A Study to Identify the Factors Involved in the Conceptualization and Execution of Mountain IT-Initiatives: Janta Portal

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Abstract—The present study identifies key antecedents of Mountain IT Initiatives. Information wave in last few decades has created a Metamorphosis and acted as a mechanism to speed up the process of transformation. However, an urban bias can be observed to be associated with this wave hence created informatics-divide of Informatics have & have-nots. This scenario is more complex for mountainous terrines. The study brings forth a new model for decentralization and informatics intervention in unreachable difficult geographies.

Keywords—Mountain IT Initiatives, Capacity Building, Difficult Geographies, digital repository, Janta Portal.

I. INTRODUCTION

WEISS (1995) defines a theory of change quite simply and elegantly as a theory of how and why an initiative works [1]. Recent perspectives on organizational change have emphasized human agency, more than technology or structure, to explain empirical outcomes resulting from the use of information technologies in organizations [2]. It should be plausible evidence and common sense suggestion that the initiatives, if implemented, will lead to desired outcomes if initiatives should be doable and should be testable [3].

It is clear that even though information technology has evolved from its traditional orientation of administrative support toward a more strategic role within an organization, there is still a glaring lack of fundamental frameworks within which to understand the potential of IT for tomorrow's organizations [4].

There is widespread acceptance that information technology (IT) and information systems (IS) have evolved from a traditional administrative, back-office support orientation towards a more strategic, central role within organizations [5] and the same can be said about IT in governance where it now occupies a prime location.

Individual beliefs about technology use have been shown to have a profound impact on subsequent behaviours toward information technology (IT) [6].

With the enormous investments in Information Technology (IT), the question of payoffs from IT has become increasingly important. Organizations continue to question the benefits from IT in terms of ROI. Furthermore, the impact of technology on non financial outcomes is gaining interest [7].

Public administrators, planners, and policy makers are overwhelmingly utilizing information technology (IT) for administrative and transactional processing activities but not decision making [9]. This top bottom approach must be replaced by an informed bottom up approach [10].

Large numbers of organizations are taking keen interest in the idea of knowledge management and many of them are launching knowledge management initiatives and programmes. A large proportion of such initiatives will fail. Yet, despite the injunctions to “learn from failure”, little detailed attention has been paid to why and how these apparently popular initiatives run into difficulties [11]. In case of Govt. initiatives non existence of feasibility studies before launching an initiative is a major cause for failure.

II. MOUNTAIN INITIATIVES DEFINED

Mountains as such refer to the high altitude places which are generally known to have different co-ordinates of development, planning in any geography across the world. With regard to India, as a case study, the mountain regime spans a huge demography from Kashmir to Arunanchal and other mountain regions down south as well. The human habitat, flora and fauna, economic and social parameters along with newer age technological inroads and practices have a unique role in mountains. In fact, when we say mountains we refer to geography where the approach of looking at the planning and development is entirely different than what it is for other regions, for example in the hill state of Uttarakhnd (where the present study has been undertaken) which has been carved out of a hugely populous Uttar Pradesh in India is regarded as a hill state. Now this state has three geographical layers, the plain region, the tarai region and the hill region. This third layer of mountain is the most crucial one as it envelopes in extremely intricate issues which are related to transport, connectivity, livelihood, agriculture, employment etc. One major point of this entire gamut is of accessibility of tangible and intangible resources. It defines the level of complexity of a mountainous region. Indeed, there are not all
the places which can be termed as inaccessible yet the study has been envisaged taking entire mountain region as difficult geography. The habitats in those mountainous zones includes people who are

- Small Farmers who are practicing ancillary agriculture
- Unable to afford basic health care costs
- Marginalized communities who are underprivileged for using social rights
- Children unable to get basic education
- Poor People without employment
- People lacking opportunities to benefit from surrounding economic growth and development

Technological interventions in general and IT-Interventions in particular have a tremendous role in combating the issue of inaccessibility. In fact, informatics and computing have opened up an entirely new window of opportunity to such mountain regions which are having different levels of complexity regarding accessibility, connectivity (wired and wireless) and application deployment.

It is amply evident, that IT has the potential of laying down level playing field between contrasting communities with respect to the development coordinates. IT can indeed bridge the asymmetrical gaps [12] which have existed in the human society for so long. With this enabling IT-initiatives and interventions there are opportunities to look beyond the existing policies, practices and solutions for difficult geographies in general and mountains in particular. It is therefore, a very interesting and unique domain to study Mountain IT-initiatives specifically addressing to the qualms of leveraging IT-initiatives for the mountains.

III. OBJECTIVE

Given the background in the previous section, the primary objective of this study is to understand the underlying dimensions that drive mountain IT initiatives.

IV. RESEARCH METHODOLOGY

The research in this paper aims to concentrate on defining a collaborative and IT-integrated platform with a capability of complete digital repository for rural milieu. Another important finding of paper is to compile this model with an ongoing project – Janta Portal Uttarakhand for effective use of ICT to improve quality of education system.

The mission statement of Janta portal platform is to set-up a planned, directed flow of information to build strong virtual allies to complement life in the rural milieu. Janta portal is an effort to establish strong Virtual coordinates which will share vital information and concerns, and these coordinates in turn link up with or support real-life activities for concerted action. The model builds the momentum of real-world processes by adding the technical advancements expressed by digital world. The Portal aims to mobilize and leverage human resources and information beyond geographical, institutional and bureaucratic barriers, and use it for concerted action.

This proposed model using designed portal would be applied in the following possible ways:

- To establish an interactive digital platform with key policy-makers and people in rural areas.
- To provide information on market rates for seasonal and regional crops, fruits and vegetables.
- To provide information on weather conditions and other information on local geography.
- To provide a platform for of e-learning, e-healthcare and skill development trainings in geographically difficult and unreachable areas.
- Establishing decentralized forms of governance.

Our studies focus on designing conceptual model for modular digital repository where each level can be defined as a set of some random variables. At first step, Connectivity can be defined as a set of four elements mapped through a mathematical many to one relationship with digital repository to provide connectivity whose presence is subject to variation due to geographical location, availability of technology and transmission medium and practically important for effectiveness for multiway e-governance in remote places.
At a particular time, values for these parameters depend on availability of transmission medium in particular geography. In this modular approach, another important task is to identify type of information that can be accumulated and disseminated through digital repository. Another major task is to define medium for content/information delivery.

V. WEB BASED IMPLEMENTATION OF CONCEPTUAL MODEL

Looking at the project size and level of complexity in implementation, it was very difficult to achieve the goals of this research and development in one step. Keeping this in mind, the web based interface for the project was designed as Janta Portal, as the first step for implementation of digital repository for difficult geographies. The designed main graphical user interface is shown in Figure 3, the concept of graphical user interface was to design a web based collaborative platform to provide basic information to people in remote areas as a prerequisite for implementation of a complete digital repository.

VI. DISCUSSIONS

The prominent factors have got a major influence on mountain IT initiatives.

IT Awareness: It is on the increase yet it needs a serious effort on part of the planners and implementers to get the citizenry involved in understanding IT. In mountain regions IT awareness got to be enhanced. People have to be imparted training in technology so as to scale up awareness levels. They also got to understand that many divides and deficiencies can be addressed only through IT interventions.

Connectivity: This is the most crucial aspect upon which hinges the entire edifice of IT governance. Ensuring connectivity is the prime requirement of any IT initiative in the mountains. Mountain regions need the connectivity most. It is only connectivity that can fetch them application dividend in the absence of other physical infrastructures. Connectivity holds the key in mountains, if at all it exists.

IT Execution: The failure of IT execution is due to poor planning and policies without feasibility studies.

IT Communication: There is a gap between IT plans and the people for whom it is meant. It is due to the lack of communication between the Government and citizens. IT as a means of communication and providing visibility to people of mountains has a huge role. Communication is the backbone in mountains. IT has to be leveraged for ensuring communication.

Government’s Role: Government has the most vital role in IT initiatives. It can work towards empowering people with IT initiatives. Govt can hugely promote mountain IT initiatives and come up with Mountain IT Initiative regime.

IT Inertia: Mountains initiatives are deeply hurt by Inertia particularly at planning level.

IT Cost: IT can be reincarnated as a frugal technology and can provide alternative solutions to several projects which demand high physical infrastructure. It can substantially reduce much expenditure also. Effective use of IT can bring down the Govt’s operational cost many folds.

IT Capacity Building: IT does not work till there is effective capacity building among its users and planners. Therefore, training, retraining are essential components of Capacity building in mountains.

VII. CONCLUSION

ICTs have the potential to bring every individual into a digital network and enable interactive and multiple-ways flow of information among them. The study identifies factors like ‘IT Awareness’, ‘Connectivity’, ‘IT Execution’, ‘IT Communication’, ‘Government’s Role’, ‘IT Inertia’, ‘IT Cost’, ‘IT Capacity Building’, ‘IT Usability’ and ‘Geographical Location’ as the prime factors of planning. The paper also conceptualizes mountain IT initiatives and delves into the issues of execution of IT initiatives in difficult geographies.

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REFERENCES


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