



SMART CITY PROJECT

A STUDY OF NAGPUR MUNICIPAL CORPORATION



I NTRODUCTION

The term strategy originates from the Greek word strategas, meaning General in the army. Strategy is the plan to gain advantage over the enemy in war. Some organizations have borrowed this term. Strategy in their organization to create new opportunities, position the services and beat competition. The meaning strategy is much broader in organization like Municipal Corporation and is built around creating a competitive advantage of the organization.

Strategy allows positioning and use of all resources of the organization through an activity or a set of activity that contribute towards building the strategic advantage for the organization.

The process of evaluation of Management Strategy includes-

- 1 Development of basic Management Strategy.
- 2 Deciding strategic sequence
- 3 Analysis and Management of different strategic initiatives
- 4 Study of the environment and forces in the market

- 5 Study of the impact of strategic actions with Management Control.
- 6 Learning based on the impact of strategic actions related to consequences.
- 7 Returning and finalizing the strategic sequence
- 8 Re-deciding the strategic sequence

INFLATION INDEX

An inflation index is a tool used to measure the rate that prices are increasing or, alternatively, money is losing its value. Economists can use an inflation index to estimate the cost of various development projects.

HUMAN DEVELOPMENT INDEX

The Human Development Index (HDI) is a composite index of outcome indicators in three dimensions:

- 1) A long and vigorous life, as reflected in life expectancy at birth.
- 2) The acquisition of education and knowledge, as reflected in the mean years of schooling (adjusted for out of school children) and literacy rate (age 7 years and above).

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- 3) Living standard and command over resources, as reflected in the daily per capita expenditure.
- 4) The Human Development Index (HDI) is a simple average of three indices in different dimensions.

HDI = $1/3$ (Health Index + Education Index + Income Index)

N A G P U R M U N I C I P A L CORPORATION:

Nagpur city covers an area of 212.56 Square kilometers and has a population of 2405665 (males – 1225405 and Females – 1180260) according to census 2011.

NMC divides city in 10 zones and which are in turn divided into wards. Each ward is represented by a corporator. NMC comprises 136 corporators, majority of whom are elected in local elections. NMC and NIT together are in charge of the civic and infrastructure needs along with development of new areas.

The **General Body** of the **Nagpur Municipal Corporation** is supreme for policy and decision making. Next to this is a **Standing Committee** which is having decision making of Financial Matters. Corporators elect one **Mayor** to head the Corporation who is considered as First Citizen of the City.

The **Commissioner** and other Government Officers execute the policy frame given by the **General Body** of the Corporation. These officers have to work within the budgetary provisions and rules governing Nagpur Municipal Corporation as envisaged in the **Nagpur Municipal Corporation Act**.

FINANCIAL STATUS:

In 2016-17, NMC's revenues registered a compounded annual growth rate (CAGR) of 6.9 percent and revenue expenditure increased at a CAGR of 9.0%. In spite of this, due to a strong revenue base in form of taxes, there was a revenue surplus of INR 78 crores and an overall surplus of INR 2271.97 crores (including capital account). Revenue income is primarily earned by NMC or for NMC by some external sources. Among own sources, the largest source was Octroi followed by

property tax, but as per now mostly Octroi was closed down and NMC is trying to find out new sources to generate money to make it financially strong.

In 2016-17, a capital expenditure of INR 2271.71 crores was incurred, mainly covering water supply, public works and roads. The cost recovery of services varies across sectors. For example, water expenditure exceeds revenue income each year, making it financially unsustainable. However, sewerage charges exceed the operation and maintenance expense but the current sewer coverage of the system is quite low due to this expecting to be left over with INR 18.64 crores.

MEANING OF SMART CITY

The first question in front of people is why Government comes with smart city program. There is no universally accepted definition of a smart city but this program is helpful for growing cities. It means make available different things to different people. The concept of Smart City varies from city to city and country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. There is no such a specific characteristics to define a smart city.

FEATURES OF SMART CITY

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

1. Concentrate on planning of 'unplanned areas' containing a range of compatible activities. Land in use and unused land close to one another in order improve use of land more efficient. The States will enable some suppleness in land use and building bye-laws to adapt to change;
2. Expansion of housing system and providing inclusiveness, opportunities, atomization and systematic security.
3. Creating toddle localities reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. Improvement in road network with refurbishing in modern system not only for vehicles and public transport, but also for pedestrians and cyclists.
4. Use of reserve space for parks, playgrounds,

and frivolous spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;

5. Concentrate on second important era of public and transport system developing open transport and last mile Para-transport connectivity for all sectors.
6. Effective governance for citizens-friendly and cost effective – increasingly. Effective and correct online services to bring about accountability and transparency. Using of mobile apps to reduce cost of services and providing services without having to go to municipal offices.
7. 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;
8. Concentrate on infrastructure for implementation of SMART services in area-based development in order to make them better. For example, assembling Areas less susceptible to disasters, using fewer assets, and providing better services in all sectors.

NEED OF THE STUDY

- 1) Managing Municipal strategic planning is at the heart of municipal resource allocation, it is thus always also a political process
- 2) The local government needs to seek good collaboration with the business sector and non-governmental organizations in order to be able to provide suitable services for the 21st century.
- 3) Learning and capacity building is vital for any Municipal Corporation in order to be successful
- 4) Formulation of new strategies for making Nagpur a smart city.

OBJECTIVES OF THE STUDY

1. To study introduction of the Municipal Development Process
2. Explaining the role of the Management strategies for development of Nagpur city

3. An overview of the stake holders involved and their contribution to the Management of strategic Development
4. To look into detailed description of the Nagpur Municipal Corporation's vision
5. To conduct Socio-economic analysis and description of the strengths, weaknesses, opportunities, and threats as applicable to developmental strategies.
6. Planning Nagpur city as smart city.
7. To examine the impact of Government policies on development strategies of NMC.
8. Overview of the budget and funding.

HYPOTHESIS

“Successful implementation of development strategies by NMC has proved useful in attaining the goal of making Nagpur a smart city”

RESEARCH METHODOLOGY

1. Scope of Study:

The Universe of study was area of Nagpur city under NMC limits.

2. Data Collection:

Study is based on secondary data studied by the Nagpur planning commission and Nagpur Maha-nagar Corporation

Secondary data has been studied by from a stratified random sample of 6000 citizens based on income group i.e. high income, middle income and low income.

I) Tools of data collection

Questionnaire and interviewed data by NPC (Nagpur planning Commission) taken for study in table format and explanation.

II) Secondary data was collected from 3 years Annual reports (2014-15, 2015-16 and 2016-17) of NMC.

3. Data Analysis

Secondary data sources have been analyzed on the basis of Hypothesis and Objectives of Study. The secondary data was collected from NMC budgets for the years 2014-15, 2015-16 and 2016-17. Overall revenue receipts and expenditures have been taken into account the following tables show the budgetary details:

Table No. 1: Overall budget of Nagpur Corporation (NMC)

Sr. No.	Year	Estimated Revenue Receipts (Rs. In lakhs)	Estimated Expenditure (Rs. In lakhs)	Estimated Surplus (Rs. In lakhs)
1	2014-15	164527.67	164508.75	18.92
2	2015-16	196512.50	196491.50	21.00
3	2016-17	227197.14	227178.50	18.64

Courtesy: Nagpur Maha nagar Corporation (Budget 2014-2017) NMC Annual budget

Table No. 2: Revenue Differentiation of NMC

Sr. No.	Year	Actual Revenue Receipts (Rs. In lakhs)	Actual Expenditure (Rs. In lakhs)	Actual Surplus (Rs. In lakhs)
1	2014-15	133053.02	134147.00	(-) 1093.98
2	2015-16	147498.00	147292.00	6.00
3	2016-17	204812.69	204798.17	14.52

Courtesy: NMC revenue budget (2014-2017) NMC Annual budget

Interpretation:

The secondary data shows rise in actual surplus (-) 1093.98 lakhs in 2014-15 to 14.52 lakhs in 2016-17. Although, the budget is showing surplus it is necessary to examine this surplus with Inflation Index to ascertain real value of money while designing the strategy for next budget.

Further, HDI is an internationally accepted indicator for development. HDI mapping of all districts in Maharashtra is done regularly and Nagpur stands 5th in ranking which score of 0.71. This criteria

should be adopted by the NMC while designing strategy for making Nagpur a Smart City.

B. Data Analysis and Explanation:

Collected data from questionnaire and interview techniques were studied and used for explanation. In all 6000 citizens were interviewed and data was collected from them. Spread over whole of Nagpur City, 2000 belonged higher income group (HIG), 2000 belongs to middle income group (MIG) and 2000 belong to Lower income group (LIG). The profile of the sample is given below:

Table No. 3: Incomewise distribution of Samples

Sr. No.	Category	Male	Female	Total
1	HIG	1070 (53.5%)	930 (46.5%)	2000 (100%)
2	MIG	1120 (56%)	880 (44%)	2000 (100%)
3	LIG	1028 (51.4%)	972 (48.6%)	2000 (100%)
4	Total	3218 (53.6%)	2782 (46.4%)	6000 (100%)

Courtesy: NPC (Nagpur planning commission under SMART program)

Table No. 4: Service wise categorization of Samples for Nagpur city

Sr. No.	Category	Service Class	Business Class	Pensioners	Others	Total
1	HIG	530 (26.5%)	1410 (70.5%)	50 (2.5%)	10 (0.5%)	2000 (100%)
2	MIG	1290 (64.5%)	610 (30.5%)	82 (4.1%)	18 (0.9%)	2000 (100%)
3	LIG	1582 (79.1%)	214 (10.7%)	180 (9%)	24 (1.2%)	2000 (100%)
4	Total	3402 (56.7%)	2234 (37.2%)	312 (5.2%)	52 (0.8%)	6000 (100%)

Courtesy: NPC (Nagpur planning commission under SMART program)

The responses recorded from the sample of citizens have been rounded off to 0 or 5. The responses are recorded on 4 point scale (1. Fully Satisfied 2. Partly Satisfied 3. Not Satisfied 4.

Cannot Answer.)

Total Sample of 6000 was considered for study of data analysis as per the details given below:

Table No.5: Infrastructure Sample distribution of Nagpur city

<u>Sr.No.</u>	Particulars	Fully Satisfied	Partly Satisfied	Not Satisfied	Can't Answer	Total
1.	Roads and Public Works	1200	1200	3000	600	6000
2.	Water Supply	2600	2000	1360	40	6000
3.	Education	870	1140	3610	380	6000
4.	Gardens	4270	1530	190	10	6000
5.	Electrification	1740	1470	2730	60	6000
6.	Health Department	2530	1470	1730	270	6000
7.	Shops and Commercial Zones	2950	1650	1330	130	6000
8.	Garbage Clearance	3650	1550	650	150	6000
9.	Drainage System	3450	1750	640	160	6000
10.	Government Scheme and Slum Areas	3310	1890	680	120	6000
11.	Toilets	2550	2050	1300	100	6000
12.	Air Pollution	3350	1650	840	160	6000
13.	Sound Pollution	2530	2070	1250	150	6000
14.	Water Pollution	3130	1070	840	160	6000
15.	Registration	4250	1550	160	40	6000
16.	Sports Department	3750	1850	240	160	6000
17.	Taxation Department	3800	1650	350	200	6000

Courtesy: NPC (Nagpur planning commission under SMART program)

Interpretations:

Selected 17 important departments were taken into consideration for further strategy of NMC.

1. Roads and parking system and public works, people are not happy. As a new strategy all roads are being converted into concrete roads along with pay and park system. People will definitely be satisfied in near future with this policy of NMC.

2. In case of Water Supply, 24x7 schemes have given good results but proper monitoring is required. At present the water supply is outsourced to OCW Company, although billing and bill collection with NMC.

3. The schools of NMC, bearing very

few, are in bad shape and new strategy to establish better schools by NMC is necessary. People are not satisfied with the present set up.

4. In case of gardens they are well maintain an NMC's strategy PPP has worked well. People have given very good opinion showing satisfaction about all gardens in city.

5. People are not happy about street light and lighting arrangement in common places. Many electric polls on road are not removed. The NMC must adopt some positive strategy for electrification of road lights.

6. Health services rendered by NMC hospitals are satisfactory but there wide scope for improvement. Proper supply of medicines and

support staff is most essentials.

7. As regards shops and commercial zones, NMC has very well planned shopping areas and has also created hawkers zone but it has to face encroachments by shopkeepers. Mall culture is getting good response.

8. For garbage collection and removal, NMC has outsourced it to private operator (Kanak Resource Management Ltd.). This strategy has worked well but further utilization of garbage for generation of Energy be considered as a strategy for proper utilization of resources.

9. Old drainage systems need renovation as there is drainage blocking in some areas. Otherwise drainage system in most of the areas is working satisfactorily.

10. Government schemes such as slum improvement program (SIP) and slum up gradation program (SUP) so also new scheme of toilets etc. are implemented successfully to cover more than 1000 slum areas in Nagpur city. People in this area are satisfied with the work of NMC.

11. As regards pollution (AIR, Water, and Sound), the strategy of NMC is working well and at present the pollution levels are under control. There are very few incidents of violation of sound norms prescribed area wise but overall situation is under control.

12. Registration department is working very efficiently and people are satisfied with the working of this department. All records are available online and are made available immediately to citizens.

13. Sports department is also working well. Strategy wise all areas are provided with play grounds and recently constructed Stadium at Mankapur so also provisions in other areas are providing good services to the sports body.

14. Last but not the least most important department is the Tax department of collection of municipal taxes as main source of revenue. The collection of taxes has shown good improvement especially during "Note Ban" period.

CONCLUSIONS

The overall view shows that NMC strategy is working well and with the new approach towards making Nagpur a SMART CITY. Efforts are being made to adopt new strategies for achieving the desired goal.

New projects of concrete roads, improved drainage system, Metro Rail, Green Buses, Use of Solar system are among latest strategies.

In addition to this, training the staff in computer and making whole NMC online and digital is under process as a part of strategy towards digitalization. Consideration of inflation index and HDI as parameters while formulating strategies, NMC shall perform better in achieving the desired goal.

In view of the objectives of Smart City, additional plans and strategies are in pipe line. Proper allocation of resources while signing MOU's with stake holders is also important while formulating strategy for development of Nagpur City.

As "Public Welfare" is the ultimate aim of any civic body, it can be concluded that citizens' oriented strategic planning of NMC will make Nagpur as Smart City by 2020.

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