The Delhi-Mumbai Expressway (DME), built by the National Highway Authority of India (NHAI), spans approximately 1350 km. The expressway is set to be one of the longest expressways in the country. Running through Dausa, Kota, Ratlam, Vadodara and Surat, it links Jawaharlal Nehru Port in Maharashtra to the Sohna elevated corridor in Delhi.

3. Parikrama Path (North-South coastal corridor) (Conceptual stage)

The Gujarat Government has outlined a blueprint for a seamless peripheral road project that will run along the state's borders with neighboring states and its coastline. This 3,533 km project, aimed at connecting missing linkages between national and state highways along the borders, is projected to cost ₹2,000 crore. Similarly, a coastal highway project is planned, which will eventually be integrated with the Parikrama Path. This highway will connect Valsad to Bharuch along the coastline and will be instrumental in boosting trade, improving transportation, and enhancing coastal connectivity across four districts (Valsad, Navsari, Surat, and Bharuch), thereby fostering regional growth

4. Bharatmala Pariyojana Phase -I (in pipeline)

Bharatmala Pariyojana Phase-I comprising of 24,800 km. of various categories of roads and about 10,000 km of residual NHDP projects to be completed by 2027-28. Two corridors are crossing SER: Delhi-Mumbai and Surat-Nashik-Ahmednagar-Solapur expressways.

5. Regional ring road (in pipeline)

A regional ring road of 120 m wide, spanning 116 km proposed for construction within the SUDA area will serve as a critical gateway for traffic heading and supply chain logistics to Mumbai and Ahmedabad.

6. Other notable projects:

- » The government is focusing on improving connectivity and economic activity in Southern and Tribal Zone (Dang, Tapi, Navsari). Key projects include a road from Saputara to the Statue of Unity, passing through Dang and Tapi districts, to enhance tourism and economic development. Additionally, the government is focusing on tribal areas with road widening, resurfacing, and bridge construction.
- » The 74.4 km Uchhal-Nizar Road will be widened to reduce congestion and improve links to Maharashtra.
- » The four-laning of the Tithal-Valsad-Dharampur Road will boost access to Dharampur Taluka and strengthen interstate connections with Maharashtra.
- » Industrial Corridor (Surat, Navsari, Bharuch): The government is upgrading key industrial corridors to support economic growth. The six-laning of the Surat-Navsari stretch will boost industrial expansion and ease transportation.
- » The four-laning of the 38.4 km Sanvalla-Tankal Road will accommodate heavy quarry traffic, enhancing Navsari's mining output.
- » In Bharuch, the Ankleshwar-Rajpipala-Statue of Unity High-Speed Corridor will connect Ankleshwar's chemical industries and boost both economic and tourism sectors.
- » The ongoing construction of a bridge over the Mindhola River will connect Surat with Navsari, easing movement between the cities. This corridor will link Surat's PM-Mitra Textile Park and Diamond Burj, boosting the textile, gems, and jewelry sectors and helping reduce industrial concentration in Surat.
- » Vapi, strategically located near Mumbai, will see further growth with the Mumbai-Surat bullet train and a new four-lane ROB, enhancing connectivity of the region

• Rail

1. The Mumbai-Ahmedabad High Speed Rail (MAHSR) Corridor also known as Bullet Train Project, will join the economic and financial hub of India. The first phase connecting Surat and Bilimora will be functional by August 2026.
2. The Surat railway station is set to transform into a Multi-Modal Transport Hub (MMTH) by December 2026, integrating railways, the GSRTC city bus terminal, the metro, and more for seamless connectivity.

-
3. Surat Metro with 2 lines and 37 stations is an under-construction mass rapid transit system (MRTS). Surat Metro Phase 1 project's DPR (Detailed Project Report) with a network length of 40.35 km (Corridor 1: Sarthana to Dream City 21.61 km, Corridor 2: Bhesan to Saroli 18.74 km) was approved by the Gujarat state government in January 2017 and by the Central Government's cabinet in March 2019.

- **Air**

SER has one domestic airport in Surat which has been upgraded to an international airport in December 2023. As of now, it has direct flights to Hyderabad, Delhi, Kolkata, Pune, Diu, Chennai, Indore, Bengaluru, Goa, Sharjah, Dubai, and Bangkok. Further, there is Surat International Airport's Domestic Cargo Terminal (DCT), which started in 2020. The 1,400 square meter terminal can handle up to 50,000 metric tons of cargo per year.

- **Sea**

There are two minor ports located in SER: Hazira and Dahej; and one lighterage port: Magdala port. Further, a Nargol port in Valsad is under planning.

- a. **Dahej port:** Dahej port is a deep water, multi-cargo port which is located in the Gulf of Khambhat. It is strategically situated on international maritime routes and provides easy access to the dense industrial hubs of Gujarat, Maharashtra and Madhya Pradesh (*Source- Gujarat maritime cluster report- 2022*).

- **Cargo:** LNG, Coal, POL Chemicals, and others are provided by different private players
- **Jetty:** Dahej Port has captive jetties and a private port used by various private players
- **Cargo handling capacity:** 30-35 MMT p.a

- b. **Hazira Port:** Hazira Port is a deep-water liquefied natural gas terminal and multi-cargo facility located in Surat.

- **Cargo:** Liquid Natural Gas, Ethylene, SPM EDC-RoRO and GAS, Cement, sponge iron LPG
- **Cargo handling capacity:** 32 MMT p.a

- c. **Magdalla port:** Magdalla Port, a lighterage port on the west coast of India in southern Gujarat, is located 16 km upstream on the southern bank of the river Tapi. It features a deep-water anchorage 15 nautical miles southwest and a 16 km long, 150 m wide approach channel marked by lighted buoys.

- **Cargo:** Coal, cement, clinker, crude oil, steel, naphtha, fertilizer, limestone, iron ore, LNG, container cargo, rock phosphate
- **Cargo handling capacity:** 38.05 MMT p.a

- d. **Nargol Port (under planning):** Nargol Port, a Greenfield port proposed in Valsad, is currently in the planning stage. Considering the strategic

location of Nargol and its proximity to the Dedicated Freight Corridor (DFC) and the Delhi Mumbai Industrial Corridor (DMIC), the port is estimated to handle sizable traffic of containers, dry bulk and liquid bulk cargo.

- **Multi-modal logistic parks**

SER has 4 Multimodal Logistics Parks proposed in Dahej, Hazira, Bhatia, Niyol.

(ii) Dedicated zones:

- **Diamond Research and Mercantile (DREAM) City & Surat Diamond Bourse**

To support the swift development of the Diamond Trading business, the Gujarat Government established a Special Purpose Vehicle (SPV) called DREAM (Diamond Research and Mercantile) City Limited, with an initial paid-up share capital of Rs. 100 crores. DREAM City spans 6.85 sq.km. located south of Surat; abutting 90 m wide outer ring road in proximity of Surat Airport.

Surat Diamond Bourse (SDB) is the anchor tenant of the project with a campus measuring approximately 0.14 sq.km. of land. It contains more than 4200 offices which will give employment to nearly 1.5 lakh people. The complex is a pre-certified green building by the Indian Green Building Council. Surat Diamond Bourse is the world's largest office building and has the potential to develop a global-level diamond trading hub, thereby driving growth in Surat.

- **Surat Industrial Growth Region (SIGR) zone (proposed in Surat Development Plan 2035)**

Surat Development Plan, 2035 was prepared considering the demand of the projected population of the next two decades. The preparation of 'Development Plan 2035' was initiated in 2013. The development area of SUDA is 985 sq.km. SUDA has conceived a plan to develop an industrial growth region of about 30 km long, having a 1.45 km width from Hazira to the existing BG Delhi Mumbai railway line near Gothan admeasuring about 40 sq.km., which is 5.09% of the total urbanized area proposed in the development plan.

- **Greenfield Mega Textile and Apparel Park (under PM MITRA), Vansi, Navsari^a (in-pipeline)**

Navsari will be one of the seven Mega Integrated Textile Region and Apparel Parks in India. The area the identified site is approximately 4.65 sq.km. The Expression of Interest (EoI) was floated by GoG in 2023 on a Design, Build, Finance, Operate and Transfer (DBFOT) basis. Facilities like office complex,

^a For development of Greenfield PM MITRA and Brownfield PM Park, there is a provision of Development Capital Support (DCS) @30% of the project cost with a maximum support of INR 500 Cr and INR 200 Crore per park for Greenfield and Brownfield PM MITRA respectively from the Government of India. This support is for creation of Core Infrastructure e.g. Developed Factory Sites, Plug & Play facility, Incubation Centre, Roads, Power, Water and Waste water system and Support infrastructure e.g. Common Processing House & CETP, Workers' Hostels & Housing, Logistics Park, Warehousing, Medical Facilities, Training & Skill Development facilities. There is a provision to use 10% of the park's area for Commercial Development e.g. Shops & Offices, Shopping Malls, Hotels & Convention Centers.

Source: Expression of Interest (EoI) for Selection of Master Developer for Development, Operation and Maintenance of PM MITRA (Pradhan Mantri Mega Integrated Textile Region and Apparel) Park on Design, Build, Finance, Operate and Transfer (DBFOT) basis in Vansi, Navsari, Gujarat, GIDC, 2023

commercial complexes, ITI and skill development center Exhibition/convention center, testing and research labs, hotel complexes and firefighting systems are proposed to be developed as common facilities.

- **Dahej Promotion of Petroleum, Chemicals and Petrochemical Investment Regions (PCPIR)**

Dahej PCPIR region has been notified under the Gujarat Special Investment Region (GSIR) Act, 2009. The total area is 452.98 sq.km with a processing area of 230 sq.km. (approx. 51% of total area). M/s ONGC Petro additions Ltd. (OPaL) is the anchor tenant and has set up a dual feed cracker complex at Dahej SEZ. Dahej PCPIR is being integrated with WDFC with spur line and Delhi-Mumbai Expressway. The common infrastructure facilities include a common effluent treatment plant with 40 MLD capacity (expansion capacity with other 40 MLD) with marine discharge facilities; treatment, storage, and disposal facility (TSDF) with incineration facility, 100 MLD desalination plant, firefighting systems and independent power plant.

- **Bulk Drug Park, Jambusar, Bharuch (in-pipeline)**

The project spans 2000 acres (approx.), overseen by GIDC, with 8% of the land dedicated to roads. The water requirement is 64 MLD, sourced from the Narmada Main Canal, with a 15 MLD water reservoir planned. A 54 MLD CETP will handle effluent disposal, and power needs of 350 MW will be supplied by GETCO/MGVCL. The development includes essential infrastructure like security, utilities, health facilities, training centers, and a fire station, alongside common utilities such as steam supply, effluent and sewage treatment plants, and waste management. The total project cost is estimated at ₹3500 crores (approx.).

- **Gujarat Agro Infrastructure Mega Food Park Pvt Ltd, Mangrol, Surat (operational)**

The project, approved as a Mega Food Park by the Ministry of Food Processing Industries (MoFPI) under the Pradhan Mantri Kisan Sampada Yojana (PMKSY), received final approval on May 22, 2014. With a total cost of ₹121.86 crores and a ₹50 crore grant, the project includes infrastructure like internal roads, power supply, ETP & STP, and weighbridges. Core processing facilities such as sorting, grading, packaging, cold chain infrastructure, and QC labs are also part of the plan, along with plug-and-play sheds for small enterprises and non-core facilities like admin buildings and training centers.

Annexure III

Global Marine Effluent Discharge Standards

Table 11. Global marine effluent discharge standards

Parameters	Units	India	USA EPA*	China Class 1, 2 & 3
		SER	Port of Houston	Port of Shanghai
pH	Value	6-9	6-9	6-9
COD	mg/l	250	4333	100-500
BOD	mg/l	100	2466	100-300
TSS	mg/l	100	2033	-
Oil & Grease	mg/l	20	20	5-20

* Measured at receiving end (seawater sample) while other countries measure at the discharge end point of CETP

Annexure IV

Shaping the Future: Proposed Projects and Policies for SER's Chemical and Pharma Industry

PROJECTS

1.1.1 Creating capacity at a global scale

1. Develop industrial estate for Global Anchor Investors	
- Location	Dahej PCPIR
- Area	20,000 - 25,000 acres (~ 101 Sq Km)
-Approx investment	\$15 - 20 billion
Details	GIDC to invite one of the top global companies to be the anchor investor for the production of specialty chemicals. Attract global players such as Aramco, Exxon Mobil, SABIC etc.
2. Develop a new Free Trade Warehouse Zone (FTWZ)	
- Location	Dahej PCPIR
- Area	2,500 acres (~ 10.1 Sq Km)
-Approx investment	\$2.5 billion
Details	To support the seamless supply of duty-free storage, trade, and value-addition activities
3. Establish a tank farm project on the PPP model at Dahej	
- Location	Dahej PCPIR
- Area	1,000 acres (~ 4 Sq Km)
-Approx investment	\$1 billion
Details	1. To supplement the existing facility at Hazira (0.19 MCM) which is insufficient 2. To meet the demand generated at Dahej as existing infra located 100 km from Dahej PCPIR

1.1.2 Additional infrastructure

1. Enhance port capacities	
Location	Dahej and Hazira Ports
Details	1. Increasing the liquid cargo handling capacities (current 32 MMT.pa) to cater future Chemical market (approx. \$150 billion) 2. Expedite the outer-harbour port at Hazira with infrastructure like pumping stations, tanker berths, and blending and mixing facilities.

2. Develop a common-user Jetty	
Location	Dahej Ports
Details	As all the jetties at Dahej are captive in nature, to support the non-major chemical players a common-user jetty in exports and imports
3. Connect Hazira port with the rail network	
Location	Hazira Port
Details	Extension of Indian railways line from National Thermal Power Corporation (NTPC) to Hazira Port & connecting Dedicated Freight Corridor (DFC) to ensure seamless transfer of freight between port and railways
4. Develop a Multi-Modal Logistic Park (MMLP)	
Location	PCPIR Dahej
Details	Customs facilities, Freight aggregation and distribution, Integrated storage and warehousing, and value-added services
5. North-South coastal roads	
Location	Connecting Dahej port and Hazira port with Expressways and NHs
Details	60M Right of way (ROW) Green and Brownfield development

Note: The area and investment for the proposed interventions are tentative.

1.1.3 Streamline the MSMEs

To develop common infrastructure facilities such as CETP, quality control certification centers, laboratories, steam boilers, fire safety systems, emergency response rooms, intra roads, drainage, pipelines, open spaces, power and other paraphernalia etc. in all the industrial estates.

1.1.4 For containing environmental fallouts

Upgrading the Surat, Integrated Command Control Centre (ICCC) to enable real-time monitoring of environmental compliance and automated generation of fines for violations of emission standards. In addition, establishing regional ICCCs at prominent Industrial estates will feed data into the central ICCC at Surat.

1.1.5 Up-scaling pharma industries

1. Establish an Air Freight Station	
Location	Surat Airport
Details	Currently, approximately 20% of pharma exports from SER are processed through Mumbai and Ahmedabad airports. To reduce logistical costs and streamline the export process, developing an air freight station within the SER region is essential.
2. Develop a new Pharma ancillary industrial estate	
Location	Near Alipor village, Bilimora
Details	The pharmaceutical industry relies heavily on various packaging materials, including glass bottles, aluminum strips, and plastics. Creating an ancillary industrial estate in Navsari would facilitate the local production of these essential packaging components, streamlining the supply chain for pharmaceutical manufacturers and reducing overall costs.

1.2 Policy recommendations:

	Intervention	Proposed action
 Monitoring	Improve compliance by leveraging technology to improve monitoring	ICCC of Surat is to be designated as the nodal monitoring entity for SER to ensure environment compliance by leveraging technology to monitor and levy penalties with PCB as the appellate
 Regulations	DESH bill and Draft India REACH Rules are currently under review with the Ministry of Commerce	State Govt. to request for early passage of the DESH bill and Draft India REACH (Chemical Management and Safety) Rules
	Streamline the process for unlocking land under sick units	Establish a Centre for Processing Accelerated Corporate Exit (C-PACE) at the state level (iNDEXTb) on similar lines to C-PACE at the Ministry of Corporate Affairs
 Green Chemicals	Global trend toward Green Chemicals	Incentivize the production of green chemicals and focus on energy-efficient fuels

Annexure V

Shaping the Future: Targeted Projects and Policies for SER's T&A and G&J Industries

Key interventions to make Surat 'Bharat Bazaar' replicating the Guangzhou & Dubai model

1. Development of B2C hub in DREAM City for end-to-end in Textile & Apparel and Gems & Jewelry

1.1 Bourses for Textile & Apparel and Gems & Jewelry	
Location	DREAM City, Surat
Details	Area: 40 acres (~ 0.2 Sq Km) each; Approx. Investment: \$1 bn Business facilities: A wholesale B2B trading marketplace for T&A and G&J. Offices for national and international traders, Product display areas, banks, retail shops, and dedicated customs clearance house for import and export. Attracting major players such as Nike, LV, Gucci, Adidas, Tiffany & co, Malabar etc. Common facilities: conference halls, multi-purpose halls, restaurants, parking, security, landscaped gardens etc.
1.2 Apparel & Jewelry souk for retail	
Location	DREAM City, Surat
Details	Area: 50 acres (~ 0.2 Sq Km), Approx. Investment: \$60 Mn Develop a retail and shopping souk street, inspired by the Gold Souk in Dubai with luxury malls, high-end restaurants Key Provision: Market area containing shops dedicated to apparel & jewelry products
1.3 Luxury Mall	
Location	DREAM City, Surat
Details	Area: 50 acres (~ 0.2 Sq Km), Approx. Investment: \$120 Mn Develop a luxury mall catering high end brands & shopping centre on the lines of Dubai mall
1.4 Artisan Village, Experience centre & Museum	
Location	DREAM City, Surat
Details	Area: 100 acres (~ 0.4 Sq Km), Approx. Investment: \$120 Mn
1.5 International convention Centre for branding & promotional activities	
Location	Sarsana, Surat
Details	Area: 50 acres (~ 0.2 Sq Km), Approx. Investment: \$0.2 bn Artisan Village & Museum based on Textile, Apparel, jewelry etc. Experience centre for branding & promotional activities Expansion/upgradation of the existing convention center to organize international expos & fashion shows for branding & promotional activities

Note: The area and investment for the proposed interventions are tentative & subject to change.

2. Development of B2B hub in HSR node for Textile & Apparel and Gems & Jewelry

2.1 B2B Zone for T&A and G&J

Location	HSR zone, Surat
Details	Area: 2000 acres (~ 8 Sq Km), Approx. Investment: \$1 Bn Develop a B2B Zone for T&A and G&J on the lines of the Guangzhou model following environmental norms. Provision of wholesale market blocks, warehouses under FTWZ, business hotels, Malls, restaurants, housing, care facilities, Shuttle services, helipads, and vertiports. Seamless connectivity with DREAM city, airport & major manufacturing clusters of India. End to End business services from trade, cataloguing, and communication to e-commerce

3. Streamlining and strengthening existing production facilities

3.1 Textile & G&J MSME Cluster

Location	Talangpore village near Sachin SEZ, Surat
Details	Area : 750 acres (~ 3 Sq Km), Approx. Investment: \$0.4 bn It was considered that to bring more size, scale and efficiency in the operation of MSMEs, a smart 'plug and play' facility must be developed in vicinity of the city where they are currently operating. Therefore, an Industrial Park for MSMEs has been proposed at an average distance of 20 km from the city core. Salient features • Large plots for big players • Sheds for MSMEs • Mega- common facility centre with » CETP » Common Boiler » Testing and certification » Warehouses » Business support centre » Material testing » Warehousing » Parking » Fire safety

Details	Logistics infrastructure: Raw Material / Finished Goods Warehouses, truck parking - Facilities for workers including - Dedicated e-bus service for transport - Workers' Hostel (Specially for women workers) - Rental housing for workers, particularly women - Creche for children - Schools - Basic amenities- water supply, sanitation, healthcare - EV Transportation Facilities, Truck driver facilities - Other paraphernalia Real estate: Hotels, Residential, Commercial complexes/malls, etc.
3.2 Surat international Airport expansion	
Location	Surat international airport
Details	Capacity expansion Surat airport which includes: 1. Vault facility for gems & jewelry 2. Cargo mega terminals 3. Airport free zone 4. Warehouses & Logistic

Note: Area and investment for proposed intervention is tentative & subject to change.

Incentives for B2B & B2C Zones

The Surat Economic Region is poised to become a leading B2B and B2C hub, leveraging strategic incentives from globally recognized economic zones like GIFT City, Guangzhou, and Dubai. These incentives offer a competitive edge by fostering an environment conducive to business growth, innovation, and international trade. By adopting and customizing these incentive structures, SER can attract significant foreign direct investment (FDI), boost local enterprise growth, and establish itself as a key player in both B2B and B2C markets. The following sections outline the specific incentives available in GIFT City, Guangzhou, and Dubai, which can serve as a model for SER's development.

1. GIFT City Incentives

- Operating Expense Subsidy:** 15% subsidy on operating expenses for 5 years.
- Interest Subsidy:** Up to 7% on term loans for 5 years, with a maximum of INR 10 million per annum.
- State Subsidies:** Subsidies on lease rental, PF contribution, and electricity charges.
- CSR Exemption:** Corporate Social Responsibility (CSR) provisions are not applicable for 5 years from commencement.
- Employment Cost Reimbursement:** 50% reimbursement of one month's employment cost (one-time) up to INR 50,000 for men and INR 60,000 for women.

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- **Electricity Duty Reimbursement:** 100% reimbursement for 5 years.
 - **R&D Support:** One-time support for establishing R&D institutes.
 - **Capex Support:** 25% subsidy for capital expenditure on IT City/Township projects.
 - **Audit and Compliance Exemptions:** No requirement to set up an Audit Committee, Nominations, and Remuneration Committee. Internal audit is required only if specified in the Articles of Association (AOA).
 - **Exemptions for Foreign Companies:** Exemptions from subscription offerings in securities and related prospectus requirements.
 - **Provident Fund Reimbursement:** 100% reimbursement of Provident Fund contributions by the employer for 5 years.
 - **Capital Subsidy:** 25% of capital expenditure as a subsidy.

2. Guangzhou Incentives

- **Corporate Income Tax (CIT) Reduction:** 15% CIT rate for qualified businesses in the Intensive Cooperation Zone (ICZ) and other development zones.
- **Investment Deduction:** 70% deduction of the investment amount from taxable income for qualified enterprises investing in seed-stage or technology startups.
- **Fixed Asset Investment Reward:** One-time rewards of up to 50 million RMB for new fixed asset investments by headquarters-based enterprises.
- **Cross-Border E-Commerce Reward:** 100,000 RMB reward for cross-border e-commerce enterprises with over \$5 million in annual imports/exports.
- **Small Business Tax Reduction:** 50% reduction on urban maintenance and construction tax, property tax, stamp tax, etc.

3. Dubai Incentives

- **Establishment of Free Zones:** Special economic areas designed to attract foreign investment and boost economic activities.
- **100% Foreign Ownership:** Full ownership by foreign entities within free zones.
- **Tax Exemptions:** 100% exemption from Corporate and Income Taxes, as well as Customs Duty.
- **Zero Tax on Imports and Exports:** No tax liabilities on importing or exporting goods.
- **Single Window Clearance:** Streamlined and simplified business setup procedures.
- **Repatriation of Profits:** 100% repatriation of profits to foreign entities.
- **Long-Term Leases:** Typically, 99-year leases ensure business stability.
- **Support Services for Ease of Doing Business (EoDB):** Additional services to simplify and accelerate business operations.
- **Investment Promotion and Protection Agreements (IPPAs):** Agreements to safeguard foreign investments.

Conclusion

The incentives outlined by GIFT City, Guangzhou, and Dubai offer a robust framework that can be adapted to SER to establish a thriving B2B and B2C hub. These incentives will not only enhance the region's competitiveness but also solidify its position as a major economic powerhouse within the broader regional and global markets.

Annexure VI

Parsi Circuit

A. Mumbai Circuit: Tracing the eternal flame- a journey through Mumbai's Parsi heritage

i. Heritage Walk in South Mumbai

Discover the timeless tales of Parsi resilience and legacy amidst historic sites like J.N. Petit Library, and K.R. Cama Oriental Institute. Create a virtual reality experience to step into the shoes of Parsi pioneers with a mesmerizing journey through time and learn about the successful Parsi businesses and the journeys to elevation

ii. Visit to Bombay House

Uncover the entrepreneurial spirit of Mumbai's Parsi community at the heart of Tata Group's historic headquarters. The Tata Experience Centre takes the people to the world of building Tata businesses.

iii. Lunch at Britannia & Co. Restaurant | Jimmy Boy

Savor the flavors of Parsi culture at Britannia & Co., where each dish tells a delicious story of tradition and taste. Indulge in an authentic wedding feast at Jimmy Boy.

iv. Dr. Bhau Daji Lad Museum, Byculla

Explore the solemn legacy of the Tower of Silence (exhibit), a poignant symbol of Parsi funerary traditions & other Parsi exhibits (additional curation required). Stop by the Khada Parsi statue on the way.

v. Dadar Athornan Institute (DAI)

Recreate the fire temple and ritual understanding at one of the oldest training institutes for priests. This can be added for people seeking a greater understanding of the religious practices without needing to enter an actual fire temple.

vi. Walk along Marine Drive

Take a leisurely evening stroll towards Marine Drive, passing by various Parsi statutes each with a tale. Enjoy the sea breeze whispering tales of Parsi heritage against the backdrop of Mumbai's skyline. Have an authentic natural ice cream from K. Rustoms, a legendary Parsi ice cream place, or Sweet Curd & Mithai at Parsi Dairy Farm

B. Mumbai - Surat Circuit: From gateway to gateway-traversing the trail of Parsi heritage

i. Day 1: Complete the Mumbai circuit

Rest at a luxury hotel after the completion of the Mumbai circuit. There are several high-quality F&B opportunities along the highway & pit stops that can be on-boarded.

ii. Day 2: Transit to Bordi, immersion into the life of the Parsi community, and chikoo farm safari

Experience the warm Parsi hospitality perfumed with the subtly intoxicating aroma of the sea and flora. The add-on experience of the fine art of honey production in an apiary (bee-keeping) is recommended. To add to the thrill of the field trip, the local brew can be savored, and mulberry and chikoos plucking from trees can be covered.

iii. Bonfire and star gazing night

What better way to end an enriching and exciting day than with a bonfire and a cool breeze blowing, under the stars of a moonlit night, feeling close to the galaxy and constellations of stars with a light touch of Parsi music. Stay at the farm or heritage houses.

iv. Day 3: Visit the Parsi Stambh, trek to Bahrot Caves, relax at Devka

- The Parsi stambh at Sanjan, Umargam taluka, Valsad has the time capsule buried & lends to storytelling. Trek to the Bahrot Caves which lie in the Bahrot Hills, create a VR experience to show the journey of the original fire before being finally housed at Udwada. The hills rise to 1,500 feet and are sacred to the Parsi community. Zoroastrians hid the holy fire for 12+ years in these mountains after an invasion of their settlement at Sanjan.
- Transit to a luxury resort at Devka and enjoy the evening at Daman.
- The drive is along scenic coastal roads seeing local architecture, optional stop at Udwada.

v. Day 4: Arrive at Navsari/Surat and complete the circuit

End the circuit by arriving at Navsari/Surat

C. Navsari Circuit: In the footsteps of ancestors- navigating Navsari's Parsi legacy

i. Arrival at Navsari

A traditional Parsi welcome ceremony with garlands and refreshments at a designated luxury lounge / Parsi bungalow.

ii. Dastoor Meherjirana Library

A guided tour of one of the oldest Parsi libraries, housing ancient manuscripts and religious texts. Special access to rare collections and an insightful discussion with a Parsi scholar.

iii. Historic Navsari tour

- **Walking Tour:** A guided tour showcasing old Parsi homes, community centers, and significant landmarks such as Jamshed Baug and various statues and memorials of notable Parsi figures like Jamshedji Tata.
- **Heritage Parsi homes:** Visit historic Parsi homes and meet with local Parsi families to hear personal stories and insights about their way of life.

iv. Lunch at a heritage Parsi house or Parsi bungalow

Gourmet Parsi Meal: A lavish, authentic Parsi lunch hosted at a beautifully restored heritage house. The meal includes traditional vegetarian/non-vegetarian dishes exhibiting traditional Parsi hospitality & culture

v. Parsi Anjuman and Cultural center

Cultural Insights: Visit the Parsi Anjuman and Cultural Center to learn about community activities, social programs, and the role of the Parsi Anjuman in preserving Parsi heritage

vi. Walk through sites and promenade (local market)

- A leisurely walk through other notable Parsi sites, including lesser-known temples.
- Experience a Parsi promenade in Sanjan, Valsad comprising of Parsi heritage along the way with local products, bakeries, and other hospitality services.
- Kolah vinegar & pickles are a must-visit

vii. Cultural performance

Enjoy a traditional Parsi cultural performance, including music and dance, providing a rich cultural immersion with F&B

D. Surat circuit: Jewels of Parsi heritage- unveiling the timeless treasures at the experience center

Surat's rich historical significance as an early settlement for Parsis, coupled with its vibrant Parsi community, tourism potential, accessibility, economic growth, and educational value, makes it an ideal location for an experience center focused on preserving and promoting Parsi heritage. The experience center will have shopping opportunities for amazing Parsi food and cultural artifacts like glass beads/silver torans and Gara/Embroidery. Explore the local Surat market on a guided walking or car tour, indulging in traditional Dotivala sweets and namkeen. Visit historic fire-temples or institutions supported by esteemed organizations, followed by lunch at a charming heritage bungalow and a showcase of iconic Parsi architecture.

Parsi Irani Zoroastrian Experience Center

Develop a Parsi Irani Zoroastrian Experience Center near Kapletha, Surat. Design the center with elements reflecting traditional Parsi architecture, ensuring a blend of heritage and modern amenities.

- **Historical and cultural exhibits** - Showcase artifacts, photographs, and a short movie/documentary tracing the history of the Parsi community in India
- **Interactive experiences** - Incorporate VR tours, interactive kiosks, and storytelling sessions to engage visitors of all ages
- **Workshops and classes** - Offer workshops on traditional Parsi arts, drama traditionally called the natak, crafts, cuisine, and language.

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- **Festivals and events** - Host celebrations of Parsi festivals like Navroz and Parsi New Year and other lesser-known cultural traditions
 - **Community involvement** - Engage local Parsi organizations and community leaders and establish volunteer programs for active participation.

E. Promenade development in Sanjan, Valsad

The Promenade will celebrate the region's heritage with Parsi-inspired architecture, featuring intricately designed shops offering handcrafted products and antiques. A vibrant food zone will showcase authentic Parsi cuisine. Cozy parsi-style cafes and cultural elements will make it a lively hub for shopping, dining, and leisure, blending tradition with modern vibrancy.

Annexure VII

List of Tourism Projects and Policy Interventions

1. Surat as the business-led Tourism hub	
1.1 Surat as a docking point for Cruise Tourism (GMB, Private)	
Location	Hazira Port or Near Ubhrat Beach
Details	Key facilities such as berthing facilities, passenger terminals, waiting areas, F&B outlets, information center, etc. to ensure smooth operations and pleasant experience for passengers
1.2 Beach Hotels (State Tourism Department, Private)	
Location	Near docking facility in Hazira/Ubhrat and Tithal beach
Details	For high-spending tourists with a wide range of facilities and amenities, accommodation and dining options, recreation facilities, kids and entertainment zones, etc.
1.3 Hotels & Resorts (State Tourism Department, Development Authority, Private)	
Location	Near docking point and airport, DREAM city, beaches, and other tourist attractions in SER (Tapi, Navsari, Dang, Valsad)
Details	15-20 hotels and resorts (including premium and budget, total 1,000-2,000 keys) catering to all segments of visitors with accommodation options, restaurants and dining areas, recreational facilities, etc.
1.4 Disneyland Theme Park (MoT, State Tourism Department, Private)	
Location	Near the docking point in Hazira/Ubhrat
Details	Gol to invite Disney to develop the park, the State to demarcate the land and provide on lease and facilitate clearances
	With theme-based recreational activities, musical fountains, landscaped areas, facilities for live entertainment & stage shows, event spaces, food outlets, retail outlets, spas, basic amenities
1.5 Beach Front Development (Development Authority/Tourism department)	
Location	Suvali, Ubhrat, Tithal and Nargol Beach
Details	Beach front development (in Suvali, Ubhrat, and Tithal) with infrastructure development and engaging activities. Nature-Based Tourism Activities at Nargol Beach, Valsad
2. Dang as the eco and rural tourism hub	
2.1. Purna Wildlife Sanctuary, Dang and Vansda National Park, Navsari (Forest Department, Tourism Department, Private)	
Location	Dang and Navsari
Details	Develop premium eco-resorts, organized day and night safaris, rental facilities for vehicles and cycling, wellness ayurvedic spa and yoga center, and visitors center. Promote 'Owling in Dang'.

2.2. Adventure tourism (Forest Department, Tourism Department, Private)	
Location	Dang, Navsari and Tapi
Details	Upgrade existing trails with the provision of key facilities and develop premium eco-campsites for high-spending tourists. The government can hold hand agencies to prepare a 2-3 day itinerary for promoting organized camping and hiking.
2.3. Rural-based experience tourism (Tourism Department, DRDA, Private)	
Location	Dang, Navsari, Tapi and Valsad
Detail	1. Develop rural homestays with good amenities and availability of local rides for visits to the villages and nearby attractions 2. Promote traditional activities such as local art and handicraft activities (bamboo handicrafts, warli paintings, etc.), ethnic cuisines (including their preparation) along with the provision of continental and fusion cuisines, and other cultural activities and local festivals. 3. Develop Mango plantation and orchard tourism in Valsad.
2.4. Don Hill Station (Forest Department, Tourism Department, Private)	
Location	Don (Dang)
Details	Development of Don Hill Station with adventure sports activities like paragliding, zip-lining, rock climbing, and mountain biking; wellness and spa resorts, cultural experiences, and tribal markets, eco-lodges and wilderness campsites, food festivals, and culinary events.
2.5. Ukai Reservoir and the catchment area (Forest Department, Tourism Department, Private)	
Location	Thuti, Jamki, Narayanpur Villages in Ukai Taluka, Tapi
Details	Develop Nature trails and guided treks, adventure activities like boating and kayaking, camping and bonfires, water sports such as jet skiing and water scooters and fishing experiences along with supporting infrastructure such as visitor, information centers, eco-lodges, etc.
3. Experiential Tourism in SER	
3.1 Adaptive reuse of Heritage buildings (Tourism Department, Development Authority, Private)	
Location	In all the dilapidated heritage buildings in SER
Details	Restore and redevelop heritage sites into hotels and restaurants, artisan museums & studios, library & cultural centers, event venues, and experiential spaces, etc. that balance conservation with commercialization and promotion

3.2 Parsi (Zoroastrianism) Circuit (MoT, Tourism Department, Private)	
Location	Parsi tourist attractions in SER and Mumbai
Details	1. Parsi Irani Zoroastrian Experience Center in Surat. 2. Featuring guided heritage tours, a state-of-the-art museum, wellness centers, recreation, and retail hubs, and targeted destination branding along the trail offering a rich cultural and immersive experience. 3. Promenade in Sanjan, Valsad.
3.3 Festivals & events (Tourism Department, Private)	
Location	Across the region
Details	1. Scale up and promote existing festivals (Dang Darbar, Saputara Monsoon festival, etc.) on a wider scale. 2. An annual week-long Dang Bamboo Festival on World Bamboo Day (18 September) in Dang to bring people from across the country to explore and celebrate bamboo's diverse uses.
3.4 Art & Culture (Tourism Department, Private)	
Location	Across the region
Details	1. Create a cultural heritage village showcasing timeless traditions, art, and culture. 2. Promote Warli art and paintings on a wider scale through commercialization and tourism integration. 3. Cultural programs and performances of local dance and music forms such as the Kahadya dance of Dang. 4. Bamboo Hub in Dang - a center for artisans, wellness, education, and ecological tourism, leveraging the abundant bamboo resources
3.5 Boutique events destination (Tourism Department, Private)	
Location	Across the region
Details	Curate events related to arts & crafts, cultural festivals, food festivals, textile heritage fashion fiesta, gems & jewelry fairs, etc.

Policy Interventions
• Cruise Tourism Policy comprising of regulatory and safety framework to address the quality and regulatory gaps, including cruise policies and standards for cruise terminals and docking facilities.
• Gujarat Tourism to promote adventure, eco-tourism, and rural homestays, in lines with National Strategy for Adventure Tourism, 2022; National Strategy for Eco-Tourism, 2022 and National Strategy for Promotion of Rural Homestays - An Initiative towards Atmanirbhar Bharat, 2022. These policies include regulations, governance, management, and monitoring mechanisms to ensure compliance with various adventure sports, eco-tourism activities, etc..
• Requisite policy regulations on assessing carrying capacity for eco-sensitive areas, such as Dang, with provisions for ensuring compliance.
• The Tourism Policy of Gujarat can be modified for the provision of land on lease for categories such as hotels, resorts, theme parks, etc
• Formulate a scheme for restoring and redeveloping heritage sites that balances conservation with commercialization and promotion.
• Include zoning for regions comprising several destinations in the Gujarat tourism policy.

Annexure VIII

List of Agriculture & Allied Interventions

Proposed interventions for enhancing the value addition from the agriculture sector in SER

1. Establishing natural farming production clusters at suitable locations with appropriate cropping pattern	
Proposed Location	Multiple locations
Project details	• 100% coverage through micro irrigation at each cluster • Common bio input resource centers for Organic Seeds & Fertilizers • Local collection and storage facilities with primary grading and sorting • Transport and logistics support to the processing center • Coordination with existing FPOs offering end-to-end support and capacity building of farmers
2. Address supply chain and logistic issues in food processing by upgrading the capacity and efficiency of the Mega Food Park	
Proposed Location	Mega Food Park at Mangrol, Surat
Project details	• Set up collection centers and cold chain logistics with refrigerated vehicles • Laboratory for food testing & quality check • Third-party certification by Accredited Certification Agencies including IFOAM, USDA Organic, EU Organic, JAS, NPOP • Develop tailored facilities aligning with the needs of identified crops like dry warehouses, cold storage, specialized packaging & branding facility • Encourage SMEs to set up facilities on a shared basis increasing occupancy
3. Promote R&D and innovation and leverage agri-technology	
Proposed Location	Navsari Agricultural University
Project details	• Establish a Center of Excellence focusing on certifications, branding, training, and R&D for advanced farming, crop varieties, and multi-cropping patterns in collaboration with NCONF, GNFSU and APEDA • Promote agri-tech services to monitor farming aspects like quality control and predictive maintenance using AI, use of IoT-enabled equipment like sensors, drones, and cameras for agri data collection, blockchain technology for traceability, and supply chain transparency

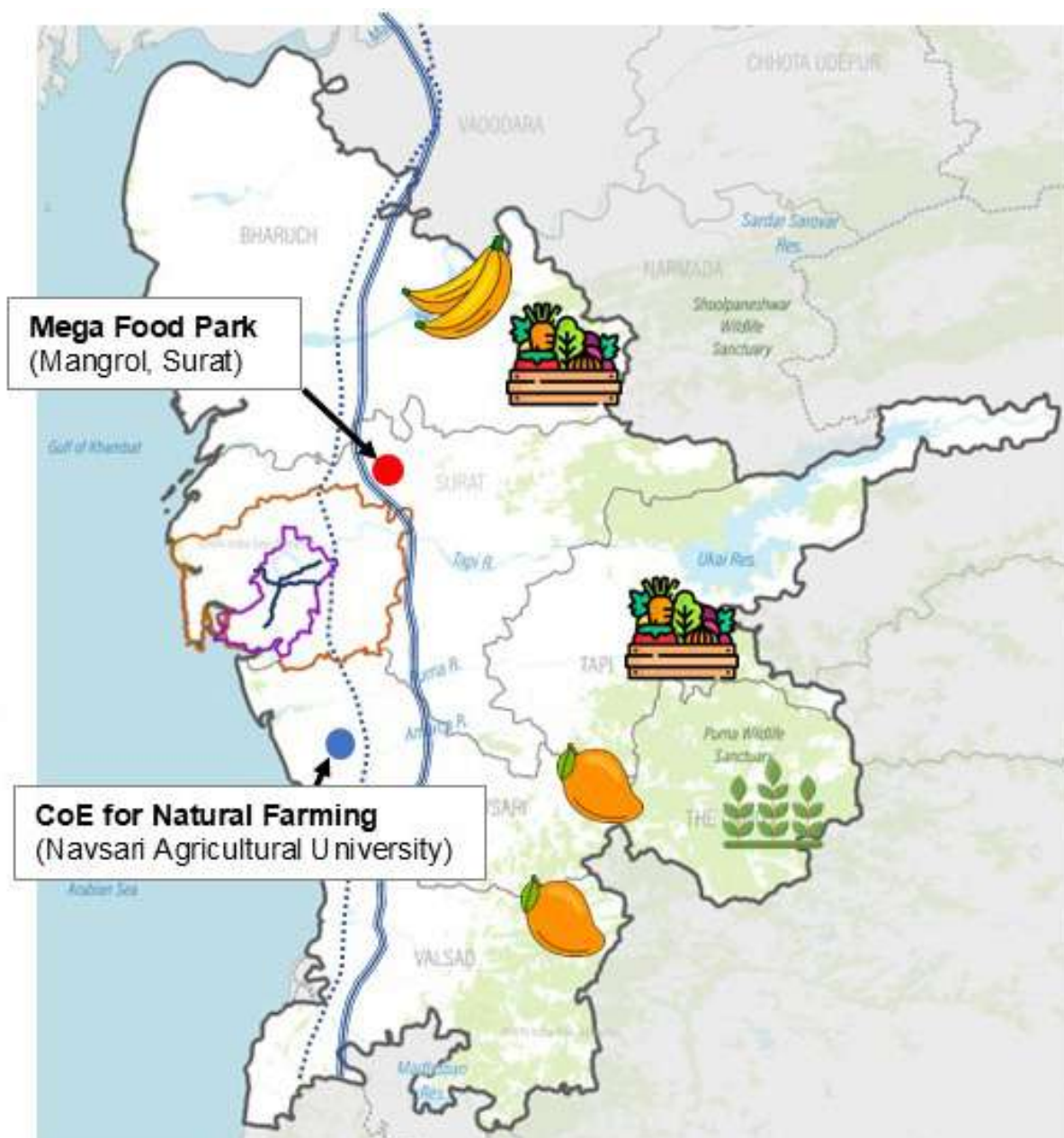


Figure 93. Proposals to promote a Cluster-based Model for Natural Farming in SER

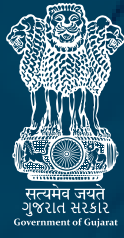
Some examples of Production Clusters*

- Mango: Tapi, Navsari & Valsad
- Banana/ Vegetables: Bharuch
- Organic Vegetables: Tapi
- Rain-fed multi-crop
(Ragi + Mango + Vegetables + Cashew nut): Dang

** Cluster locations are indicative and suggested based on district-level production data only*

Designed by:





NITI Aayog