

People Centric Smart Cities

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Abstract. Smart Cities Project is been undertaken in mission mode by the Government of India. The endeavor is to plan and build / rebuild pollution free, eco friendly living spaces with the efficient means of Transportation, Communication, Governance, Health Services and other civic requirements. There is also an emphasis on giving identity to these cities based on its main economic activity. The aspects of peaceful and happy living with regard to values and universal common good of mankind does not come out clearly in the definition and other mission statements. This paper endeavors to highlight the importance of the Culture and Spirituality in creating the cities that will promote Peace, Harmony, Happiness and the Virtue of co-existence amongst the dwellers in keeping with the rich traditions and value systems inherited from the glorious past. It is emphasized that the Smart City be given the identity which is representative of its character, culture and the unique value that it offers. The quest to build smart cities from the standpoint of enhanced economic activity and operational efficiency with the use of High-end integrated technologies for automation, Artificial Intelligence and Internet of Things the importance of "Culture" as bedrock of "Smartness" has been subdued. It is proposed that the richness of Culture, strength of Spirituality and importance of Identity based on values and character be emphasized in planning and building smart cities. A framework to assess the contribution of a People Centered Smart City in its role as "Culture Transmitter" in influencing the growth, sustainability and wellbeing of inhabitants is also presented.

1 Preamble

History bears testimony to the fact that cities that have a value system and intrinsic Culture that resonates with the belief system of the people over several generations, have been the influencers of growth and wellbeing of the society. Ancient civilizations were established and propagated with very fine examples of cities that have played the role of harbingers of Culture and beliefs: Athens, Rome, Mohenjo Daro, Harappa, Patliputra, Hastinapur, London to name a few.

2 The smart cities project by Government of India

The ambitious project-"100 Smart Cities Mission" was launched by Prime Minister of India on 25 June 2015.[1][2] A total of ₹98,000 crore (US\$14 billion) has been approved by the Indian Cabinet for the development of 100 smart cities and the rejuvenation of 500 others. ₹48,000 crore (US\$6.9 billion) for the Smart Cities mission and a total funding of ₹50,000 crore (US\$7.2

billion) for the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) have been approved by the Cabinet.[3][4]

2.1 Features of Smart Cities

Some typical features of comprehensive development in Smart Cities are described below. [5]

- a) Promoting mixed land use in area based developments—planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient.
- b) Housing and inclusiveness - expand housing opportunities for all;
- c) Creating walkable localities - reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security.
- d) Preserving and developing open spaces - parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;

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- e) Promoting a variety of transport options - Transit Oriented Development (TOD), public transport and last mile para-transport connectivity;
- f) Making governance citizen-friendly and cost effective - increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce cost of services and providing services without having to go to city offices;
- g) Giving an identity to the city - based on its main economic activity, such as local cuisine, health, education, arts and craft, culture, sports goods, furniture, hosiery, textile, dairy, etc;
- h) Applying smart solutions to infrastructure and services in area-based development in order to make them better.

2.2 The Smart City Project Implementation

The “Smart City Mission” project is being executed by various State Governments, local smart city project officers under the guidance of Government of India satisfactorily and on schedule says Ms Rupal Sharma, IAS, Project Director and Deputy commissioner, Smart city project office Pune, during the interview with the Authors.[6] She also informed that all the features as envisaged by the Smart City Mission Project, have been included in the master plans.

The interactions the authors had with several officials in the office, indicated inclusion of Technology aspects of most of the features regarding mobility, Governance, civic utilities, information etc. The other aspects of rejuvenating open spaces, theme parks, walk ways, waste disposal and other public amenities have also been catered for comprehensively in the execution plans. The information regarding promoting culture, spirituality and unique identity of the city was not evidently available either in the smart city offices or other literature published in public domain.

2.3 The Smart cities of Future

The smart Cities of Future for Sustainable development and wellbeing of the society need to be defined appropriately. The authors interviewed Honorable Professor Dr Vishwanath Karad, the founder of the MAEER’s Trust, the MIT Group of Institutions, the UNESCO chair for World Peace, President of the MIT ADT University, Loni kalbhor, Pune and the proponent of the Philosophy of “The Union of Science and Spirituality” to achieve peace and well-being of mankind. Professor Karad questioned the limitation of the very definition of Smart Cities.[7]

Professor Karad along with his team of World Peace Mission which included the luminaries like Dr. Vijay Bhatkar, Padmashree (The noted Scientist “Param Super Computer” Fame) and Dr. R. A. Mashelkar, Padma Vibhushan (The noted Chemical Engineer and champion

of Innovation, The fellow of the World Academy of Sciences), opine that the smart city is the one which fosters Peace and Harmonious living through Rich culture, Strong value systems and Practiced Spirituality aimed at the wellbeing of all with a spirit of equality and sustainability. The authors therefore propose the model of People centric Smart City with emphasis on aspects of “Fostering Spiritual consciousness Artifacts”, “Culture transmitting spaces synchronized with Local culture”, and “Identity of City as Transmitter of Culture and Uniqueness” In addition to the well understood and executed themes of “Energy & Environment Sensitivity” and “Technologically Smart Civic Life”.

2.4 The Proposed Model of Smart cities of Future

The authors developed the Model proposed for building smart cities of future comprising of five components. The first Two components are addressed appropriately while planning and implementing the smart cities projects in Indian context in particular. However the other three components pertaining to Spirituality, Culture and Unique Identity of city need emphasis and attention.

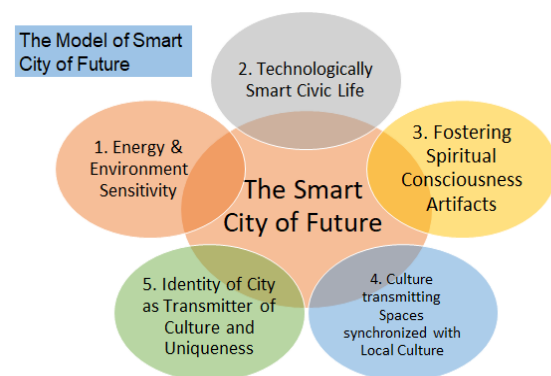


Fig. 1 Proposed model of people centric Smart City of the Future.

3 Spirituality for Peace and Sustainable Development

There is no one definition that can justifiably enumerate the meaning and sense of Spirituality.[8] The Cambridge dictionary defines spirituality as, “The quality that involves deep feelings and beliefs of a religious nature, rather than the physical parts of life.” Collins dictionary says, “Spiritual means relating to people’s thoughts and beliefs, rather than to their bodies and physical surroundings.” The Oxford dictionary says, “Relating to or affecting the human spirit or soul as opposed to material or physical things.”

3.1 The experts have put together the definition from practice perspective. [9]

According to Mario Beauregard and Denyse O’Leary, researchers and authors of *The Spiritual Brain*, “spirituality means any experience that is thought to bring the experiencer into contact with the divine (in other words, not just any experience that feels meaningful).”[10] Nurses Ruth Beckmann Murray and Judith Proctor Zenter write that “the spiritual dimension tries to be in harmony with the universe, and strives for answers about the infinite, and comes into focus when the person faces emotional stress, physical illness, or death.”

3.2 Spirituality for Peace

The 5th World parliament of Science, Religion and Philosophy organized by MIT World peace university from 2nd to 5th Oct 2019 resolved that the pathway to world peace is through the time tested philosophies of various nations of the world and can be achieved through the union of Science and Religion working in unionism for the benefit of mankind. [11]

3.3 Spirituality for Sustainable Development

The Sustainable development, Economical, Social and Ecological can be achieved through spirituality.[12] The empathy for other beings, sensitivity to the environment and the Spirit of common good promotes development that is equitable and environmentally friendly. Organizations that have the spirit of Sustainable spirit for all, have displayed continued good economic performance and have also lasted longer than their counterparts.[13] Societies and groups who follow spirituality as an intrinsic value are found to live harmoniously and enable their fellow beings to work together for the common good. [14]

3.4 Spirituality for Promoting Powerful Living

The above view point points at spirituality as a means of promoting the culture of powerful (self-esteem and sound health) and purposeful (for common, social and ecological good). This will enable scientific and technological developments to serve the needs and wants of mankind in a sustainable manner [15]. It is also logical that culture of powerful living empowered by spirituality and sustainable technologies will result in physiological and emotional wellbeing of the society and foster a spirit of creativity and innovation owing to collaborative and sensitive approach. While the literature and teaching of the society encourage sustainable development through culture and spirituality, the ecosystem in the city, which is aspired to be Smart has to be designed and implemented through appropriate artifacts and facilities, layout, systems and processes and non-formal monitoring mechanisms.

4 People Centric Cities

As per Nobel Laureates Amartya Sen, Sustainable Development can happen when cultural matters become an integral part of our life and enhancement of our living standards. [16] As per United Cities and Local Governments (UCLG) emphasize the role of cultural as a pillar of Sustainable development and driver of development and People Centered Cities taking Holistic and integrated approach to development needs with cognizance to Creativity, Heritage, Knowledge and Diversity.[17]

4.1 Developing People Centric Smart Cities

The People Centric Smart Cities are to be made sustainable through urban regeneration strategies to enhance the livability of cities by respecting their identities and spirit of powerful living ensuring social inclusion [18]. The principles of creativity and innovation including digital technologies should be used as resources for sustainable urban development and improve local livelihood. [19] The culture of spirituality can be used as a tool the shape the future Smart Cities to achieve the following.

- Plan people centric cities and make them live able
- Enhance the quality of urban environments
- Elevate holistic development of the mankind
- Inculcate culture of sustainable lifestyle
- Make the city inclusive, safe and resilient
- Promote intrinsic link between cultural diversity and biodiversity to ensure greater environmental sustainability
- Culture and spirituality as an asset to eradicate poverty by linking economic and social dimension.

5 Cities as Cultural Transmitters (Cultural Capitals)

5.1 Interrelation of Culture and Economic growth

The Cultural growth and Economic growth of cities manifest in regenerative manner[20]. Economic growth enables cities to make investments creation and maintenance of Culture Assets and indulge in Art, Performing Arts and Literary pursuits (Theaters, Operas, museums, Art galleries, Libraries, Science centers, Research centers etc.). Sound financial strength of the city results in creation of Sports facilities, Common civic Utilities and places of recreation (Indoor & Outdoor Sports arenas, Public baths, Parks & Gardens etc...). The abundance of wealth promotes the development of high quality and lasting architectural assets (Forts, Palaces, Clock towers, Fountains, etc).[21] The grandeur of rich Cultural assets and indulgence of city in Cultural, Sports,

Literary, Scientific discovery, Festivals and events creates wealth generation which in turn fuels urban development resulting in economic growth [22].

5.2 Cultural Transmitters (Cultural Capital)

The contribution of cities that are rich in cultural assets and pursuits and hence centers of economic growth, is notable in establishing and nurturing of rich cultures and civilizations.[23]. In the Pre Fordist era the cities that have been forerunners of Culture enabled centers of vibrant commercial activities stimulating economic growth and influencing progress of society and the nation [24]. Glaring examples of such cities include Athens, Amsterdam, Rome, Vienna, London, Paris, Madrid, Istanbul, Venice, Prague. Even in current times these cities enjoy the status of “Cultural Transmitters” or “Cultural Capital” of their nations and contribute immensely to growth and development [25]. These cities have earned their preferred status blessed by rich cultural heritage that has transcended from generations of hundreds of years.

In the Post Fordist Era modern cities have emerged that have built their own identity as Dominant Culture in bringing recreation and happiness to the inhabitants and visitors and in turn have also become centers of economic, scientific and industrial growth. The prominent modern “Cultural Transmitter” Cities include New York, Los Angeles, Shanghai, Hong Kong, Singapore, and Mumbai [26]. UNESCO has classified cities in three categories based on the degree of influence the “Cultural Transmitter” cities have in promoting Economic growth, Scientific & Industrial growth, Sports and Cultural Festivals and the wellbeing of inhabitants [27]. The three categories are Alpha (Profound Influence), Beta (Very High Influence) and Gamma (High Influence). The examples of Influencer City types are as below

- a) *Alpha* - London, Paris, New York, Tokyo
- b) *Beta* - Chicago, Frankfurt, Hong Kong, Los Angeles, Milan, Singapore
- c) *Gama* - Beijing, Moscow, Delhi, Mumbai, Tehran

6 Top “Cultural Transmitter” Cities of the World - A Perspective

The cultural transmitters can attain their status by making them Livable for all by excelling economically through the Rich Cultural Assets and Distinctive City Life. “For Cities to thrive the need to be livable and citizens need to feel connected. They need to work hard to close the gap between rich and poor. And in the phase of significant growth they need to maintain their distinctive character.” Says Justin Simons the Chairperson of WCCF.[28]

6.1 Characteristics of “World Cultural Transmitter” Cities (WCTC)

Cities and the people living there, all over the world, are greatly influenced by the prevalent culture. “The Leadership, Government, Business, Education and Health must understand the essential contribution Culture makes to Prosperity and Quality.[29] The world cities culture forum in its Annual Summit in Amsterdam reviewed top 25 “Cultural Transmitter” Cities. It was found that culture is a key ingredient of the success of “Cultural Transmitter” Cities owing to inclusion of culture aspects in urban planning and policy. The following observations were made in the report.

- a) WCTC enjoy economic growth and are leading drivers of global economic recovery.
- b) Culture has contributed to the economic growth as revenue drivers.
- c) Economic success has shown negative consequences in certain cases that includes over stretched infrastructure, social inequality and risk of homogenization.
- d) Economic Success is also driving out culture and creativity by making cities uncomfortable for many local artists and cultural producers.
- e) There is a need to integrate new communities, manage diversity and improving public places to create the cities of the future.
- f) For a city to be a “Cultural Transmitter” culture needs to be the golden thread of Urban policy.

6.2 Features of WCTC

The findings of the World Cities Culture Report 2015 are summarized by the authors placed at Exhibit 1.[30] The features are tabulated under following parameters for the purpose of assessing the impact of these parameters on economic performance and the number of tourists visiting the city.

- a) Population in million
- b) GDP (USD million)
- c) GDP Contribution Per Person (USD million)
- d) GDP Contribution Per SQM Area (USD million)
- e) Rank as per GDP
- f) Rank as per GDP Contribution per Person
- g) Rank as per GDP Contribution per Sq. Km Area
- h) Rank as per No of Tourists per year Rank
- i) Area in Sq. Km
- j) Number of Heritage Sites, Museum, Art Galleries, Libraries
- k) Number of Theaters and Cinemas
- l) No of Tourists per Year in million
- m) Creative Industry Employee in percentage of population.
- n) Number of Branded Festivals & Celebrations

6.3 Top ten Cultural Transmitter Cities based on Economics Performance

The top ten Cultural Transmitter Cities based on the GDP contributions are given in table 7.1 which is deduced from exhibit 1 (refer 7.2 above).

Table 1: Top ten “Cultural Transmitter cities” based on annual GDP (2015)

| City | Population in m | GDP USD in m | Area in Sq Km | Rank as per no of Tourists per year |
|---------------|-----------------|--------------|---------------|-------------------------------------|
| Vienna | 1.77 | 7794200 | 415 | 14 |
| New York | 8.41 | 1406000 | 1215 | 6 |
| Los Angeles | 10.12 | 826826 | 10510 | 11 |
| Tokyo | 13.16 | 743826 | 2130 | 12 |
| Paris | 12.01 | 730819 | 12012 | 3 |
| Shanghai | 24.26 | 667448 | 6341 | 10 |
| London | 8.42 | 492584 | 1572 | 1 |
| Singapore | 5.47 | 425155 | 718.3 | 2 |
| San Francisco | 0.81 | 388272 | 121 | 16 |

| | | | | |
|----------|------|--------|------|----|
| Hongkong | 7.27 | 381186 | 2755 | 13 |
|----------|------|--------|------|----|

The above analysis result indicates that there is a positive correlation between the GDP and the contributions made “per person” and” per square meter”. This infers that the population and size of the cities contribute effectively towards GDPs in case of top Cultural Transmitter Cities of the world. It is also interesting that the top ten Cultural Transmitters Cities based on GDPs are not amongst top ten with respect to the number of tourists visiting the city. Vienna is top in GDP based on high per person GDP contribution whereas London and Singapore which are ranked one and two based on the number of tourists are seventh and eighth on GDP performance. This indicates that Cultural Transmitter Cities have influence on non tourist income that contributes to GDP. In other words, culture influences revenue generation even on non tourist revenues coming out of activities such as Science, Technology and Innovation.

6.4 Top ten Cultural Transmitter Cities based on number of tourists

The top ten Cultural Transmitter Cities based on the number of tourists together with the influence of Cultural Assets and related operations are given in table 7.2 below which is deduced from exhibit 1. (Refer 7.2 above)

Table 2: Top ten World Cultural Transmitter Cities Based on Number of Tourists per year. (Million)

| City | GDP | Culture assets | | | Cultural activity | Creative Industry Emp % |
|---|---------|------------------------|--|-----------|--------------------------|-------------------------|
| | | In USD annually (2015) | Heritage Sites, Museum, Galleries, Libraries | Art Sites | | |
| Ranked based on no of tourists per year | | | | | Festivals & Celebrations | |
| London | 492584 | | 215 | 1105 | | 16.3 |
| Singapore | 425155 | | 319 | 211 | | 5.1 |
| Paris | 730819 | | 1413 | 490 | | 9.0 |
| Dubai | 337907 | | 69 | 7 | 35 | 2.2 |
| Istanbul | 349000 | | 38363 | 189 | 150 | 13.4 |
| New York | 1406000 | | 142 | 1093 | | 8.6 |
| Seoul | 335493 | | 814 | 526 | | 12.0 |
| Rome | 163005 | | 200 | 292 | | 2.7 |
| Amsterdam | 43401 | | 350 | 0 | 350 | 9.2 |

| | | | | |
|----------|--------|------|-----|------|
| Shanghai | 667448 | 2471 | 214 | 22.7 |
|----------|--------|------|-----|------|

The data in table 2 indicates that the larger number of tourists visiting a city are influenced by the size of the cultural assets of the city that includes Heritage Sites, Museum, Art Galleries, Libraries, Theatre and Cinemas. It is also observed five of the cities ranked on the basis of number of tourists also figure in the list of cities with top ten GDP performance. This highlights the contribution of cultural assets in generating revenues for the Cultural Transmitter Cities. The importance of deploying employees to harness the potential of cultural assets is indicated by the fact that there is positive significant correlation between Creative Industry emp % with number of cultural assets($P = 0.011$). The numbers of tourists visiting the city are generally higher where larger number of employees is deployed by creative industry, as depicted in figure 7.1

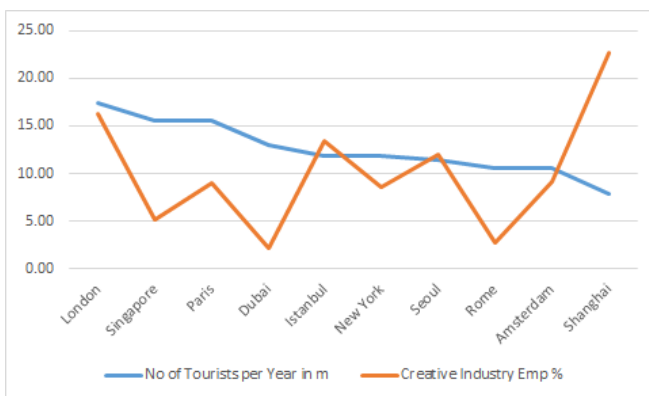


Fig 2: Influence of no of employees in creative industry on number of tourists

7 Framework for making 44 Smart Cities People Centric

A framework to build/ rebuild Cities as “People Centric Smart Cities of the Future” is developed and presented below. The framework is structured in three sections:

- a. Preparation - The activities that need to be undertaken before undertaking the project to develop Smart Cities.
- b. Execution of the Project Assessment Framework to measure the Levels achieved, in terms of completeness of desired features of “People Centric City”.

7.1 Preparations

The salient steps required to make necessary planning and preparations [31] before launching on the project to develop “People Centric Smart Cities” are listed below.

7.1.1 Setting the objectives (Uniqueness & Identity)

The project team must ascertain as to what will be the ingredients that will give the city a unique identity. Few examples of the themes are listed below

- a) Fostering spiritual consciousness
- b) Holistic development to integrate creativity, heritage, knowledge and diversity
- c) Enhance the livability of the cities
- d) Innovation for sustainability of cities
- e) City to be safe, resilient and inclusive
- f) Fostering Environment Sensitive Powerful living Architecture
- g) Unique Identity of City based on its Cultural/Technical/Economic/Environment ... prowess

7.1.2 Organization involving all Stakeholders

It is recommended that the project team for planning, execution and monitoring must have representation of Stakeholders from all walks of life. List is given below.

- a) Main Administrative Control Office system
- b) Citizens Forum
- c) NGOs
- d) Prominent Economic Groups
- e) Prominent Industrial Groups
- f) Institutions of Higher Education
- g) Institution of Primary and secondary Education
- h) Spiritual and Literary consortium
- i) Religious Heads
- j) Prominent achievers of various fields from the city

7.1.3 Identification of Constituting Elements of Culture and Spirituality (CECS)

The elements that would give the “People Centric City” its unique identity and richness depending on the History and Cultural Environment must be identified and relevant specifications/characteristics should be detailed. A list is given below.

- a) Heritage Sites

- b) Historical and Archaeological Centers
- c) Museums
- d) Art Galleries
- e) Libraries
- f) Theatre including Amphitheatres
- g) Prominent artifacts of Significance
- h) Places of Worship
- i) Places of Spiritual Awakening and practice
- j) Markets & “Haats”
- k) Chaupaals & Common places of Meeting
- l) “Ghaats” and Community bathing spaces
- m) Artists and Artisan Colonies
- n) Factories and Economic activity centers of yesteryears
- o) Prominent Factories, Business offices and Economic Activity Centers identifying City
- p) Residences or memoirs of Citizens with outstanding contributions
- q) Animal parks and conservatories
- r) Natural Activity Sites
- s) Signages and Identity Displaying Artifacts
- t) Sports arenas, grounds and sites representative of identity

7.2 Execution

The salient steps that could be undertaken for execution of the “People Centric Cities” are recommended below.

7.2.1 Layout impregnated with CECS

The layout of the smart city is to be designed in a manner that promotes interaction of people, exchange of knowledge, involvement in Cultural and Spiritual pursuits, promotes harmonious living in an inclusive manner such that all people are able to enjoy the fruits of the Cities wealth as per their economic standards. Themes to be considered are listed below.

- a) Layout from mobility and operational perspective
- b) Facilitate interactions
- c) Aesthetics and beautification
- d) Cultural infrastructure
- e) Technologically smart civic life
- f) The inclusive approach in city planning
- g) Safe and resilient city planning
- h) Sustainable (environmental, economic and social) city

7.2.2 Awareness and Promotional activities Schedule and System

The information regarding the unique artefacts that uniquely identify the city must be disseminated in all

forms using all medium and practices available to promote them. Few of the methods are listed below.

- a) Kiosks and Apps
- b) Performing and visual arts
- c) Cultural events/camps
- d) Spiritual events/camps
- e) Media and broadcasting
- f) Literature

7.2.3 Signature Events and Specific Initiatives

Signature events like the “Tomatina Festival” of Spain, “Carnival” of Goa, Pushkar Mela of Rajasthan must be factored in the scheme of City Layout, Preparation of special spaces and appropriate municipal arrangements. A list of such activities is given below

- a) Summit
- b) Conference
- c) Rally
- d) Competitions
- e) Seminars

7.3 Assessment Frameworks

A framework to assess the status and levels achieved by the “People Centric Smart Cities” in delivering the promise to the inhabitants and visitors in terms of providing powerful living, inclusive attitude and respect for sustainability. The assessment is recommended to be made under three categories to obtain a comprehensive index suggested by the three sets of indicators.

- a) Economic Indicators
- b) Social Indicators
- c) Media Indicators

7.3.1 Economic Indicator

The Economic Indicator that the Smart City is delivering promise can be ascertained by

| | | | | |
|------------------------------|---|---|---|--|
| Net Revenue Earned (Culture) | = | (Sum of Income from all Cultural Contributor Elements [CCEn]) | - | Sum of (Direct Expenses [DECAn] on operating the Contributor Asset / Element + Amortized Investment [AICAn] on it) |
| {NRE(C)} | | { Sigma CCEn } | | {Sigma (DECAn / AICAn) } |

The cities can be ranked on the basis of Net Revenue Earned from Cultural / Scholastic pursuits

- a) Annual Revenues earned from Cultural / Archaeological asset operations
 - b) Annual Income (Hospitality Expenses + Transportation + Purchases) from tourists
 - c) Income from the Events conducted in the city
 - d) Additional knowledge Industry income
 - e) Additional income through arts
 - f) Income from Sports events
 - g) Income from Spiritual events
- highest attained anywhere as a guideline Indicator employing the following scheme:

7.3.2 Social Indicators

It is recommended to have multiple criteria based on Social recognition and contributions made by the city to ascertain the level of "People Centric Smartness". A comparative index for each measure / theme could be worked out as a fraction of the number achieved by the particular city with the number achieved by the city with highest achievement for the theme which is to be converted on a 10 point scale.

Number achieved by city) {CNn}
*Social Index [for the theme n] {SITn} * 10/*
(Number achieved by the city with highest Achievement for the theme n) {HCN}
Social Index City = Average of SITn (for 1 to m) where m = Total no of Themes considered

The themes that could be considered for the purpose are given below.

- a) Events and artifacts awarded on international forum
- b) City's luminaries achieved international awards and recognitions
- c) No of peace and sustainability events organized by citizens
- d) Happiness index of people
- e) Satisfaction index of new migrants/asylum seekers.

All such indices can be averaged to get a score out of 10
7.3.3 Media Indicators based

Media presence and media related achievement are good indicators of cities contribution as "Cultural Transmitter". The brand image and mentions in media can be worked out based on multiple themes and expressed as a percentage of the best in class figures expressed on a scale of 10.

All such indices can be averaged to get a score out of 10
(Numbers achieved by city) {MNn}=

*Media Index [for the theme n] {MITn} * 10/*
(Number achieved by the city with highest Achievement for the theme n) {MHN}

Media Index City = Average of MITn (for 1 to m) where m = Total no of Themes considered
The themes that could be considered for the purpose are given below.

- a) Brand image of city, citizens and artifacts
- b) Preferred destination status
- c) Social media presence
- d) No of information centers/kiosks
- e) Films made in city
- f) Media accolades for events for cultural and scientific events

Social indicators and Media indicators present a sense of overall quality of life or well-being of people in specific city. These indicators give direction to tourists, researchers, job seekers, students, migrants with respect to their decision of visiting or moving to particular city. All the people who are connected and involved in creating and developing smart city would be able to replicate and modify the model of best cities according to the specific unique culture of their own city. Awareness about the status of the city with respect to Economic indicators, Social indicators and Media indicators would develop positive competitive spirit among all stakeholders to put conscious efforts towards sustainable and systematic development of cities. This also would enable to involve dwellers of cities in the development of cities and make it people centric in true sense.

8 Conclusion

The influence of Culture and Scholastic pursuits on Sustainable development and Powerful living to all has been highlighted. The Cities that are designed as People Centric Smart Cities of the Future have displayed high economic growth as well as provide equitable and inclusive living experience. It is paramount that Smart cities must promote Spirituality and interaction with all citizens to foster harmonious and enlightened living. Framework to design (Prepare), develop (Execute) and assess (Measure) the status of City as Cultural transmitter has been suggested.

References:

1. Wikipedia, Smart Cities Mission:
https://en.wikipedia.org/wiki/Smart_Cities_Mission.
2. Press Information Bureau, 25 June 2015 Prime Minister launches Smart Cities, AMRUT, Urban Housing Missions. (n.d.). Retrieved November 15, 2019, from <https://pib.gov.in/newsite/PrintRelease.aspx?relid=122788>

3. Prime Minister launches Smart Cities, AMRUT, Urban Housing Missions. (n.d.). Retrieved November 15, 2019, from <https://pib.gov.in/newsite/PrintRelease.aspx?relid=122788>
4. Business Standard, BS Reporter, 30 April 2015, archived from the original on 25 November 2015 Cabinet nod To Rs 1 lakh cr for urban renewal, 98 smart cities to take off, New Delhi:
5. Ref: Smart cities mission, ministry of housing and urban affairs, Government of India. <http://smartcities.gov.in/content/innerpage/smart-city-features.php>
6. Extracts from the interview with Ms Rupal Sharma, IAS, Project Director and Deputy Commissioner, Smart city project office Pune, during the interview with the Authors on 12th November 2019.
7. Extracts from the interview with Honorable Professor Dr Vishwanath Karad, the founder of the MAEER's Trust, the MIT Group of Institutions, the UNESCO chair for World Peace, President of the MIT ADT University, Loni kalbhore Pune on 02 Oct 2019.
8. Sasson, R (2019). Success Consciousness - skills for success, positivity and inner peace Retrieved November 15, 2019 ,from <https://www.successconsciousness.com/blog/spirituality/what-is-spirituality-meaning-and-definition/>
9. Amy R. Krentzman and Carlson, D., Leonard, B. (2013). Spirituality in healthcare. Online module, Center for Spirituality and Healing. University of Minnesota. Retrieved November 4, 2019 from <http://www.csh.umn.edu/integrativehealingpractices> .
10. Beaugard, M. & O'Leary, D. (2009) The spiritual brain. New York: Harper Collins.
11. 5th World parliament of Science, Religion and Philosophy organized by MIT World peace university from 2nd to 5th Oct 2019. <https://mitwpu.edu.in/news/world-parliament-of-religion-science-and-philosophy-2019/>
12. Ulluwishewa, Rohana and Kumarsinghe S, (2014). Spirituality and Sustainable Development, Palgrave and Macmillan publication. USA
13. John Mackey, Raj Sisodia and Bill George (2014), Conscious Capitalism, Liberating the heroic spirits of business. Harvard Business Review press.
14. Rajvanshi, Anil. K; (2002). Spirituality can help in sustainable development, available online www.nariphaltan.org/suspri.htm.
15. A Duxbury, N. (2014). Cultural governance in sustainable cities. Kult-ur: Interdisciplinary journal on the culture of the city, 1(1), 165-182. Special issue: Governança de la ciutat i drets culturals (Governance of the City and Cultural Rights). Retrieved from <http://www.e-revistas.uji.es/index.php/kult-ur/article/view/1252/1229>
16. Sen, A. (2012). Cultural for Sustainable Development. Rio+20, 1–20.
17. The policy Statement of the 3rd world congress of UCLG and Global Taskforce of Local and Regional Governments, UNESCO Report on Sustainability implementation, 2015
18. UNESCO (2016). Culture Urban Future: Global Report on Culture for Sustainable Urban Development. Paris: UNESCO
19. UCLG (2018), Culture in the Sustainable Development Goals: A Guide for Local Action. Barcelona: UCLG.
20. Richard Florida June 7, 2018 How Culture Shapes Economic Development, CityLab.com
21. Hosagrahar, J.; Soule, J.; Fusco Girard, L.; and Potts, A. (2016), 'Cultural Heritage, the UN Sustainable Development Goals, and the New Urban Agenda', concept note, ICOMOS.
22. Yang, M., et,al (2016). Culture: urban future, global report on culture for sustainable urban development
23. A. Scott, "The cultural economy of cities", International Journal of Urban and Regional Research. 21, no2, pp.323 -39
24. J. Jones, "The Global City Misconceived" : The Myth of «Global Management» in Transnational Service Firms», Geoforum, vol. 33, 2002, pp. 335-350.of World Cities», Cities, 16, no6, 1999, pp.445-458
25. UCLG (2018), Culture in the Sustainable Development Goals: A Guide for Local Action. Barcelona: UCLG.
26. Nadarajah, M., and A. T. Yamamoto. (Eds.) (2007). Urban Crisis: Culture and the Sustainability of Cities. Tokyo: United Nations University Press.
27. J.V. Beaverstock, R.G. Smith and P.J. Taylor, A Roster British Council (2018), Cultural Heritage for Inclusive Growth, British Council.
28. Justin Simons, Chairperson world cities culture Forum
29. Henry Matisse BOP Consulting January 2015, World Cities Culture Report 2015
30. Exhibit 1, Features of World Cultural Transmitters Cities deduced from World Cities Culture Report 2015 and summarized in tabular form by the authors and placed it enclosure.
31. UCLG (2015), Culture 21: Actions. Commitments on the role of culture in sustainable cities. Barcelona: UCLG.