Government of
Maharashtra

सत्यमेव जयते

NITI Aayog

Developing Mumbai Metropolitan Region (MMR) as a Global Economic Hub

September 2024

DATA SOURCES AND DISCLAIMER

This document is the Economic Master Plan for the Mumbai Metropolitan Region (MMR). It describes the Growth Drivers and roadmap that will steer the region to its goal by FY30.

Data used for the purpose of this document is derived from various public sources and from the inputs received from the state government – including GDP, jobs and economic baselines from data published by the Maharashtra Department of Economics and Statistics; existing land, project and budget details from MMRDA and CIDCO reports, and climate baseline data from the Mumbai Climate Action Plan 2022.

Projects and suggestions laid out in this document are directional, derived from stakeholder consultations and preliminary market scans and must be tested and further developed through more detailed economic, financial, environmental, social feasibility and impact studies before implementation.

Contents

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Eknath Sambhaji Shinde
Chief Minister
Maharashtra

Message

It gives me immense pleasure to present the people of Maharashtra with this Economic Master Plan that lays out the vision to make Mumbai Metropolitan Region (MMR) one of the world's premier city-regions by 2030, with a GDP of INR 25 lakh crore and with 30 lakh more jobs, of which 10 lakh will be for women. I am proud to say that MMR is the first city-region to publish this Economic Master Plan under Bharat's G-Hub Programme.

MMR is India's largest economic city-region and one of the world's largest urban agglomerations: It is home to 20% of Maharashtra's population, and contributes to over 30% of Maharashtra's GSDP. The per-capita income in the region is $5,248, almost double the national average. MMR's continued development is central to the Honorable Prime Minister Shri Narendra Modiji's vision of a Viksit Bharat by 2047.

MMR stands out as an international financial centre, India's largest port with multimodal connectivity, a thriving manufacturing hub, a premier centre of education, India's art and entertainment capital, rich natural resources including a 300 Km long coastline, and it has a centuries-old history and rich culture. With such endowments, MMR has the potential to achieve great economic heights with inclusive growth across sectors and social groups.

This Economic Master Plan defines 7 Growth Drivers that will power the sustainable and inclusive development of MMR. It envisions a very large role for the private sector, which will be enabled by the Central and State Government through better infrastructure, seed investments, favorable policies, and institutes that facilitate the role of the private sector. I am happy to say that projects with over INR 4 lakh crore rupees of investment are already underway. My Government is committed to create enabling ecosystem and critical policy framework essential to work in close collaboration with the private sector to achieve MMR's economic goals.

I am especially happy that this Economic Master Plan lays out plans to build over 3 million affordable houses so that no one will have to live in slums. It also envisages 30 lakh jobs across sectors from construction to high-end AI and technology, including 10 lakh jobs just for women.

The report is another step towards achieving the goal of a $ 1 trillion economy of Maharashtra. I would like to thank all the people associated with the report, especially the NITI Aayog for working in the spirit of the cooperative federalism on the 'Growth-hub' program. This Economic Master Plan lays out not only the road map for inclusive development of the MMR but overall development of Maharashtra as "Vikasit Maharashtra" by 2047. I would like to congratulate the NITI Aayog, ISEG Foundation and World Resources Institute on the release of MMR Economic Master Plan.

(Eknath Sambhaji Shinde)

Devendra Fadnavis

DEPUTY CHIEF MINISTER
MAHARASHTRA STATE

MESSAGE

I am pleased to see the release of this Economic Master Plan for the Mumbai Metropolitan Region (MMR), and I thank the leadership of our Honorable Chief Minister Shri Eknath Shindeji, and the initiative of the NITI Aayog in presenting this report to the people of MMR. It is a great honor that MMR is the first city-region in the country to release its Master Plan under NITI Aayog's 'Growth Hub' program.

According to the World Bank, 40 percent of India's population will be in urban areas by 2036, that will contribute almost 70 percent to GDP. This growth of city-regions needs careful planning, and close partnerships between the private sector and various government bodies.

This Economic Master Plan goes beyond a Mumbai-centric view, and lays out a comprehensive plan for the development of the entire MMR, including employment for 10 lakh women, 30 lakh affordable homes, specific measures to improve material circularity in MMR and to accelerate its net-zero transition, and amenities to attract and retain talent in MMR.

This report closely dovetails with our Economic Advisory Council Report which we had commissioned under the Chairmanship of Tata Son's N Chandrasekaran to lay out Maharashtra's 1 Trillion dollar roadmap. Both reports hint at developing regions around Mumbai to further bolster the growth momentum. Our Government plans to have the 3rd Mumbai at the Mumbai Trans Harbour Link influence zone and 4th Mumbai near the Wadhavan Port including 3rd Airport for Mumbai.

An incremental GVA contribution of almost $150 Bn is planned for the next 6 years while generating almost 30 lakh jobs, through 7 identified growth drivers for the region.

This Economic Master Plan lays out the vision for MMR to achieve a GDP of INR 25 lakh crores by 2030, and upto INR 80 lakh crores by 2047. This will make a vital contribution to our Hon. Prime Minister Shri Narendra Modiji's vision of Viksit Bharat by 2047.

(Devendra Fadnavis)

सत्यमेव जयते

DEPUTY CHIEF MINISTER
MAHARASHTRA STATE

Message

Maharashtra is the largest state economy in Bharat, and we have set a goal to become an INR 80 lakh crore ($1 trillion) economy by 2030. The Mumbai Metropolitan Region (MMR) is a crucial part of this ambition, contributing 31% of the state's GDP. Its continued economic growth, extending beyond Brihan Mumbai, is essential for both Maharashtra and Bharat's aspiration of becoming a Viksit Bharat by 2047.

The MMR is experiencing significant growth, supported by over $50 billion in ongoing infrastructure investments. To further develop MMR into a Global Economic Hub, we plan to initiate a seed investment of $6 billion (INR 50,000 crore). The government is fully committed to providing the necessary finances to meet our development goals for the region.

We are dedicated to making MMR nearly slum-free by 2030. However, this effort requires support from the Central Government due to the presence of nearly two lakh slum households (ten lakh people) on Central Government land within MMR, managed by agencies such as the railways, AAI, Mumbai Port, and defence.

The report also proposes utilizing 253 hectares of land under the Mumbai Port Trust to revitalize Mumbai's core city, creating green spaces, enhancing services, and promoting housing, tourism, and recreation. The Maharashtra Government will provide all necessary financial and infrastructure support to ensure the success of this project.

As MMR leads the 'Growth Hub' programme, other city-regions like Pune, Nashik, and Nagpur will also be included to harness their strengths effectively.

Sincere gratitude to NITI Aayog, the ISEG Foundation, and WRI for your collaboration in preparing this report. Your support is invaluable as we work towards these ambitious goals.

(Ajit Pawar)

Sujata Saunik
Chief Secretary

Maharashtra aims to become a US$1 trillion economy soon, with the Mumbai Metropolitan Region playing a crucial role in this ambition. Spanning over 6,300 sq km, the MMR region currently has a GDP of US$140 billion and is targeting an increase to US$300 billion, significantly contributing to Maharashtra's overarching economic goals. Cities are central to economic growth and innovation. The concept of economic master planning, which positions cities as growth hubs, is essential. This approach not only emphasizes economic advancement but also prioritizes job creation, sustainability and inclusivity.

To support this growth, numerous large-scale connectivity projects are being developed across the MMR. This Economic Master Plan serves as a strategic framework to establish the MMR as a global center for commerce, innovation, and culture. It outlines key growth drivers and provides a roadmap to achieve the vision of transforming the region into a $300 billion economy by 2030. While the region is well-regarded as India's finance and entertainment capital, its two airports and three major ports position the MMR to emerge as a logistics powerhouse for the Western Coast of India. Additionally, it holds significant untapped potential in tourism that could be leveraged for further growth.

As India strives to become a knowledge economy, the newly developed areas of Mumbai, particularly in the Navi Mumbai-Panvel region and Palghar-Vadhvan region, offer a remarkable opportunity for the MMR to emerge as a leader in higher education, innovation, and R&D. This plan represents a shift towards a more sustainable and diverse economy, with opportunities for growth and innovation in a range of sectors along with a women inclusivity blueprint to enable and scale up women participation in workforce.

Central to this plan is our commitment to fostering a favourable business environment conducive to attracting investment, fostering entrepreneurship, and driving economic growth. Targeted interventions across tourism, aviation, healthcare, education and untapped sectors such as new age services and start-ups will aim to generate new opportunities for businesses and create high-quality employment for our citizens. Moreover, the Economic Master Plan underscores a commitment to elevating the quality of life for residents. Through investments and policy reforms into critical areas such as green infrastructure, public transportation, affordable housing, our aim is to cultivate a more sustainable city and improve liveability that meets the needs and aspirations of all its inhabitants and establish MMR as the sustainability & inclusivity leader in the country with its target of near net zero by 2047.

While many projects will require further detailing, this report represents a strong starting point. It emphasizes projectization, necessary policies investments equivalent for laying the groundwork for future plans. This report is a culmination of extensive collaboration, and strategic planning among the Government of Maharashtra, various state implementation agencies and industry stakeholders.

I would like to thank NITI Aayog for recommending the methodology used in its development. I would also like to extend my thanks to the ISEG Foundation and WRI for their invaluable contribution to the creation of this master plan for the Mumbai Metropolitan Region.

(Sujata Saunik)

बी. वी. आर. सुब्रह्मण्यम
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मुख्य कार्यकारी अधिकारी
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FOREWORD

Nearly 35% of India's population is urban today, contributing more than 55% of India's GDP. As India progresses on its growth path, nearly 40% of India's population could be urbanized by 2030, generating nearly 70% of its GDP. Cities, therefore, will play a major role in India's economic growth story, a role that is only going to get bigger. It is time that they were not only recognized as the country's economic engines but also planned and governed effectively to fulfil this role.

In 2023, NITI Aayog created a Growth Hub initiative under the Viksit Bharat vision. This initiative aims to strategically develop city regions for economic advancement, leveraging an economic master planning framework developed in collaboration with the ISEG Foundation. Four city-regions, viz Mumbai Metropolitan Region (MMR), Surat, Visakhapatnam and Varanasi, were taken up as pilot areas for finalizing economic visions at the request of the states. I am pleased that the MMR Economic Master Plan is now complete. This plan is designed to transform the region into a vibrant hub to attract talent, featuring a livable, inclusive, and sustainable urban ecosystem.

With a population exceeding 25.8 million and a GDP of $140 billion, the Mumbai Metropolitan Region (MMR) is already India's most important economic powerhouse. However, its untapped potential remains substantial. The Economic Plan is a crucial initiative to unlock this potential, leveraging the region's strengths, including its status as a thriving financial services and entertainment hub, with three major ports, two airports and Maharashtra's ongoing energy transition initiatives, among others.

Moreover, the plan recognizes the importance of sustainability and inclusivity in ensuring long-term prosperity and outlines a holistic approach to urban planning to create livable, inclusive, and sustainable urban ecosystems that attract high-quality talent, focus on scaling up women participation and drive economic growth.

This plan involved a detailed evaluation of the region's economic landscape, conducted through over 75 meetings with central and state agencies as well as industry stakeholders. This comprehensive analysis identified both strengths and challenges, enabling the identification of key growth drivers and the formulation of policy frameworks to facilitate growth.

While the projects and policies outlined in this report will require further refinement to establish a precise implementation pathway, this serves as an excellent starting point. It sets the foundation for transforming MMR into a US$1.5 trillion economy by 2047 and provides a clear roadmap with growth drivers to achieve a US$300 billion GDP by 2030.

I would like to extend my gratitude to the Government of Maharashtra for taking the lead in enabling the preparation of the MMR Economic Plan and to the ISEG Foundation and WRI for their invaluable knowledge partnership and expertise in preparing this report.

I hope this economic plan transitions into actionable projects, policies, and funding strategies, leading to a successful implementation. I extend my best wishes to the Government of Maharashtra and MMR officials as they work on detailing and executing this economic master plan.

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Dated: 8th August, 2024

[B.V.R. Subrahmanyam]

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Executive Summary

Economic Master Plan for the Mumbai Metropolitan Region (MMR)

- The Mumbai Metropolitan Region (MMR) is a $140 billion economy (INR 12,00,000 crore). Spread over five districts, with an estimated 25.8 million population, it employs 10 million people. Its per capita income of $5,248 (INR 4,36,000) is higher than the national average. However, real economic growth over the FY12 - 20 period has been sluggish at 6.1% CAGR, lower than the national average.
- By 2047, MMR can grow into one of the world's foremost economies with a GDP of close to $1.5 trillion (almost matching the Tokyo Metropolis Region's GDP of $2 trillion in 2023) and GDP/capita of $38,000 (equivalent to present day Italy)
- Over the next seven years (by FY30), MMR can achieve a GDP of $300 billion (INR 25,00,000 crore), grow at 9 - 10% real CAGR, and provide employment to an additional 2.8 - 3 million people, of which one million could be women. To achieve this, the region will need to attract private sector investments in the range of $125 - 135 billion (INR 11,00,000 crore) over this period. Additionally, it will need to grow its urban areas such that they systematically open up new opportunities for providing highly productive jobs and affordable housing.
- The good news is that MMR is already on this positive growth trajectory. Investments of almost $50+ billion (INR 4,15,000 crore) have been made in nearly 20 important ongoing / planned infrastructure projects. Many of these projects are already complete and several more are expected to be completed over the next 5 - 7 years.
- The Economic Master Plan has identified seven economic Growth Drivers that can drive $130 - 150 billion (INR 11 - 12,50,000 crore) in incremental GDP for MMR by FY30, while creating around 2.8 - 3 million non-farm jobs. They are:

  1. **Global Services**
     Transform MMR into a global services hub by growing seven champion services: 1) Financial services and fintech, 2) New-age services like AI, 3) Healthcare and education, 4) Aviation, 5) Media and entertainment, 6) Global capability centres, 7) Data Centers. (Estimated Impact: GVA increase of $40 - 45 billion or around INR 3,50,000 crore and 0.9 - 1 million more jobs.)
  2. **Affordable Housing**
     Create three million affordable homes by FY30, including 2.2 million slum rehabilitations and 0.8 - 1 million affordable homes. (Estimated Impact: GVA increase of $18 - 20 billion or around INR 1,60,000 crore and 0.3 million more jobs.)
  3. **Tourism**
     Repurpose Mumbai for its residents as a vibrant urban recreation hub and a tourism hub, by promoting themes like coastal, beach and cruise tourism, MICE tourism, nature tourism, culture, heritage and fort tourism, entertainment tourism, and wellness and medical tourism. (Estimated Impact: GVA increase of $15 - 20 billion or INR 1,60,000 crore and 0.7 million more jobs.)
  4. **Manufacturing and Logistics**
     Position and develop MMR as a port-proximate, integrated manufacturing and logistics hub. Rejuvenate MMR's manufacturing base by focusing on seven value-chains in discrete and assembly-line manufacturing, green hydrogen, circular economy, electronics, bulk industries, and integrated textiles & apparels. (Estimated Impact: GVA increase of $20 - 25 billion or INR 2,00,000 crore, and 0.6 million more jobs.)

5. **Planned Cities and Transit-oriented Development**
   Plan brownfield urbanisation (a total of 19 business districts, tourism hubs, new cities) in emerging areas and intensive transit-oriented urban renewal of the existing city. (Estimated Impact: GVA increase of $25 - 35 billion or INR 2,50,000 crore and 50,000 more jobs.)

6. **Sustainability and Inclusivity**
   Transform MMR into the sustainability and inclusivity leader in India with the aim of achieving net zero by 2047, and increase women's participation in the workforce to 38 - 40% by 2030. (Estimated Impact: GVA increase of $2 - 3 billion or INR 20,000 crore and 50,000 more jobs.)

7. **Urban Infrastructure**
   Ensure world-class core and last-mile urban infrastructure. This includes essentials like metro rail and other transport, roads, sewage and water, and less polluting alternatives. It also includes nine vital Amenities for Liveability and Talent Attractions (ALTAs). (Estimated Impact: GVA increase of $4 - 5 billion or INR 37,000 crore and 0.3 million more jobs.)

- To convert these growth drivers into actionable plans, 30 projects, eight sectoral policies and nine institutional shifts have been identified.
  - These 30 projects cover the seven growth drivers and include the creation of two world-class financial services districts at BKC and Wadala, rapid development of an Aerocity near the Navi Mumbai airport, introduction of services/culture/tourism hubs on the Mumbai Port Trust land, creation of a Film City in Mumbai, redevelopment of slums and affordable housing, introduction of tourism hubs and precincts, five industrial cities, world-class connectivity infrastructure and world-class citizen amenities.
  - The eight policies cover services, tourism, affordable housing, TOD policy, investment attraction and land allotment, urban planning, green MMR and women inclusivity.
  - The institutional shifts include: i) increasing the mandate for economic masterplanning, investment/talent attraction for MMRDA, ii) creating a ministry/department of services at the state government level to develop policy and attract investments, iii) creating an MMR Tourism Board and iv) including economic master-planning as one of the mandates for the three large Municipal Corporations in the MMR.

- The support of the Central Government of India for MMR's transformation will be critical. Required actions could include: i) expediting the implementation of the recently announced deep-draft Vadhavan Port, ii) facilitating the development of MMR as a global aviation hub, iii) developing part of the Mumbai Port Trust land for job creation through services, housing and tourism, iv) facilitating the redevelopment of 2.2 lakh slum households on Central Government owned lands in line with the "Housing for All" vision and v) increasing the "ease of doing business" through simplifying MoEF (Ministry of Environment and Forests), Defence and AAI (Airports Authority of India) approvals.

- Catalysing and attracting private investments is a main pillar of this master-plan. A total of $125 - 135 billion or INR 11,00,000 crore will be required in private investments which is around 70 per cent of the total investments required. The Centre and the State will need to complete all ongoing and announced projects of $65 billion (INR 5,00,000 crore). The Government of Maharashtra agencies such as MMRDA, CIDCO, SRA, MHADA and MIDC will need to scale up their investments at least 2x (which will be self-funded through monetisation of the developed lands) and the Government of Maharashtra will need to make investments of $6 billion or INR 50,000 crores in addition to the already committed government spending to kick-start the virtuous cycle of public and private investment.

- The implementation of the plan can be expedited by the creation of an integrated MMR-level War Room with designated representatives from relevant state departments. The implementation can be reviewed on a quarterly basis by a governing body led by the Honorable Chief Minister and Deputy Chief Ministers. A Growth Hub Steering Committee chaired by the Chief Secretary can review progress on a monthly basis for effective coordination and alignment of efforts towards achieving the developmental goals of MMR.

1 Introducing the G-Hub project

Globally, successful urban economic hubs were created on the backs of their capabilities to attract high-quality talent. In fact, some of the world's largest urban economies, be they Singapore, London, Tokyo or New York, are also the world's best places to live, work and play.

Hence, as India sets its aspiration to become a $35 trillion economy by 2047, its centenary year of independence, this is the right moment for a step change to be introduced into the economic master-planning and urbanisation approach for Indian cities, to explore and embrace bold and break-through initiatives which could make them competitive, talent-attracting magnets by providing a liveable, inclusive and sustainable urban ecosystem.

Strategically, this new urbanisation approach should start with the preparation of an economic vision for the city with a 20 - 25-year horizon, while creating an Economic Master Plan for the next ten years. Spatial regional planning for the city should be further prepared to achieve the aspirations and targets set out in the Economic Master Plan. Also, in order to allow flexible geo-spatial economic growth, economic visioning and master planning will need to be done for a "City-region", which could include economically relevant and co-located spatial areas for the next 20 - 25 years, rather than just the existing cities and municipal boundaries.

As a pilot to lead this initiative, NITI Aayog, in partnership with the state government of Maharashtra, has assisted in the preparation of this Economic Master Plan for the MMR.

The MMR is India's largest economic region and one of the world's largest urban agglomerations. By 2047, MMR would be a $1.5 trillion economy of nearly 36 - 38 million people. Substantial private and government investments are needed in planned urbanisation, job creation and sustainability to realise its potential. To lay a foundation for this growth, several massive, large-scale, intra- and inter-regional connectivity projects are under various stages of development through the length and breadth of MMR. The Government of Maharashtra has also recently launched an economic vision for the Maharashtra state that lays down the road map to become a $1 trillion economy by 2028.

This Economic Master Plan builds on the existing momentum to define MMR's 2047 vision and its path for 2030.

What is an Economic Master Plan

An Economic Master Plan for a city region should be founded on three key pillars:

1. Benchmark Economic Growth.
2. Liveability to attract talent.
3. Inclusivity and sustainability, to support the economics.

Economy & Investment
Making cities as Economic Growth leaders rather than just urban hubs

Quality of Life
Making cities livable with world-class quality of life for all segments of society

Inclusivity & Sustainability
Making cities as equal opportunity platforms for all + leaders in sustainability

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The master plan is developed following five key steps:

1. As is Economic, Infrastruture and Sustainability Diagnostics
2. SWOT and endowments analysis of the city
3. Top down economic, sustainability, physical infrastructure vision
4. Detailing out top 7-10 economic growth drivers
5. Funding/ Implementation Plan

2 Providing context about the MMR economy

As per the regional plan, the MMR is spread across five districts in Maharashtra - Mumbai Island City, Mumbai Suburban, Thane, Palghar and Raigad - with a geographical area of 6,328 sqkm. Having said that, for the purpose of this study and to account for the strategic impact of key upcoming infrastructure projects, a slightly expanded geographical limit of MMR has been taken into consideration. This includes areas towards Vadhavan port in the north and Dighi port in the south.

With these adjustments, the MMR as considered in this report, is estimated to be a $140 billion[1] economy in FY23, with an estimated population of 25.8 million and 10 million jobs. There are nine municipal corporations within this region – Greater Mumbai (Municipal Corporation of Greater Mumbai—MCGM or BMC), Thane (Thane Municipal Corporation or TMC), Navi Mumbai (Navi Mumbai Municipal Corporation or NMMC), Mira-Bhayandar, Kalyan-Dombivli, Vasai-Virar, Bhiwandi-Nizampur, Ulhasnagar and Panvel.

Key factoids about MMR's economy:

- As of 2023, the region accounts for 31.2% of Maharashtra's GDP, and 20% of its population. It has a per capita income of $5,248, which is 1.6X of the Maharashtra and 2.3X of the India average. This is the result of concentration of high-productivity services jobs in MMR.
- The region has grown at 6.1% CAGR (FY12 - 20, real) historically, slower than India's 6.6% CAGR over the same period.
  - » The services sector (professional services, health, education, real estate services) drives nearly 60% of MMR's GDP (and nearly 40% of employment) and has grown at an average 8% CAGR, primarily driven by productivity growth. This has the potential to be substantially increased.
  - » However, the manufacturing and logistics sector, which contributes 20% of MMR's GDP (and 27% of employment), has grown at a meagre 4.5% CAGR, driving down the region's growth. This indicates that manufacturing growth moved to other parts of Maharashtra / India during this period due to the availability of cheaper land / better incentives.
  - » Similarly, growth in the construction sector (nearly 6% of GDP) and trade, hospitality (13.4% GDP) was at 2.8% and 6.2%, respectively.
- In FY23, MMR employed 10 million people; jobs have grown at 1.1% CAGR historically during FY12 - 20.
  - » Labour force participation is 53.8%, as against 57.9% for Maharashtra and 55.2% for India. This needs to be improved.
  - » Key employment-driving sectors include knowledge services (2.4 million; 1.8% historical employment growth during FY12 - 20), manufacturing, transport and logistics (2.7 million; declined at -0.5% over FY12 - 20), trade and hospitality (1.5 million; 3.3% growth) and construction (0.8 million; 0.1% growth).

[1] Total GDP of 5 districts in FY23 was $161.4 billion; for the purpose of this report, 75% of GDP of Thane, Palghar and Raigad has been taken within MMR

- The Greater Mumbai area under MCGM contributes nearly 60% of MMR's GDP, 52% of the MMR population and has grown at 6.2% CAGR (GDP growth; FY12 - 20; real). The adjoining city areas of Thane and Navi Mumbai together have contributed 17% of GDP and population while growing much faster at 7.9% CAGR during the same period exhibiting an outward expansion of the Mumbai region. This is similar to the growth trajectories of global hubs like London and New York, where populations gradually expanded geographically. Having said that, job density still naturally remains primarily concentrated around Mumbai city.

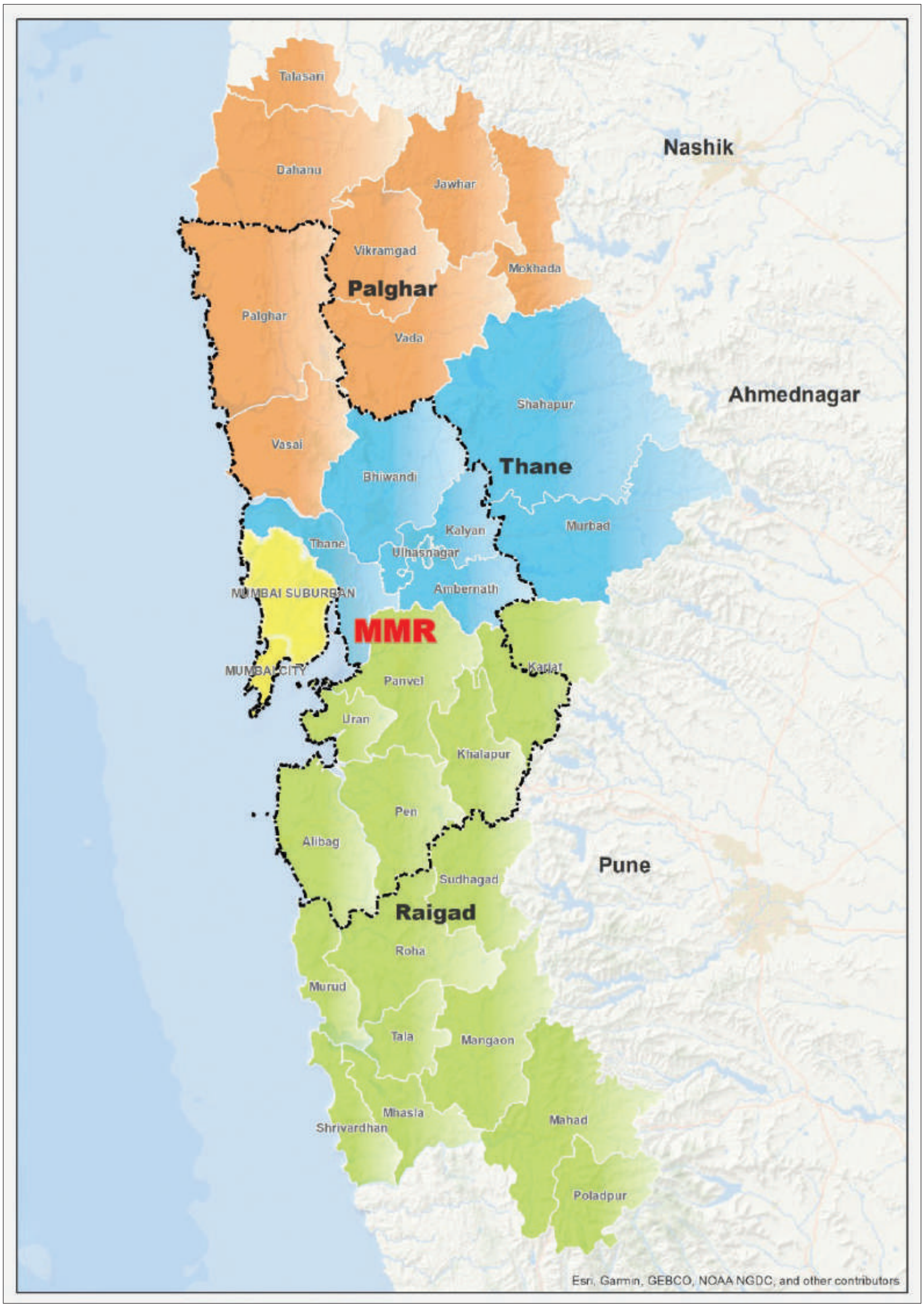


Figure 1: Geography of Mumbai Metropolitan Region

3 Articulating the vision and aspirations for MMR

Going forward, by 2047, MMR could be transformed into one of the world's foremost economies with a 36 - 38 million population, $1.2 - 1.5 trillion GDP (equivalent to Tokyo's GDP in 2023) and more than $38,000 GDP/capita (equivalent to Japan and Italy today).

By FY30, MMR should aspire to a GDP of $300 billion, a growth rate of 10% real CAGR and a per capita income of $10,000 - 12,000. On the back of this economic growth, its population would also increase from the 25.8 million it is today to nearly 29 million by 2030.

Geographically, MMR's population and GDP will get redistributed outwards as new areas systematically emerge along the upcoming connectivity corridors. Re-distribution of the population could be more stark, as new affordable urban areas emerge, with seamless and fast connectivity to jobs which could continue to be concentrated in the inner regions. Over the next 25 years, the Greater Mumbai (MCGM area) population is likely to remain more or less flat (13 million in 2023 and projected to reach 13.7 million by 2047) with its share of the MMR population dropping from 50% to 36%. Even if the population were to decrease, the GDP share would drop marginally from 60% in 2023 to nearly 55%. This is because of the concentration of some of the highest productivity jobs in Mumbai. They would drive Greater Mumbai's GDP per capita up from $6,500 in 2023 to $55,000+ by 2047. This growth trajectory would be similar to the growth trajectories of global economic regions like London and New York. London's inner city hosts 40% of the metropolitan region population, 60% of the jobs and 68% of all GDP. The share of population and jobs in London's inner city has remained nearly flat over the last two decades. Similarly, New York's inner city hosts 31% of the metropolitan region population, 51% of the jobs and 60+% of GDP.

Having said that, as depicted in Figure 2, while the population of the rest of MMR could potentially grow from 13 million (50% share) to 22 - 24 million (64% share) by 2047, its GDP share could potentially grow from 40% to 45% of MMR, growing at 1 - 2% p.a. faster than Mumbai's inner city, given the emergence of new business districts, new cities and new manufacturing and logistics hubs.

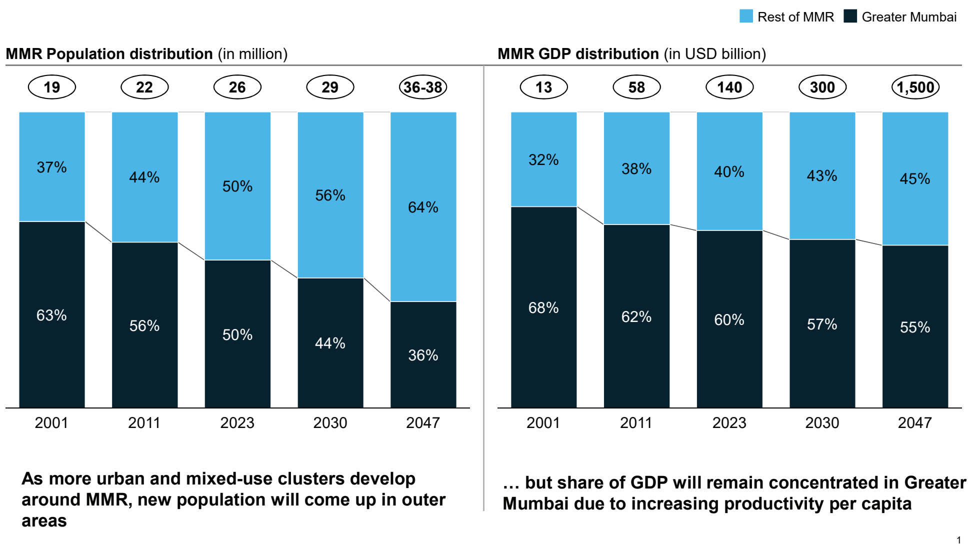


Figure 2: Mumbai Metropolitan Region Population and GDP Distribution Trends

There are certain key implications of the MMR growth trajectory that are important to note here:

1. By 2030, MMR will have around 3.5 million youth entering the workforce, of which approximately 1.5 million will be women. Jobs will be needed for them.
2. The per capita income aspiration will require that at least 50% of all new jobs in MMR (i.e., 1.4 - 1.5 million) are high-productivity, cutting-edge jobs, e.g., IT/ITeS, financial services, AI, chip manufacturing, media, AVGC and R&D.
3. Outward growth of MMR will need to be managed and new urban clusters / cities developed along the upcoming transit corridors.
4. MMR will need 3 million affordable homes by FY30.
5. Additionally, the share of households with a family income of more than INR 12 lakh will grow from 19% in FY23 to 30% by FY30, implying that there will be a growing higher-spending class to cater to.
6. Simultaneously, MMR will need ambitious goals to revise its liveability, inclusivity and sustainability indicators, in line with global economic hubs like Singapore, Tokyo and London. Some illustrative targets and indicators are shown in Figure 3 below.

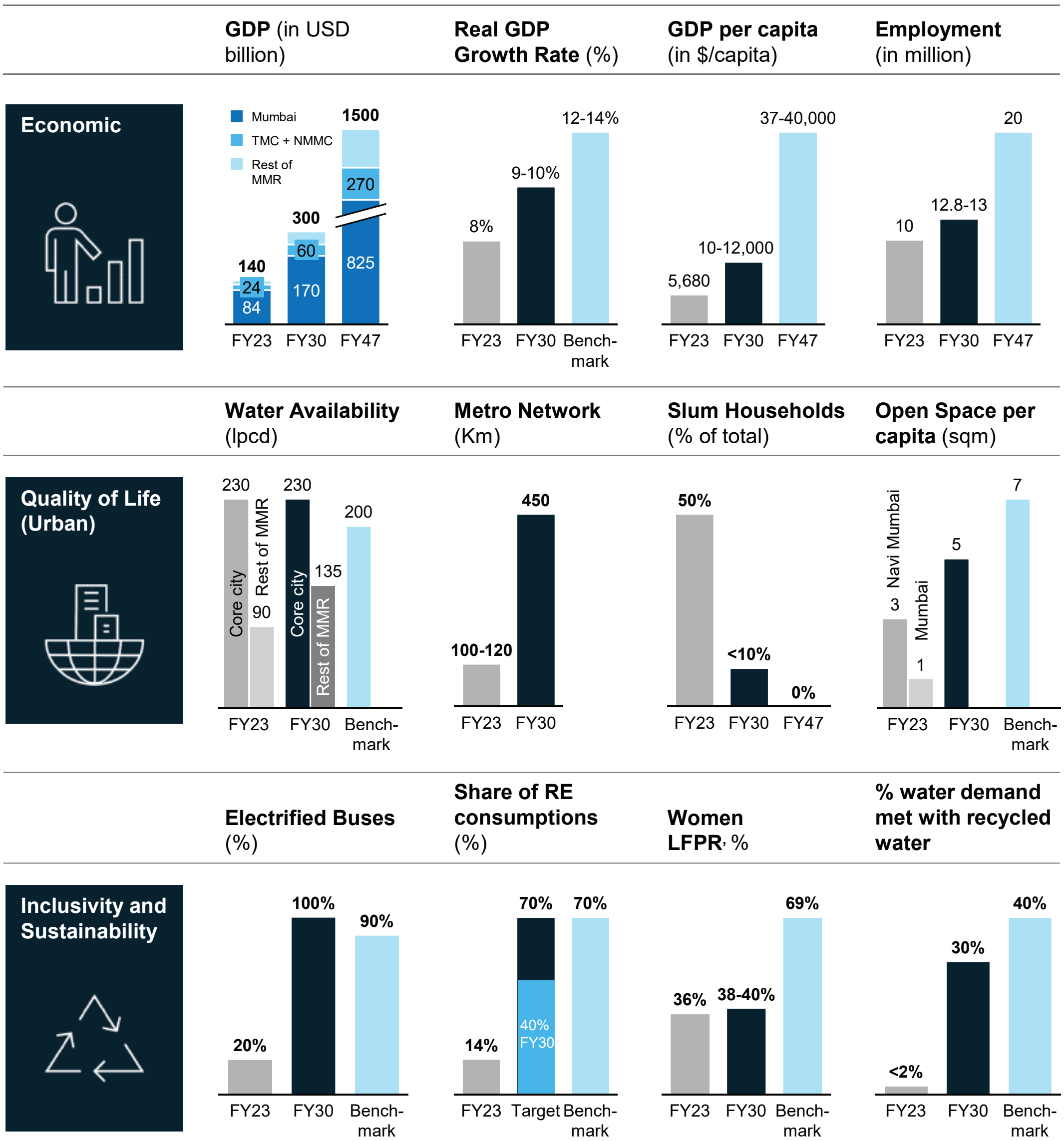


Figure 3: Examples of Key Performance Metrics and Targets for MMR

The evolving developmental needs and the vision for MMR at 2030 and 2047 will require several mindset changes, careful understanding of the region's endowments and identification of the growth drivers. This will have to be supported by the substantial investments in connectivity and urban infrastructure.

Good news is that MMR is well-poised for growth with $50+ billion investments in ongoing and planned infrastructure projects. The key infrastructure projects are illustrated in Figure 4 below.

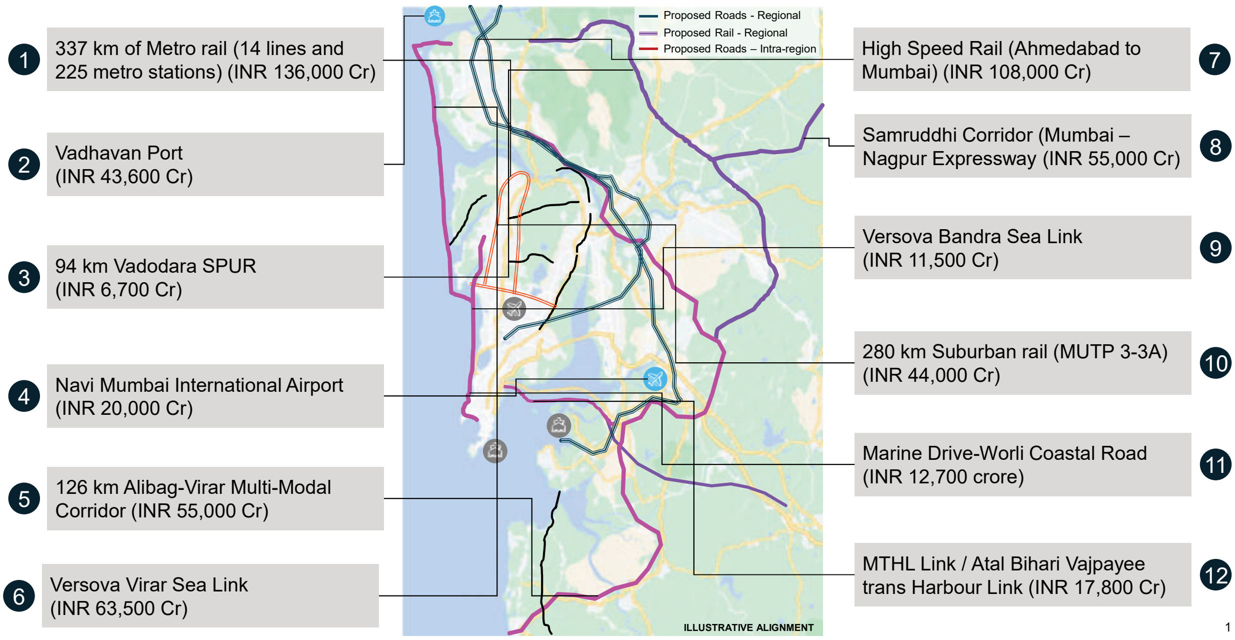


Figure 4[2]: Key Large Infrastructure Projects in MMR

[2] Capital expenditure numbers are approximiate

4 Key mindset shifts required to make MMR a Global Economic Hub

In order to ensure that MMR is on the right track to becoming a global economic hub, the central and state governments need to facilitate eight key shifts in mindset:

1. **Regional economic and spatial planning in metropolitan areas will need to be substantially strengthened by expanding the mandates of the regional development authorities.**

   Currently, regional economic and physical master planning is weak or non-existent. This needs to be strengthened substantially as a mandated, statutory system. Associated with Economic Master Planning, there is also the need for master-planning of regional infrastructure for bulk water, regional solid waste and regional transport.

   All large metropolitan areas around the world (London, Tokyo, New York) have well-crafted regional economic and spatial master plans, derived from clear, long-term, economic visions and aspirations. For example, in Greater London, the Authority prepares a regional Economic Master Plan, which gets further detailed at the city / borough level by the respective city corporations / borough council.

   Similarly, the MMR regional, economic and spatial master plans need to be prepared by a nodal authority, in this case, Mumbai Metropolitan Region Development Authority (MMRDA). Further, the regional master plans need to flow into the city-level development plans in a cascading manner.

2. **A new planning approach to urbanisation and city development will have to be adopted.**

   A number of mini cities and urban clusters will need to be developed in MMR over the next decade. The existing approach of brownfield city master-planning will not work for these. Five key principles of planning new cities / urban clusters will need to be followed:

   a. High quality master planners will need to be used for mixed-use master planning. This would include attracting the first 30,000 jobs by securing the first three or four anchor investors to kick-start the investment cycle and designing the city to fit target jobs. Based on global and national benchmarks of successful new urban clusters / cities, these 30,000 anchor jobs will help activate the cycle of further jobs, GDP, investments on their own.
   b. A master plan with a minimum 40% area for street-grid and open spaces with a 15-min walkability to the nearest metro / rail to enable ease of transit will need to be put in place.
   c. Amenities for Liveability and Talent Attraction (ALTAs) (as described in later section) will need to be developed on a priority basis.
   d. Mixed-use cities with mixed-use flexibility to developers across housing, commercial, hotel, recreation, etc. with global FSI will need to be planned and developed.
   e. Green and sustainable city principles such as adequate water drainage, green buildings, renewable energy, zero waste, etc. must be prioritised and integrated as core components from the outset.

3. **Regional and city governments will need to acknowledge the importance of investing in ALTAs.**

   The good news is that the MMR is in the process of spending close to $50 billion on building capital infrastructure that will set it up for rapid economic growth. Having said that, the not so good news is that, in most cases, the capital investment stops at building the trunk road or metro lines and stations. There are no planned investments for ALTAs. Although ALTAs are, in fact, what is known as the crucial "last mile" of investments (typically, around 10% of the infrastructure investment), necessary for attracting talent and making the city liveable, they are almost always neglected or deprioritised by municipal bodies / development authorities.

The concept of systematically thinking about and providing for ALTAs needs to be an integral part of the regional / city master plan. It is important that nine ALTAs are actively planned and facilitated for in every township in MMR. These include:

a. Green spaces, i.e., parks/gardens
b. Waterbodies, lakes and river-front walkways, bicycle paths
c. Sea-facing infrastructure: ocean-fronts, beaches, jetties, marinas, terminals
d. K-12 schools
e. Multi-speciality hospitals
f. Sports playgrounds and sports complexes
g. Multi-cuisine restaurants, cafe districts, cafe streets, sea-facing and roof-top restaurants
h. Retail and entertainment zones
i. Museums, amphitheatres, theatres and event venues

Master-planning and proactively investing the last 10% of capital investments in ALTAs will allow MMR to attract and retain talent, which is crucial for economic growth. Much of the investments needed in getting these ALTAs in place will come from the private sector. Having said that, the state government, municipal corporations and special planning authorities (SPAs) will need to be the ones responsible for facilitating these investments and they will need to do so by planning for them at the regional stage itself, opening up government lands through PPP / allotments and attracting private investments through suitable policy incentives (including at-cost / subsidised land allotment where necessary).

4. **Affordable housing is one of the most important core elements of "infrastructure". The state government needs to treat it as such.**

Singapore has nearly 82% people living in public housing, which is built as well-developed communities with all the necessary amenities. These public housing units cater to people coming to Singapore for work and education across all income brackets, including students, working singles and families.

As of 2023, Mumbai is one of the most unaffordable cities in India. Rents in most areas exceed 50% of monthly incomes, as against the 30 - 35% benchmark globally. A vast majority of people coming to Mumbai cannot afford market-linked private housing (or the MHADA housing, auction prices of which go up to INR 30 - 40 lakhs in many cases), and hence are forced to live in slums.

Hence, affordable housing in the context of MMR needs to be thought about beyond the traditional definition of "slum rehabilitation". Indeed, MMR needs to recognise that affordable housing is one of the most important elements of the infrastructure it needs to offer and accordingly think of creating it as part of its talent attraction schemes with the following features:

a. Design it such that it caters to different categories of talent (e.g., student hostels, studios for working singles, family units, senior housing, working women's hostels, etc.) in addition to LIG/low MIG segment
b. Ensure that 30 - 40% of the stock is available on a rental basis.
c. Provide it at reasonable and affordable costs (400 sq ft units with a rent of less than INR 15,000 per month, sales price less than INR 20 lakhs).
d. Ensure that it comes with high-quality community spaces and ALTAs.
e. Ensure that it is a 15-minute walking distance from the metro / suburban rail station.

In order to meet these requirements, the state government will need to create the right incentives and policies and institutional architecture if these units are to be built to these specifications. Correctly done, this could be a very large growth, GDP and employment driver as discussed in sections ahead.

5. **Sustainability and inclusivity should be front and center of all key investments by the government and private sector.**

   MMR should take the front-seat when it comes to driving Maharashtra's sustainability journey with an aim to drive net-zero by 2047. While this is one of the Growth Drivers for MMR, it is also important that the state government and local bodies drive the sustainability agenda for MMR at an accelerated pace, almost as a dramatic shift in the way the government has, thus far, worked with the private sector.

   This could mean taking ambitious targets (40% renewable energy usage, mandatory use of sustainable construction material, mandatory green certification of buildings above a certain size, 100% EV buses, covered walkways, 100% recycling, etc.), while also simultaneously ramping up resources, innovation and capability to support meeting these targets. This will require a close working relationship between various government departments / agencies and the private sector to ensure that it is a concerted effort.

   Also, as an emerging global economic hub, MMR will need to increase the participation of women in its workforce. This will need to be supported by a shift in mindset when it comes to the design and planning of urban areas, for example, provision of clean toilets, CCTV coverage, care infrastructure and last-mile public transport.

6. **The investment attraction approach needs to understand the importance of, and push for, the growth of the services sector.**

   Most of the investment attraction effort at state-level is focused on manufacturing investments anchored by the department of industries through bodies like Maharashtra Industry, Trade and Investment Facilitation Cell (MAITRI), Maharashtra Industrial Development Corporation (MIDC), etc.

   This is good, but it needs to be noted that 65 - 70% of GDP and 45 - 50% of jobs for large metropolitan regions like MMR will come from the services sector, for which, there is no nodal investment facilitation and attraction agency. The state industries department has taken up policy making for a few services sectors like IT/ITeS and AVGC. However, there is no government agency dedicatedly thinking and working towards attracting aviation services, financial services, fintech, mediatech, start-ups and other new-age services. Hence, the approach to growth and investment attraction in services sectors seems ad hoc.

   A focused and facilitative approach by the state could pay dividends, especially when there are many alternate investment destination avenues available within India and globally, all competing to get a share of the services pie.

   Tailored economic thinking is needed to attract different types of services through policy making and investment attraction (e.g., start-ups need operating cost subsidies like affordable rentals, skilling subsidies, proximity to research and innovation hubs and market-linkage support). Hence, given the strategic importance of the services sector in MMR's economic progress, a services investment attraction department/ministry is needed both at the state government level and at the MMRDA level. This department will need to focus on attracting service sector jobs like AI, start-ups, fintech, health, education, AVGC, hospitality, transport services, logistics services, media and entertainment, aviation services.

7. **Non-rail public transportation (buses, ferries, ROROs) needs to be proactively invested in.**

   Huge investments (close to $17 billion) are flowing into the metro-rail transportation corridors of MMR. This is definitely required. However, it is important that 5 - 10% of this investment be used for non-metro rail public transportation. Typically, buses and water transportation are labelled as "loss-making" and therefore the subsequent and constant push to reduce such services. But, actually, a well-planned bus

/ ferry transport network has proven to be much more effective in reducing city congestion, lowering air pollution, while also solving last-mile connectivity issues and providing access to emerging city areas. Hence, investments and cross-subsidies (if required) to operate a well-connected buses and ferries ecosystem is vital for all cities.

Further, these buses and water transport vehicles should be planned as sustainable electric vehicles, which could aid in meeting sustainability targets for MMR, while also being cheaper in terms of the lifecycle cost of operations than diesel buses.

With this view, specific investments into EV buses and coastal ferry services should be made (outlined under Growth Driver 6) and MMRDA should operate them on an integrated basis for the region (through private sector participation and the necessary viability gap funding).

8. **The role of the larger municipal corporations in economic planning, investment and talent attraction needs to be redefined.**

Large municipal corporations in MMR, namely, MCGM, TMC and NMMC need to substantially step up three key roles:

a. Economic master-planning
b. Investment and talent attraction and
c. Ease of doing business.

Even though the 12th schedule of the constitution requires Urban Local Bodies (ULBs) to take up economic planning of cities as a role, these corporations neither have the mandate nor the capabilities to anchor the economic planning as well as investment and talent attraction roles. Instead, corporations limit themselves to urban services delivery and effectively play the role of a regulator rather than an investment facilitator. This mindset needs to change dramatically as India moves towards 2047. This mindset shift can be brought about by making the necessary changes in the MRTP Act, mandating corporations to plan their development plans as per the overall regional priorities and giving them clear investment and talent attraction targets.

This means that large municipal corporations need to:

a. have economic development departments with clear investment attraction targets reporting to the Municipal Commissioner
b. have clear and transformative targets on “Ease of Doing Business”
c. take a lead role in sectors such as tourism
d. play a key role in talent attraction by investing in creating a liveable city and ALTAs (as mentioned earlier)

5 Prioritising the Growth Drivers that will transform MMR into a Global Hub

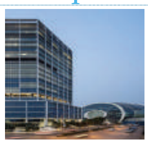
MMR has 9 significant endowments that can be built upon to achieve its economic aspirations.

1. **India's financial capital** with headquarters of global and local banks, brokerage houses, securities exchanges, trading platforms, and the RBI
2. **India's largest port & trade hub** with capacity of 30+ million TEU in FY23
3. **Large manufacturing hub** with textiles, chemicals, petrochemicals & chemicals, gems & jewelry as key sectors
4. **Globally connected** with 2 international airports
5. **Multimodal domestic connectivity** with rail, road, air and coastal shipping
6. **India's art & entertainment capital** with a thriving ecosystem, including Bollywood and India's premier performing arts spaces
7. **300 Km coastline** that offers potential for tourism, recreation & maritime activities
8. **Large cosmopolitan centre** with a vibrant job market for 10 million people, and is home to 50,000+ HNIs and 1500+ UHNIs
9. **Historically significant region** with rich art, culture, unique forts, festivals and colonial architecture

Based on these endowments, and favourable economic trends in the global economy, we have identified 7 Growth Drivers that can power MMR's sustainable and inclusive growth till 2047.

Seven key Growth Drivers are anticipated to transform the MMR into a robust $300 billion economy by FY30, creating approximately 2.8 - 3 million jobs. This ambitious projection underscores the region's potential for substantial economic expansion driven by strategic initiatives across various sectors as outlined in detail in Figure 5 below.

1



Global Services Hub

- Financial services
- New-age services
- Healthcare, education, skilling
- Aviation
- Media and Entertainment
- Global Capability Centres
- Data Centers

$40-45 billion GVA

2

3 million Affordable Housing Units

- 2.2 million slum houses redeveloped
- 0.8-1 million additional houses for low-income segments and talent attraction

$18-20 billion GVA

3

Global Tourism and Urban Recreation hub

- Nature, coastal and cruise
- MICE
- Culture & heritage
- Film & Entertainment
- Wellness and medical
- Citizen and tourist infrastructure

$15-20 billion GVA

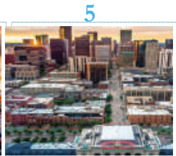
4

Port-Proximate Integrated Manufacturing and Logistics Hub

- 3 large ports, including Vadhavan port development
- 11,000 hectare new industrial cities
- 4 integrated super-large logistics clusters

$20-25 billion GVA

5



Planned Urbanization and Intensive TOD Development

- 19 planned cities & business districts
- 20+ transit stations as mixed-use hubs

$25-35 billion GVA

6

Inclusivity & Sustainability Leader

- Net Zero by 2047
- 38 - 40% women participation
- 40+% RE consumption
- 30% water recycling
- 100% waste segregated and recycled/ converted to energy

$2-3 billion GVA

7

World-class Urban Infrastructure and Transport

- Regional bulk infra
- Last mile connectivity
- Amenities of Livability and Talent Attraction (ALTAs)

$4-5 billion GVA

GVA increase of $130-150 billion and 2.8 – 3 million incremental jobs

Figure 5: Seven Key Growth Drivers for MMR Economic Master Plan

Growth Driver 1

TRANSFORM MMR INTO A GLOBAL SERVICES HUB BY DEVELOPING SEVEN CHAMPION SERVICES

Seven champion services could transform MMR into a global services hub. They are:

1. Financial services and Fintech
2. New-age services (AI, cybersecurity, robotics, R&D, Industry 4.0 and start-ups)
3. Health and education
4. Global aviation services
5. Media and entertainment
6. Global Capability Centers
7. Data Centers

Cumulatively, these services could lead to a $40 - 45 billion GVA swing for MMR by FY30, creating 0.9 - 1 million incremental high productivity jobs.

1. Financial Services and fintech

The financial services industry in India is expected to grow at 8% CAGR into a $ 1.1 trillion market by 2030, on the back of four segments – lending, capital markets, insurance and fintech. Mumbai, already the financial capital of the country, has all the right ingredients to grow into a global financial hub (similar to London) for banking and financial services, insurance, fintech, PE/VCs, if it were to improve the quality of life for the talent it employs to serve the financial services industry.

Mumbai could capture 15 - 20% of India's incremental market (i.e., $ 90 billion) by FY30, targeting under 30 GFCI ranking (currently 66), at least 3,000 NBFCs headquartered in the city (currently 1,300) and at least ten fintech unicorns in MMR (currently 4).

In order to do so, the following actions will need to be undertaken:

a. Develop 3 - 4 world-class business districts that offer a high quality of life in prime locations in Mumbai such as BKC (30 hectare), Wadala Financial Center (20 hectare), Kharghar Corporate Park and Mumbai port trust land redevelopment (250 hectare), similar to Canary Wharf in London. They will work as talent attraction magnets.

b. Build on the existing strong talent ecosystem by attracting and setting up more premier STEM and MBA colleges.

c. Create a services policy that focuses on attracting financial services companies and fintech start-ups and scaling them into global leaders by offering competitive real estate, incentives for job creation and up-front operational cost subsidies.

2. New-age services (AI, Cybersecurity, Robotics, R&D, Industry 4.0 and Startups)

India's startup and innovation ecosystem could add $1 trillion to the economy by 2030 on the back of its growing digital footprint, ample funding avenues and emerging talent ecosystems in tier 1 and 2 cities. Although many new-age services are still in their early stages, they offer significant growth potential and are poised to play a vital role in boosting India's GDP in the years to come. MMR, especially affordable emerging areas within the region such as Navi Mumbai, Thane, NAINA, MTHL Influence Area and Virar, is aptly positioned to take a large share of this pie, with its excellent global connectivity, developing talent ecosystem and proximity to Mumbai city's existing ecosystem to become a leader of innovation in Industry 4.0, AI, cybersecurity, robotics, biotechnology, neo-lending, AR/VR.

In order for this to happen, the following actions will need to be undertaken:

a. Develop low-cost, mixed use business areas (in areas like NAINA, MTHL Influence Area, Thane, Virar) with:

- Flexible / shared start-up offices (INR 40 - 60 per month per square feet rent)

- Affordable homes across formats (1/2/3 BHK, co-living, guest houses, hostels) with rents in the range of INR 15,000 per month
- Cutting-edge innovation labs, knowledge and research parks, Centers of Excellence
- Educational institutes including colleges, universities, skilling institutes
- Recreational spaces, high-street retail
- Metro / rail stations in walking distance.

b. Ensure an increase in the establishment of educational institutions with a focus on STEM courses (as mentioned in a later section).

c. As a part of the services policy, launch a policy that boosts start-up competitiveness in MMR by significantly decreasing the costs of doing business by reimbursing R&D costs, rents, PF for trained employees; creating a startup support fund for issuing reimbursements and subsidies; providing a single window clearance for all research, patent and funding, similar to the Gujarat and Karnataka policies.

3. Integrated healthcare, education and skilling hub

India has a clear global advantage in the education, health and skilling domains due to its youth population and affordable healthcare. This can help create exciting economic opportunities:

- 35 - 40 million students in India will need high quality higher education by FY30.
- India is already the pharmacy of the world and aspires to be the hospital for the world, targeting $25 - 30 billion medical tourism market capture by FY30.
- India's youth population creates an unparalleled opportunity as a talent factory in an ageing world (25 - 30% of the world's population will be over 60 years by 2047).

MMR can tap into these opportunities across three broad areas:

a. Become the leading hub for internationally recognised higher education in India.

MMR is not included in the current list of the top 10 districts in India in terms of number of colleges. The top districts, Bengaluru (1,000+ approved colleges as per the 2024 All India Survey on Higher Education), Hyderabad (491 colleges) and Pune (475 colleges) have benefitted greatly from being top of this list and have created a large job ecosystem.

Interestingly, discussions with several investors in the education sector suggest that there is substantial interest in the MMR area since it can fulfil the requirements of educational institutions in terms of affordable land/buildings and supporting amenities such as student housing, recreation and entertainment infrastructure. MMR's emerging new cities in NAINA and the MTHL influence area could be the perfect hubs for India's next generation of integrated EduCities (2 or more EduCities over 100 hectares) since they will be able to offer the kind of infrastructure needed: integrated campuses with multiple colleges / universities; ample affordable faculty and student housing; common sports, recreation, retail and blue-green infrastructure; research and innovation centers.

Being one of the largest business hubs in the country with an excellent global connect, MMR could naturally expand into becoming India's leading higher education hub of high repute.

This could be achieved through the following:

i. Attracting 20,000 additional higher education graduates per year through 25 - 30 nationally reputed colleges including 15 engineering universities, two or three planning colleges, two or three law colleges, five or six medical & pharmacy colleges, one or two liberal arts colleges.

ii. Additionally, attracting premier MBA colleges to Greater Mumbai around the financial services hubs as part of the development of the upcoming business districts such as Wadala.

b. Become a large regional medical and nursing education and medical tourism hub on the back of its robust air connectivity

Mumbai is already known for its premier hospitals but is constrained by the lack of modern medical infrastructure when it comes to being a leading global medical tourism hub. The emerging new cities around Mumbai and the global connectivity acquired through its two international airports makes MMR perfectly poised to becoming a hub for global medical tourism over the next 4 - 6 years.

It can consolidate its position by doing the following:

i. Attracting five lakh foreign medical tourists by adding 15,000 tertiary beds across more than 20 JCI accredited hospitals through the private sector.

ii. Attracting 5,000 seats across eight-ten premier medical colleges and multiple nursing colleges to create a pool of trained doctors, nurses and paramedics able to serve regional demand.

iii. Developing one or two integrated MediCities in emerging areas like the MTHL Influence Area and NAINA around the upcoming airport with hospitals, research campuses, pharmaceutical company offices, medical colleges, affordable homes, hostels and retail.

iv. Additionally, in the short term, developing 3,000 - 4,000 beds of premier multi-specialty and super-specialty hospitals within greater Mumbai and closer to existing population centers with high-paying capacity.

c. Become global exporter of skilled talent (1.5 - 2 lakh trained per annum) in key sectors.

MMR should target the skilling of at least 10 - 12 lakh people cumulatively by FY30 (as against around the three lakh trained till date across state programmes) across new-age courses like nursing and care-giving, industry 4.0, digital courses like AI and machine learning (ML), IoT, UI/UX design, cyber-security, EV tech, hospitality, green manufacturing, aviation and AVGC, to feed into its own economy as well as to create at least 30% of the skilled workforce which could be placed abroad to serve global talent shortages. For instance, there is the likelihood of a global demand for 8 - 10 million care workers across Germany, Japan, the UK, the US and Australia by FY30, to provide for the increasing numbers of elderly citizens in these countries. Similarly, the World Economic Forum estimates that there will be nearly 20 million additional digital jobs required globally by 2030, across fields like information security, content creation, system administrators, telecom, etc.

Of the 10 - 12 lakh-strong skilled workforce, MMR should target skilling so that at least 40% of these are women, in courses like electronics assembly, computer and digital courses, animation and visual graphics, fashion technology, supply chain, care giving and nursing, aviation and hospitality services, etc.

4. Global aviation hub

Mumbai is already India's largest sea-air cargo hub. Once Navi Mumbai International Airport (NMIA) becomes operational, Mumbai will be one of the largest aviation hubs in India. This presents the opportunity to position Mumbai as the Global Aviation Hub for South Asia with 150 MPPA (million passengers per annum) by 2030, along the lines of Dubai (200 MPPA; expected to go 250 MPPA by 2040 across two airports) and Atlanta (90 MPPA). Being a global aviation hub has multiple spill over benefits including job opportunities in all airline/airport related services, MICE tourism, opportunities in hotels/restaurants, retail and tourism sectors.

In order to achieve this, the following will be needed:

a. A target of 150+ MPPA passenger traffic in the two airports by FY30. This will require expediting the completion of Phase 2 of Navi Mumbai airport and supporting infrastructure.

b. Facilitating 3X air traffic movement (20,000 per month in 2023) by ensuring world-class terminal and runway performance parameters. This can be done by working actively with airline companies and central ministries to introduce 3X direct international connections (45 in 2023), especially to the US, Europe, Asian business destinations and incentivising airlines to make Mumbai the hub.

c. Also, leveraging the JNPT proximity and existing ecosystem to facilitate 3X international air-sea cargo movement (0.6 MMT annually in 2023) by providing seamless freight transit between JNPT and NMIA along with a sufficient warehousing ecosystem.

d. Facilitating inter-airport connections for air passenger transit by making suitable adjustments to the under-construction metro link between Mumbai and Navi Mumbai International Airports, with baggage areas, stations developed as transit retail zones, overnight parking zones, etc.

e. Developing a full-fledged AeroCity around Navi Mumbai International Airport, complete with office, MICE, retail and entertainment, hospitality districts. It should be easily accessible to the rest of the city areas and developed as a global aviation city to house aviation services and provide high-quality transit entertainment (similar to Singapore Changi airport).

f. Increasing ease and speed of transit, allowing on-arrival visas, e-visas and simplifying passenger transfers between flights.

   Increasing regional airline density, allowing higher regional density and promoting inter-airline cooperation / partnerships to enable faster launch of new routes.

This needs to be achieved by actively working with multiple airlines and the Ministry of Civil Aviation with the vision to make Mumbai region one of the largest global aviation hubs in the world.

5. Media, Animation- Visual Effects, Gaming, Comics (AVGC), Bollywood and Entertainment

Key segments of India's media and entertainment ecosystem (animation, visual effects, gaming, comics {AVGC}, filmed entertainment and digital media) are expected to grow at 20% CAGR with a $32 billion increase in market size by 2030. Simultaneously, India is pivoting from jobs that are currently concentrated in the production segment of the value chain to high value jobs in the pre/post-production segments.

Given its existing strong media, Bollywood and the AVGC footprint, MMR could capture 20 - 25% of India's incremental market ($ 9 billion) by FY30, targeting 2X growth in Mediatech, AVGC jobs as well as in live events and media-based entertainment.

In order to achieve this, the following key actions will be needed:

a. Significantly scaling up the Andheri / Goregaon ecosystem as a film and media tech hub is vitally important and this will require the setting up of AVGC firms, centers of excellence in AR/VR, Animation, VFX and Gaming, along with the development of quality studios, production offices. Towards this, a film and media city will need to be built.

b. Well-thought-through policies will be needed to attract new-age media, AVGC firms. In addition to the geographic hub that will fuel the already-existing ecosystem, policies should focus on facilitating a significant decrease in the cost of doing business (e.g., affordable rentals, reimbursement of R&D costs, state GST on gaming, PF reimbursement on employee training, hardware cost reimbursements). This can be done through the state government "services policy" that is a recommendation in later sections.

c. An ecosystem for digital online courses on animation, VFX and digital media (already discussed in skilling above) will need to be created.

6. Global Capability Centers (GCCs)

India is the largest GCC market globally with 50% of the current global market share. At present, India is home to about 1,600 GCCs that employ about 1.7 million people. Having said that, the market continues to have huge potential to grow with about 500 new companies expected to establish GCCs in India by 2025, creating USD 60 - 85 billion expected annual revenues. MMR has 10% of the GCC share in the country but should aim to grow this to 15% of the Indian GCC market share by expanding to emerging affordable hubs around Mumbai.

MMR is in a strong position to attract GCCs as it is by an existing talent ecosystem in finance, legal services, AVGC and digital skills. Hence, MMR should target three types of GCCs:

a. Global business service centers around BFSI (Banking, financial services and insurance), legal and marketing domains;

b. Centers of excellence or innovation centers in artificial intelligence (AI) / machine learning (ML), animation and media, automation, cybersecurity, drones, cloud computing and advance analytics.

c. Engineering and R&D centers for new products, processes and technologies.

It should do so in the following ways:

- Utilise the business areas (discussed in the previous section) to create an attractive ecosystem for global capability centers.
- Create a talent ecosystem for STEM education, along with curriculum development and apprenticeship programmes, in partnership with existing GCCs and academic institutions (already discussed in the previous section).
- The state needs to continuously engage with industry bodies like NASSCOM, and work upon improving the regulatory and policy ecosystem to attract more global multi-nationals to set-up GCCs in MMR. Maharashtra has already initiated this effort through its IT/ITES Policy 2023 which lays a special focus on establishing an integrated CoE along with innovation clusters. The state could further increase its efforts to attract Fortune 2000 companies to MMR through targeted policy measures and by initiating an investor attraction process.

7. Data center hub

Maharashtra holds 55 - 60% of India's data center capacity of which 50% is in Mumbai. Navi Mumbai is emerging as a major data center hub.

With endowments of being a fiberoptic data capacity landing station, stable power supply, and climatic conditions, Navi Mumbai can be further developed as a leading global data center hub.

Northern Virginia, USA is the world's largest data center hub (5000MW), over 51 million sqft. Our analysis indicates that the demand for data center in India will continue to rise with the rapid rise of cloud penetration, Artificial Intelligence and data localization requirements. Navi Mumbai can aim to increase its data center capacity tenfold to 3000 - 3500 MW, and will need to allocate 35 - 40 million sqft of space, thereby attracting investment of $15+ billion (INR 1,20,000 crore).

Growth Driver 2

BUILD THREE MILLION AFFORDABLE HOMES

As of FY23, MMR has 2.2 million slums. While these slum dwellers need rehabilitation, the challenges associated with dealing with an ever-expanding slum population can only be successfully addressed if the supply side constraints for affordable housing are dealt with simultaneously.

There are three key steps to addressing the slum and affordable housing challenge in MMR:

a. Rehabilitating the 2.2 million households living in slums (targeting <10% slums by FY30).

b. Ensuring that no new slums emerge in MMR through strict monitoring and enforcement.

c. Creating additional affordable housing stock for 0.8 - 1 million households.

- 0.5 - 0.6 million affordable homes that cater to the LIG / lower MIG segment facing poor living conditions due to shortage of housing stock at the price-points needed
- 0.3 - 0.4 million affordable homes for new talent coming into MMR for jobs and education across various categories (students, single workers, small families, working women)

This Growth Driver could create a potential GVA impact of $18 - 20 billion by FY30 as well as generating 0.25 - 0.3 million employment through construction activities.

a. Rehabilitating the 2 - 2.2 million households living in slums in MMR

To achieve this, 2.8 - 3 lakh slum households need to be resettled annually. However, in the last five years, the actual slum resettlement velocity, i.e., slums resettled annually in MMR through the existing Slum Rehabilitation Authority (SRA) schemes, has been only 5,000 - 16,000 each year.

Although the goal of increasing slum resettlements from the 5,000 - 16,000 slum households in FY23 to the aspirational 2.8 - 3 lakh households per year may seem daunting, here is a brief economic analysis.

- Economically attractive sites: It is estimated that roughly 40 - 50% of all slums (i.e., 1 - 1.1 million slum households) are financially attractive to private developers under the prevalent Slum Rehabilitation schemes. These are normally located in areas with real estate prices of around INR 30,000 per square feet or more. Therefore, 1 million households could be rehabilitated through the private sector and with market forces. The good news is that letters of intent for 4 - 5 lakh slum households are being issued to various private developers, which could fructify over the next four to five years.
- Economically less attractive sites: The remaining 1 - 1.2 million slum households would need some viability gap funding and could be taken up by housing department agencies or through partnerships with other government agencies likes MMRDA, CIDCO, MSRDC. The financially viable sites in this category could follow a similar model to the Slum Rehabilitation Agency with the free sale component, though at lower returns than the private Slum Rehabilitation projects.

  One part of the viability gap funding needs to be provided by state government support to the tune of INR 20,000 crore (Affordable Housing Fund). This will be required to kick-off the cycle of investments in these categories. The rest of the funding will have to come from the balance sheets and profits of SRA, MHADA, cross-subsidised through profits earned from financially attractive projects.

Three more specific modifications will be needed to get this moving:

1. Of the 2.2 million slum households, 0.2 million are located on central government land (AAI, railways, defence, port, navy etc). These parcels do not come under the purview of the state Slum Rehabilitation schemes. With the aim of “Housing for All”, a “modified Slum Rehabilitation

scheme" is hence recommended for slum rehabilitation on central government lands. This is one of the most vital central and state government collaborative interventions required.

2. Of the 2.2 million slum households, 1.85 lakh (8.5%) are located on CRZ land, both on the landward as well as the seaward side and addressing CRZ slums is crucial for protecting environmentally sensitive areas of the city. These slums also present serious climate disaster risks for the city. Different strategies may be needed for landward and seaward slums due to their specific locations:
   - On the landward side – Permit and fast-track rehabilitation of slums in-situ.
   - On the seaward side – Relocate all existing slums and rehabilitate in nearby schemes within 1 km (like PAP units) or on the landward side; free up the reclaimed land on the seaward side with no housing or habitation for long-term environmental sustainability.
3. Further, in large cluster-based slum rehabilitation projects, SRA/MHADA should aim to create 20 - 30% of the incremental stock as rental stock. The ongoing Dharavi rehabilitation project is a good precedent for such rental housing.

b. Ensuring that no new slums develop in MMR

To ensure that no new slums are formed, the state could consider creating an "Enforcement Wing" in the Housing Department. The Enforcement Wing could be responsible for GIS based surveillance or use other new technologies to check and monitor new slums across various parts of the city and proactively coordinate for their prevention and removal.

c. Creating additional affordable housing in MMR

Ultimately, slums are the sign of a massive undersupply of affordable housing in MMR. Two types of affordable homes need to be built in MMR (similar to Singapore public housing) as outlined below:

- 0.5 - 0.6 million affordable homes, similar to those being built by MHADA, CIDCO and Maha-Housing (2 lakh homes already under construction); these will cater to the unaddressed housing demand from the existing LIG / lower MIG segments.
- 0.3 - 0.4 million affordable homes under a new class of housing called "housing for talent attraction" to be created by MHADA, CIDCO, MMRDA, and the private sector (through incentives) to cater to incoming talent. These units will need to be built near the emerging job hubs with the following markers:
  - » Created near emerging job hubs such as Wadala, Navi Mumbai, Thane, NAINA, Virar, MTHL influence area and others.
  - » Designed to cater to different categories of talent (e.g., student hostels, studio units for working singles, shared units, small family units, working women hostels).
  - » Available as both rental housing as well as purchase units, a large percentage of this stock should be available as rental units.
  - » Available at reasonable cost (400 sq ft units with rents of less than INR 15,000 per month).
  - » Offering high-quality community spaces and ALTAs (like parks, playgrounds, sports center, schools).

Growth Driver 3

REPOSITION MUMBAI AS A GLOBAL TOURISM HUB AND A VIBRANT URBAN RECREATION HUB FOR ITS RESIDENTS

MMR has significant underutilised tourism potential:

1. The spending population in MMR is rapidly increasing with approximately 30% of its population likely to fall into the category of having more than an INR 12 lakh household income by FY30. However, the city does not have adequate public recreational facilities to cater to the needs of even its population in 2023 (e.g., less than 1.6 sqm per capita open space in Mumbai city in 2023, as against 8 sqm in Singapore).
2. MMR will receive 150 million air passengers per year by 2030. This represents huge untapped potential. As of 2023, it receives 5 million domestic, 1 million premium tourists and 1.5 million foreign tourists each year staying for less than 1 - 2 days due to the serious lack of tourism attractions on offer.
3. Additionally, MMR's key tourism and recreation endowments are vastly underutilised:
   - 300 km coastline
   - "Home to Bollywood" and entertainment capital of India
   - Colonial architecture and monuments of significance
   - Eco-spots like Sanjay Gandhi National Park, flamingo areas, mangrove belts.

There is the potential to generate $55 - 60 billion in tourism and recreational revenues by FY30 (4X revenue of FY23) and add $15 - 20 billion in GVA. This can be achieved by targeting:

- 4X tourists (1.5 million foreign tourists to more than 5 million)
- 5X premium tourists (1 million premium tourists to more than 5 million)
- 2X average length of stay (1 - 2 days moving to 3 - 4 days)
- 2 - 3X average spend per tourist (less than INR 10,000 to INR 30,000 - 40,000 per trip)
- 2X average recreational spend per family (less than INR 2,000 per month to INR 5,000 per month).

This growth can be activated by a four-fold strategy:

a. **Prioritise tourism themes for MMR and create a specific master plan around them. There are seven potential themes:**

   i. Beach, coastal and cruise tourism

   ii. Meetings, incentive, conventions and events / exhibitions (MICE) tourism

   iii. Nature tourism

   iv. Culture, heritage and fort tourism

   v. Entertainment and film tourism

   vi. Wellness and medical tourism

   vii. Citizen and tourist infrastructure.

b. **Create more tourism and recreational avenues – both within the city as well as in the outer areas across the selected themes.**

   i. **Beach, coastal and cruise tourism**

   MMR is bestowed with a 300 km long coastline and more than 20 - 25 beaches. It has, however, failed to monetise any of this for tourism and recreational purposes. MMR should master plan its coastline to become India's first urban beach recreational hub. It could do so with the following interventions:

   - Develop integrated master plans with infrastructure for two tourism development areas – i) Gorai & Madh Island as beach entertainment as well as a spiritual and wellness tourism hub and ii) Alibag (including Kashid) as a world-class tourism city.
   - Develop an ecosystem for world class cruise tourism (international cruise ship enablement, domestic cruising enablement through support on cruise infrastructure, parking, rationalisation of ports and other charges, promotion and marketing).

- Develop 4 - 6 emerging integrated beachfront tourism areas including 6 - 8 public promenades (with ferry points, boardwalks, retail, seafront cafes, beach clubs). Examples would be Madh Island, Mandwa Beach near Alibag, Shirgaon and Edwan Beach near Palghar, Bhuigaon Beach near Vasai.
- Target at least two blue flag beaches in MMR.
- Develop two sea sport hubs (jet skis, hydro water boarding, splash tours, kayaking) with licensed partners at Alibag and Madh Island.
- Develop 3 - 5 world-class marinas with sufficient boat / yacht parking, for example at Mumbai port land, near Seawoods Navi Mumbai, Alibag and other appropriate locations.
- Develop ten new boat or ferry jetties along the MMR coast to ensure seamless connectivity, i.e., 1 boat or ferry terminal every 10 km along the MMR coast.

ii. MICE tourism

MICE is one of the fastest growing tourism segments globally with a market size of $1,200 billion. India is an emerging MICE destination, with its cost advantages and the diverse experiences it can offer. With excellent global connectivity, a flourishing business ecosystem and a slight upscaling of its hospitality infrastructure, MMR can become one of the leading global MICE hubs and can attract international conferences, corporate incentive travel and international trade fairs. The upcoming Navi Mumbai airport with its Aerocity and Mumbai port land redevelopments can potentially be the anchor for attracting global MICE footfalls, offering world-class convention and exhibition infrastructure, world-class premier hotels, modern recreation and entertainment spaces and seamless connectivity, similar to global hubs like Singapore and Dubai which have created world-class MICE hubs like Expo City Dubai, Suntec Singapore Convention & Exhibition Center.

Towards this, MMR should:

- Develop 12,000 - 15,000 additional hotel rooms (in addition to 15,000 as of 2023; Delhi NCR has 30,000+, Singapore has 60,000+)
- Develop a 2 million sqft international exhibition and convention center (Expo Center) in or near AeroCity in Navi Mumbai.

iii. Nature tourism

MMR benefits from a mixed terrain that offers a plethora of eco-tourism sites such as national parks, forest areas, hills and mangrove plantations. These need to be leveraged to expand MMR's tourism offerings as well as to create recreational spaces for its residents. As a priority, MMR could do the following:

- Develop a nature circuit within MMR that covers the revamp of sites like Sanjay Gandhi National Park, Tungareshwar Sanctuary near Palghar district, Kharghar hill plateau in Navi Mumbai, Karnala bird sanctuary in Navi Mumbai into half/full day experience hubs offering world-class experiences curated by involved global experts, while retaining their natural character and being mindful of eco-sensitivity. These sites could be transformed to offer closer to nature experiences like safari parks, observatories, kayaking/boating, trekking circuits, feeding areas, etc.
- Develop world-class infrastructure for flamingo and mangrove tourism in sites like Airoli flamingo sanctuary in Navi Mumbai, Mumbai Port Trust land, mangrove locations like Thane Creek. The sites can cater to specific inclusions of a flamingo observatory, state-of-the-art breeding research centers, kayaking eco-sports hubs, themed cafés, souvenir shops and curated experience centers.

iv. Culture, heritage and fort tourism

Mumbai is undoubtedly the home of film, theatre and media tourism in the country. Having said that, the city has failed to showcase its existing Bollywood and theatre ecosystem due to a lack of good quality tourism infrastructure. The existing film city in Goregaon is old, dilapidated and does not offer any specific exciting activities to tourists. Also, tourist exposure to Mumbai's rich cultural heritage is limited to the Kala ghoda festival and sites like Prithvi theatre, Colaba, CST terminus, the gateway of India and Elephanta caves; all of which are over-crowded and too poorly maintained to attract premium tourists. Again, even though Mumbai's rich historical legacy also has huge potential, infrastructural challenges such as accessibility, preservation and the improvement of visitor amenities are blocking access. By improving its infrastructure and leveraging its rich historical legacy and strategic location, Mumbai could cultivate tourism as a vibrant venue for tourists from all over the world.

MMR needs to dramatically change its image, have a complete makeover of its cultural and heritage tourism, along the lines of London and Los Angeles:

- Revamp cultural icons and the heritage circuit of the city including the Gateway of India, Elephanta Caves, heritage buildings of South Mumbai like Kala Ghoda, Crawford Market, Zaveri Bazaar into Notified Tourism Precincts, with landscaped and "Instagram-able" tour-ist infrastructure like pavements / walkways, façades and urban design improvements. Examples of such precincts could be Copacabana beach, Brazil with designed sidewalks / pavements, skyscraper hotels, apartment houses, cafes, nightclubs, restaurants, theatres and cafes/bars lined all along the waterfront..
- Revamp/add four-six iconic museums, like a science and future of technology museum or an arts and culture museum, in a phased manner
- Develop the Fort circuit including a revamp of Bandra Fort, Worli Fort, Mahim Fort and the iconic Raigad Fort. For example, Bandra Fort could be revamped with public amenities, light and sound shows, making it attractive for tourism as well as events.

v. Entertainment and film tourism

There is a need for MMR to embrace entertainment tourism, spearheading iconic projects akin to those in Singapore and Dubai. By investing in state-of-the-art tourism attractions, MMR can elevate its global appeal, offering visitors unparalleled entertainment while showcasing the city's vibrant culture:

- Develop a world-class film city near Goregaon/Andheri, with Bollywood Broadway, iconic studios, event venues, theatres.
- Attract global concerts and festivals to MMR, like music concerts and festivals like Lollapa-looza, Sunburn by developing world-class event venues.
- Create an oceanarium (40 million litre capacity) at the MTHL influence area or Mumbai Port Trust land.
- Develop a 200-hectare world-class themed adventure park, south of Navi Mumbai with resorts, animation studios, ride zones, water parks, event venues, etc. similar to Disney Land.
- Create Mumbai Eye at the Mumbai port trust or some other appropriate piece of land.

vi. Wellness and medical tourism

The global wellness tourism market is upwards of $650 billion , with India ranked among the top 15 destinations for wellness tourism and 10th in medical tourism index out of 46 destinations of the world by Medical Tourism Association. Consequently, . India's national strategy and roadmap for medical and wellness tourism, published by the Ministry of Tourism (2022), lays emphasis on improving its ranking by investing in better infrastructure and service quality norms.

MMR, on the back of its excellent connectivity, can be the natural leader in creating affordable, integrated medicity infrastructure. Towards this, MMR should:

- Develop 40 hectare of integrated medicity south of Navi Mumbai, near the new airport, to attract global medical tourists. CIDCO is already working on a proposal for this.
- Attract 10 - 12 more JCI accredited hospitals (there are six in FY23 as against nine in Delhi and 13 in Singapore) in MMR.

vii. Citizen and tourist infrastructure

Lastly, there needs to be a dramatic uplift in MMR's urban recreation infrastructure to cater to its diverse residents across all income brackets as well as the talented youth coming to the city for work. Some of the projects which could be considered include:

- Culinary districts including at least ten Michelin star restaurants, 30 sea-facing restaurants, 25 - 30 rooftop restaurants, 8 - 10 speciality curated food streets, craft brewery districts in the urban clusters of MMR.
- 3 Central Park equivalents and a complete revamp of the 400 parks in the city.
- A minimum of three 18-hole golf courses and clubs of 40 hectare each.
- At least five new multi-sport academies with world class facilities.
- Significant sea-facing infrastructure including walkways, marinas, jetties, water-sports hubs, sunset spots, ROROs, revamp of lighthouses, etc.

Green spaces (parks, gardens)

Waterbodies, lakes and river-front walkways, bicycle paths

Sea facing infrastructure, marinas, jetties, terminals

K 12 Schools

Multi-speciality hospitals

Sports playgrounds and complexes

Multi-cuisine restaurants, cafe districts, cafe streets, sea-facing and roof-top restaurants

Retail and entertainment zones

Museums, amphitheatres, theatres and event venues [1]

Figure 6: Amenities for livability and talent attraction (ALTAs)

c. Support the broader tourism investment and infrastructure effort with softer activation, tourism promotion and facilitation efforts with an annual budget of INR 200 - 300 crore. This could include:

i. Creating a 365-day calendar of events, experiences and hosting large scale events (like a monsoon festival, global arts festival, food festival, cruising festival, etc.).

ii. Actively attracting revenue-generating events to Mumbai, like concerts, sports events, Lollapalooza, etc.

iii. Place-making of key tourism precincts like Elephanta Caves, Gateway of India, Sanjay Gandhi National Park, including their regular upkeep, hosting events, opening up areas for community activities like play areas, evening bazaars, fitness events, marathons, etc.

iv. Brand building through marketing campaigns.

v. Entering into industry collaboration with private sector investors, tourism operators, technology providers, etc.

vi. Incorporating digital technology in tourism services, like MMR tourism website and app, AR/VR experiences, tourism reviews, etc.

vii. Facilitating and building human capital through skill trainings, tourism workforce certifications and accreditations.

viii. International marketing to target tourists from Europe, South-east Asia.

d. To do this in a focused manner, create an MMR Tourism Promotion & Facilitation Board and create a robust tourism policy for private sector activation, targeting $6 - 7 billion in private sector investment with around Rs. 7,000 - 8,000 crore in government investment to bring tourism at par with global destinations

The tourism policy, as discussed in detail later, needs to provide for and create adequate incentives for private sector involvement through public-private partnerships (PPP) and will involve merit-based allotment of existing or new plots in city areas. The MMR Tourism Board will need to play an active role in investment attraction and tourism promotion in collaboration with agencies such as MMRDA, CIDCO, MCGM, NMMC, TMC, etc.

Growth Driver 4

POSITION MMR AS A PORT-PROXIMATE INTEGRATED MANUFACTURING AND LOGISTICS HUB

Historically, MMR's manufacturing sector has been sluggish ($22.9 billion GVA in FY23; 4.5% real GVA growth in FY12 - 20; negative employment growth), with focus shifting outwards to other parts of Maharashtra / the country due to the high land costs in Mumbai and the unavailability of well-developed / well-connected industrial pockets in the region. The logistics sector, by contrast, has grown at 8.7% historically, showing strong growth momentum on the back of strong freight connectivity and urban demand.

As India aspires to reach $1.25 trillion in manufacturing GVA by FY30, MMR could play a key role by becoming a super-large, port-proximate logistics and manufacturing ecosystem. To its advantage, MMR has many of the right ingredients to fuel this growth:

- Three large ports within MMR with a capacity over 200 MT, 30 million TEUs by FY30 – soon to be one of the largest urban port ecosystems in Asia, including the upcoming Vadhavan port in North MMR which will add a capacity of 15 million TEUs, with a deep draft of 18 m by 2030.
- India's second-largest consumer economy (the other being Delhi NCR).
- Large investor and corporate ecosystem in place (headquarter to some of India's largest corporates and 50 banks).
- A dedicated freight corridor, ports, expressways and an airport that have together been responsible for strengthening regional and global freight connectivity.
- Large, under-developed hinterland areas within MMR, with relatively lower land costs, opening up with improved connectivity.

This Growth Driver has the potential to add $20 - 25 billion to MMR's FY30 GVA ($15 - 20 billion in manufacturing with the growth rate increasing from 4.5% to 8 - 10%; and $4 - 6 billion in logistics and transport by accelerating the growth rate from 8.7% to 10%). This will need $25 - 30 billion in investments in the sector. In order to push MMR's manufacturing and logistics GVA growth, certain priority areas will need to be targeted as identified below:

1. **Accelerate creation of super-large port ecosystem (200 MT and 30 million TEUs capacity by FY30, up from nearly 150 MT and 7.5 million TEU today) between JNPT, Vadhavan port and Dighi port**

   JNPT is already undertaking container terminal capacity development of 10 million TEUs, which will be operational by 2025. Vadhavan port, being a deep-sea port (18 m draft) with more than 15 million TEU capacity (ultimate capacity 25 million TEU by 2040), will be critical for India's west coast and for MMR to build a strong export ecosystem. The Vadhavan port will also be critical when it comes to supporting Maharashtra and MMR's aspiration to become export manufacturing hubs. Hence, both governments will need to push the implementation of this port so that it is ready by 2027 / 2028. It will require government investments in the region of INR 43,600 crore and private investments of INR 30,000 crore in the container terminal.

2. **Prioritise seven manufacturing sectors for MMR**

   Given the strategic advantages listed earlier, MMR should look at seven focus sectors –

   a. **Discrete (gems and jewellery)** – MMR contributes nearly 20% of India's output and 52% of India's gems and jewellery exports. Despite the development of new regions like Surat, this sector will continue to flourish in MMR given its existing ecosystem. MIDC is already thinking beyond SEEPZ by developing a 20-acre park in the Navi Mumbai MIDC area.

   b. **Assembly-lines (white goods) –** MMR as a large consumption economy supports the white goods / consumer durables sector, further supported by the large port ecosystem at JNPT.

   c. **Electronics, including chip R&D and assembly –** Despite areas like Pune, Sanand, Chennai taking a lead in the semi-conductor industry, Mumbai's talent, research and business ecosystem can be a perfect combination to support export-focused chip manufacturing, especially the design, R&D and assembly segments of the value chain, which need highly skilled talent. Towards this, an integrated, extremely well connected and planned electronics ecosystem is needed near the Navi Mumbai airport with affordable industrial infra, affordable housing, research & development facilities and quality ALTAs to attract high-quality talent.

d. **Green hydrogen –** India's National Green Hydrogen Mission aspires to 5 MMT per annum green hydrogen capacity addition till 2030, making India a Global Hub for the production, usage and export of Green H_2 and its derivatives. MMR is the perfect location for setting up 0.5 MMT capacity near its ports (say Vadhavan port or Dighi port), catering to both export as well as domestic demand.

e. **Circular economy parks (sustainable packaging, recycling hubs) –** MMR should invest in developing circular economy parks to support its sustainability targets, including plastic recycling, construction & demolition material recycling, waste2energy, battery recycling, sustainable packaging, etc. A 300-hectare park is recommended in MMR (potential location: Between JNPT and Dighi port).

f. **Bulk (chemicals, pharma, steel) –** Already a large ecosystem in MMR, the chemical and pharma sector benefits from proximity to port (for imported raw materials) and petrochemicals refinery. Based on conversations with industry stakeholders, the Mumbai-Surat corridor could continue to be one of the largest chemicals corridors in the country. MIDC is also developing a large pharma park near Dighi port. Further, the state government is already in discussions with steel majors to expand the steel processing ecosystem near Dighi and Vadhavan port, serving MMR and regional demand.

g. **Integrated textiles and apparels –** MMR could be competitive for export-focused integrated textile and apparel manufacturing next to Vadhavan port. This cluster could leverage its proximity to the Surat ecosystem, and the deep-sea port to create a competitive export hub.

3. **Develop 11,000 hectares of integrated Port-Proximate industrial cities including:**

a. **2,000 hectares around Vadhavan port,** connected to a dedicated freight corridor; suitable for sectors like green hydrogen, steel, chemicals, integrated textile and apparels.

b. **6,000 hectares around Dighi port,** already acquired by MIDC; suitable for pharma, steel, circular economy parks.

c. **Existing Navi Mumbai area, which** is already getting reprogrammed as a data center, tech, electronics and gems & jewellery hub.

d. **Dronagiri and areas near MTHL Influence area, near JNPT,** could be suitable for electronics and assembly lines manufacturing, given the proximity to the port and availability of the urban ecosystem to support high quality talent.

e. **Panvel-Khalapur belt, along the Pune Expressway (2000 ha),** is fit for white goods assembly, circular economy parks, and electronics manufacturing.

To ensure the success of these industrial cities, these should be planned with clear markers:

a. **Super-integrated clusters –** with manufacturing, logistics, innovation hubs and affordable housing.

b. **Super-connected** – Port-proximate (less than 30 min freight transit); rail-siding to western dedicated freight corridor, 6/8 lane road connectivity.

c. **30 - 40% lower cost of doing business –** Cheap and reliable power (at less than INR 6 per unit cost for industrial consumer); reliable water availability (less than INR 40/kl); single window and time-bound clearances; sector-specific incentives to reduce cost of doing business, including production-linked incentives like capital subsidies, SGST reimbursements.

4. **Develop four integrated multi-modal logistics parks, totalling nearly 1,000 - 1,500 hectares, providing 60 - 70 msf of additional warehousing space in MMR.**

   In FY23, MMR has a warehousing stock of 140 million square feet (msf), representing 30 - 35% of India's total. However, only 17% of this stock is classified as Grade A, with Chennai and Pune leading at 75% and 73% respectively. MMR should target to increase its Grade A warehousing space by 4X to meet the growing demand, which would require an additional 60 - 70 msf of warehousing space.

   To that end, four strategic locations along the corridor could be considered for setting up integrated multi-modal logistics parks which include Kharbav (MMLP already proposed by MMRDA), Angaon-Sape (emerging area at landing of Samruddhi Corridor and Vadodara Spur, already declared as growth center by MMRDA), Padeghar near JNPT and MTHL influence area. Further, logistics hubs need to be planned around the upcoming Vadhavan and Dighi ports to significantly reduce logistics costs and improve efficiency of cargo movement from all three directions (Gujarat, Nashik, Pune).

5. **Develop a 300-hectare industrial circularity park between JNPT and Dighi port**

   This should include:

   - plastic recycling (2,000 TPD)
   - steel recycling (1.5 million MT) and
   - construction and demolition waste recycling (6,200 TPD) through private sector participation.

Growth Driver 5

PLANNED BROWNFIELD URBANISATION AND INTENSIVE TRANSIT-ORIENTED DEVELOPMENT (TOD)

Planned urbanisation is key to MMR systematically organising and laying the base for its forward planning in terms of talent attraction and growth.

In the past, because of a lack of focus on economic and regional master-planning, cities have grown haphazardly. The good news is that there is an excellent opportunity to practise “cutting edge” planned urbanisation going forward. More than 20 critical connectivity projects (like the Samruddhi expressway, Virar Alibag multi-modal corridor, western dedicated freight corridor, 337 km metro, 172 km suburban rail and bullet train), which are underway for completion over the next three or four years in MMR, will open up newer areas as well as help connect the existing core city areas. This will create an excellent opportunity for urban renewal as well as creating planned urbanisation to attract talent and create a liveable MMR for one and all.

Planned urbanisation has two key pillars in the context of MMR. As part of this Economic Master Plan, several economic areas and TOD development opportunities have been identified as shown in figure 7 which could drive a $25 - 35 billion GVA over FY30.

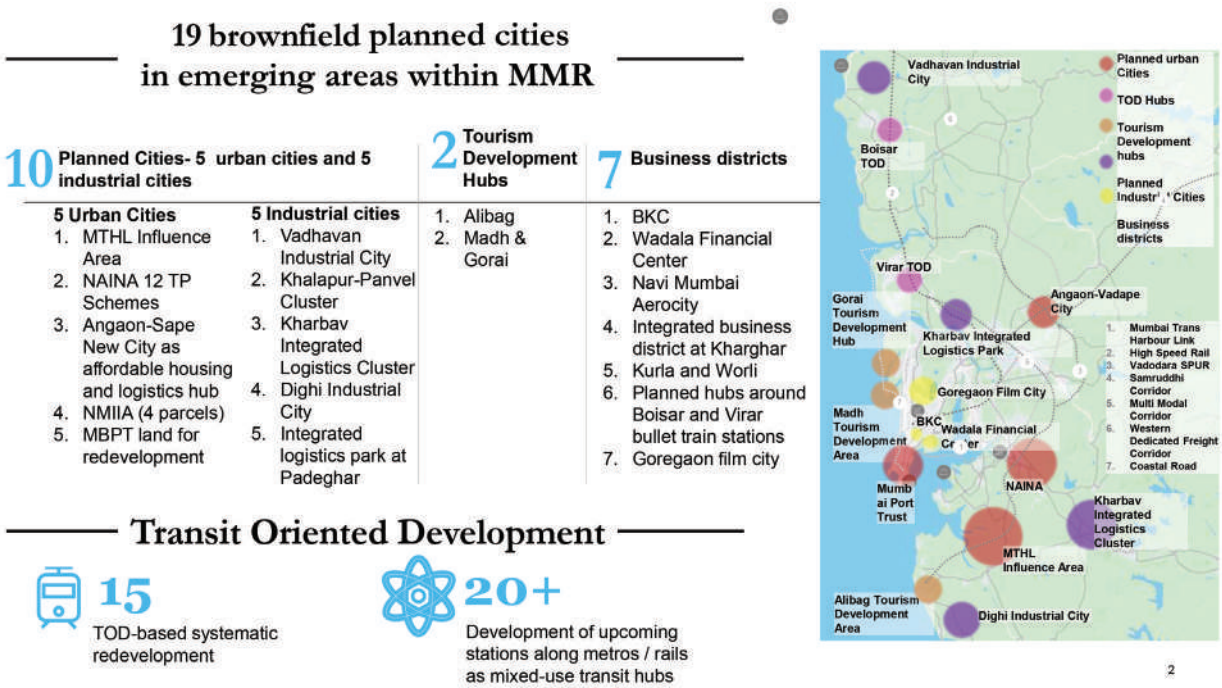


Figure 7: Illustrative presentation of proposed urban infrastructure

1. **MMR will need a total of 19 new economic areas, to be developed by MMRDA, CIDCO, MSRDC and some by the private sector in a world-class master-planned manner (as discussed in the chapter on mindset shifts)**

   These planned urban areas can be in a variety of sizes and formats as below:

   - Ten planned cities
     - » Five urban cities: 2,000-hectare MTHL Influence Area, 4,000 hectares in NAINA through TP scheme, 2,000 hectares in Angaon-Sape New City, 1500 hectare across four parcels of Navi Mumbai Integrated Industrial Authority (NMIIA), 250-hectare Mumbai port land development.
     - » Five industrial cities: 2,000-hectare Integrated Industrial City at Vadhavan including exploring opportunity for a third airport at Vadhavan to boost export manufacturing ecosystem and domestic connectivity, 2,000-hectare Panvel Khalapur Cluster, 5,800-hectare Kharbav Logistics Cluster, 6,000-hectare Dighi Industrial city, 380-hectare logistics park at Padeghar.

- Two tourism hubs (Alibag, Madh/Gorai) - Alibag including Kashid as a world class tourism hub and Gorai and Madh as a beach entertainment, spiritual and wellness tourism hub.
- Seven business hubs including BKC, Wadala Financial Center, Navi Mumbai Aerocity, integrated business district at Kharghar, Kurla and Worli, planned hubs around the Boisar and Virar bullet train stations, Goregaon film city.

These business districts will need to be developed by MMRDA, CIDCO, the Mumbai port trust and the private sector along the lines of global business hubs like Canary Wharf, London and Shanghai Bund. They will need excellent metro and bus connectivity, mixed-use zoning, flexible height restrictions, a world-class master plan with at least 25% - 30% of the area under roads, greens and water bodies, ample recreation spaces, hotels and retail zones.

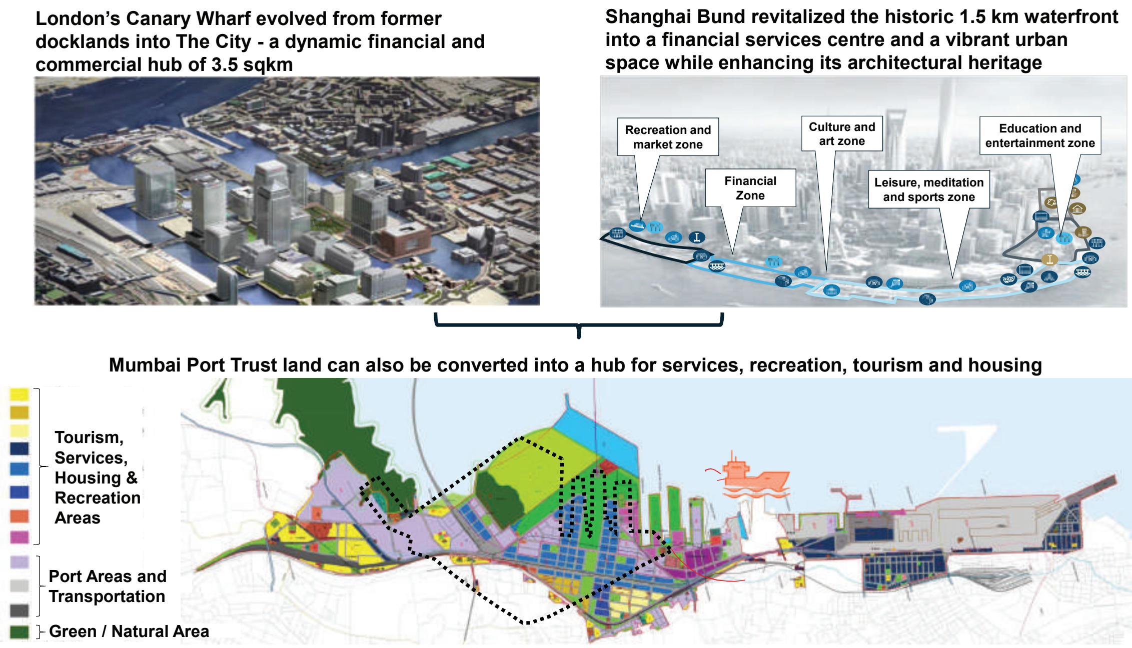


Figure 8: Transformation of Global Business Hubs.

In addition, the state should encourage the building of at least five privately planned and developed integrated township projects (ITPs) in the MMR area. They will need to be incentivised through policy promotion and infrastructure support to the private sector.

2. **MMR will need to undertake intensive TOD by leveraging the opportunity created by 337 km of metro lines and 172 km of suburban rail (nearly 450 metro and rail stations are expected to be up and running by FY30) for planned urban renewal.**

   Two opportunities exist in this context:

   - Fifteen TOD-based systematic redevelopment sites of 500 - 800 m in areas around metro / rail stations through preparation of local area plans. This could include areas like Andheri, Ghatkopar, DN Nagar, etc. which have a greater density of old structures.
   - Development of 20 upcoming stations along metros / rails as mixed-use transit hubs with integrated commercial complexes, retail zones. The stations could include those with strategic locations, higher footfalls, proximity to commercial hubs, e.g., Wadala, Thane, Bhiwandi, Kalyan, Vikhroli, Taloja, Malad and Mankhurd.

In order to facilitate this, the state will need to put together a TOD Policy to define the procedure of how TOD will be applied in the existing city area, as well as how the planned redevelopment of private lands can be incentivised.

Growth Driver 6

TRANSFORM MMR INTO A SUSTAINABILITY & INCLUSIVITY LEADER IN INDIA

Sustainability and inclusivity are important Growth Drivers for MMR across two areas:

A. Making MMR “Near Net Zero” by 2047

B. Making MMR a gender inclusivity leader for India

Within inclusivity, for the immediate purpose, the specific lens of gender inclusivity has been applied, given its economic and social impact. Other aspects of inclusivity, including disabled-friendliness, senior-care, cultural diversity will also need to be considered during the detailed planning stages.

A. MMR should aim to achieve “Near Net Zero” by 2047

While India is on the path for net zero by 2070, MMR should take the lead and create a near net-zero plan that it can get to by 2047. The Mumbai climate action plan has already been created with this lens. It should also be extended to other subregions. A composite net zero plan where MMR targets to reduce its GHG emissions from 1.8 to <1.3 ton CO2e per capita[3] by 2030 and <0.3 ton CO2e per capita by 2047[4] is what should be the focus going forward.

This will need action across three key areas and require $2 - 3 billion in investments by government or government-owned institutions by 2030:

1. **MMR as a national anchor in the energy transition journey**

   Maharashtra is already working on its energy transition plan and MMR needs to be at center-stage with ambitious targets across renewable energy usage, the shift to EVs and the introduction of new technologies like green hydrogen.

   MMR should look at achieving:

   - **40% share of RE by FY30 –** In order to be able to support the energy transition to renewables, the transmission and distribution network will need to be substantially strengthened from the source areas to MMR. This will need government investment in the range of INR 20,000 crore over the next six-eight years.
   - **100% buses and 50% EVs out of all new vehicle registrations by FY30 –** In addition, MMR should prepare a plan for all buses (about 14,000 needed by 2030) in MMR to be gradually transitioned into EV buses by 2030. To support this capacity, a significant upgrade in EV charging infrastructure will be needed. Nearly INR 20 - 25,000 crore in investment will be needed towards this. More than 90% of which will need to come from the private sector.
   - **0.5 MMT green hydrogen produced annually by FY30 –** The state government has already prepared a green hydrogen policy. The area around Vadhavan port or other ports may be considered for setting up this capacity and will need an investment of INR 8 - 10,000 crore from the private sector.
   - **Increase penetration of energy efficient buildings –** Create a Green MMR Policy and by institutionalising the Energy Conservation Building Code (ECBC) 2017.

2. **MMR as India leader in achieving material circularity**

   As a large urban economy, MMR will produce nearly 20,000 tons per day of waste by FY30 (against 14,000 tons per day in FY23[5]). This is across municipal waste, construction waste, plastic waste, hazardous waste, much of which goes unsegregated, untreated and is inefficiently disposed of. MMR urgently needs a strong material circularity push to reduce the load on natural resources as well as to stop unscientific waste disposal.

   MMR should look at ensuring:

   - **100% waste segregated and recycled/converted to energy by FY30 (estimated as an INR 18 - 20,000 crore investment, mostly through the private sector)**
     - » Build two multi-use waste to energy plants (total 1,700 TPD) and eight bio-gas plants (total 9,500 TPD) to cater to all of MMR through private sector participation.

[3] Limits as per Climate Action Plan for Mumbai
[4] Mumbai Climate Action Plan aspires for 0.5Ton CO2e per capita by 2050, a 71.5% reduction on baseline
[5] Average 600 - 650 gm waste per capita per day

» Develop a 300-hectare industrial circularity park between JNPT and Dighi port with plastic recycling (2,000 TPD), steel recycling (1.5 million MT) and construction and demolition waste recycling (6,200 TPD) through private sector participation.

- **30% water demand met by the use of recycled water**

  Less than 2% of treated wastewater is recycled in FY23 in MMR due to the low acceptability of recycled water within urban areas as well as industries. In fact, most municipal corporations throw away / dispose of all recycled water after the secondary treatment stage.

  Overall, a perception change may be needed to drive up the use of recycled water, at least for industrial and landscaping / flushing uses. Additionally, infrastructure capacity will need to be built for the tertiary treatment and supply of recycled water.

  By FY30, MMR should target:

  » Building a tertiary water treatment capacity of 600 MLD (1000 MLD by 2047) and, simultaneously, building a recycled water network in phases to provide recycled water to industrial areas. This will need investment in the range of INR 2,000 crore.

  » Making zero discharge and reuse of recycled water mandatory for all new townships, societies, urban clusters above a certain threshold, for flushing and landscaping uses.

- **40+% reduction in the monthly peak air quality index (AQI)**

  Over the last few years, AQI in Mumbai has ranged between 150 - 300. Controlling air quality is vitally important to creating a liveable city, attracting talent and ultimately achieving the 2030 plan. The state environment department in collaboration with MMRDA and the municipal corporation will need to create an AQI reduction action plan for the next five years that outlines the stringent steps that need to be taken to control and achieve a 40+% reduction in monthly peak AQI.

  A few suggestions that could be evaluated include:

  » Focusing on clean transportation strategies, such as incentivising electric vehicle adoption and promoting carpooling and ride sharing.

  » Introducing effective waste management initiatives, including enforcing stricter regulations against open burning and targeting 100% waste segregation at source.

  » Implementing stringent regulations against industrial emissions along with incentives for cleaner technologies and regular monitoring that can help curb industrial pollution.

  » Implementing comprehensive construction management measures to control dust and emissions from construction sites, along with scheduling activities to minimise peak-hour disruptions.

3. **MMR as a leading example in climate adaptation and resilience**

   As per the Mumbai climate action plan report, coastal areas in MMR are at risk of a 0.1 - 0.3 m rise in sea levels over the next two or three decades, creating a possible scenario where the Arabian sea could begin flooding most of Mumbai at least once every year. Further, given the extreme rainfall, landslides may become an increased risk in the vulnerable areas of Mumbai (incidentally, 70% of landslide prone areas within Mumbai fall within informal settlements). This is not all. The mean temperatures in Mumbai are expected to rise by 1.5 - 2 °C and, by 2040, as many as 60% of the days in a year could have temperatures exceeding 32 °C. What is more, over the last year, AQI in Mumbai has ranged from150 - 300 which means that the air quality risks in certain areas have been severe to extreme, exacerbated by the ongoing construction activities.

   Climate adaptability and prompt action to improve climactic conditions are therefore of extreme importance. And MMR needs to take them up on a priority basis.

   The following actions will therefore be required:

   - Create a comprehensive Climate Adaptability Plan 2030 and 2047 to mitigate all climate risks such as flood hazards, rise in sea levels, urban heat, coastal risks like tropical cyclones, landslides, water and power uncertainties and increased air pollution.

- Identify, size and locate critical projects to be undertaken by 2030, like flood retention lakes, dykes, covered and permeable footpaths, climate-resistant housing, coastal protection embankments and walls, underground water storage, etc.
- Increase share of public transport. Metro and rail are either already under construction or expected to be as per the plan. MMR now needs a concerted effort to increase its buses and water transport network, along with first and last-mile connectivity including maximising walkability.
- Develop a Center of Excellence for climate technologies and disaster management to work on creating innovative solutions in a streamlined manner.

B. MMR should become the gender inclusivity leader for India

As of FY23, MMR has a 35.6% participation rate for women in its labour force. This means that MMR is employing a mere 33 lakh women in its workforce. By contrast, Vietnam has a female labour force participation rate of 69% and Hong Kong of 53%. In other words, MMR has a long way to go.

India aims to achieve a 50% female labour force participation rate (LFPR) by 2047. MMR should lead in gender inclusivity by targeting 60% female LFPR by 2047 and 38-40% by 2030. This would mean adding 9-10 lakh women to the workforce by addressing skilling disparity, women's safety concerns, last-mile transportation gaps, gaps in child and senior care on a priority basis. This could be done by launching a Women Inclusivity Blueprint to scale-up the participation of women in the workforce through interventions like:

- Additional capacity for women in EduCities and MediCities, and in upcoming business districts
- Attracting women centric manufacturing sectors like electronics units, assembly units (e.g., assembly lines of Harrier and Safari at Tata Motors are run entirely by women)
- Providing incentives to employers for gender friendly policies including flexible working-hours, setting up creches, etc.
- Creating a women's entrepreneurship hub (similar to Telangana) as a launchpad for women-led start-ups.
- Stronger partnerships between the government and private sector to programme demand-backed training curriculums and certification programmes. For example, the Government of India and state governments could work together to shape a standard curriculum and skill taxonomy in collaboration with industry bodies.
- Upgradation of existing ITIs and skilling universities, with at least 40% capacity kept for skilling courses for women. The scope of existing government skilling institutes (e.g., Women Industrial Training institutes, National Vocational Training Institutes) needs to be expanded to launch multiple women-centric training programmes with flexible hours to ensure a higher participation rate.
- Collaboration between the state government and private sector to develop a student-centric education model that incorporates digital skilling, design thinking, practical apprenticeships and vocational models into the existing curriculum for primary and secondary education
- Official certification body providing "Gender Badge" certification to factories that meet standards of safety and working conditions for women and enable women at their workplaces and beyond.
- Making priority allotments to women-owned affordable housing
- Increasing women-only buses on key routes and providing commute subsidies
- Establishing clean public toilets (one every 1 km on key roads)
- Developing working women's hostels in all areas including industrial areas

Growth Driver 7

ENSURE WORLD-CLASS CORE AND LAST MILE URBAN INFRASTRUCTURE

Infrastructure not only supports economic growth but the related investments also directly contribute to the region's construction GDP. Therefore, it is important to focus on both core and last-mile urban infrastructure as key drivers of economic development.

Four key infrastructural areas (as depicted in Figure 9) need to be strengthened if MMR is to be considered at par with global economic hubs like Singapore, Tokyo and London. These include:

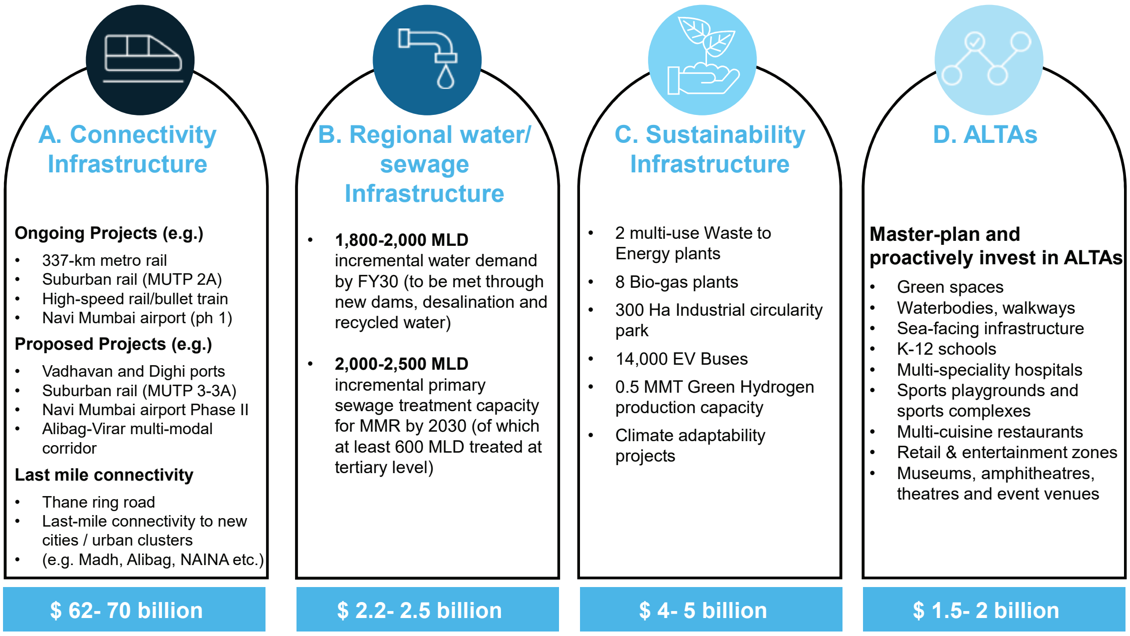


Figure 9: Four Urban Infrastructure Priority Areas

1. **Connectivity Infrastructure –** MMR has taken a big step up on this already. However, it is crucial to maintain the momentum required to complete the ongoing passenger / freight connectivity transport projects and start proposed strategic projects as a priority for completion by 2030. It is also crucial to strengthen last mile connectivity and ensure seamless integration across the entire metro network. This interconnectedness will facilitate easier travel for people, bridging gaps and enabling efficient access to existing as well as planned new areas. To this end, the following key projects need to be completed:

   a. **Ongoing Projects –** Nearly 20 projects worth $50 - 55 billion (INR 400 - 440K crore) are on-going that need to be completed. These include but are not limited to:

      i. 337-km metro rail: This is transformational for MMR. It has to be ensured that all the metro corridors are inter-connected for easy and seamless commuting

      ii. Suburban rail under MUTP 2A

      iii. High-speed rail/bullet train

      iv. Navi Mumbai airport (Phase 1)

      v. Alibag-Virar multi-modal corridor including metro/rail connectivity

   b. **Proposed Projects –** It is imperative that four projects be completed on priority to support the strengthening of MMR's connectivity. They will need another $12 - 15 billion (INR 95 - 120K crore) in investment. These include

      i. Vadhavan port – The project was recently announced. With a deep draft of 18 meters, it will be India's largest port, featuring nine container terminals. It is set to transform MMR

ii. Suburban rail under MUTP 3 - 3A – 280 km route including augmenting of existing network as well as expansion in the northern part to meet the future demand and solve the urban transportation problem in MMR

iii. Navi Mumbai airport Phase II (100% private sector investment)

iv. Dighi port (100% private sector investment).

c. **Last mile connectivity** – It is a critical component of the infrastructure and should be given due priority. It includes road projects to improve intra- MMR connectivity like the Thane ring road, and last-mile connectivity to new cities / urban clusters like Madh, Gorai, Alibag, NAINA etc. (INR 5,000 crore)

2. **Regional water/sewage infrastructure** – MMR depends for its water needs on existing water reservoirs of the respective municipal corporations. At an aggregate level, the water reserves will not be sufficient to meet the increased demand of the entire region by 2030 (there is an estimated gap of 1,800 - 2,000 MLD between supply and demand). Also, the reservoirs are subject to seasonal variations and climate change, putting MMR at risk of water shortage in the near term. MMR will, therefore, need to create additional capacity of 1,800 - 2,000 MLD by 2030, which will need to be met through new reservoirs, desalination, recycled water and network strengthening. It will need investments in the range of $0.6 - 0.7 billion (INR 5,000 - 5,500 crore) over the next 5 - 7 years.

   Further, 2,000 - 2,500 MLD of incremental primary sewage treatment capacity will be needed for MMR by 2030, of which at least 600 MLD will need to be treated at tertiary level to ensure water recycling. This will need another $1.6 - 1.7 billion (INR 13,000 -14,000 crore) in investment over the next 5 - 7 years.

   The responsibility for planning and developing all these investments will need to be taken on by MMRDA as the regional nodal agency. This will benefit the region by balancing the water supply and ensuring the judicious use of limited resources.

3. **Sustainability infrastructure** – Energy and sustainability infrastructure is a critical need when looking to build a resilient and future ready MMR and will require investments in the range of $2 - 3 billion (INR15,000 - 25,000 crore) over the next 5 - 7 years to dramatically increase the sustainability infrastructure including MSW recycling, circularity infrastructure and climate adaptability infrastructure.

   Additionally, at least 14,000 EV buses along with charging infrastructure across the region will be needed to make MMR's per capita bus availability at par with cities like London and Singapore and provide for sustainable last mile public infrastructure ($1.75 billion; INR 14,000 crore, of which 50% will need to come from the private sector).

4. **ALTAs** – As mentioned earlier, MMRDA, municipal corporations and the respective special planning authorities should prioritise building ALTAs as the last-mile infrastructure close to homes and places of work to improve liveability. It will need an investment of about $1.5 - 2 billion (INR 12,000 - 15,000 crore) to develop amenities like parks, water bodies, promenades, boat terminals, footpaths, etc.

6 Projectisation and Implementation roadmap for the Economic Master Plan

These seven Growth Drivers together will have a substantial physical footprint. The region will require the following additional stock by 2030:

- Three million affordable homes
- 150 - 175 msf additional Grade A/B offices
- 12,000 - 15,000 additional premium (3 - 5 star) hotel rooms
- 25 - 30 new colleges (e.g., STEM, medical, law, liberal arts) for 20,000 graduates annually
- 15,000 additional tertiary hospital beds
- 60 - 70 msf additional warehousing spaces
- 10 - 12,000 hectares of industrial area

For ease of implementation, the Economic Master Plan needs to be converted into actionable projects and initiatives. The plan has been prioritised into a list of 47 interventions which MMR and the Maharashtra state government will need to operationalise. The concept, sizing and exact geographical locations of these projects will need to be fine-tuned further to convert them into implementable projects.

The 47 interventions are classified as below (and depicted in Figure 10 and 11):

- 30 projects for MMR to take up over the next five or six years
- Eight economic policies and blueprints for the state to take up in order to trigger the investment cycle
- Nine institutional shifts which will be necessary to drive the Economic Master Plan.

30 Projects

MMR as a Global Services Hub

1. 2 world-class business districts (Wadala and BKC) for financial services
2. Complete development of Aerocity as a global aviation city
3. MTHL influence area as a new city with services, education, entertainment and housing
4. Medicity & Educity south of Panvel as integrated healthcare, education and skilling hub
5. Integrated business district at Kharghar
6. Services, recreation, tourism and housing hub on MbPT land
7. Development of film city as entertainment tourism

Affordable Housing & Slum Rehabilitation

8. 2.2 mn slum rehabilitation
9. 0.8-1 mn affordable housing for LIG/ low MIG segment and talent attraction

Tourism

10. 2 themed tourism development hubs (Gorai & Madh + Alibag)
11. 20 notified tourism precincts and 6 tourism PPP projects
12. Master Planning 300 km coastline

MMR as Port-Proximate Integrated Manufacturing and Logistics Hub

13. Kharbav integrated logistics cluster as a multi modal logistics park
14. Khalapur-Panvel manufacturing cluster for white goods assembly, circular economy parks, and electronics manufacturing
15. Integrated logistics park at Padeghar
16. Gems & jewelry park at Navi Mumbai
17. Vadhavan port and industrial area suitable for sectors like green hydrogen, steel, chemicals, integrated textile and apparels
18. Dighi port and Dighi industrial city for pharma, steel, circular economy parks

Planned urbanisation and intensive TOD development

19. NAINA 12 TP Schemes as mixed-use city
20. Kurla and Worli as mixed-use projects for housing and services
21. Angaon-Sape new city as affordable housing hub
22. Planned hubs around bullet train stations (Virar and Boisar)
23. Navi Mumbai SEZ development as mixed-use commercial recreation hubs and integrated logistics & hi-tech manufacturing cluster
24. 15 TODs of 500-800m in area around metro / rail stations via local planning
25. 20+ Stations redevelopment as mixed-use transit hubs

Inclusivity & sustainability leader in India

26. 7 sustainability projects including T&D network, WTE & biogas plants, circularity park, EV buses, green hydrogen, climate adaptability projects

World-class urban infra and transport

27. Complete ongoing regional connectivity projects ($50-55bn)
28. Regional bulk infrastructure projects including water reservoirs, STPs, network upgradation
29. Amenities for Livability & Talent Attraction (ALTAs)
30. Missing links in regional transport projects inc. projects to improve intra-MMR connectivity, and last-mile connectivity to new cities / urban clusters

Figure 10: List of 30 projects across all Growth Drivers.

8 Proposed Policies

1. Services Policy
2. Tourism Policy
3. Affordable Housing Policy
4. TOD Policy
5. Investment Promotion and land allocation Policy
6. Simplified and enabling urban planning policies
7. Women Inclusivity Blueprint
8. Green MMR Policy

9 Institutional Shifts

1. MMRDA
2. CIDCO
3. Housing department & agencies
4. MIDC
5. Tourism department and Tourism Board
6. Key Municipal Corporations
7. Statistics & Economic measurement agency
8. Department of Services
9. Ease of doing business initiatives

$ 125-135 billion Private Investment	**$ 130-150 billion** Incremental GDP by FY30	**2.8-3 million** Incremental Employment by FY30

Figure 11: List of 8 policies and 9 Institutional Shifts across all Growth Drivers.

The list of projects, policies, blueprints and institutional shifts across all Growth Drivers represents a strategic framework aimed at catalysing development in the MMR. Importantly, this comprehensive approach is projected to materialise into more than 20 land-based projects distributed across various geographical locations, as visualised ahead.

1A. World-class business district (BKC)

20 Ha at E-block | Mixed use commercial, residential (Premium + Affordable), high-street retail, malls, F&B spaces, entertainment & recreational spaces

10 Ha at High Street BKC above HSR station Mixed use development with riverfront, walk-to-work residential spaces, retail & shopping experiences

10. Two Themed tourism development hubs

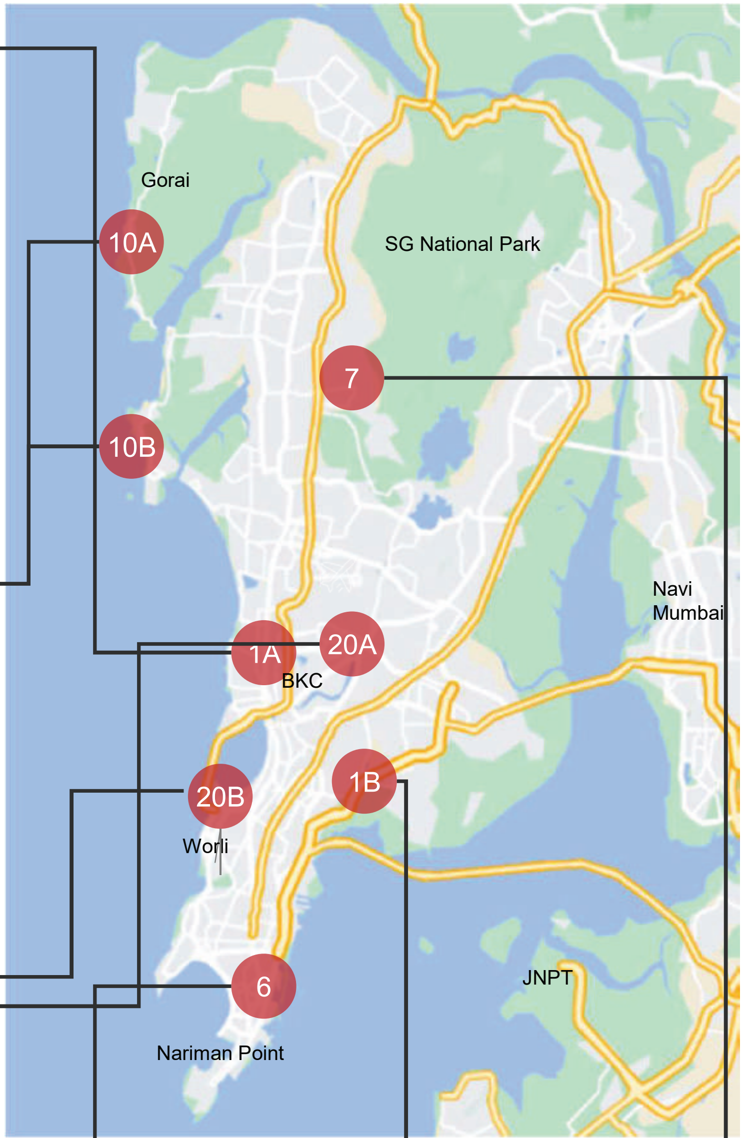
5,800 Ha across 3 locations | Themed tourism hubs along the MMR Coastline - Gorai (2000 Ha) and Madh (1,200 Ha) as a spiritual & wellness and beach entertainment hub, and Alibag as a World-class Tourism hub (2,600 Ha)

20. Kurla and Worli as mixed-use projects

6.4 Ha at Worli & 10.5 Ha at Kurla | Worli - mixed use project with office space, hotels, hospital, entertainment hub; Kurla - mixed use project integrating hotel, commercial, entertainment, MICE, residential spaces

6. Services, recreation, tourism and housing hub on MbPT land

250 Ha of core development area | Residential + Commercial BUA + central garden and seafront park + 11 km of eastern seafront promenade + Eco Park

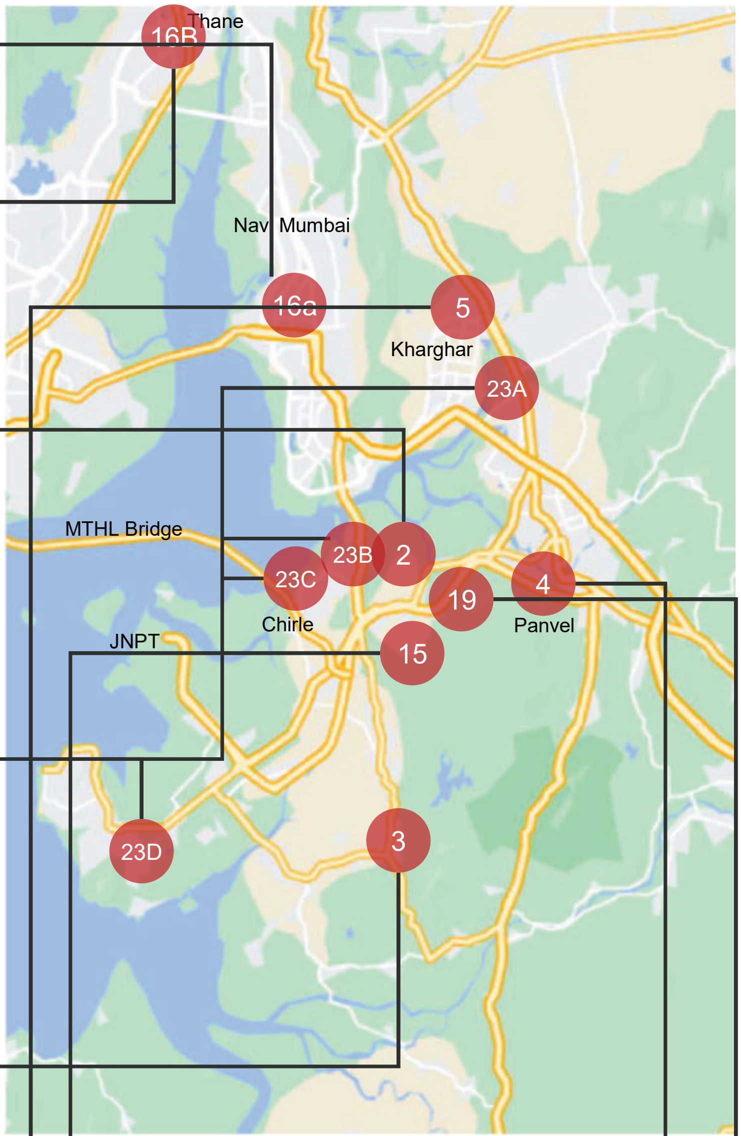


1B. World-class business district (Wadala Financial Center)

20 Ha | 25 Mn sqft mixed use development with Serviced Apartments, Shared Offices, Hotels; focus sectors - BFSI, Innovation, R&D, Start-ups, FinTech

7. Development of Film city

110 Ha | 16 msf of AVGC and media tech offices and Centers of Excellence in AR/VR, Animation, VFX and Gaming + recreation & entertainment avenues



16A. Gems & Jewellery Park at Navi Mumbai

16B. Navi Mumbai MIDC Area - Thane Trans Harbour Creek redevelopment

Redevelopment of Thane MIDC area as a data centre, services hub

2. Complete development of Aerocity

270 Ha | **Services District** for new-age jobs + **MICE & Hospitality District** for International events, exhibitions & conventions + **Entertainment & Retail District** (high street retail, oceanarium, beach cafes, small marina)

23. Navi Mumbai SEZ development

1,500 Ha across 4 locations | 3 parcels to be developed as mixed-use commercial, recreation hubs + 1,000 Ha land at Dronagiri as Integrated logistics & high-tech manufacturing (non-polluting) cluster

3. MTHL influence area as a new city

2,000 Ha in Phase 1 by FY30 | Integrated Townships, education, healthcare, multi modal logistics parks + data centre and R&D, park, sports, recreation & entertainment city

5. Integrated business district at Kharghar

150 Ha | 20 msf Commercial area (focus sectors - BFSI, Innovation, R&D, Media & Entertainment) + 3-4 msf retail & entertainment + 1000 keys hotel + civic amenities + 8-10 msf residential area

15. Integrated logistics park at Padeghar

380 Ha | Integrated Logistics Park

4. Integrated mixed use Medicity & Educity south of Panvel

150 Ha | Internationally-recognized higher education hub (global exporter of skilled talent – e.g., in digital services, healthcare & care-giving, hospitality, EVs, AVGC and construction) + Global medical tourism hub

19. NAINA TP schemes as mixed-use cities

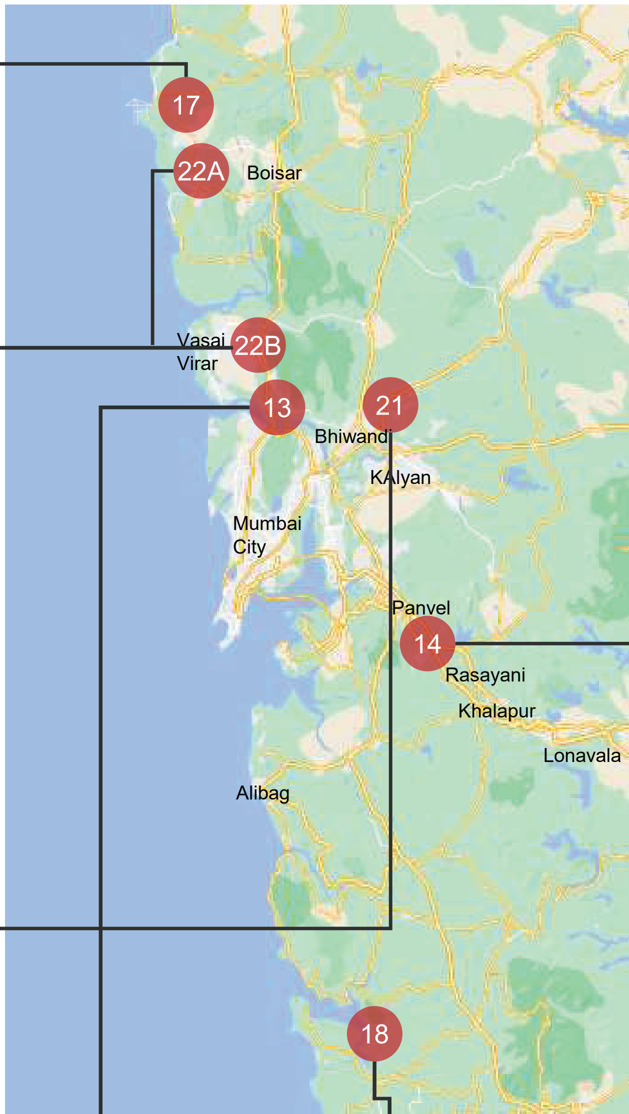
4200 Ha (Incl. 420 Ha Growth centre plots with 4 FSI + 97 Ha Saleable plots with 2.5 FSI) | 20 msf Commercial area + 5 msf Retail, Recreation & Entertainment facilities + 1500 hotel rooms, serviced apartments | Residential, ITP townships on rest of the area

17. Vadhavan Port and industrial area

Vadhavan Port + 2,000 Ha Integrated Industrial City at Vadhavan | port-proximate manufacturing and logistics cluster + affordable housing for industrial workers + potential third airport

22. Planned urban clusters around 2 bullet train stations

Greenfield urban clusters around transit, including HSR stations at Boisar & Virar | Development of buffer area around transit stations; high-density, mixed-use development



21. Angaon-Sape new city as affordable housing hub

2,000 Ha, of which 20-30% area may be developed by FY30 | New Urban City at Vadodara SPUR and Samruddhi corridor integration; mixed use cluster with affordable housing

13. Kharbav Integrated logistics cluster

5,800 Ha | MMLP & Logistics Parks + residential including affordable housing

18. Dighi industrial city + Dighi port ecosystem

Dighi Port + 6,000 Ha Integrated Industrial City at Dighi | port-proximate manufacturing and logistics cluster + affordable housing for industrial workers

14. Khalapur-Panvel manufacturing cluster

2,000 Ha, of which 30-40% area may be developed by FY30 | Urban Cluster along Mumbai-Pune expressway

Figure 12: Geographical mapping of select projects.

Financially, the Economic Master Plan will involve attracting $125 - 135 billion in private sector investments over the next 6 - 8 years.

The government investment needed to catalyse and attract private sector investment will need to come from the central and state governments as well as state government agencies over the next five-seven years. As mentioned previously, the good news is that many of the infrastructure investment projects have already been announced and are in various stages of implementation.

While government investments are a must, private sector investments are the primary driver for MMR's economic transformation. About 70% of the total investment ($125 - 135 billion, INR 10 - 11 lakh crore) across the seven growth drivers will need to come from the private sector. This ranges from physical assets like housing, office buildings, recreation facilities, hotels, data centers, container ports, transmission lines, manufacturing to softer aspects like R&D, world-class skills and expertise. The proposed private investments in each growth driver are as follows:

Growth Drivers		Private sector Investment	
		USD (Bn)	INR ('000 Crore)
1	MMR as a Global Services Hub	24 – 25	190 – 200
2	Affordable Housing	36 – 38	285 – 305
3	MMR as a global tourism and urban recreation hub	6 – 7	45 – 55
4	MMR as Port-Proximate Integrated Manufacturing and Logistics Hub	25 – 27	200 – 215
5	Planned urbanization and intensive TOD development	30 – 32	240 – 255
6	Inclusivity & sustainability leader in India	2 – 3	15 – 25
7	World-class urban infra and transport	2 – 3	15 – 25
Total		**$ 125 – 135 Bn**	**INR 10-11 Lakh Crore**

Figure 13: Private sector investments.

Therefore, government agencies have to play a major facilitatory role for attracting private sector investments as well as talent. To that end, the required investment from government to kick start the implementation of the economic master-plan has been outlined below:

- **Complete ongoing regional connectivity projects of around $50 billion.**
  - » **State government agencies:** As of FY23, projects worth $30 - 35 billion (INR 240 - 280K crore) are under implementation including 337-km metro, suburban rail under MUTP 2A, Alibag-Virar multi-modal corridor, Versova-Bandra sea link, Versova-Virar sea link and 12 other strategic road projects such as Versova Dahisar link road, Marine Drive-Worli coastal road, etc. will need to be put on a priority path for completion by 2030. This is what will create a base of excellent connectivity for people.
  - » **Central government agencies:** Complete around $15 billion (INR 120K crore) ongoing connectivity projects managed by central government agencies in the region which include Mumbai-Ahmedabad high speed rail / bullet train, Mumbai-Vadodara expressway SPUR, Delhi-Mumbai Freight Corridor and other smaller projects such as CST station redevelopment.

- In terms of new investments, state government agencies must make strategic investments of $34 - $36 billion (INR 270 - 290K crore) under this economic plan to further accelerate the region's growth trajectory.

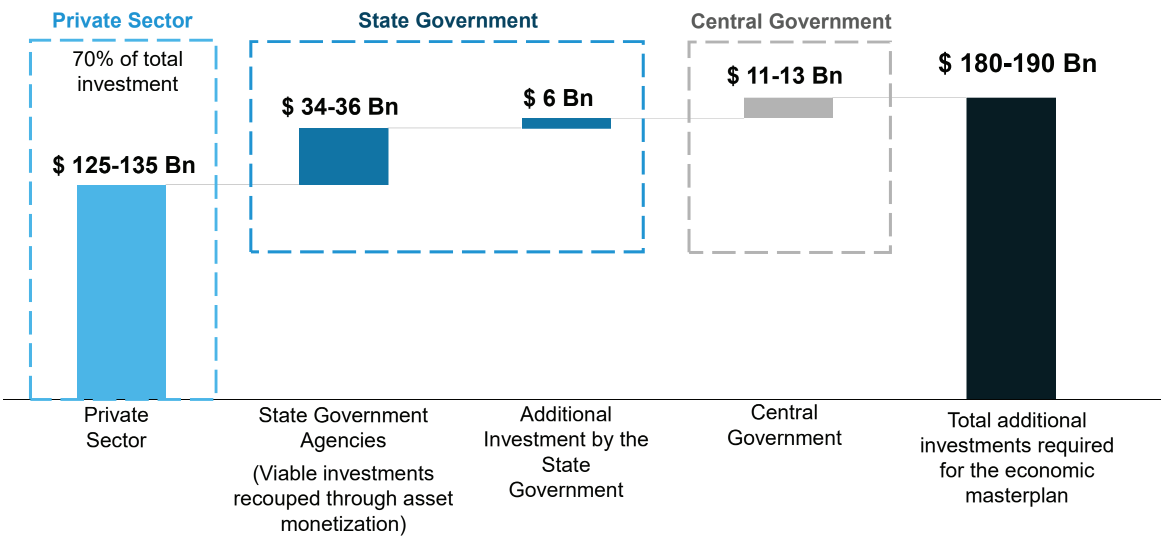


Figure 14: Total investment under the economic masterplan.

- While the investment from state government agencies looks large, these investments are financially viable, and bankable and recoupable through asset monetisation. This includes:
    - » MMRDA & CIDCO to invest INR 115 - 135K crore ($14 - $17 billion total; MMRDA – INR 75 - 85K crore, CIDCO – INR 40 - 50K crore) spread over 5 - 7 years. This strategic investment will focus on comprehensive Economic Master Planning and development of new cities and business districts, development of crucial last-mile infrastructure, sustainability and regional water/ sewage infrastructure initiatives, creating ALTAs, supporting housing department agencies to facilitate affordable housing, and strategically acquiring land banks to drive future economic growth.
    - » Housing agencies (SRA, MHADA) need to invest INR 120K crore ($15 billion) for slum rehabilitation and developing affordable housing for talent attraction (discounting for support from the PMAY scheme) spread over 6 - 8 years. This would be in addition to facilitating the private sector in rehabilitating 1 million slum households in financially attractive areas. The investment would be fully recoverable over an 8 - 10 year period.
    - » MIDC should plan to invest INR 35K crore ($4 - 4.5 billion) in the next 5 - 7 years for comprehensive initiatives including creating five industrial cities, land acquisition and infrastructure near the Vadhavan industrial area and Khalapur-Panvel manufacturing clusters. This investment will also encompass infrastructure planning, including ALTAs, and the systematic plotting and development of industrial areas such as the Dighi industrial city, Kharbav integrated logistics park, etc.
- While state government agencies will be the primary investment vehicles, the state will need to budget an additional INR 50K crore investment over the next three-four years to bridge the gap in some important areas: Affordable housing fund (Rs. 20K crore), MMR tourism fund (Rs. 8K crore) and state share for critical infrastructure projects (INR 20 - 25K crore) to kick-start the investment cycle.
- Central government investment support is crucially required in several key areas outlined below that are pivotal to the success of the regional economic plan:
    - » Three new strategic projects should be completed before 2030 to support the economic masterplan which will need a total central government funding of $10 - 12 billion (nearly INR 80 - 95K

crore).These include Vadhavan port (INR 76K crore, 60% central government and remaining through PPP), 280 km suburban rail under MUTP 3 - 3A (INR 44.6K crore, 50% GoI and remaining state government) and metro/rail along Alibag-Virar multi-modal corridor (INR 55K crore with metro/rail investment of nearly 45 - 50% to be funded by central government).

» The building of 4 lakh affordable housing units in MMR will need to continue being supported under the PMAY scheme to the tune of INR 8 - 10K crore.

These government investments will serve as a catalyst, drawing in and energising $125 - 135 billion private sector contributions across all Growth Drivers recommended in this Economic Master Plan to transform MMR into a robust $300 billion economy by FY30.

Eight launch-pad policies will be needed to attract private sector investments

1) **Services policy**

Services will play a key role in driving more than 70% of MMR's GDP in FY30. It is therefore very important that a services policy that will help facilitate investments into the sector is drawn up forthwith. The state already has an IT/ITeS and AVGC policy. This needs to be expanded to other services with the objective of incentivising both the services companies as well as the developers.

As discussed earlier in the section on mindset shifts, specific incentives are needed to attract different types of new-age services such as tech, start-ups, AI, AVGC, FinTech, health and education, GCCs etc. so as to ensure a competitive advantage over the other states. These incentives should be directed both towards the developers and the companies setting up the services businesses. They should be of the following kinds:

- Incentives for developers of the services hubs, business districts: Higher FSIs, global FSI for mixed use hubs, some relaxation in charges and other incentives including reduction in property taxes over the first eight-ten years, single window clearance for land and building permissions.
- Incentives for companies such as reimbursement of state GST over a period of 6 - 8 years, initial capital subsidy, start-up support fund for reimbursements and subsidies towards rents and expenses (e.g., rent subsidy for the first two years).

2) **Tourism policy**

A tourism policy is needed to prioritise the state's focus on its key tourism themes in MMR, including Beach, coastal and cruise tourism, MICE tourism, Nature tourism, Culture, heritage and fort tourism, Entertainment and film tourism, Wellness and medical tourism and Citizen and tourist infrastructure. Also, the role of the proposed MMR Tourism Promotion and Facilitation Board (formed through a state act) will need to be outlined in this policy.

Further, private investments are key to the tourism sector across hotels and resorts, entertainment and recreation projects like museums, theme parks, sports complexes, restaurants, gaming arenas, etc. and MICE projects like convention and exhibition centers.

Land being a critical challenge in MMR, the state should consider a customised land allotment policy (including lease rent subsidies, longer lease tenures, longer moratoriums, increased FSI, reduction in premiums, reduction in property taxes.) for anchor tourism investors.

The policy should specifically target $6 - 7 billion in private sector investments over the next seven or eight years. Also, specific capital subsidy and SGST incentives could be offered to incentivise the development of iconic tourism projects (like marinas, iconic beaches and resorts, Mumbai Eye, world-class oceanarium, theme parks, etc.) through the private sector.

3) **Affordable housing policy, with INR 20K crore housing fund**

A revamped housing policy is needed to outline the state's outlook for the development of three million affordable homes in MMR by FY30. This includes one million homes by the private sector through Slum Rehabilitation scheme, 0.5 - 0.6 million slum rehabilitations by Slum Rehabilitation Agency / MHADA directly, 0.5 - 0.6 million slum rehabilitations in partnership with MMRDA, CIDCO and other similar agencies and 0.8 - 1 million affordable homes for LIG/lower MIG segment as well as talent attraction.

To provide seed funding for state agency-led slum rehabilitation and affordable housing, the policy should facilitate the creation of an INR 20,000 crore housing fund.

For slum rehabilitation, the policy should address:

- Specific policies for slums in landward and seaward CRZ areas
- Specific Slum Rehabilitation policy for slum rehabilitation on central government land
- Creation of an "Enforcement Wing" in the housing department for GIS-based active slum tracking and prevention in MMR

Further, the policy would be instrumental in introducing a new class of affordable housing in MMR as "affordable homes for talent attraction", with the focus on:

- Providing affordable housing across categories like student housing, senior housing, industrial worker housing, studio apartments, working women housing.
- Revamping the rental housing policy under MHADA as the nodal agency to create 30 - 40% rental stock in MMR.
- Demand side impetus through housing finance schemes for specific allottees like dabbawallas, drivers, working women, etc.

4) **Transit-oriented development (TOD) policy**

A TOD Policy will be needed to incentivise planned redevelopment within a 500 - 800 m radius of key metro and suburban rail (and potentially bus) stations in MMR.

The objective of the TOD policy will be to promote high density, mixed-use development around transit stations, while also developing / improving areas under the public realm by increasing footpath areas and walkable blocks, public open spaces, improving last mile connectivity and upgrading municipal infrastructure.

To this effect, the TOD policy will need to define procedures of how TOD will be implemented (through local area planning or TP schemes), as well as define clear charters for such redevelopment in the form of revised planning norms applicable for the area.

5) **Investment attraction and land allotment policy**

This is specific to brownfield/greenfield cities and urban clusters developed by various government agencies such as MMRDA, CIDCO, Tourism Department

As discussed previously, the investment attraction approach for new urban areas in MMR needs to substantially shift towards an "anchor plus" strategy. Prevalent mandates of CIDCO, MMRDA and other government agencies do not allow such an approach.

Hence, an investment attraction and land allotment policy for anchor investors may be needed for CIDCO, MMRDA developed urban areas, which could provide a transparent route to anchor investor attraction in these areas.

Such a policy could define the mechanism by which preferential land allotment could be made to anchor investors, like at-cost / subsidised lease rents / sale price, discounted development charges, customised packages (like trunk infrastructure development by the state government at no cost to investor, etc.).

6) **Simplified and enabling urban planning policies**

In order to maximise the economic benefits of recommended economic Growth Drivers and planned urbanisation strategies in this report, MMR could benefit from certain modifications to its prevalent urban planning regulations and policies:

- Base FSI for the entire region with any additional (capped / uncapped) FSI available as premium purchasable FSI, without the complexities of fungible or ancillary FSI.
- Consider concept of global FSI in all large, private and government city/business hub projects to indirectly maximise the area under open spaces, roads and greens as well as to cross-subsidise real estate cost across asset classes.
- Consider simplifying ground coverage, set-back norms and minimum statutory parking norms for dense areas to allow modern urban design concepts like built-to-line.
- Specify world-class master-planning with modern planning principles as a requirement for new business hubs and new city projects.

7) **Green MMR policy including climate adaptability plan**

MMR will need a Green MMR Plan to act upon the various concepts and mindset shifts discussed in this report. MMRDA should consider preparing a Green MMR Master Plan and action plan, outlining top actionable projects, targets and action items for various government and private sector agencies. A climate adaptability plan would be an important and integral part of the Green MMR Master Plan when it comes to addressing climate risks like floods, urban heat and rising sea levels. Existing climate action plans prepared by individual corporations could be integrated into this plan.

Further, this should then be converted into a Green MMR Policy, incentivising the private sector into taking actionable steps to implement targets, for example, institutionalising the Energy Conservation Building Code 2017, green certified buildings, use of sustainable construction materials, climate research, use of EVs and roof-top solar.

8) **Women inclusivity policy and blueprint**

MMR needs to target for one million additional women entering the employed workforce by FY30. Towards this, the state government needs to prepare an MMR women inclusivity blueprint and action plan, outlining concrete steps to achieve this. The blueprint could incentivise the private sector into actively promoting women inclusivity, for example, women-focused courses in ITIs, incentives for factories and establishments with an all-women workforce, women only cabs, creches in offices, working womens' hostels, safe transportation, etc.

Further, this blueprint could also give specific mandates to government departments / agencies for promoting women inclusivity as discussed in an earlier section.

Nine institutional shifts will be required to implement the Economic Master Plan

1) **MMRDA**

MMRDA's role in the economic and spatial master planning of MMR is critical but is limited to some regional planning and infrastructure creation. Its role as a regional economic planning and development agency will be particularly important for the successful implementation of this Economic Master Plan and, therefore, five key mandates that expand MMRDA's jurisdiction are needed going forward. They are:

- Regional economic and spatial master planning including focus on tourism and knowledge services

- Regional infrastructure planning and implementation (transport — metros and buses, water, solid waste, sewage treatment, affordable housing)
- Township and city creation through SPA
- Agency for investment and talent attraction
- Planning for green MMR and climate adaptability

Specifically, MMRDA will need to implement 14 projects within this Economic Master Plan over the next five or six years, which will require an increase in its annual spending from INR 30,000 - 35,000 crore to INR 40,000 - 50,000 crore. This also includes an overall allocation of Rs. 25,000 crore for land acquisition in areas and cities being developed by MMRDA.

MMRDA and the state government should make a complete plan to increase the financial capability and annual revenues of MMRDA to INR 30,000 crore annually. This can be done through:

- Land sales
- Share of development charges for all of MMR to compensate for infrastructure development
- 1% share of stamp duty from all of MMR to compensate for infrastructure development
- 1% share of TOD cess from MMR along the metro corridors
- Appropriate share of premium FSI charges for all of MMR
- Loans / grants from multi-lateral agencies for core infrastructure
- Funding under various schemes of central government / state government
- Commercial loans with land bank as collateral

Consistent with the mandate expansion, five key changes will be required in MMRDA's structure and way of working:

- Introducing a new economic planning wing to lead economic vision, economic planning for all of MMR, for adding capabilities for tourism and knowledge-based services master-planning and for attracting investments.
- Introducing a new investment promotion wing to attract private sector investments to MMR.
- Strengthening of the spatial master planning of urban hubs and cities using state-of-the-art planning principles. This will require world-class spatial planning capabilities and can be done by strengthening the spatial master planning department within MMRDA and having five or six world-class master-planning agencies on an empanelled basis.
- Undertaking large city projects like MTHL Influence Area using an empowered special purpose vehicle (SPV).
- Creating two or three separate SPVs for infrastructure:
    - » Development and management of regional water/ sewage infrastructure (water, sanitation, solid waste management)
    - » Unified bus and ferry operations within MMR
    - » Development of affordable housing and tourism in MMR in collaboration with repective state government departments and agencies.

2) CIDCO

With its success with Navi Mumbai, CIDCO has proved its credentials as a greenfield new city developer. Going forward, CIDCO's mandate needs to be scaled-up to reflect that it is an:

- Integrated city agency and developer beyond Navi Mumbai and one of the leading city developers in the world and that it will seamlessly facilitate the incorporation of economic master-planning with world-class liveability and sustainability.
- Investment and talent attraction agency for the cities it has developed.

Along with this, CIDCO will need to implement ten projects within this Economic Master Plan over the next five-six years, while increasing annual spending from INR 6,000 - 8,000 crore to INR 12,000 - 15,000 crore and increasing annual earnings from INR 5,000 - 6,000 crore to at least INR 15,000 crore by 2030. To do this, CIDCO will need to transform itself as a modern corporation with debt funding and asset monetisation.

Also, two key adjustments / changes will be needed to CIDCO's institutional structure:

- Forming SPVs for large city projects
- Creating an economic planning and investment attraction wing within CIDCO to anchor the thinking and implementation of investment and talent attraction initiatives.

3) MIDC and Industries Department

In this Economic Master Plan, four planned industrial cities in MMR across 10,000 - 12,000 hectares of land area were to be taken up by MIDC over the next 5 - 7 years. However, there should be a shift in thinking and mixed-use industrial cities should look to be developed rather than mere industrial areas.

- Adequate mixed-use land including affordable housing, commercial and retail spaces, recreational and amenity spaces (say 30%)
- Efficient last-mile connectivity to freight rail and trunk road
- Adequate logistics and warehousing infrastructure
- World-class infrastructure including water, sewerage, CETPs, solid waste treatment, power network, wide roads (minimum 14 m ROW), parks and green spaces.

Towards this, MIDC's mandate needs to be transformed into an agency that excels in industrial city creation, logistics enablement and manufacturing investment attraction by developing integrated mixed-use manufacturing and logistics clusters with excellent infrastructure that are walk-to-work, have a high quality of living, affordable housing, ALTAs and are sustainably planned.

To facilitate this transition, MIDC or a private franchisee should take up the role of a power distribution licensee within these large industrial cities. This will ensure reliable power delivery to industrial units at competitive rates (around Rs. 5 per unit).

4) Housing department agencies

As discussed above, housing department agencies like MHADA, SRA, MahaHousing, Shivshahi Prakalp have a critical role to play in this Economic Master Plan by leading affordable housing development and slum rehabilitation in MMR.

Over the next 5 - 7 years, this master plan must envision a substantial increase in the velocity of slum rehabilitation in MMR from 5,000 - 16,000 households per annum to 2.5 - 3 lakh per annum. This is a 20x increase. Towards this:

- Slum Rehabilitation Agency will need to expand its capacity and resources to facilitate the private sector in rehabilitating 1 million slum households in financially attractive areas through an Slum Rehabilitation scheme over the next six-seven years. Slum Rehabilitation Agency will receive revenue from these projects through development charges / approval fees.
- The 0.5 - 0.6 million households which are part of the less-financially attractive slums will need to be taken up in partnership with MMRDA, CIDCO and other similar agencies. These projects will also be net revenue positive, while at much lower rates of return than the private schemes.

- The rehabilitation of the residual 0.5 - 0.6 million slum households will need to be undertaken by Slum Rehabilitation Agency / other housing agencies directly, for which these agencies will need some initial investment support from the state government. The remaining investment can be funded through cross-subsidisation from the aforementioned revenue generating projects and the SRA's balance sheet.

Further, around 0.8 - 1 lakh affordable homes for talent attraction (studio apartments, service apartments, student housing, women's housing) will also be needed. Of these, at least 50% will need to be provided by MHADA and other housing department agencies. The rest through private developers. These projects could be allotted through auction at subsidised allotment rates and will be net revenue positive for the housing agencies.

While most of the housing infrastructure will be revenue positive, the agencies will need some initial state government support. The creation of a Housing Fund of INR 20,000 crore to support public housing development should help with this.

In addition, MMR needs to create 30 - 40% rental housing stock for affordable housing to cater to talent coming to the city. MHADA can take up the role of the nodal agency for such rental housing but will need substantial increase in capacity and resources.

5) Tourism department

The tourism sector, as discussed earlier, needs a sizeable step-up in MMR. To support this, the state government needs to establish an MMR Tourism Promotion and Facilitation Board under the department of tourism.

This Board will be responsible for five or six key mandates:

- Preparing the tourism master plan for MMR
- Facilitating and helping organise tourism events (e.g., concerts) and maintaining a calendar of events
- Place-making of 20 notified tourism precincts within MMR, including tourism amenities, façade and urban design improvements, hosting community activities, etc.
- Leading the brand creation and global marketing of MMR
- Leading the tourism investment promotion, attraction and facilitation
- Leading project-specific joint ventures with MMRDA, CIDCO and the Municipal Corporations.

The larger tourism infrastructure spend will need to come from the state government, MMRDA (Alibag — including Kashid, Gorai & Madh), CIDCO (flamingo park, marinas, sea tourism in Navi Mumbai), MCGM, NMMC and TMC (parks, water bodies, museums, beaches and basic tourism amenities) and the private sector. There will likely be a total government spend of INR 7000 - 8000 crore over the next five or six years towards tourism projects in all the themes as discussed above.

6) Separate Services Ministry/Department for services policies and investment attraction

As discussed in the section on mindset shifts, a new department/ministry of services is necessary to lead policy-making, investment promotion and attraction for champion services sectors in MMR (and the rest of the state of Maharashtra) in a focused manner.

The state can create this by expanding an existing department (e.g., industries) or creating a separate department for Services. The mandate for the department could include the seven champion services for MMR in priority (Financial services; New-age services —Tech, start-ups and innovation sectors; Health and education; Media and entertainment; Aviation services; Global capability centers, Data centers)'. Other knowledge services can be added to this mandate as per state directive. This department will devise the policies and incentives, undertake roadshows in partnership with agencies such as MMRDA or CIDCO, play a key role in investment attraction and monitoring.

7) **Municipal Corporations (especially MCGM Thane Municipal Corporation, Navi Mumbai Municipal Corporation)**

Municipal corporations have neither the mandate nor the capabilities to anchor the investment and talent attraction roles for their cities. Instead, they limit themselves to urban services delivery and the role of regulator rather than investment facilitator. This approach to municipal governance needs to change if MMR is to realise its economic vision.

This calls for a change in the MRTP Act, mandating large municipal corporations to:

- Prepare an economic masterplan for the city as per the overall regional priorities laid out in the regional economic masterplan and incorporate it in the development plans (DPs)
- As a part of the economic masterplan, take up clear annual, five-year and ten-year investment and talent attraction targets and allocate annual budgets towards the creation of ALTAs, world-class tourism infrastructure, investment attraction and promotion activities
- Create dedicated institutional capacity in the following areas:
  - » Empowered economic and spatial planning department with adequate resources for economic thinking, spatial planning, urban design, ALTA planning and reporting to the Municipal Commissioner,
  - » Clear and transformative targets and a specific cell on "ease of doing business"
  - » A special cell in the economic development department to promote sectors such as tourism
  - » Investment in creating a liveable city and ALTAs to promote talent attraction
  - » A dedicated climate resilience and sustainability wing.

8) **Directorate of Economics and Statistics**

Lack of credible periodic economic data (like district/city level, sector level GDP, employment, spatial job mapping, investment mapping, income distribution, slum count) is a key challenge in the state set-up. It leads to inefficient planning and allocation of resources. At the regional and state level, the data is grossly inadequate. The mandate and budgets of the Directorate of Economics and Statistics, therefore, need to be expanded to give the following data:

- District-wise, city-wise and sector-wise accurate GDP on an annual basis
- District wise and sector-wise employment on an annual basis
- District-wise and sector-wise investment estimation on a semi-annual basis
- Critical consumption and income surveys on an annual basis.

This is a critical yet easy institutional shift for the state to implement.

9) **Ease of Doing Business**

65 - 70% of overall investment for achieving growth and employment targets comes from the private sector. By simplifying the approval process, MMR could be responsible for an institutional shift that would dramatically ease the process of acquiring the needed investments.

MMR could be a pioneer in India if it were able to simplify its real estate approvals by:

- Completely digitalising six approvals through a PPP project similar to the Passport Seva Kendras:
  - » Change of land use / NA approvals
  - » Layout and building plan approvals, including commencement certificate
  - » Fire NOCs
  - » Demarcation and zoning approvals
  - » Various other NOCs such as Traffic NOC, drainage, sewerage NOC

- Also, looking to reduce the number of approvals required for real estate as well as hotels / restaurants by 80%. For example, NA approval should be considered deemed automatic, after approval of the zonal development plan.

Similarly, the central government approvals required in MMR, especially AAI height clearance and MoEF clearance, could be significantly simplified by:

- Incorporating existing and any new incremental AAI and CRZ guidelines within the city development plan; thereby removing the need for additional AAI or CRZ clearance.
- Removing ambiguities around AAI height restrictions by clearly defining zone wise heights, especially in areas around the Navi Mumbai airport.
- Compressing the time of CRZ / MoEF approvals within MMR, including allowing state-level approval for projects below 2.5 lakh sqm built-up area.

The Government of India (GoI) will need to play an enabler role across five key areas.

The Government of India needs to play a critical role across five levers to enable the economic master plan.

1. Global hubs like London (Canary Wharf) and Shanghai (Bund) have successfully transformed their under-utilised urban ports / harbours into the world's finest business districts and vibrant downtowns. 253 hectares of land under the Mumbai Port Trust presents an untapped opportunity to revitalise Mumbai's core city and open up this prime area for high-end services, housing, green spaces, cruise tourism, recreation and high-end entertainment.

   Towards this end, the GoI needs to take steps to facilitate the redevelopment of the Mumbai Port Trust land as mixed-use development, including providing an approval of the redevelopment master plan, facilitating the existing lease renewals and deciding on an optimum implementation structure through a partnership between Mumbai Port Trust and the state government.
2. Nearly two lakh slum households (1 million people) are located on central government land in MMR across agencies like the railways, AAI, Mumbai port and defence. These slum areas do not fall under the gamut of state Slum Rehabilitation schemes. Hence, they need an unlock by the central government through the creation of a policy in line with the Hon'ble Prime Minister's "Housing for All" scheme to facilitate the redevelopment of central government slums by state agencies.
3. As discussed earlier, MMR could be a global aviation and MICE hub with 150 MPPA passengers across the two airports by FY30, rivalling Dubai and Singapore. This needs facilitation by the central and state governments. They need to unlock 3X direct international flight connections, significantly increase ease and speed of transit for passengers and increase the regional airline density operating out of the two airports in MMR.
4. To make Mumbai an attractive investment destination, there needs to be a significant increase in the ease and cost of doing business. To this end, central government support is needed in debottlenecking existing AAI height clearance and MoEF approval processes for developments in Mumbai, both in terms of approval speed and complexity, and also to selectively release AAI, Defence and Indian Railways owned land for economic growth of MMR.
5. Lastly, the pace at which some of the critical infrastructure projects happen will be critical to opening up expected private sector investments. Hence, the central government will need to consider taking up four critical projects as part of its PRAGATI review architecture, including the Vadhavan port, the slum rehabilitation on central government land in MMR, the 172-km suburban rail corridors, the rail corridor along the Alibag-Virar modal corridor.

7 Immediate next steps for the implementation of the Economic Master Plan

To expedite the implementation of the Economic Master Plan at state level, it is essential to establish an appropriate mechanism. This includes the creation of an integrated MMR-level War Room comprising of designated representatives from all pertinent state departments, serving as members for the duration of the projects. Such a coordinated effort is crucial for ensuring effective planning, coordination and execution of initiatives aimed at driving economic growth and development across the Mumbai Metropolitan Region.

Under the proposed framework, given the multi-departmental nature of implementation, a structured review process is crucial. It is recommended to conduct quarterly reviews on the MMR Growth Hub, where the Honourable Chief Minister and Honourable Deputy Chief Ministers would be present to oversee progress. Additionally, monthly reviews under the leadership of the Chief Secretary should be held to ensure continuous monitoring and timely adjustments, thereby facilitating effective coordination and alignment of efforts towards achieving the developmental goals of the Mumbai Metropolitan Region. These reviews will play a pivotal role in maintaining accountability and driving strategic initiatives forward. It is also recommended that a nodal officer and nodal agency be created to coordinate efforts across various departments and agencies.

Significant strides can be taken over the next 12 months by establishing the necessary implementation architecture. This includes effecting nine institutional changes, formally notifying eight proposed policies and initiating the implementation phase for 30 key projects. These concerted efforts are poised to catalyse rapid progress and lay a solid foundation for sustainable growth and development in the designated timeframe.

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4. City & Industrial Development Corporation of Maharashtra	14. Municipal Corporation of Greater Mumbai
5. Department of Higher & Technical Education	15. Thane Municipal Corporation
6. Department of Planning	16. Navi Mumbai Municipal Corporation
7. Department of Tourism	17. Slum Rehabilitation Authority
8. Department of Environment & Climate Change	18. Maharashtra Industry Trade and Investment Facilitation Cell
9. Department of Industries, Energy & Labor	19. Maharashtra State Maritime Board
10. Maharashtra Institution for Transformation	20. Rail Land Development Authority

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