Framework of G2C Strategies for Uttarakhand

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ABSTRACT

The term Governance may be understood as the process by which society steers itself. This includes the interactions among the State, the private enterprise and the civil society. With the advent of Internet and networking and communication technologies, the whole process of governance has become ICT driven. Different National and State governments are utilizing ICT to provide services to the citizens at their door steps and bringing down the cost of governance and increasing efficiency and effectiveness of delivery.e-Governance is the use of information and communication technologies to support good governance. It includes: e-Administration, e-Citizens & e-Services and e-Society. But are these efforts sufficient? Do they actually impact the man on the street? This paper is based on a research project to evaluate the existing framework of G2C solutions deployed in the state of Uttarakhand, a semi-hill state of India, and based on findings, proposes a revised model of G2C.

Keywords: *e-Governance, G2C, e-Strategy, G2C Framework*

1. INTRODUCTION

ICT has tremendous applications in G2C form of e-governance. The government can improve its efficiency, accountability and transparency by using ICT. In the increasingly growing complexities of public administration, the use of IT has become indispensable for effective governance and e-Governance is an emerging trend which can re-invent the way the Government works. But in India, the experience has shown that the success of initiatives depends on the political will and commitment of bureaucracy.

ICT brings in lots of benefits in the area of e-Governance – e.g. enhanced transparency, online services, civil society participation, e-trade facilitation, empowerment of marginalized groups, savings of public resources, strengthening the principles of democratic governance through enhanced interactivity and engagement with citizen and civil society.

e-Governance allows citizens to communicate with the government, participate in government's policy making and citizens to communicate with each other. The e-Governance truly allows citizens to participate in the government decision-making process, reflect their true needs and welfare by utilizing e-Governance as a tool.

In India, e-Governance started with National Informatics Center's (NICs) efforts at connecting district headquarters through computers in the 1980s and through establishment of pan-India network. This has provided the backbone to implement several solutions and services around G2C. To further utilize the potential of e-Governance to improve the quality of life of the vast population of the country, the Government of India has formulated a national programme – the National e-Governance Plan (NeGP). The plan seeks to create the right governance and institutional mechanisms, set up the core infrastructure and policies and implement a number of Mission Mode Projects at the center, state and integrated service levels to create a citizen-centric and business-centric environment for governance.

The plan attempts to cover all the important areas relating to e-Governance – Policy, Infrastructure, Finances, Project Management, Government Process Reengineering, Capacity Building, Training, Assessment and Awareness etc. across the Central and State Governments.

NeGP is designed to leverage capabilities and opportunities presented by ICT to promote good governance across the country in a time-bound manner with clearly defined responsibilities. NeGP is aimed at introducing e-Governance systematically through 25 Mission Mode projects, which would touch the lives of more than 1 billion people.

The vision of NeGP is to make all Government services accessible to the common man in his locality through common service delivery outlets. The implementation strategy envisages clear definition of service goals and metrics for each project and structured stakeholder consultations with all stakeholders including citizens and civil society organizations before the service goals of each project are firmed up.

All State governments in India have implemented several G2C projects under the guidance and monitoring of NeGP. They practically touch every citizen, be it a school student, a government employee, a house wife, a farmer, a businessman, a teacher, male, female, resident of rural, hilly, urban terrains etc. This

reflects the Uttarakhand government's commitment and resolve to bring government at the doorstep of every citizen. And IT provides that backbone.

However their implementation leaves a lot to be desired.

2. NEED AND SIGNIFICANCE OF THE STUDY

In early 1990's most of the states in India started implementing G2C e-Governance initiatives. However, they faced several implementation challenges. They were:

- Infrastructure capacity
- Compatibility with existing IT systems/ databases/ platforms
- Scalability of applications
- Information exchange mechanisms
- Geo referencing of assets
- Limited ability to carry out financial transactions

Government of India, as well as government of Uttarakhand has also launched several initiatives under the National e-Governance Plan (NeGP) and e-Governance roadmap for G2C sector. The projects have been undertaken with a view to streamline the government's services to citizens, to increase transparency, to reduce operational costs, to increase accessibility, to increase administrative efficiency and effectiveness.

But these have shown mixed results. Despite the government spending big money and putting in lots of efforts the status on ground is not too flattering. Thus, it was time to investigate further and look into the reasons for failure and propose a way forward.

The government is spending big money, but not able to reap the benefits, whereas many State governments have made tremendous progress and led to an e-revolution of sorts. They have saved money increased efficiency, brought transparency and empowered ordinary citizens. Uttarakhand is yet to see these benefits.

3. OBJECTIVES

The broad objectives of this research was to study and critically evaluate the status of the existing G2C projects in Uttarakhand and propose a way forward if things needed any improvement.

To address the objectives, research in the following areas was undertaken:

1. E-initiatives undertaken and initiated by the central government in the area of G2C.
2. Existing system of e-Governance w.r.t. G2C applications in the state of Uttarakhand.
3. Awareness levels and perception of citizens towards the existence and effectiveness of G2C e-initiatives in Uttarakhand.

The present paper is based on the findings of the research with respect to the first two objectives – Status of G2C applications in Uttarakhand.

The data items collected during a period of about six months or so were further corroborated by extensive brain storming sessions conducted at different levels. It led to the realization that there is tremendous space that needs to be filled in through various e-Strategies.

4. EXISTING FRAMEWORK

The e-Governance projects in Uttarakhand are coordinated by the state's nodal agency for IT-Information Technology Development Agency (ITDA). ITDA is an independent and autonomous body to guide and monitor various projects and provide expert inputs, monitor, evaluate and execute State's IT initiatives and projects under the National e-Governance Plan (NeGP).

The projects are chosen in a manner that they touch every citizen, be it a school student, a government employee, a house wife, a farmer, a businessman, a teacher, male, female, resident of rural, hilly, urban terrains etc. This reflects the Uttarakhand government's commitment and resolve to bring government at the doorstep of every citizen. And IT provides that backbone.

a. Uttarakhand State Wide Area Network (UKSWAN)

Uttarakhand State Wide Area Network (UKSWAN) presently provides the IT backbone to offer G2C services. It is expected to cover the entire State and provide a reliable, resilient and a secure backbone for voice, video and data services on the same network.

The broad objectives of Uttarakhand State Network are:

- To provide a reliable and secure backbone network.
- To provide a complete array of government services and online information to the public in a secure way.
- To provide convenient, anytime, anywhere public access to Government's information and services.

- To provide the State and local government entities with cost-effective long-distance converged communication services (voice, data and video) to fulfill the State's vision of widespread access to government services.
- To interconnect existing networks with the proposed network to get better utilization of the existing facilities.
- To support e-Commerce applications to meet public requirement and thereby improve the efficiency of all concerned.
- To Provide Open interfaces for connectivity to facilitate the exchange of information among State government users.
- To ensure vendor-neutrality with regards to user connectivity, and not limit the choice of products and services available to State agencies.
- To provide significant improvement in Government to Citizen (G2C), Citizen to Government (C2G), Government to Business (G2B), Business to Government and Government to Government (G2G) interfaces.

UKSWAN is designed to be a high capacity scalable network based on open standards that will carry Voice, Data and Video traffic among designated locations in the state. The connectivity to end-user will be the combination of standard leased circuits, dial-up circuits or wireless circuits as appropriate for the individual offices. State e-Governance Gateway (SEGG) with adequate capacity for Internet and provision for connecting other existing Networks of other states and country (as shown in Figure 6.1) are the additional requirements.

UASWAN will work on multi-tiers of Network connectivity model, which comprise of State Head Quarter (SHQ), District Head Quarters (DHQs), Tehsil / Taluka Head Quarters (THQs) etc. SHQ shall be connected to all DHQs and offices in State Capital with required bandwidth capacity. Each DHQ shall be connected to their respective THQs and offices in those Districts with required bandwidth capacity. Each THQ shall be connected to the offices in those Tehsils with required bandwidth capacity.

b. Tipping Points

The present G2C strategy in Uttarakhand talks of a multi-layered structure with Uttarakhand State Network as the backbone, and technology support centres at District and Tehsil levels. It talks of Citizen Service Centres (CSC) at the grass-root level for providing access to applications to ordinary citizens.

But the times have changed since the original plan was made. The changes have come about due to following aspects:

1.   Changes in technology have been the most important reason why there is a need to review and revise the existing G2C strategy, which has largely failed to deliver results. The first reason is the lack of full deployment of UKSWAN. Without this backbone, Applications have no meaning. In the last few years technologies and models like Cloud Computing, Data centres, 3G etc. have come up. These make the life much simpler. By using these features, the reach can be multiplied manifold.

2.   Changing expectations of citizens. Due to whatever little experience the citizens have had with G2C applications, they have seen the power and realize the potential of these applications. Present applications are half-baked and partially computerized. There is an urgent need to go for complete computerization.

3.   Telecom revolution. Telecom has changed the rules of the game. Places where there are no banks, no post offices, no landline phones, there are mobile phones. And the handsets have also started getting more and more powerful and versatile. From simple voice and sms facility, the handset now provides full data processing capability, camera, video camera, torch, alarm clock, watch, internet, email etc. In fact, today's handsets are multi-utility devices which have done away with Camera, Watch, Clock, Torch, Computer, Video Camera etc. There is no need to print documents or photographs. One can just click and upload them instantly. It is imperative that the government use this powerful tool as the main citizen touch point.

4.   The lessons learnt from the past few years have come handy. Now is the time to take stock of what went right and what went wrong. There are many failures in terms of Application design, some in terms of complexity of user interface, some only allow a form to be downloaded, and for remaining processing one has to visit govt office. Existing CSCs have failed to make an impact. All these lessons can be utilized to become better in future.

c. Constraints in the Existing Systems

The government of Uttarakhand has done quite well in terms of creating an IT infrastructure as well as building capacity by spreading IT education from school level itself. It has also rolled out several ambitious software applications (projects) as listed above. However, these projects have met with mixed success.

The failures are due to following reasons:

- **Lack of connectivity** -The reach and strength of connectivity in remote areas is still weak. The signals are weak enough to prevent continued, stable service.

- **Lack of training to the concerned government functionaries** - The government staff at the interface level are not yet trained to fully explain the benefits of the scheme or be able to fully operate the software.

- **Lack of awareness on the part of citizens about these projects** - The biggest hindrance is the lack of awareness about the schemes to the citizens. They do not know the schemes, their benefits and whom to approach for the same. The government has failed to ensure full utilization of these schemes by its failure to inform the intended users.

- **Stand-alone approach of government departments** - The government departments still work under their own budgets and plans. Lack of coordination means costly resources are duplicated, public money is wasted, and it taken much longer to roll out a service. There is no concept of shared resources, and inter-operability of applications. Precious public money is wasted in duplicating infrastructure.

- **Commercial un-viability of the projects** - Without a public-private partnership model, the local entrepreneurs do not see commercial sense in creating a local presence. Some local entrepreneurs who had come forward, have lost money, and without governmental support and backing to make these a commercial success, they have started withdrawing. For example, without sufficient number of rolled out G2C applications, and awareness about them in the local population, the number of footfalls in Soochna Kutirs (Project Janadhar) is very less, making these commercially unviable.

- **Partial computerization (forms still being deposited manually)** - In most of the cases, the website is there, information is available, but thereafter processing is manual. People are supposed to print the forms and again stand in the queue for manual processing. This is one of the biggest stumbling blocks in making G2C applications a success. If people have to visit the regular office for processing in any case, they do not see value in just getting a form printed from citizen service centers.

- **Lack of maintenance of existing applications** - Once launched the maintenance of the websites and software is not undertaken, as a result, the public loses interest in the integrity of the applications. At local level, there is no provision of adequate backups and HW maintenance. If a system is down, it may remain unavailable for days.

d. Telecom Revolution in India

The telecom revolution in India has been a great boon for the citizens and government alike. It has provided a level-playing field to all the citizens and provided a platform for them to enjoy the benefits of technology. E-revolution has led to e-democratization.

With the synergy of Telecom, Internet, Computers, the citizens in even the remotest areas have an equal chance of participating in and benefiting from the technological revolution sweeping the country. The mobiles have further cemented this fact by practically bringing the power in the hands of people. The mobile is that powerful tool, which has bridged the technological, democratic, educational and financial divide between the Haves and Have-nots. Now the government has reached the last man standing.

Every city, town or village is now on the radar of government and industry. Banks ATMS, Internet Cafes, Computer Centers, Mobile towers – these have removed e-deprivation and ensured e-inclusion of the marginalized.

Slowly, but surely, m-revolution is replacing e-revolution. G2C strategies of national and State governments also have to keep this in mind. The way m-density has overtaken landline density, has also surprised policy makers. Traditionally, the government machinery is much slower than private. In this case, due to privatization of telecom, the penetration has happened in too quick a time, taking even the government by surprise.

Now the ball is in government's court. The government has to seize the opportunity with both hands. Some State governments have taken the lead in this matter and done wonderfully well. Some State governments, like Uttarakhand are slow to act. But all is not lost yet. To catch up, the government of the State needs to do several things. It has to reassess, review and revise its current strategy, and make focused attempts to speed-up the process.

5. PROPOSED FRAMEWORK

An e-Governance plan at State level must take a holistic view of e-Governance initiatives across the State, integrating them into a collective vision, a shared cause. Around this idea, a massive statewide infrastructure reaching down to the remotest of villages needs to be evolved, providing a large-scale digitization of records, to enable easy, reliable access over the internet or on mobile. The access to G2C portals could be through media such as Mobiles, Landline telephone, Computer Centers, Banks, Bank ATMs, PCOs, CSCs etc. The ultimate objective should be to bring public services closer home to citizens, within their reach. With

population in a semi-hilly state like Uttarakhand scattered in remote locations, access is a big challenge, as it may not be economic. Also, in terms of prioritization, the applications with maximum impact at the grass-root level should be adopted first. For this, a program approach needs to be adopted, guided by common vision and strategy. This approach will have the potential of enabling huge savings in costs through sharing of core and support infrastructure, enabling interoperability through standards, and of presenting a seamless view of Government to citizens.

The proposed model should have multiple touch elements. While Uttarakhand State Network remains as the IT backbone, the citizens should be able to access Applications from multiple access points. They could use a bank ATM, post office, Mobile Handset, Landline telephone, computer centres, STD/ISD PCO booths, CSC, Internet Café etc. to access G2C Applications. The PCO Booth, Internet Café, Computer Centres etc. can work as mini-CSC and provide limited, often used services to the citizens.

This power and flexibility in the hands of citizens will empower them and make the integration process faster. CSCs would remain a key touch point, but its utility would diminish for 'Query' type transactions. For example if a person wants to see latest circle rates, s/he need not visit CSC, and should be able to see the data from any web-enabled device, or a mini-CSC. They should also be able to call up someone using landline and get answers.

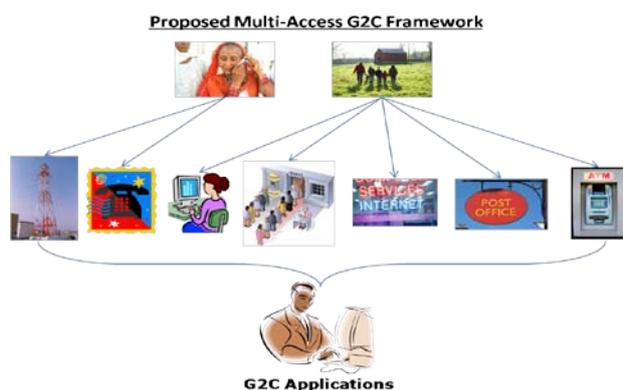Thus, multiplicity of citizen touch points is a key part of the G2C Strategy.

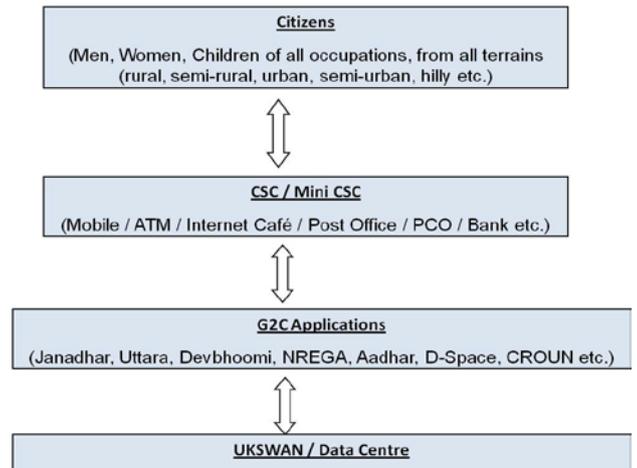**Fig 1:** Representation of Citizen Touch points

Fig 2: Information flow in proposed system

Key Elements:

- The Uttarakhand State Network infrastructure would help in connecting all State government offices, horizontally and vertically.
- CSC would be the main access point for citizens and will be used for most of the transactions like payment of electricity bill, water bill, municipal taxes, VTA, Service Tax, Insurance payments, mobile bills, landline bill, etc. and request for passport, new electricity/telephone connection, driving license, school admission form, various types of certificates like nationality, domicile, birth, death, Caste, Income Solvency etc.
- The Mini-CSCs would supplement the CSCs. These include a Bank, ATM, Post office, Mobile Handset, Landline telephone, computer centres, STD/ISD PCO booths, Internet Café etc. The present CSCs have not taken off due to lack of commercial viability. With the right incentive scheme or subsidy, these centres can come up in even in the remotest parts of the State, generating rural employment in the bargain. This would help in e-inclusion of the marginalized groups.
- These gateways (CSC / Mini CSC) should provide a single window access to the various services of the state government at all levels.
- The government, in a time bound manner should re-engineer the existing processes and make them fully computerized. Present partial computerization is doing more harm than good. It is giving a bad name to the whole process.
- The physical forms should be replaced with e-forms, with facility of online reply. Standardization of information collection; storage and digitization of forms are very critical steps for making G2C e-initiatives successful in the state.

- The Application development and maintenance should be given to private players like TCS, Wipro etc.
- All data should be stored in secure centralized Data Centres. These could be jointly managed by Private Players and Govt. (NIC).

a. IT Architecture

It is proposed that the IT backbone be such that it provides sufficient bandwidth to the citizens in the remotest parts of the State, and is stable and secure. The e-architecture could look something like following:
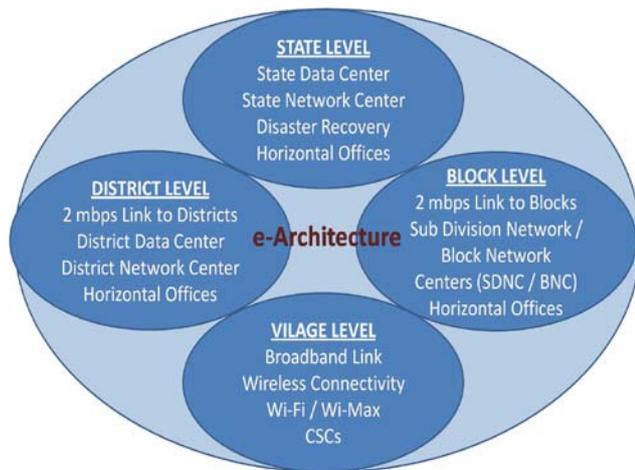

Fig 3: IT architecture for the proposed framework

The IT connectivity from Village to Block to District level, culminating at State capital level with adequate redundancy and security leads to 24 x 7 stable connectivity and quality of service.

b. Rework Strategy

It is therefore, proposed that the government of Uttarakhand should revisit its strategy document, to reassess, review and revise the shortcomings in the present approach. With the not-so-successful implementation of present G2C IT projects, there is a need to revamp the strategy, to reprioritize and reenergize.

One key finding of the survey is that the people across the state, except for those directly associated with the Project implementation, were not aware of the Projects. This finding has been reported cutting across gender, location, occupation, age or educational profile of the respondents. Between 70 – 80% respondents have said 'Can't say' about the various G2C schemes of the government. During clarifications, they revealed that by this remark they did not mean that they could not rate the Projects due to less interaction, but that they were not aware of the schemes at all, and hence, were unable to give either a positive or negative rating.

Hence, a key input is to increase the visibility of the schemes across the State, so that the beneficiaries can avail these.

Secondly, the government should also involve private sector in the design, development and deployment of G2C applications. The State IT infrastructure is inadequate, inefficient and too slow. Without involving private sector players, it is not possible to meet the expectations of the citizens.

The strategy also needs to be revised in terms of the medium of delivery of the applications. These need to move beyond the existing CSCs and computer centers.

c. M-Strategy

The mobile has changed the dynamics of the situation. Earlier the government had focused on spreading computerization and banking services in the country side. But the bank has now moved from a physical bank to e-banking to m-banking. This has ensured financial inclusion. Similarly, computers have shrunk in size and latest mobile handsets incorporate the powers of a basic computer. A decent palm-top can be had for as cheap as Rs. 14,000 only. The computers have gone the banking way, and from computer centers, to personal computers, have now shrunk inside the mobile handset itself. With technologies like GPRS, Bluetooth, 3G etc., a person would be able to manage all this in the confines of his home. This is a massive power. The government must revisit its strategy to perhaps make the GPRS enabled handsets cheaply available, especially to rural women, so that their integration with the mainstream is rapid.

Today there are more mobiles than landline phones.

M-strategy should also look at the possible applications for different categories of mobile phones, as cheaper mobiles may not support all makes of cell phones.

d. Private Sector Involvement

The present central coordinating agency is not able to deliver results. The central portal UTTARA has not delivered results. Perhaps, the Government agencies need to be made more accountable. There may be a requirement to make it more broad-based with involvement of known IT experts from private sector. Any future G2C strategy must take the form of Public-Private partnership (PPP) model. One example of this is the hugely successful Aadhaar project, where the Unique Identification Authority (UIDA), headed by ex-Infosian Nandan Nilekeni has set a record of sorts in implementing the project in a record time and cost. Government owned BSNL cannot reach everywhere. On

the basis of the data available for this study it is found that there are holes to be plugged in the telecom domain. It must start dialogue with private telecom players like Airtel, Vodafone, Tata Teleservices, Idea, Reliance etc. and involve them to plug the last-mile connectivity. For them some sort of incentive scheme may have to be devised.

The partnership can happen in the following areas:

- Project Management
- Financial partnership
- Design consultancy
- Implementation
- Training
- Hardware maintenance
- Data digitization etc.

e. Process Reengineering

The government should undertake process reengineering to reduce procedural bottlenecks in a computerized environment. Computerizing a manual process as it is retains the inefficiency. As such, there is partial computerization. Having a website with static information at Government level is not what G2C perceives. The existing manual workflows need to be computerized to do away with paper work completely. This requires rigorous process reengineering.

There are numerous instances of a computerization effort gone badly. E-governance does not mean having a passive website of a government department. Successful e-governance is an integrated phenomenon. It provides a comprehensive interface to a citizen which services his all needs. If a person gets only outdated information from a website, or gets half information, or cannot do e-transaction, then the half-baked process is as bad as not having anything. If ultimately a person has to travel to a government office multiple times to complete a transaction, after, maybe greasing the palms of a number of them, then the whole exercise is futile. The key benefits of less time, zero bribe, more efficiency etc. fly outside the window with partial computerization.

The concept of CSC is of having a single-window solution for all citizen service needs. If a person has to travel to 10 different places to get ten different services, then it is not e-governance. And to provide a centralized service, the Application software of different departments must co-exist, use same Data centre capabilities, train a person to handle multiple applications etc. This can only be possible with process reengineering. Existing processes must get modified, common coding schemes must evolve for smooth data-sharing e-forms must get simplified to minimize online data entry, massive citizen databases on the lines of Aadhar must exist to provide central authentication.

f. Standardization

In order to ensure smooth integration of Applications at deployment and maintenance stages, it is suggested that Technical standards for development of applications are defined at the very outset. Since different technologies are going to be deployed, it is imperative that interface standards also be developed and agreed upon to ensure seamless interconnectivity. The standards could be for hardware, system software, networking, applications, security etc.

Common services from a single platform can be provided when data flow between different department applications takes place. This requires standard naming conventions; data coding schemes, storage formats enhanced security, integration with financial partners like banks and PayPal for online transactions etc. India is a vast country and to reach the masses, local language content is also required.

g. Stakeholder Involvement

The future framework would need involvement of different stakeholders like government departments, telecom companies, banks, post offices, computer centers etc. These bodies should be involved at the planning stage itself to make the effort more broad-based.

Any financial transaction will necessarily have to get routed through a financial partner like a bank, PayPal and in present scenario, a telecom player who at backend will again tie up with a bank.

Telecom players will emerge as the key stakeholders. More than 96% population in Uttarakhand has access to a mobile phone. With technology enhancing the capabilities of handheld devices every week, the mobile has become the most powerful device ever produced. It has the power to connect two entities like nothing else. It now also has power to execute financial transactions. If we can pay our bills pay rent, pay for government services, pay to a shopkeeper through a mobile phone we don't need a separate bank account an ATM a credit card etc. In western countries credit cards have replaced cash. In India mobile money will replace cash.

Computer centers in remote areas are another potential centers. People who need printouts or need support in filling forms, or receipts of their payments can go to a nearby computer centre to get such services. For this they need to be suitably compensated. In some instances these centers which were to act like CSC wound up as financially they could not sustain themselves.

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h. Last Mile Connectivity

The existing State wide area network (SWAN) needs to be more robust. Also, the last mile access at the village, locality level must be strengthened. For this existing infrastructure could be used, eg. Bank ATMs, computer centers, Post office, Citizen Service Centers.

Mobiles have in a way made the last mile question not so important. Now instead of the copper wire, we need telecom towers. These will replace last mile point-to-point connectivity to last mile radius. With 3G services also being rolled out and e-connectivity being a 'always-on' phenomenon, more applications need to be written for mobile interface.

i. ATMS

ATMs must play a key role in any future G2C strategy, apart from mobiles. Today cheaper, more robust, secure ATMs are available which can be deployed rapidly even in remotest parts of the country. While mobiles can take care of non-cash financial transactions, for cash transaction or other banking needs, ATMs must be spread across the length and breadth of the State and be accessible within a range of 2 Kms. or so.

Today cheaper, more hardy ATMs are available which can work for long hours on generators, work without ACS, can provide basic services and are secure. More than 80% people have accessed ATM at some point of time. In case they can also get information or basic services like payment of dues etc. through these, then they can become virtual Citizen Service Centers.

j. Extensive Awareness / Capacity Building

Massive training of operational staff is required so that they can provide best possible operational support to the users. Special scheme must be evolved so that rural people, especially women are involved in the training process.

This is a humungous opportunity for employment. In Uttarakhand literacy rate is very high. Women are educated, and retired men are also available to work as resource persons for successful e-Governance initiatives.

Awareness is the biggest reason for the failure of today's e-governance projects. Government has not taken adequate steps to popularize schemes which bring service at the finger tips of consumers. If a vendor sits with his products in his house, no one will know about or buy his service or product. Similarly, if the government does not inform the citizens about its Projects, they will remain unutilized.

In India, the computerization projects have morphed into e-governance projects due to Centre's guidance and insistence. The first level was hardware where a lot of money was to be made in procurement, and it has been made. The second stage is of computerization. Here, the departments have insular look they confuse computerizing their existing work with e-governance. Whereas, the g-governance ethos starts with the citizen in mind. To provide cheap, fast, efficient and 'always-on' service without 'middle-men' should be the mantra for successful e-governance projects. Just like it pays for Indian politicians to keep the masses illiterate, for electoral gains, it suits the government to keep citizens uninformed about the existence and benefits of e-governance projects, lest they start demanding more. But this is a small vision. Experience from developed countries and Indian States which have successfully deployed e-governance projects, reveals that success is intricately linked with awareness. The success of Pulse Polio program is one such example. If people know where they have to go and what service they can avail at what cost, they will start demanding better service and more efficiency. Thus it suits Babus to keep citizens unaware but it is the basic requirement for e-governance to succeed.

The present research also proves that awareness is the biggest concern area. 71% citizens are not aware of most of the government's e-governance projects. 60.6% people feel that society can improve thru e-initiatives and web-based information retrieval is a fast and efficient mechanism. People also appreciate the computerization of transport office and employment exchange. The reason for these is that these are visible to the public.

k. Economic Viability

Existing local entrepreneurs who were selected to operate Citizen Service Centers (CSC), find it commercially unviable as the fees paid by the users is too less. Also, because there is no visibility of the services among the citizens. The government must provide some kind of subsidy or financial incentive to make commercial sense.

There are instances of CSCs and computer centers closing down, but the fees charged by them is too less for them to survive. And they cannot survive on the money they receive as transaction fee by the users.

The government must evolve a revenue sharing model or an incentive scheme to subsidize operations of CSC and Mini CSCs if they are to increase usage. Banks, Post Offices, ATMs, Computer Centers, PCOs – all need some kind of financial framework to latch on to the e-governance bandwagon.

l.   Citizen Service Centres

All villages or citizen clusters need to have access to a CSC within two kilometers radius. Originally, CSCs were the planned service centers which were meant to provide centralized single-window service to citizens. In some States like Gujarat, these have taken up very well. Instead of creating another typically government, bureaucratic office, these can be built as large, decent places with AC, water dispensers, Toilets, sufficient seating space, ATM, PCO, Snacks counter, utility stores, parking etc. Since opening these places could free existing office space from different departments the money thus saved could be used to provide these amenities. The place should be located conveniently in a large area.

Similarly, mini CSCs with limited services could be housed in Bank ATMs, Internet café, STD/ISD booths or Computer Centers. As is evidence from the collected data there is a sizable existing network of PCOs available in the State with BSNL as service providers. PCO have been provided services of only simple telephony i.e. local, STD or ISD calls. Existing PCO centers may be upgraded to having facility to Internet access / providers to common users. This may be evolving as follows:
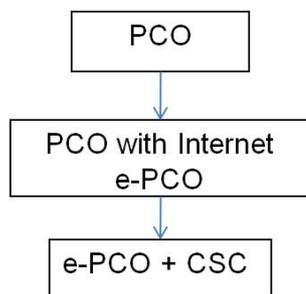

Fig 4: PCO to e-PCO

Today we also have mobile PCOs, which can be moved anywhere. These can be effectively used by entrepreneurs to build newer service and revenue models.

m.   G2C Ecosystem

The proposed framework would look something like the following model. In this framework, the IT backbone is in the centre. On top of that lie Centre and State driven citizen centric applications. All these Applications and integrated framework are standardized with the help of Policies, Standards and Guidelines. Different Applications are designed, deployed, in short, owned by different departments. But at the core level they have to share hardware resources, optimally utilize the bandwidth and provide seamless experience to the citizens (customers).
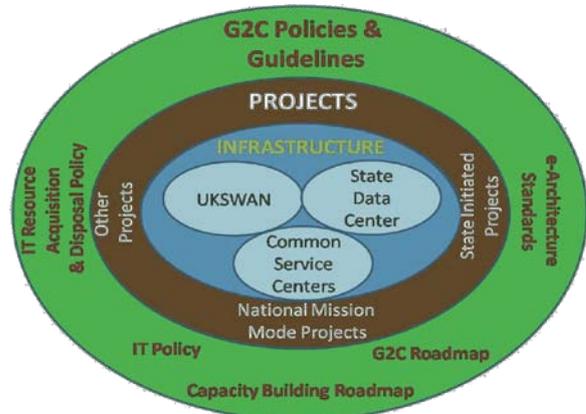

Fig 5: G2C Ecosystem

This can only happen when these applications follow certain standard guidelines and protocols which let these Applications talk to each other and share data across. This will also mean that data is redundant. For example, UID (Adhar) could be the single authentication mechanism for all applications. And once a person logs into a system for doing a transaction, he need not authenticate himself again while doing a different transaction. The citizen should be able to pay Electricity bill, Water bill, make Insurance premium payment etc., without having to separately authenticate himself.

n.   G2C Middleware

Apart from the hardware and Applications, the proposed G2C Framework would also be an assemblage of multi-sourced middleware. This would be a network of agencies providing services in areas like:

Fig 6: G2C Middleware

- Data Centre management
- Information Security
- Payment Gateways
- Content Management
- GIS services
- Process Support people

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- System Administrators
- Database experts
- Logistics Support
- Training partners
- Standard bodies
- Project Management Support staff
- Internet Service Providers
- Computer Centres
- Telecom Operators
- Banks
- CSC operators
- PCOs etc.

All these different agencies need to coordinate their work. A central Project Management function with both government and private players should jointly monitor and regulate this work.

o.   Summary of Design and Development of Framework

To summarize, any future framework should have following basic elements:

- Involvement of Private players like Telecom companies, SW vendors etc.
- Special schemes for Women, especially rural women
- Integration of Rural communities
- Financial incentive schemes to make CSC / Mini CSCs self sustaining
- Privately managed Data Centres
- Support for maintenance of IT infrastructure
- Spread of ATMS across the State, and
- Making cheaply available (maybe subsidized) GPRS enabled Mobile phones available in the rural markets.

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