E-Governance in Public Transportation: U.P.S.R.T.C. - A Case Study

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Abstract: As we know that an effective e-Governance will provide an efficient solution for most of the problems in many government and public sectors in India. Transportation sector is not the exception for the e-Governance. The use of Information and communication technology (ICT) in Transport sector causes drastic change in the exploration of various services, provided by Vahan and Sarathi projects. Vahan project supports all transactions related to vehicles such as issue registration certificate, fitness certificate, receipts and permits etc, whereas Sarathi issue's Learner Licence, Permanent Driving Licence and conductor licence to the applicants. But this development in Transport sector is entirely different from the governance of State Road Transport Corporation. This paper highlights some feeble features in governance of the Uttar Pradesh State Road Transport Corporation (UPSRTC) which was found by an extensive survey, performed on commuters as well as officials of UPSRTC.

Keywords: e-Governance, ICT, public transportation, survey.

1. E-Governance In Public Transportation Sector:

Now a day's e-Governance is affecting every facet of Uttar Pradesh state Government and public sectors as in [1], Transport sector is also enhancing or reengineering their administrative and service delivery mechanism by using effective ICT technologies such as e-Governance. Transport sector provides two successful G-C Projects to the society. The Vahan and Sarathi [2] projects in the Transport sector are running successfully in many states of the India. Vahan project is dedicated for all the transactions or processing regarding vehicles whereas Sarathi is related to driving licence and other activities. Uttar Pradesh Governments provides e-Governance services through their Vahan project only. But this development in the transport sector is not sufficient. According to the service delivery process, we can divide the Transport sector in three major unit's i.e. State Transport Authority (STA), Roads and Public Road Transport Corporations.

TABLE 1: Share of Different Modes of Transports in GDP [3]

Sector	19992000	2000-01	2001-02	2002-03	2003-04	2004-05
	As percentage of GDP (at factor cost and constant prices)					
Transport of which:	5.7	5.8	5.8	6.1	6.2	6.4
Railways	1.1	1.1	1.1	1.1	1.1	1.1
Road Transport	3.8	3.9	3.9	4.1	4.3	4.5
Water Transport	0.2	0.2	0.2	0.2	0.2	0.2
Air Transport	0.2	0.2	0.2	0.2	0.2	0.2
Services *	0.4	0.4	0.5	0.5	0.5	0.4

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Vahan e-Governance project is confined up to STA only. Therefore, there is huge scope for e-Governance in Public Road Transport Sector to improve there services. Today, there is no alternative for the public road transports in the Transportation because of its door to door availability. Transport sector accounts for a share of 6.4 per cent in India's Gross Domestic Product (GDP). Share of road transport is 4.5 percent and gradually increased in India's GDP as shown in the table 1. Indian roads are dominant mode of transportation which carries almost 90 percent of passenger's traffic and about 65 percent of freight [4]. Even though most of the road public transports of states are not satisfied by their revenues. Their are number of reasons for the unsatisfactory revenues in the sector i.e. mismanagement in the system, irresponsive system, ineffective plans, lack ness of transparent system corruption and very limited use of effective information and communication technologies are some major issues involved in the system. In next section we are discussing some of common flaws which are observed by the extensive survey performed on well educated commuters of road public transportation.
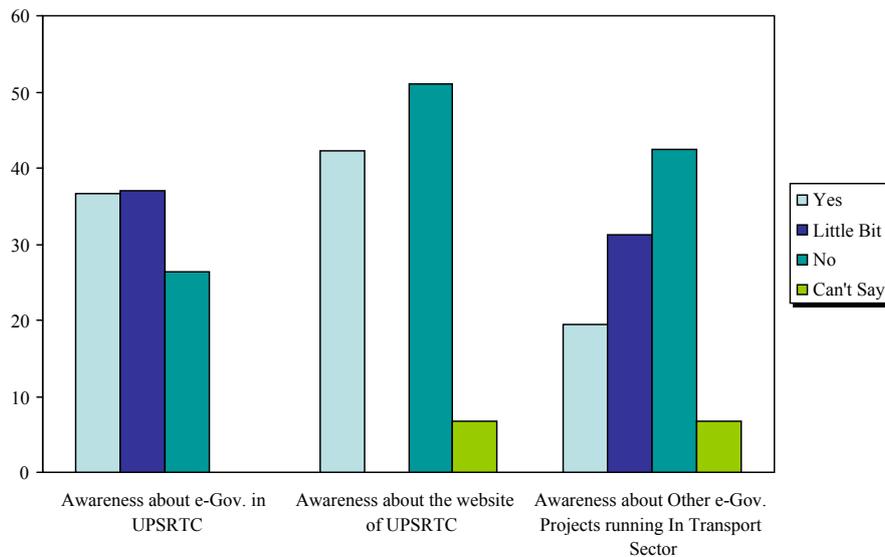

Figure 1: Awareness in Commuters

2. Survey And Data Collection:

The objective of the extensive survey was to understand the awareness, satisfaction level for available services and basic need of users or commuters regarding various issues involved in the Public Transportation. Around 434 persons who were surveyed, are well educated commuters (because educational and technical literacy is also one of the responsible factor for the poor governance: UP literacy rate according to 2001 census is 57.4%) and some are officials of public transportation who are directly involved in the planning, regulation and operation of UPSRTC. There are some important facts of public transportation which was discussed with commuters and officials through the questionnaire are categorized in three parts Awareness, Satisfaction level and need to do or Issues involved in the system.
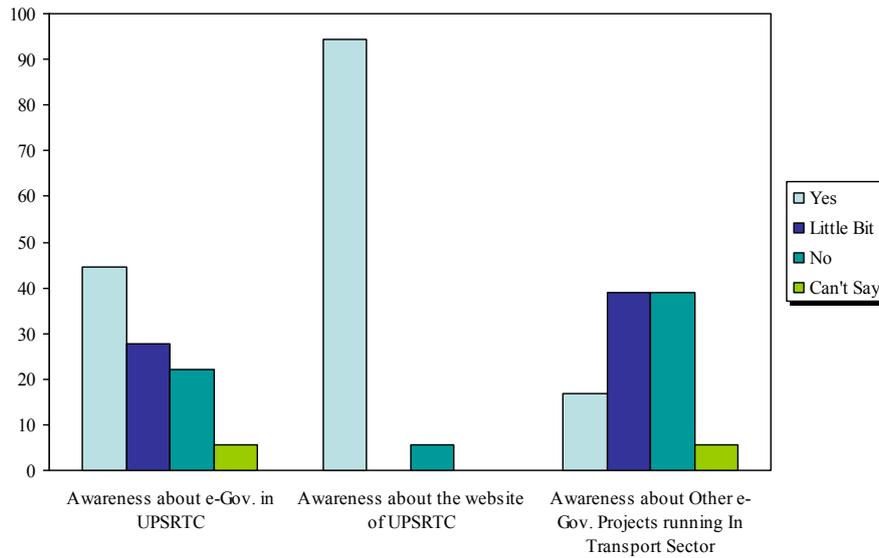
Figure 2: Awareness in Officials

2.1 Awareness:

The awareness between users of the services or Commuters and provider of those services or Officials are given in figure 1 and figure 2 respectively. It has been observed that awareness about e-governance in UPSRTC is found un satisfactory among well educated commuters. As we have seen in the figure 1, the commuters are aware but more than 50 percent is not aware about the website as well as the other e-governance projects in the sector. If we consider poor literacy rate and technical illiteracy also then condition became worse. Therefore UPSRTC needs to publish or advertise awareness programs through the media or communication channels. But awareness about e-Governance in officials is also not very encouraging as we seen in figure 2, because low awareness in service providers will causes the poor service delivery to their customers in UPSRTC.
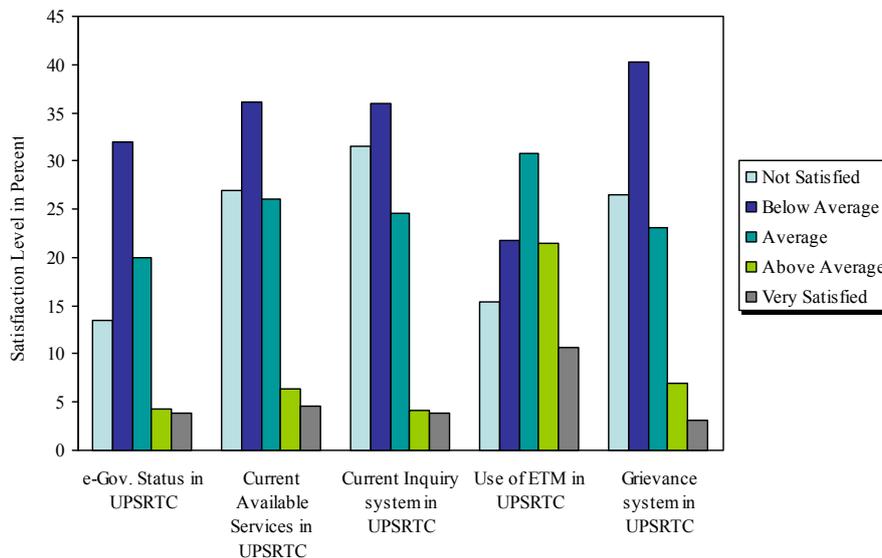

Figure 3: Satisfaction Level in Commuters

2.2 Satisfaction Level:

Satisfaction level for the commuters is described in figure 3 where as satisfaction for officials are represented in figure 4. In most of the defined parameters, the satisfaction levels in the commuters are unsatisfactory except for the use of electronic ticketing machine (ETM). On other hand the satisfaction level in officials are quite good except interconnectivity of UPSRTC between neighbouring sates. It clearly

represents the gap between the satisfaction level in commuters and officials. If the services of UPSRTC are good then it must be reflected back by the users of those services i.e. commuters. The financial growth of UPSRTC is quite supportive for implementation of e-Governance (as in figure 4) but the available services on their Website is not even updated as in figure 3. Therefore satisfaction level among commuters as well as officials strongly recommended for the implementation of e-Governance in the Public Transport sector.
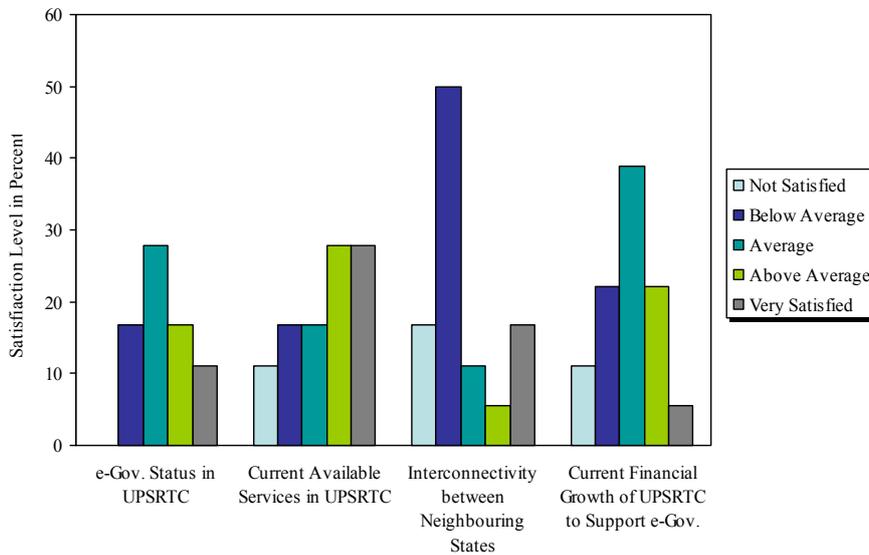

Figure 4: Satisfaction Level in Officials

2.3 Issues:

The needs of commuters are represented by figure 5, where as needs of officials are given in the figure 6. According to commuters there are number of parameters such as Interconnectivity, use of ICT, on line information's and services, on which UPSRTC have to pay more attention to provide quality services to
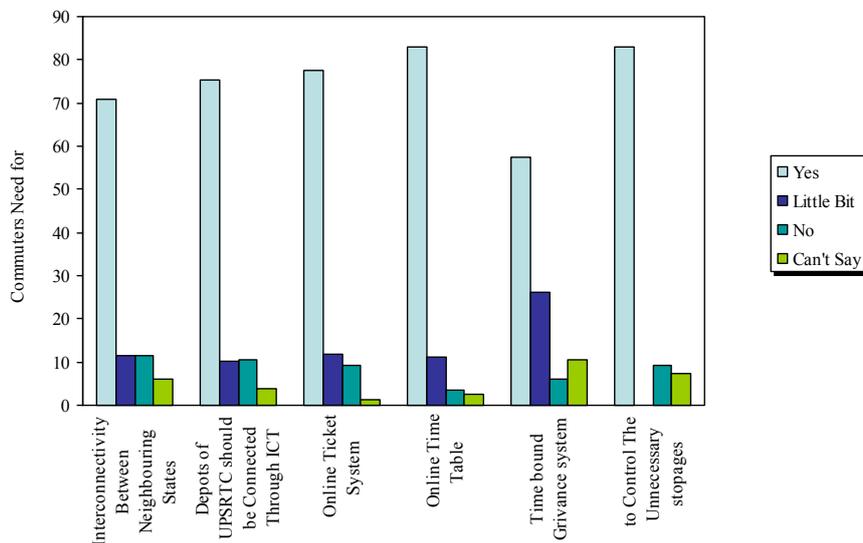

Figure 5: Commuters Need

their users. Also want attention on mechanism for locating the specific services. On other hands official's needs are focused on interconnectivity private public partnership involvement for bridging the infrastructure gap, officials are also concern about some mechanism for tracking or locating the individual services of UPSRTC.
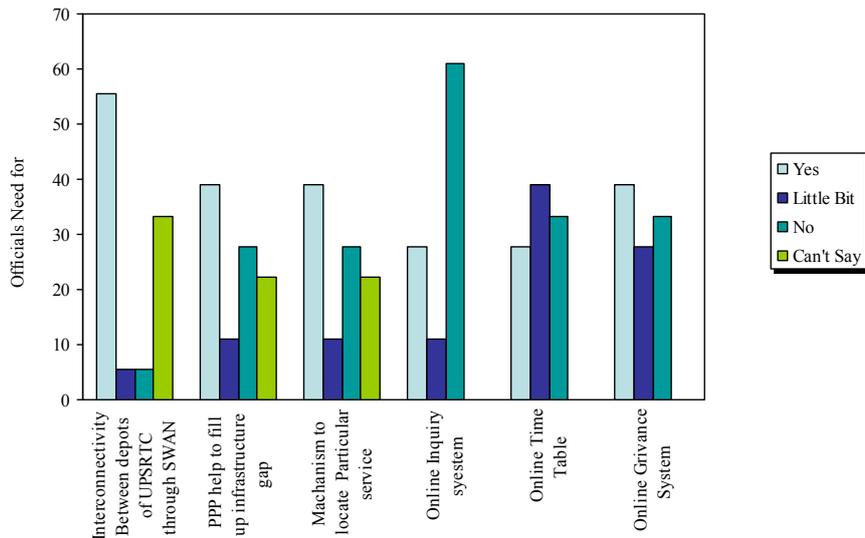
Figure 6: Official's Need

As we have seen that in figure 6 officials are less concern about the online inquiry system, and online time table. But in online availability of information is the primary concern of e-Governance. It has been observed that the needs of commuters and officials are almost similar which clearly indicates the necessity of e-Governance to provide effective and efficient Services to their users.

3. E-Governance: Gateway For The Quality Services In Upsrtc:

The mission of UPSRTC is to provide Efficient, Economic, Co-ordinated and adequate passenger road transport services to the users. This became reality after implementing e-Governance in an effective way. E-Governance needs to focus on three basic things i.e. ease of interaction, availability and quality services. According to the Gartner Group (Baum and Di Maio) four stage model for the e-Governance [5] was discussed considering UPSRTC's current available services.

- Web Presence: In UPSRTC, it provide a well developed website for the public transport corporation, but available information's should be updated to provide quality services to commuters as in figure 3.
- Interaction: In this stage, users can interact with their agencies through online forms, e-mails or by downloading documents. UPSRTC provides some functionality on their website but low level of awareness (as in figure 1) and limited functions need more attention.
- Transaction: In transaction users can perform business with the agencies such as online ticketing, online payment etc. UPSRTC provides such services only for their premier bus services; therefore it must be extend to facilitate more users.
- Transformation: Government transform the current operational processes to provide more efficient, integrated, unified and personalize services at their regional or national levels including internal and external applications to provide full communication between government and non government organization. UPSRTC will require the process re-engineering to provide better services to their commuters.

4. Conclusions:

Services of UPSRTC lags behind because of unawareness and number of issues related to the accessibility of services and public transportation, which ultimately causes low level of satisfaction for the UPSRTC services among commuters. On other hand, officials of UPSRTC also feel the need of some effective and efficient mechanism for flawless governance of public road Transport Corporation. Therefore we can say that public road transportation requires new ICT enabled services which provides effective, efficient, accountable and transparent system to the commuters as well as officials because computerization of government services have capability to minimise corruption, provide transparent system and quality service to their users. Therefore an extensive survey was performed on commuters of UPSRTC as well as Official of UPSRTC to identify the actual status in the public Transport sector in Uttar Pradesh. On the basis of survey results it has been observed that there is huge gap of between the service users and the service

providers of UPSRTC. As in figure 3 and 4, commuters are below satisfied by the current available services where as officials of UPSRTC are above satisfied. The interconnectivity is also one of the major issues which have to resolved, this gap has to be minimised by using effective methodologies for the governance. The purpose of extensive survey is to find the awareness, satisfaction level and the issues involved with in UPSRTC. On the basis of survey an e-Governance model for Public transportation would be proposed. This advancement in governance process of UPSRTC will be helpful for providing effective, transparent, efficient services to their commuters.

5. References:

[1] Shefali Nandan, Lession from E-government initiatives in Uttar Pradesh, www.csi-sigegov.org/egovernance_pdf/4_26-32.pdf

[2] Vahan and Sarathi E-Governance at Regional Transport Offices in Taminnadu www.tn.nic.in/tnhome/projectfiles/brochure-transport.pdf

[3] Government of India Planning Commission New Delhi, http://planningcommission.nic.in/aboutus/committee/wrkgrp11/wg11_roadtpt.pdf

[4] India Transpor Sector - Roads http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSARREGTOPTRANSPORT/0,,contentMDK:20703625~menuPK:868822~pagePK:34004173~piPK:34003707~theSitePK:579598,00.html

[5] Hala Al-Khatib, A Citizen Oriented E-Government Maturity Model, http://www.brunel.ac.uk/329/BBS%20documents/PHD%20Doctoral%20Symposium%2009/HalaAlKhatib0632085.pdf