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# TAKING A CITIZEN-CENTRIC APPROACH TO E-SERVICE DELIVERY: A CASE STUDY OF CHANDIGARH CITY (INDIA)

**Manjul Vaidya***

**Abstract** *Governments around the world have recognized the potential of Information & Communication Technology (ICT) to design and deliver e-services. One key idea underlying this development has been service orientation and making government more 'citizen-friendly' and 'service-conscious'.*

*Chandigarh Administration has taken steps to improve quality of life of citizens by designing and delivering services through various e-governance initiatives. Administration's most significant aspect of ICT is e-Governance and the most encompassing initiative in this context is 'Project e-Sampark'. The purpose of this project is to bring together the services of all departments under a single umbrella and give the citizens a 'Multi-service—Single-Window' experience.*

*The objective of the study is to evaluate end-users experience about design and delivery of citizen-centric e-services. An exhaustive questionnaire was prepared to do an in depth exploratory level research. The data collected through the field visits was analyzed to discern the perceptions and expectations of the citizens. Data was analyzed both quantitatively and qualitatively and the interpretation was done using simple tables, charts, and graphs.*

*The paper concludes with pointers to certain challenges and opportunities that lie ahead for effective implementation of citizen-centric services in city Chandigarh.*

**Keywords:** *Information & Communication Technology (ICT), Citizen-centric E-services, Multi Service-Single Window, Citizen satisfaction and Critical Success Factors, Good Governance.*

## INTRODUCTION

During recent decades, a worldwide series of initiatives to 'reinvent government', create the new public management, has been widely discussed in order to address perceived shortcomings in public sector agencies and to generally make government work better (Osborne and Gaebler, 1992). One key idea underlying this movement has been service orientation and making government more 'customer-friendly' and 'service-conscious'. Instead of designing programmes from the perspective of the service providers and managing them through existing bureaucracies, reformers have literally turned the system on its head and tried to put the service recipients (mainly citizens and businesses) first. Instead of initiating by starting out by asking what services government agencies can provide, they start with what the citizens really need. In other words, there has been a distinct shift from an 'agency centric' model to a 'citizen centric' model as depicted by Fig. 1.

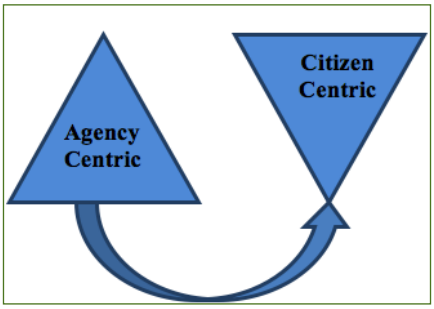
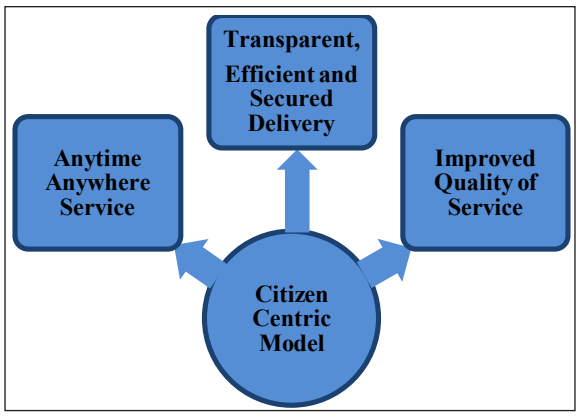



**Fig. 1: Agency Centric to Citizen Centric Model**

Fig. 2. Captures the three primary objectives of the citizen centric model. The model promise, availability of services round the clock, providing transparent, efficient and secured delivery of service as well as increasing the quality of services provided by the service provider. Hereby, the primary objective of our study is to evaluate end-users experience about design and delivery of citizen-centric e-service delivery in Chandigarh.

* Department of Information Technology, Chandigarh, India. Email: vaidyamanjul@gmail.com

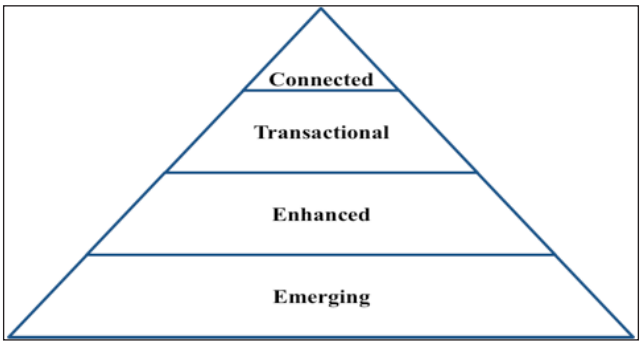



Source: Delivery through e-Governance Portal- Present scenario in India, White Paper by NISG, Hyderabad, India, 2008 p (4)

**Fig. 2: Objectives of Citizen Centric Model**

## Stages of Online Service Development

Four stages of online service development, are shown in Fig. 3 are considered :




Source: United Nations E- Government survey 2014, Report195 (pp)

**Fig. 3: The Four Stages of Online Service Development**

In stage I, websites of the Government provide only the information on public policy, governance, laws, regulations and types of Government services provided. Citizens can have updates and can also follow Links to archived information. In stage II, Government websites deliver enhanced one-way or simple two-way e-communication between government and citizens, such as downloadable forms needed for availing services. The sites have audio and video capabilities and are multi-lingual. Two-way communication facilities are provided at stage III. Most sophisticated level in the online e-Government initiatives is provided at stage IV. It can be characterized by an integration of G2G, G2C and C2G (and reverse) interactions. The Government encourages participatory deliberative decision making and is willing and able to involve the society in a two-way open dialogue. In this stage Government will move from Government-centric to citizen-centric approach, where e-services are targeted to citizens through life cycle events and segmented groups to provide tailor-made services.

India has made tremendous efforts over the last decades in its endeavour to move from lower stages of online development to higher and higher. There are good number of Indian states where the delivery of variety of citizen services has reached 'transactional' stage and efforts are on to strike 'connected' stage. Presently, more than forty ministries of the central government and all states and Union Territories are offering more than 2300 e-services to the citizens. Most commonly used online services include paying for utilities.

## Digital E-Governance is the Key for Cost Effectiveness

Governments all over the world have recognised the fact that designing and delivering of public services through online channels promise tremendous value propositions to seekers as well as providers of services. It is interesting to note the quantum of savings that might accrue by using online as compared to offline channels. Digital delivery of public services can be highly cost effective. Based on empirical cost data for some Government services, UK Government's 'Digital Efficiency Report' found that digital transactions were many times cheaper than offline channels as shown in Table 1.

**Table 1: Channel vs. Relative cost unit**

| S.No. | Channel | Relative cost unit |
|---|---|---|
| 1 | Digital | 1 |
| 2 | Telephone | 20 |
| 3 | Post | 30 |
| 4 | Face to Face | 50 |

Source : UK Government Digital Efficiency Report, 2012

Globally, lots of attention has been given to 'citizen-centric on-line services' by governments. Since 2001, the United Nations Department of Economic and Social Affairs (UNDESA) has been publishing a report titled 'The United Nations e-government survey'. The survey tracks e-government developments in the member countries and prepares a composite index called 'e-government development index (EGDI)'.

EGDI measures the readiness and capacity of national institutions to use ICTs to deliver public services. It is calculated as a weighted average of normalized score on

the three most significant dimensions of e-government, namely (a) scope and quality of online services quantified as 'online Service Index' (OSI); (b) the status of the development of telecommunication infrastructure expressed as 'Telecommunication Infrastructure Index' (TII) ; and (c) the inherent human capital expressed as 'Human Capital Index' (HCI). The composite value of each of these three indexes is then normalised to fall in the range of 0 to 1 and the EGDI is derived by taking the arithmetic average of the three. The indicators that go into the making of TII include, usage of Internet, subscription to broadband and for HCI, adult literacy rate, gross enrolment ratio etc.

Online Service Index (OSI) is based on the responses to an exhaustive online questionnaire. Each member country's national portal, e-participation portal and websites of related ministries of education, labour, social services, health, finance and environment are assessed.

## India's Global Ranking in UN E-Government Development Index (EGDI)

It is heartening to note the e-government development India has made during recent years. For the first time India figures among the top 100 countries in the United Nations e-government Development Index. India stands at 96 out of 193 countries. Denmark has emerged at the top with a magnificent score of 0.9150, followed by Australia and South Korea. Europe has been named the pioneer in fastest online services whereas the progress in American and Asian countries is slower but quite significant. Table 2. highlights India's progress during recent years.

**Table 2: E-Government Development Index**

| Year | Rank | EGDI | Online Service Component | Telcomm Infrastru-zctrue Componet | Human Capital-component |
|---|---|---|---|---|---|
| 2018 | 96 | 0.5669 | 0.9514 | 0.2009 | 0.5484 |
| 2016 | 107 | 0.4637 | 0.7464 | 0.1430 | 0.5019 |
| 2014 | 118 | 0.3834 | 0.5433 | 0.1372 | 0.4698 |
| 2012 | 125 | 0.3829 | 0.5359 | 0.1102 | 0.5025 |

Source : United Nations E-government surveys reports for the years 2012, 2014, 2016 and 2018

Main contributory factor for India's EGDI rank improvement has always been its online service component. As per report for the year 2018, India has done exceptionally well on count of indicators related to OSI as shown in Table 3.

**Table 3: Online Service Component Score ( 2018)**

| Rank | Country | Score |
|---|---|---|
| 1 | Denmark | 1.00 |
| 2 | Singapore | 0.9864 |
| 3 | USA | 0.9861 |
| 4 | Republic of korea | 0.9792 |
| 5 | France | 0.9792 |
| 6 | Australia | 0.9722 |
| 7 | Finland | 0.9653 |
| 8 | India | 0.9514 |

Source : United Nations E-government surveys reports for the year 2018

Out of all 193 member countries, India has scored very well. Only 7 countries, as shown in above table are ahead of India. Further, India with a score of 0.9514 is bracketed with Itlay, Japan, New Zealand and Norway. In fact, transforming e-services into citizen-centric ones, very effective e-participation is a must. UN survey also prepares a supplementary index called as 'E-participation index'. This Index reflects the e-participation mechanism deployed by a member country. India has performed exceedingly well in the E-participation Index for the year 2018 by achieving 15th rank with a score of 0.955.

Hereby, to analyse the factors would be play a key role in e-service delivery, we need to understand the Digital journey of Chandigarh and the e-Governance.

# DIGITAL JOURNEY OF UT ADMINISTRATION, CHANDIGARH

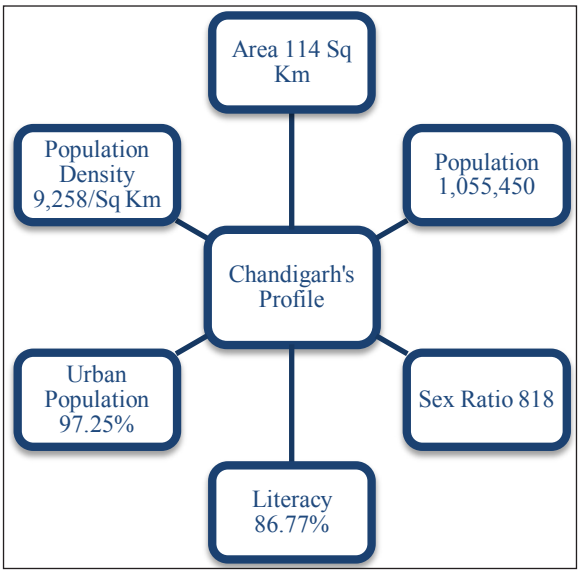
## Chandigarh - An Overview

'City Beautiful' Chandigarh was planned by the famous French architect, Le Corbusier. Picturesquely located at the foothills of Shivalik, it is known as one of the best experiments in Urban planning and modern architecture in the 20th century in India. Le Corbusier conceived the master plan of Chandigarh as analogous to human body. Head - Capital Complex and administration offices, Heart - city center, Lungs - Leisure valley and open spaces, Intellect - cultural and education institutes, circulatory system being network of roads which follows a grid pattern making planning of infrastructure a significant strength.The basic planning unit of the city is a 'sector' and presently there are 58 sectors. By its original planning, it has mixed land use in each sector. Sector is a self-sufficient unit consisting of residential areas, commercial complexes and fully carpeted

good quality roads. Green and public spaces are pervasive in the city. In fact, 37% of city's geographical area is under green cover. City has perfect design to house and integrate core infrastructure which is a key strength enabling delivery of basic services to all of its citizens.

Chandigarh Capitol Complex, a Government compound located in the sector-1 of the city has been declared as a UNESCO World Heritage Site since 2016. The excellent social infrastructure, large green spaces, and its compact size, make Chandigarh an ideal work destination. Presently Chandigarh is administered as a 'Union Territory' and is the capital of two Indian states-Punjab and Haryana. With a total area of 114 sq.Km., Chandigarh has population of about 11 lakhs.

Active and alert Citizens are a big boon for the city. Their participation and engagement with policy and decision making processes such as Development of Master Plan, Industrial Policy and making the city as a smart one etc. is substantial. Besides, Chandigarh's administrative structure as a union territory facilitates single point decision making which is critical towards implementation of development agenda. City has achieved 100% Aadhaar coverage. Fig. 4. sums up key points of the city's profile




Source : Smart City Mission (UT),(Nov 2015), Chandigarh Smart City Proposal

**Fig. 4: Chandigarh's Profile Key Highlights**

## E-Governance Initiatives

Chandigarh Administration is committed to providing a responsive and effective administration for the welfare of public keeping in view the national objectives. It has laid down an action plan in order to enable all sections of the society to benefit from the application of ICT.

Administration's most significant aspect of ICT is e-Governance and the most encompassing initiative in this context is 'Project e-Sampark'. The Project was initiated in the year 2004. The purpose is to bring together the services of all Government departments under a single umbrella and give the citizens a '-Multi service—Single-Window' experience. Idea being to save the citizens from undue harassment due to longue queues, multiple visits and lack of transparency. Twelve departments of UT administration/corporation/ boards and few private companies have collaborated with department of IT to make citizen services available through centres of Project e-Sampark. These centers are located in urban area as well as rural area. Major stakeholders of the project include: Department of Information Technology (DIT), National Informatics Centre (NIC), Build-Operate-Transfer (BOT) operator, Government Departments and Banks and Citizens.

## Public Private Partnership' (PPP) Model and Project E-Sampark

Creation and utilization of ICT infrastructure in the domain of citizen services delivery will require good amount of investment. It is a fact that rising fiscal constraints are forcing Governments to seek cooperation from private players to partner in such projects. Public-Private Partnership (PPP) is one form of such cooperation having potential of creating value propositions for both the parties.

Project e-Sampark is based on 'Public Private Partnership' (PPP) mode. Public sector in the mode is represented by the Department of IT, Chandigarh Administration. It has decided to work on Build-Operate-Transfer (BOT). The advantage being short set-up time and lower risk involved during build and operate phase. Department of IT has selected a BOT operator who will operate Sampark Centres, develop and maintain software and portal and be responsible for hosting as well as content management. After the tenure of the contract is over entire operations including the centre, hardware and software is transferred in the as-is condition to the Department. DIT has chosen a number of high volume and popular services across the different departments of UT to be provided through the Sampark Centres and a few of them online through the Sampark portal.

All the services offered at Sampark Centres follow a general process as depicted by the Fig. 5.

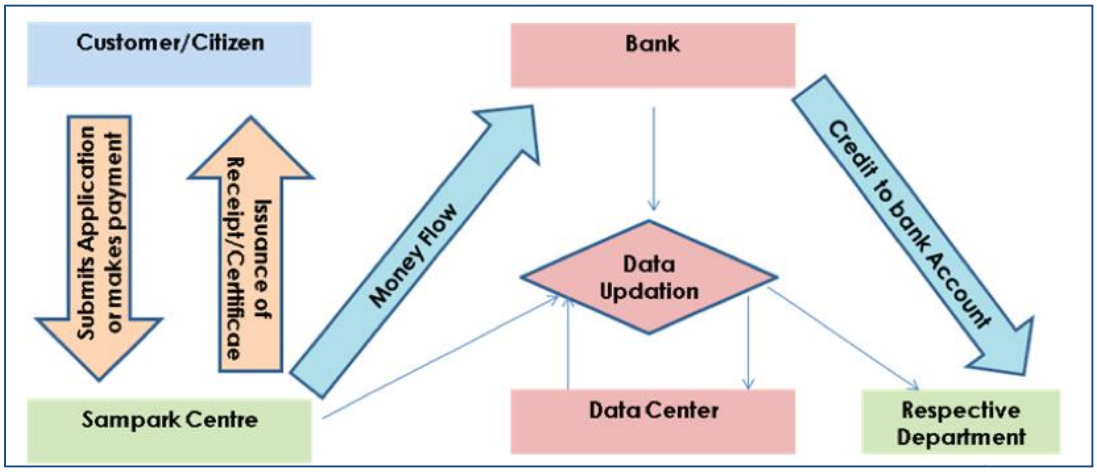



**Fig. 5: Process Flow- Operations at Sampark Centre**

In terms of the requirements to be fulfilled by the seekers of a service transaction and also the internal procedures involved in making a typical service available to the citizen, service transactions can be put into three categories:

**Transaction without personal interface -** Services not requiring presence and can be availed remotely. Presently such category includes services such as Payments of bills of Electricity and Water & Sewerage, BSNL etc. Substantial number of services offered under the project fall in this category.

**Transaction requiring personal interface / verification of the supporting original documents-**There are situations where legal requirements mandate presence of the seeker of service or his/her representative to be present before the government official or the original documents needs to shown for validation of the photocopies submitted. For example: Issue of Senior Citizen Card, Issue of Birth Certificate, and Issue of Death Certificate.

Proper e-Governance environment will encourage moving more and more services from category two to category one. ICT application will facilitate such a shift. For example verification of the original documents can easily be done away with in good number of cases, if reliable databases of the respective departments are available to the officials of other departments for online verification. Similarly it is desirable to review some of the legislations. Through these types of efforts it is quite possible to move some more services to category one.

**Transaction requiring personal interface / field verification-**There are services where field verifications are needed. For example, issue of passport. Though presently such a service is not offered by Sampark Centres but there is a public demand for it.

Above mentioned activities at the Sampark Centres are carried by a team as shown in Fig. 6. This process flow in a typical centre is carried by a team of 4 to 5 people. Presently 141 employees are working in these centres.

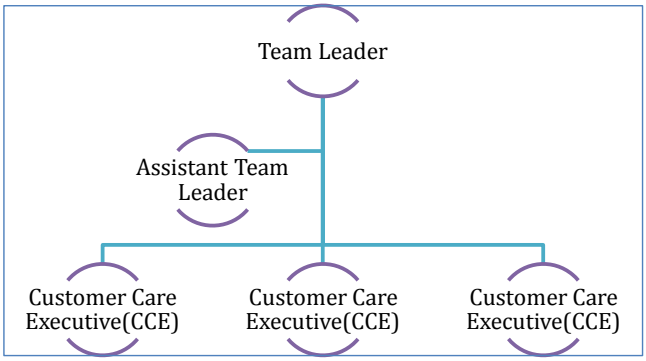



**Fig. 6: Team Structures at Sampark Centres**

It can be said that Project e-Sampark has made tremendous progress since its inception in the year 2004-05. From a beginning of 1.89 lakh transactions in the year 2004-05, the volume of transaction has gone to 26 lakhs during the year 2017-18. Growth in terms of number of centres as well as number of services offered has been quite high. Table 4. highlights the types of services offered under the project.

**Table 4: Types of services offered by the Project e- Sampark(Year 2017-18)**

| Category | Name of Service | Category | Name of Service |
|---|---|---|---|
| 1. User Fee collection | Payment of Electricity Bills | 3. Issuance of Certificate/Pass | Countersigning of Documents (Certificate issued by other State) |
| | Payment of Water & Sewerage bills | | Renewal of Arms License |
| | Telephone bill payment | | Transfer of Arms License of other state |
| | Deposit of College fee | | Firm/Society Registration |
| | Payment of Sticker & Postal Chillan | | Late entry of Birth |
| 2.Tax Payment | Payment of Taxes | | Late entry of Death |
| | | 4. Booking for various services | Booking of Tube well for irrigation in rural areas |
| 3.Issuance of Certificate/ Passes/cards | Issue of Bus Pass | | Open space booking |
| | Senior citizen card | | Community centre Hall Booking |
| | Birth certificate | | Booking of Community Centers and grounds |
| | Death certificate | | Doctors appointment for patients to GMSH-16 & GMCH-32 |
| | Disability Identity Card | | |
| | Aadhaar Card | 5.Registration with Government Authorities | Tenant Registration |
| | Caste Certificate | | Domestic servant registration |
| | SC Bonafide Certificate | | Forwarding of Application related to Electoral Roll |
| | BC/OBC Bonafide Certificate | | Online submission of college forms |
| | SC (Outside State) Certificate | | Passport Application Submission |
| | BC/OBC (Outside State) Certificate | 6.Miscellaneous | Filling of RTI |
| | Dependent certificate | | Disbursement of Pension |
| | Character Certificate | | Deposits of Dwelling units of Chd. Housing Board |
| | Income Certificate (for students) | | Sale of e-Stamp Papers |
| | Residence Certificate | | Sale of Stamps and Special Adhesive Stamps |
| | Countersigning of Documents (Certificates issued by Chandigarh Admin) | | |

Source :Project Sampark Web Portal (Oct,2018)

## OBJECTIVE OF THE STUDY

To evaluate end-users experience about design and delivery of citizen-centric e-service delivery in Chandigarh.

## RESEARCH METHODOLOGY

This is a survey based empirical study. An exhaustive questionnaire was prepared to do an in depth exploratory level research. To provide inputs to design questionnaire, focus group interactions were conducted with the two constituencies: the providers of services-- The Department of Information Technology,Chandigarh Adminstration and users of services-- Citizens visiting sampark centres for availing a service. The questionnaire included both close-ended (rated on five point Likert scale) and open-ended questions on overall quality of governance and quality of life in Chandigarh as well as suggestions for improving e-services. It is well understood that only certain segments of the population are of direct interest from the point of view of the objectives of the study. As such the focus for collection of data has been on relevant segments only. The 'targeted relevant population segment' comprises those respondent citizens of Chandigarh who have availed of services provided under e-Governance initiative of Chandigarh Administration. In total, 150 questionnaires were distributed and 137 were found usable for analysis. Detailed interactions with the key officials of various departments were held so as to understand their readiness about e-Governance initiatives.

Only those visitors exiting the sampark centre after availing a service were approached.The respondents were given approximately fifteen minutes to complete the questionnaire. The questionnaire was filled in many cases by the respondents, however in few cases it was filled by the

researcher based on the information given verbally by the respondent. Participation in the survey was voluntary and respondents were assured of full confidentiality.

Demographic profile of respondent citizens depicts that around sixty percent of the respondents are in the age groups of upto 30 years and 31-40 years. One third female and more than seventy eight percent are possessing graduation and post graduation degree. More than one-fifth of the respondents represent academic/ teaching--both school and college/university levels. Retirees represent another big chunk of respondent citizens.

## DATA ANALYSIS

This section discusses about trends in popularity of services. Data for the analysis,has been taken from secondary sources-published documents of Chandigarh Adminstration and web portal of Adminstartion.

It has been observed that only a few of these services are popular among citizens, the popularity and usage of services depended on periodicity of use with services that were required frequently such as payment of electricity/ water bills. Fig. 7. highlights this phenomenon.

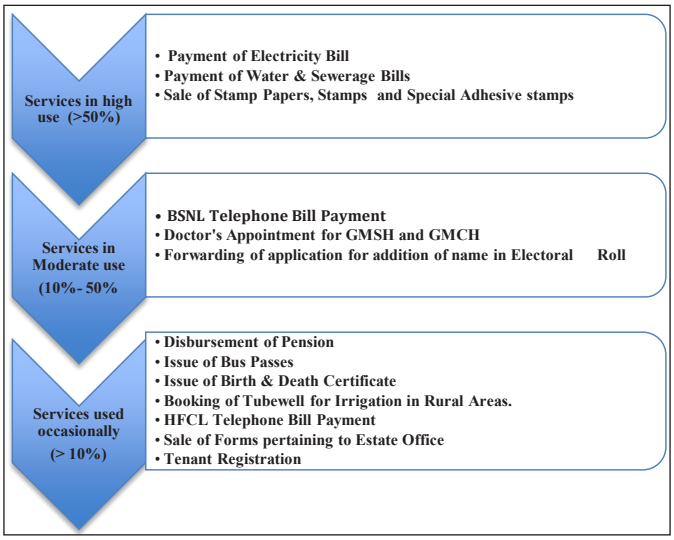


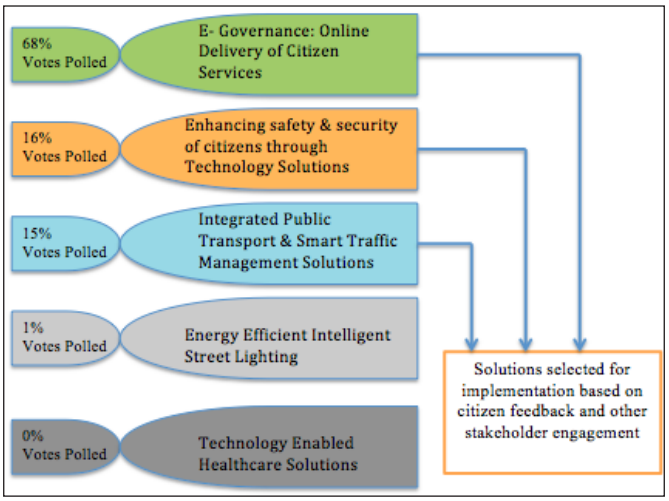

**Fig. 7: Services in Demand (2017-18)**

A closer analysis of demographic profile of the respondents using various services reveals retired citizens represent quite a high proportion of users for services like, Issue of Senior Citizen Card, Tenant Registration, Domestic Servant Registration, AIRTEL Telephone Bill Payment, Sale of Stamp Papers, Payment of Water & Sewerage Bills and Payment of Electricity. Citizens engaged in private services have used most of the services. From time to time based on public feed back, Chandigarh Administration has been adding new services to the project. Recently keeping in mind the demand made by the parents of students seeking admissions in various Educational Institutions located in Chandigarh, Administration launched a portal to help students apply online for admissions to courses offered by 14 Government and Govt. Aided colleges of the city.

## 'City Beautiful' Chandigarh on a 'Smart' pathway

Productive use of ICT and fruitful participation by private players through PPP mode has been working well to create public value under e-sampark project. Government's decision to develop Chandigarh as a smart city has come at a right time. Present ICT based initiatives of Chandigarh can be aligned and improved further to meet citizen's aspirations. Citizens have not only given suggestions but have played a pivotal role in shaping and defining the vision and goals for the city. Chandigarh Administration took proper care to ensure systematic and structured citizen engagement while making the proposal for Smart City. Citizen feedback was sought through consultations and discussions with various stakeholders. Efforts were made to make citizen engagement process more inclusive and broad-based. Suggestions from senior citizens, Resident Welfare Associations, Economically Weaker Section of the society, and Women Welfare Associations etc. were invited and considered.

Based on these interactions priorities of citizens were grouped into two classes namely (1) pan-city solutions and (2) area based development priorities. Following figure highlights the level of priority given by the citizens to e-governance initiatives in the city. As can be observed from the figure given below, 68% of the citizens gave top most priority to online delivery of services.




Source : Smart City Mission (UT), (Nov 2015), Chandigarh Smart City Proposal

**Fig. 8: Pan-City Solutions**

## Experiences and Satisfaction Regarding Services Offered Under Project E-Sampark

Relationship between service provider and service seekers differ in commercial and non-commercial sectors. In private sector organisations offering commercial services, there is direct relationship between commercial success, as measured by the rate of return and market share etc., and the standard of customer service. Public sector presents a more complicated and different type of situation. Providers of these services do not normally operate for financial profits. Therefore, the balance between citizen's expectations and the level of service to be provided need to be based on commercial as well as non-commercial considerations. One of the key objectives of the public service reforms has been to continuously improve the quality of citizen services.

## Experience(s) Dealing at Sampark Centre

Respondents were requested to give their feedback about the treatment they got while dealing with functionaries at Sampark centres. Issues included along with responses have been listed in the Table 5.

**Table 5: Experience(s) Dealing Sampark Centres & Kiosks**

| | | Very untrue | Untrue | Neutral | True | Very true | Total |
|---|---|---|---|---|---|---|---|
| **1** | **I was treated fairly** | 0 (0) | 0 (0) | 4 (2.92%) | 50 (36.50%) | 83 (60.58%) | 137 (100%) |
| **2** | **I did not have to wait long at the service counter.** | 0 (0) | 1 (0.73%) | 5 (3.65%) | 61 (44.53%) | 70 (51.09%) | 137 (100%) |
| **3** | **I was informed of everything I had to do to get the service** | 1 (0.73%) | 2 (1.46%) | 12 (8.76%) | 98 (71.53%) | 24 (17.52%) | 137 (100%) |
| **4** | **It was easy to find what I was looking for** | 1 (0.73%) | 2 (1.46%) | 10 (7.30%) | 96 (70.07%) | 28 (20.44%) | 137 (100%) |
| **5** | **I was able to get through to an operator at the counter without difficulty** | 0 (0.00%) | 1 (0.73%) | 8 (5.84%) | 102 (74.45%) | 26 (18.98%) | 137 (100%) |
| **6** | **Staff went the extra mile to make sure I got what I needed** | 1 (0.73%) | 2 (1.46%) | 22 (16.06%) | 96 (70.07%) | 16 (11.68%) | 137 (100%) |
| **7** | **Staff were knowledgeable and competent** | 1 (0.73%) | 4 (2.92%) | 6 (4.38%) | 107 (78.10%) | 19 (13.87%) | 137 (100%) |

The table 5 above, portrays considerable consistency in response to citizens' experiences dealing with the office of Sampark centres. More than 95% of the respondents consider their experience to be good ( i.e., sum total of 'very true' and 'true') as they *'were treated fairly', did not have to wait long at the service counter'* On the other hand, not more than 4% of the respondents considered their experience to be deficient (i.e. sum of 'untrue' and 'very untrue'. 3% to 16.06% did not think much of their experience (i.e. 'neutral') dealing with the staff deployed at the centres. The present study has confirmed that front line staff is pivotal in creating a positive citizen experience. This is especially true in a situation where accessibility to the technology is an issue. Elderly people and citizens particularly in rural area , it has been found have a preference for face-to-face interaction as a preferred mode of service delivery option.

## Citizens' Satisfaction with the Service Delivery

Recognizing the importance of front line employees in service delivery, the mechanism for identifying employees with the 'right stuff ' has been a point of research during recent years. Effective service providers have been described as resilient, resourceful, empathetic, and creative. Level of citizen's satisfaction with regards to services offered under Project e-Sampark has also been evaluated for aspects like 'time-to-deliver', 'accessibility' and overall quality.

As can be seen from Table 6, the overall level of satisfaction with service delivery (i.e. sum of 'very' and 'rather' satisfied respondents) has been quite high for all the three parameters i.e. time-to-deliver, accessibility and overall quality. More than 95% respondents belong to this category. This high proportion include Citizens from all age groups, professions and genders. More than 20% respondents were 'very satisfied' with regards to accessibility and overall quality of service delivery whereas 48% said they were 'very satisfied' with regards to time-to-deliver. Less than 4% respondents were indecisive (i.e. indifferent), a trait which perhaps reflects lack of understanding or appreciation for citizen centric services by sampark centres.

**Table 6: Satisfaction with the Service Delivery**

| | | Not at all Satisfied | Rather Dissatisfied | Indifferent | Rather Satisfied | Very Satisfied | Total |
|---|---|---|---|---|---|---|---|
| 1 | Overall, how satisfied were you with the amount of time it took to get the service? | 0 | 1 | 2 | 68 | 66 | 137 |
| | | (0) | (0.73%) | (1.46%) | (49.64%) | (48.18%) | (100%) |
| 2 | Overall, how satisfied were you with the accessibility of the service? | 0 | 1 | 5 | 101 | 30 | 137 |
| | | (0) | (0.73%) | (3.65%) | (73.72%) | (21.90%) | (100%) |
| 3 | How satisfied were you with the overall quality of service delivery? | 0 | 1 | 4 | 102 | 30 | 137 |
| | | (0) | (0.73%) | (2.92%) | (74.45%) | (21.90%) | (100%) |

In order to understand the association between demographic profile of respondents and level of satisfaction with the Service Delivery, we took certain variables like viz. gender and education and applied chi-Square test. While analysing the association between gender and quality of service delivery, we obtained the chi-Square value of 2.81 and significance value of.007 which is slightly greater than critical value of 0.05. It clearly indicates no impact of gender on respondents satisfaction with regard to quality of service delivery. However, education does have association with the level of satisfaction. While analysing education profile of the respondents, the chi-square value of 6.89 and Asymp. sig. Value of.000 which is less than critical value of 0.05 was obtained. The test verifies that higher the education level, higher is the level of satisfaction with regard to quality of service delivery.

## CONSLUSION

Cities, all over the world are gaining population and also becoming hubs of human activity. Trend is likely to persist. Almost one half of the world's population is estimated to have used the internet in the year 2017. Experts say over the next 5 years with the help of global 5G and other space based systems entire human race will get connected. Citizens of cities including Chandigarh are not only becoming more aware about the potential power of ICTs but are demanding more effective e-governance. Majority of Chandigarh citizens want improvement in e-governnance through online citizen-centric services. They want more and better online offerings through emails, SMS feed updates, mobile applications and downloadable forms.

There are certain areas where citizens want more attention to be given. Aspects identified include effective back-end systems, automation of administrative tasks including proper coordination between various departments of the Administration. In the present scenario citizen services are offered by a mix of sources. There are various individual departmental web-sites, departmental service centres and Sampark Centres. It will be more helpful if Chandigarh Administration, in addition to present Sampark Centres located in different sectors position the 'e-Sampark Portal' as UT-wide single point portal and instruct all departments to project themselves through this channel. The portal must be secured and reliable platform. Citizens need not visit websites of individual departments to get services. Individual departmental websites need to be integrated with the suggested portal. The portal should enable seekers of services to download as well as submit applications online. Requisite application fee can also be paid through payment gateway.

Presently web-site of the administration has listed all services, both informational as well as transactional. Once above mentioned portal is available, such information relating to services can be put on that single point entry portal.

Since Aadhar enrolment in the city is complete. Level of banking developments in city has been quite high, presently Chandigarh has 419 bank branches, 689 ATMs, more than 17lakh debit cards issued. City ranks quite high in the country in terms of per capta digital payment transactions. Per capta income has also been increasing over the years. Chandigarh citizens are showing tremendous affinity to digital technologies and have expressed willing to pay reasonable charges for the better and more e- services. Keeping in view these favourable developments coupled with great advancements in mobile technology, design and delivery of online e-services should be given most urgent attention.

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