The Mirabilis Matrix

The Mirabilis Matrix is an analytical framework for urban thinking. It encompasses three verticals: Hardware, Software and Governance. The horizontals are: **Liveability**, **Competitiveness** and **Environmental Footprint**. It provides a way to think about how different elements come together to form a successful city.

This is not a priority list but a way to think about how a successful city comes together by combining different ingredients. Successful urban planning is about organically combining these facets. This is not a "mechanical" approach but one that explicitly thinks of the city as an evolving eco-system.

	Hardware	Software	Governance
Liveability	Good quality housing and amenities like parks, hospitals, clubs and schools	Social networks & interaction. Clustering of amenities to create "urban buzz", a sense of place and history.	Safety and enforcement of Law. Simple and well enforced system of municipal regulation.
Competitiveness	Transport & communications links. Quality of office/commercial space.	Clustering of human capital and ability to attract talent, socio-cultural openness.	Reasonable tax rates. Efficient governance structures.
Environmental Footprint	Public transport, density, green spaces, waste management, etc.	Environmental consciousness, low impact lifestyles.	Air and water quality. Sustainable practices with regard to water supply & usage, etc.

Definitions:

The Horizontals

Liveability: At the most fundamental level, cities are to be lived in. To succeed, they must be pleasant places to live, work and play for a large cross-section of the society. Hardware, software and governance are all important factors that define liveability. There is no set formula for how these ingredients combine to make a city liveable. Different cities have evolved different recipes that fit the particular needs of particular societies.

Economic Competitiveness: For time immemorial, cities have competed for influence, power and commerce. In the nineteenth and twentieth century's, this often meant growing and harnessing their industrial prowess. In the twenty-first century, however, cities will compete in terms of their ability to bring in human capital. Rather than lead to the dispersion of economic activity, the telecommunication revolution appears to have increased the value of clusters of human capital. Thus, London and New York have emerged as global cities while university towns like Boston, San Francisco-Bay Area, Oxford and Cambridge (UK) have witnessed extraordinary revival.

Environmental Footprint: More than half of the world's population now lives in urban areas. India too is likely to be urbanised very quickly over the next few decades. There is a need to consider the environmental costs and benefits of this shift. A conscious effort will be required to design dense cities with public transport systems and sustainable energy, air and water practices.

The Verticals

Hardware: This includes all the residential/commercial buildings, roads, theatres, museums, stadiums, airports and so on that constitutes the physical form of a city - the material manifestation of the city. Clearly these are very important but, in India, all urban thinking and planning seems sometimes to be limited only to this aspect.

Software: This relates to all the activities that people conduct in the urban space. This includes economic activities as well as socio-cultural interactions that give a city its life. To provide an analogy, as a computer's hardware must allow the software to function correctly, a city must provide adequate physical infrastructure to enable its citizens to perform well. Grand and expensive projects do not always create great cities if they do not actively engage with the lives of the citizens.

Governance: Cities are complex systems and they require constant regulation/management in order to function efficiently. Rules must be rational and their enforcement must be visible and even-handed. Very little thought is given to this aspect in India even in its major cities. Gurgaon, for instance, is still run as if it was a small "*moufassil*" town, even as different promoters create a random mix of management

systems for their individual developments. There is no consistent set of municipal rules or a transparent system for enforcement.