

9 Facets to Re-building Jodhpur

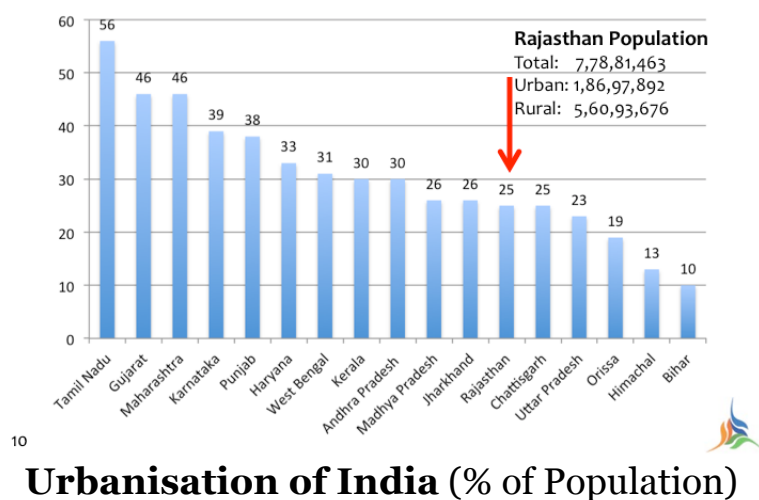
Towards transforming the City by 2035



The Jodhpur Initiative

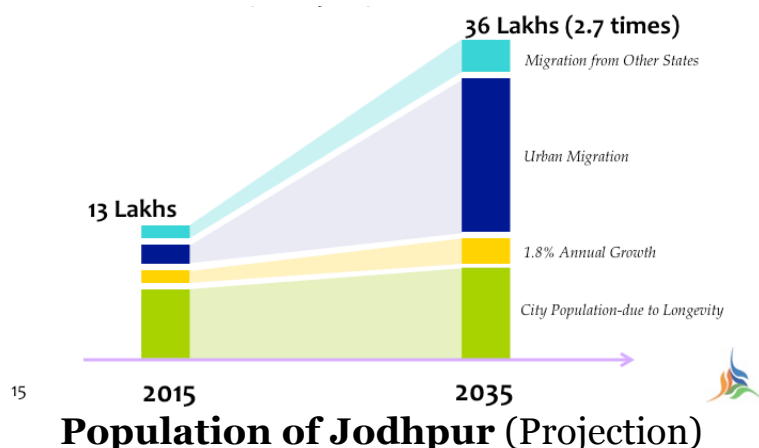
Planned Growth of Jodhpur

India has a young and rapidly growing population—a potential demographic dividend. But, India needs thriving cities, if that dividend is to pay out. McKinsey research estimates that cities could generate 70% of net new jobs created to 2030, produce around 70% of India's GDP, and drive a near 4-fold increase in per capita incomes across the nation. If handled well, India can reap significant benefits from urbanization; it could add 1.0–1.5 % to the annual GDP growth, bringing the economy near the double-digit growth to which the government aspires.



Urbanisation of India (% of Population)

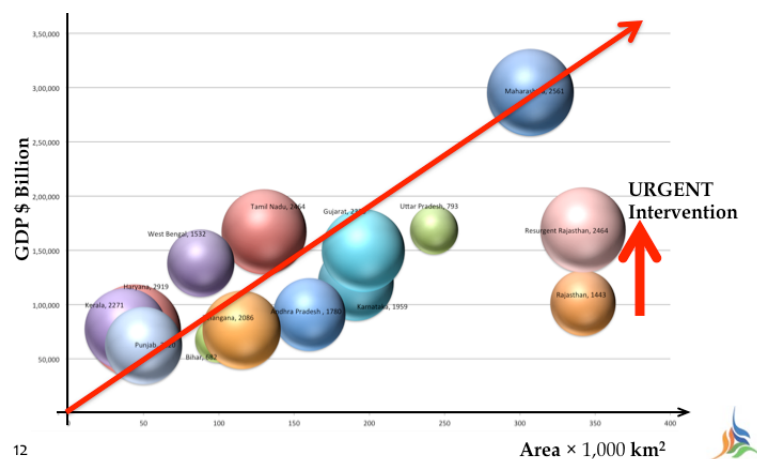
Jodhpur is the second largest *Metropolitan City* in the state of *Rajasthan*. The number of crucial infrastructure and industrial projects in progress slates Jodhpur to become the *fastest developing city* of western Rajasthan. The population of Jodhpur is poised to grow at an alarming rate of ~9% per year from ~13 Lakhs in 2015 to ~36 Lakhs in 2035. This rapid urbanization presents substantive expectations to be met, like providing safe housing, good health, clean energy, sewage and solid waste disposal, smooth transportation, required urban infrastructure, effective governance, access to education and skills training, and green environment. For the expectations to be met and made sustainable, the city of Jodhpur needs to grow in a planned manner.



1

Economy

Rajasthan is the state with the largest land area. But, its contribution to India's economy is below national average. Maharashtra is the wealthiest Indian state and has an annual GDP of US\$ 300 billion, nearly equal to the national GDP of whole of Pakistan or Portugal, and accounts for 12% of the India's GDP; Tamil Nadu (US\$ 140 billion) and Uttar Pradesh (US\$ 130 billion) are behind Maharashtra. Although, for the past 3 years, the rate of growth of Rajasthan is higher than that many states of India, it still is ranked 7th in GDP contribution to the nation (US\$ 100 billion); its ranks 23rd amongst all states in GDP per capita. Of this US\$ 100 billion, Jaipur alone contributes \$25 Billion, and the balance from the rest of the state. Jodhpur's GDP stands at ~US\$ 4 billion (with US\$ 350 million from Handicrafts, US\$ 240 million from Tourism, US\$ 100 million from Textile, US\$ 90 million from Guar Gum, US\$ 80 million from Steel, and US\$ 300 million from Real Estate). Rajasthan's GDP per capita is US\$ 1,443 as against that of Maharashtra at US\$ 2,800, and it is below national average. Also, Rajasthan's agricultural economy shrunk by 6% during last 5 years, from contributing 25% to Rajasthan's GDP in 2010, to 19% today.



Economy of Rajasthan (with Expectation)

Actions

Jodhpur should move towards *knowledge-based economy* – imitate some ideas from across the country, replicate a few, and employ select new ones. In particular, it should adopt newer, high productivity and high value manufacturing (like automobile, farm equipment, earthmoving, heavy engineering, and aerospace and defense production). Here, Jodhpur should leverage the proximity to the *Delhi-Mumbai Industrial Corridor* for enhancing manufacturing-related economy.

In addition, Jodhpur should build trial-tested economies related to:

- (1) IT and IT enabled Services (like business process outsourcing, and back offices finance business;
- (2) Tourism and sports business; and
- (3) Handicraft business ably supported by a Design School for Handicrafts.

To help succeed in developing the above economies, suitable support and development of building and infrastructure construction will be necessary.

2

Housing

The city of Jodhpur is no exception to the national practice of unregulated development. The current techno-legal regime does not examine the structural safety of the buildings and structures proposed; only architectural plans are examined and building permits are issued by the municipal corporations and development authorities. This practice needs to be altered for the good of the people. The threats of urban floods, cyclonic winds (or tornadoes) and earthquake shaking are real, and need to be considered in the design, even though the recurrence of some of these incidents is rare. Even if the municipal corporations and development authorities agree to examine structural safety of the proposed constructions, there is no competence available within these bodies to examine structural safety.



Actions

All new development under the purview of the *Jodhpur Development Authority* and *Jodhpur Municipal Corporation* should be regulated fully. Urgently, Jodhpur should:

- (1) Modernise the current Bye-Laws; and
- (2) Prepare and implement New Bye-Laws for new development in the green field areas of the greater Jodhpur area (the NEW City). Also, Jodhpur should:
 - (a) Prepare and implement separate Bye-Laws for existing Jodhpur city INSIDE the walled area (the WALLED City); and
 - (b) Revise Bye-Laws for existing Jodhpur city OUTSIDE the walled area (the OLD City); and
- (3) Mandate and Implement Third Party Structural Safety Inspection System for the NEW City.

3

Citizen Engagement for Social & Cultural Growth

For a successful rebuilding of Jodhpur, sustained engagement is necessary of all citizens of the city. Reinforcing the collective ability is essential to improve community, and this requires processes that encourage civic engagement in planning & decision-making. The city should plan a *strategic road-map* and facilitate the implementation of the projects envisaged in the same. But, in long run, the citizens of the city have to take forward the said projects and tasks. The consistency of all campaigns depends upon the *continued involvement* of a larger portion of society. No campaign can go for long, unless the citizens **own** the same. Thus, it is necessary that all citizens of the city are brought together, and the initiatives undertaken taken forward by the citizens themselves. Hence, a fresh look is needed for community engagement, social networks and integration.

Actions

The specific citizen-connect activities proposed include:

- (1) Launch large scale, consistent publicity through newspapers, hoardings, etc.
- (2) Introduce a mascot as face of Jodhpur, who talk and interact with citizens.
- (3) Plan activities, like *Sunday for Society* – and other special activities on weekends.
- (4) Embark on a different, innovative campaign with *positive energy* to draw the attention and involvement of larger group of society.
- (5) Organize events to explain the *idea* and *projects* to give a larger visibility to the outputs and outcomes of development of Jodhpur.
- (6) Host local fairs and festivals.
- (7) Arrange competitions on the agendas of development of Jodhpur in schools and colleges.

(a) Youth Development

Jodhpur should resolve to develop and use knowledge, skills & experiences of the youth of the city of Jodhpur to participate confidently in their communities towards re-building the city. This *positive* youth development involves intentional efforts of other youth, adults, communities, government agencies, schools and other institutions, to provide opportunities for youth to enhance their interests, skills and abilities.

(b) Public Safety

Jodhpur should promote social stability, security and justice, law enforcement, crime prevention, justice, and emergency management. One example is road safety, where Jodhpur could engage to bring alignments of different Institutions and making them to understand, prioritise and allocate resources.

(c) Recreation and Sports

In the 1870s, teams from princely states (such as Patiala and Jodhpur) started participating in Polo games. Since then, Jodhpur has been known for Polo. Going forward, Jodhpur should associate with various sports authorities in India and abroad to promote coaching camps in the city for elite sportspersons and encourage international competitions to be organised in city.

(d) Art and Culture Development

There is growing international interest in the potential of the cultural and creative industries, which can drive sustainable development and create inclusive job opportunities. Jodhpur should revive its past engagements, and initiate organised seasons of the various activities in the domains of arts and culture, especially the traditional ones.

4

Health

For long, Northwest Rajasthan has been deprived of quality medical services in the region. Also, the region has been suffering from large incidence of specific medical challenges, namely **cancer**. Therefore, providing affordable, quality medical services in the region is a major requirement of the development of Jodhpur. The establishment of an All Indian Institute of Medical Sciences in the city of Jodhpur in 2010 is a major boon.

Actions

The next critical step is to review and prepare a plan to make the city a medical haven for quality medical services for both the people of the region as well as for those from across the country or abroad. The specific actions that Jodhpur should embark on are:

- (1) *Accessibility*: Jodhpur should leverage the presence of AIIMS in the city, and transform into a health city through proper planning of the matters related to health at every level, including primary healthcare, specialized hospitals, preventive care, alternate medicine, telemedicine, medical tourism, and health education.
- (2) *Cost*: To deliver high quality healthcare at low cost, besides government hospitals, Jodhpur should work on methods, where private hospitals are incentivized to provide a cross-subsidization between high income and low income patients, as well as extensive use of ICT to monitor the tests and medicines prescribed by private hospitals. Jodhpur should create models, where living expenses for families of patients are reduced dramatically, and where the overall efficiency and utilization of resources by public and private hospitals goes up substantially.
- (3) *Quality*: Attracting to Jodhpur best medical and nursing staff from across the country, is a critical part of the strategy to enhance the quality of healthcare. In the short term, creating partnerships with specialized hospitals from across the country, leveraging telemedicine and bringing access to government insurance schemes would be a part of the focus on quality.

5

Education

The city of Jodhpur was known for quality engineering education in the 1950s and 1960s, especially through the *M. B. M. College of Engineering* of the Jodhpur University. But, enroute, the picture changed. The city remained to be known only for its *Lawyers* and *Chartered Accountants*, but lost its sheen for offering quality technical education for over 4 decades. In the mid to late 2000s, the picture changed. Many new Institutes and Universities were announced – *IIT Jodhpur*, *AIIMS Jodhpur*, *NLU Jodhpur*, *NIFT Jodhpur*, *Ayurvedic University*, *Sardar Patel Police University*, and *Footwear Design and Development Institute*. Now, most of these academic organizations are established or underway of being established. Their growth is hinged critically on the regulated development and prosperity of the city.

On the other hand, the city has a large set of unemployed youth. Enhancing their skills and making them employable is critical to the sustainable development of Jodhpur.

Actions

Two pronged approach is required to make Jodhpur grow with a plan. The specific actions that Jodhpur should embark on are:

- (1) *Quality of Primary and Higher Education*: Jodhpur should leverage the existence of AIIMS, IIT Jodhpur, NLU and other universities & institutions in the city, to attract good teaching talent. In turn, this will create partnerships with global universities to attract visiting Faculty Members.
- (2) *Skill Development*: Jodhpur should focus on promoting training and skill development programs by bringing major central government skill development programs to the city, which focus on the needs of the local industry, and work with national level certification bodies to tailor some programs based on the available skills in the city.

6

Infrastructure

The City of Jodhpur was suffering from major water *shortage* till early 1990s, when the water from Punjab through the *Indira Gandhi Canal*, and thereafter by the *Rajiv Gandhi Canal* reached water to the city. Sociological changes happened thereon – people of the city of Jodhpur used the canal water (which became easily available in taps in each house) in place of drawing water from traditional wells spread throughout the city. Alongside, the city did not develop the mechanisms to take the storm water, waste water and sewage from each household and treat them – even today most of the water is left into the ground. Over the last two decades of getting the canal water, the ground water table has risen – at an alarming rate of about 1m per year in some places, and lesser in some. But, for sure, the ground water is polluted with sewage. Numerous test of ground water quality at different locations have established this emphatically – in many cases, the contamination of Nitrates, Fluorides, Sulphates and Phosphates (from the sewage) are well beyond acceptable levels. It is a matter of loss of human dignity in the city of Jodhpur... with sewage contaminating the ground water and the ground water filling basements of houses in the city of Jodhpur. Further, recurring urban floods even with a short duration rain, are testimony to the unplanned growth and lack of preparedness of the city.

Alongside, the city is plagued with challenges of affordable transport within the city and inter-connectivity with the other major town and cities in the state and the rest of the country. With the population expected to increase to ~35 Lakhs in the next 20 years, the problem will be even more aggravated. Firstly, the city will grow to a diameter of about 90km from 40 km today. Formally designed road network density needs to be increased in the greater Jodhpur area. Also, road safety and traffic congestion will become increasingly important to be addressed from now on; the situation is alarming already, even with ~13 Lakhs population.

Also, the energy demand of the city will increase multifold to meet the demands of ~35 Lakhs. Domestic cooking gas, electricity and petroleum fuels will become bottlenecks. Attempts need to be made on tapping non-conventional and renewable energy sources.

Actions

The City of Jodhpur should work on a number of tracks, including:

- (1) Quantifying the source of water, and planning the water availability for next two decades,
- (2) Managing the supply, distribution and monitoring of the drinking water to the households,
- (3) Reviewing *Waste Water Handling and Treatment Strategies*, and re-engineering the *Management* strategies,
- (4) Understanding the possibilities of re-structuring the governance and legal aspects of water and waste water management in the city,
- (5) Planning and establishing cost-effective multi-modal transportation system,
- (6) Designing and developing convenient network of roads, and
- (7) Estimating the energy demand and ensuring energy balance.

Clearly, the work along the above initiatives should be *technology driven*, and involve significant effort towards online monitoring and decision making through sensors.

7

Environment Protection and Sustainability

Jodhpur is the city not only of the *wealthy*, but also the city of the *sensitive*. Alongside, the people of Jodhpur are *peace lovers*. Thus, making them sensitive to the tenet of *living more with less*, is an effort that is likely to succeed. With most resources coming from out of the city, the city needs to be reminded constantly how to use resources sparingly. With the best solar radiation resource of the country available in the city for a large part of the year, the city requires harnessing this natural, renewable resource for energy generation.

Living on the south-eastern edge of the *Thar* desert is challenging for the people of Jodhpur. The frequent *dust storms* in summers, the *scorching heat* for over four months, and the dynamically changing weather away from the arid... are some of the major challenges. Poor handling of water matters, lack of mechanisms in the city to handle sewage, sullage, storm water drainage and solid waste are key challenges that need to be addressed urgently.

Greening the city is another major responsibility of the current generation. This is the best gift that it can give for generations to come... !!

Actions

To prepare a plan for the mobility in the city, Jodhpur should resolve to understand and highlight to the city issues that deal with (a) Sustainability, be it from the standpoint of making passive built environment with low carbon footprint, sparingly using the natural resources or importing limited resources from outstations; and (b) Environment, be it for greening it, protecting it or improving it. To achieve the stated targets, Jodhpur should:

- (1) Elaborate to the city the various aspects that affect sustainability of the city, its people, its resources or its built environment; and
- (2) Highlight the factors that are responsible for the deterioration of the environment and thereby the quality of life in the city of Jodhpur, and work towards finding solutions to these factors.

8

Heritage Conservation

The magnificent Mehrangarh Fort and the mint condition Umaid Bhavan Palace are true masterpieces of the city of Jodhpur. In addition, it has some of the best heritage properties of the world. But, their upkeep and showcasing these other valuable properties is abysmally poor. Heritage Conservation is about bringing places to life for everyone, perhaps for a moment's inspiration, but more often as the beginning of a longer voyage of discovery. Visiting an important building, a beautiful garden, an amazing stretch of countryside or coastline can be *a life-changing experience* - a chance to connect with our emotional and spiritual side or to discover new meaning and beauty in the world about us. We ought to conserve for the future, mixing the best traditional methods with innovative new practices and ensuring that as much as possible, our properties and resources are open for everyone to enjoy. These beautiful places and collections offer opportunities for learning, creativity and participation in natural and historic environments.

Actions

Jodhpur should plan to work to establish inter-related tracks, by:

- (a) Planning tourist walks and tracks along the city,
- (b) Preparing heritage precincts to be presentable to tourists along these heritage tracks with ICT strategies,
- (c) Give new perspectives to tourists on the history and heritage of the city of Jodhpur.

9

Mobility

The city of Jodhpur is changing its road habits from the informal to the formal – from *sparse* population to *large* population, and from *roundabouts* at road junctions to *signal lights*. Coupled with this are the facts that (a) the mechanism of issuing driver's license lacks rigour, and (b) many persons with age less than the legal limit drive motorised vehicles, even to secondary and senior schools every day... The consequence of this is that the city has large number of accidents in a year – many of them are fatal ones.

On the other hand, the facilitating the convenience of tourists has not addressed by the public transport – clean, hygienic, convenient, affordable, safe, timely and punctual. That is what a tourist gets in the places that are designed and prepared to be tourist-sensitive. Jodhpur has to rise on this ladder...

Actions

Jodhpur should prepare a plan for the mobility in the city. For this, it should: (a) Guide the city administration to plan and implement needed initiatives for improved transport system in the greater Jodhpur area; (b) Make available public transport within 10 minutes of walking from place of work, home or activity; (c) Integrate land use and transport planning; and (d) Offer equity to all sections of the society (including urban poor and differently-abled). To achieve the stated targets, Jodhpur should:

- (1) Study current mobility pattern of people and goods rather than of just vehicles, review the current transport systems in the city, and identify the needs and gaps for futuristic transport;
- (2) Work towards efficient network structure (transport hierarchy, system reliability, schedule coordination, transfers); and
- (3) Suggest possible improvements in the infrastructure and promote public transport, including: (a) Alternate modes of transport, like non-motorized vehicles, bicycles and pedestrian walkways, and (b) Effective use of ICT for facilitating users of the timings and for assuring safe transit.

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The Jodhpur Initiative

The Jodhpur Initiative (TJI) is a think tank, established as non-profit trust drawing primary support from the competencies of S&T, health and legal organizations in the city, like Indian Institute Technology Jodhpur, Defence Laboratory, Jodhpur, and All India Institute of Medical Sciences, Jodhpur. Also it involves distinguished citizens of Jodhpur. The Initiative will leverage for social benefits, the core competencies of educational institutes, distinguished citizens and domain experts.

TJI strives to institutionalize the multi-faceted Re-building of Jodhpur through professionally driven advocacy to Local Government of Jodhpur and Government of Rajasthan. In the long run, with this experience of Re-building Jodhpur, TJI will offer guidance towards mainstreaming re-building of other cities in India.

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