

INTRODUCTION

Information Communication and Technology (ICT) in simple term means, any product or system that communicates, stores and or processes information. Digital convergence allows the same channel to be used for data, voice and images there by enhancing potential for human interactions. ICT is playing a multi-faceted role for changing the model of business transactions. ICT is facilitating new forms of interactions. Internet reduces the transaction cost and increases the market access. These create new windows of opportunity. ICT has an enormous impact on shaping the mindsets and attitudes of the society for adopting the change process. The wider use of ICT will result in new social situations where the ICT applications will be applied to the traditional needs of the society.

A number of state governments have initiated e-governance projects and many of them have been successful. Most of these are essentially for improving the service delivery and improving the government services. Some of the major ICT initiatives taken by the state governments are given in **Table 1**:

Table 1: Selected E-governance Initiatives in India

State/Urban Territory	Initiatives covering departmental automation, user charge collection, delivery of policy/programme information and delivery of entitlements
Andhra Pradesh	e-Seva, CARD, VOICE, MPHS, FAST, e-Cops, AP online-One-stop-shop on the Internet, Saukaryam, Online Transaction processing
Bihar	Sales Tax Administration Management Information
Chattisgarh	Chattisgarh Infotech Promotion Society, Treasury office, e-linking project
Delhi	Automatic Vehicle Tracking System, Computerization of website of RCS office, Electronic Clearance System, Management Information System for Education etc
Goa	Dharani Project
Gujarat	Mahiti Shakti, request for Government documents online, Form book online, G R book online, census online, tender notice
Haryana	Nai Disha
Himachal Pradesh	Lok Mitra
Karnataka	Bhoomi, Khajane, Kaveri
Kerala	e-Srinkhala, RDNet, Fast, Reliable, Instant, Efficient Network for the Disbursement of Services (FRIENDS)
Madhya Pradesh	Gyadoot, Gram Sampark, Smart Card in Transport Department, Computerization MP State Agricultural Marketing Board (Mandi Board) etc
Maharashtra	SETU, Online Complaint Management System-Mumbai
Rajasthan	Jan Mitra, RajSWIFT, Lokmitra, RajNIDHI
Tamil Nadu	Rasi Maiyams – Kanchipuram; Application forms related to public utility, tender notices and display
North-Eastern States Arunachal Pradesh, Manipur, Meghalaya, Mizoram & Nagaland	Community Information Center. Forms available on the Meghalaya website under schemes related to social welfare, food civil supplies and consumer affairs, housing transport etc.

SCOPE OF THE PROJECT

It was felt that there is a need to carryout a study on some innovative ICT platforms so that we could learn about the benefits of the ICT initiatives in rural areas. This project was undertaken under the guidelines of the Planning Commission of India so as to provide us with insights into the new development platforms created with ICT. The emphasis was to examine whether the poor benefited from these project initiatives. Though the benefits of ICT platforms have been generally stated, specific assessments have not been made. It has been proved at the global level that ICT can help in poverty reduction in number of ways. The purpose of this study was to identify innovative applications of ICT which resulted in poverty reduction. This study analyzes twelve innovative ICT projects that have contributed significantly to a reduction in poverty or increase in the wealth of traditional communities. The objective was to study these projects spread over different economic activities where ICT has been used in novel manner for augmenting income or increasing worker productivity or generating employment.

This study essentially attempted to test four hypotheses namely:

- ICT can create new development platforms that increase access to information and resources resulting in better utilization of human capital
- ICT enhances the skill base thereby empowering the poorer communities
- ICT needs participative management practices to make the development platforms sustainable
- ICT platforms have resulted in significant increase in income, provided they are conceptualized to meet such on objective.

This study has helped us in assessing the institutional and economic factors that could make ICT projects useful to low income population.

METHODOLOGY

The study of twelve ICT project was carried out in the following manner:

1. preparation of the questionnaire and interviews at the institutional and grassroot level
2. detailed assessment of the project implementation, starting from project conceptualization.
3. examination of the twelve selected projects under the following perspectives:
 - government perspective
 - implementing agency perspective
 - users perspective
4. Preparation of a draft report
5. small workshop on the draft report
6. preparation of the final report

Some of the crucial factors that are covered in the case-studies are:

- project overview
- project idea
- idea initiation
- project conceptualization process
- project co-ordination
- project implementation
- project evaluation
- benefits to the participants
- technical performance of the project
- organizational achievements
- skill development and empowerment
- replication and scalability
- local leadership
- critical success factors for the project

The projects that were covered under this study are given in **Table 2**:

Sl. No.	Project Name and Theme
1.	ICT application in a dairy industry: The e-experience of Amul
2.	Developing a Rural Market e-hub: The case study of e-choupal experience of ITC
3.	E-governance in a fishermen community: A case study of Pondicherry
4.	Developing ICT platform for enhancing agricultural productivity: The case study of EID Parry
5.	ICT for the renewal of a Traditional Industry: A Case Study of Kancheepuram Silk Saree
6.	Internet Kiosks for rural communities: Using ICT platforms for reducing digital divide
7.	Evolving an ICT Platform for a Traditional Industry: Transforming Artisans into Entrepreneurs
8.	Regaining Competitiveness using an ICT platform in a Traditional Industry: Adoption of Computer Aided Design for Carpet Weaving
9.	Providing Rural Connectivity Infrastructure: ICT Diffusion through Private Sector Participation
10.	ICT Platform for Enhancing Agricultural Productivity: The Case Study of Tata Kisan Kendra
11.	A Telemedicine Platform: A Case Study of Apollo Hospitals Telemedicine Project
12.	A Telemedicine Platform: A Case Study of Care Hospitals Telemedicine Project

A number of innovative ICT projects were listed and from that twelve projects, which were innovative, were selected. The Table 3 lists the twelve projects alongwith their characteristics, namely:

- segment in which they are operating,
- involved organizations in implementation of the ICT platform,
- selected features that could be replicated, and
- replicability of the project to other regions and businesses.

Table 3: Characteristics of the ICT projects

Case Study	Action	Implementing Organization	Feature	Replication
AMUL	ICT platform for improving milk procurement practices	GCMMF, local village co-operatives and active participation from farmers	<ul style="list-style-type: none"> ▪ customized for local needs ▪ setting up of information kiosks ▪ strong collaboration at the local level 	Replicated throughout Gujarat and efforts are to replicate in other parts of the country
e-Choupal	Rural e-market hub for procurement and selling of soyabean	ITC and local farmer participation	<ul style="list-style-type: none"> ▪ Customization of ICT platform to meet local needs ▪ Training and skill development 	Replication in other states and widening of service portfolio
e-Governance Pondicherry	ICT platform for providing effective governance	MSSFR, and local fishermen colony	<ul style="list-style-type: none"> ▪ Customized for local needs ▪ Developing a systematic knowledge base ▪ high level of trust and focus on low-income groups 	No efforts for replication
EIP Parry	Knowledge kiosks designed for agricultural transactions and for providing value-added services in the farmers	EID Parry and local farmers	<ul style="list-style-type: none"> ▪ creation of social network ▪ catering to the local needs of farmers ▪ support of corporate house 	Efforts for replication in other parts of Tamil Nadu

Kancheepuram Silk Saree	ICT Platform for improving productivity of saree weavers	Software designer and the weaving community	<ul style="list-style-type: none"> ▪ software tool for designing ▪ acceptability of the platform ▪ skill development 	No efforts for replication
Internet Kiosks	Information Kiosks using low cost technology	IIT-Madras and a local development agency	<ul style="list-style-type: none"> ▪ low cost technology ▪ technology transfer ▪ public-private participation 	Some efforts for replication in nearby clusters
Leather Industry	Software tool for improving the productivity of leather craftsmen	CLRI and local craftsmen community	<ul style="list-style-type: none"> ▪ Reducing design time ▪ Internet access ▪ Intensive skill development of the community 	No efforts for replication
Carpet Industry	Computer-aided design for carpet weaving	Software company, local developmental agency and local weavers	<ul style="list-style-type: none"> ▪ Software customized for needs of the weavers ▪ Cycle time reduction, interactivity, flexibility 	In nearby clusters
Rural Connectivity	Providing access through the low cost technology	IIT-Madras and local developmental agency	<ul style="list-style-type: none"> ▪ Cost effective and efficient technology ▪ Provision for value-added services ▪ training 	Efforts for replication in other clusters
Tata Kisan Kendra	Precision farming for giving knowledge and value-added services	Tata Chemicals Ltd. and local participation	<ul style="list-style-type: none"> ▪ GIS ▪ Co-ordination and control ▪ Operational support ▪ Implemented in phased manner 	Networks is spread over 3 States and efforts are on to replicate it in other States
Apollo Hospital	Performing tele-consultation and examination through telecom network	Apollo Hospital and governmental agencies	<ul style="list-style-type: none"> ▪ Shared services infrastructure ▪ Connectivity to remote places ▪ Reputation of the service provider 	Efforts are on for replicating the platform
Care Hospital	Tele-consultation and examination through telecom network	Care Hospital, APVVP, Phillips & Siemens	<ul style="list-style-type: none"> ▪ Connectivity to remote place ▪ Shared infrastructure ▪ Reputation of the service provider 	Efforts are on for replicating the platform

The reasons for identifying these projects for detailed study are namely:

- The novel ICT platform implemented by GCOMMFL has helped the milk farmers in Gujarat to reduce their indebtedness. This model has been replicated in many cooperative dairies across the country.
- Rural e-market hub developed by ITC Ltd has assisted the farmers in supplying their produce directly to the company and increasing their knowledge base with the help of the company. The platform has helped in developing local leadership and it is being replicated by ITC for other crops and regions. The profit for the farmers has shown an increase and money flow has become steady.
- E-Governance initiative in Pondicherry by MSSRF has used the ICT platform for efficient and effective governance in the local fishermen community so that they maximize their revenue. Low-income fishermen benefited from this.
- EID Parry embarked upon the ICT initiative by setting up 'Parry's Corner' to provide value-added services to the sugarcane farmers in Tamil Nadu. It helped them to reduce expenditure and increase the farm productivity.
- Kancheepuram Saree Industry experience proves, that an innovative ICT platform can be useful in revival of the traditional industry and help the weavers in increasing their productivity and capturing the market.
- Information kiosks setup with the low-cost technology helped in disseminating information to the poor people. This technology was incubated in IIT-Madras and through a public private partnership it was disseminated.
- CLRI used the ICT platform to revive the traditional art of making Kolhapuri footwear and increasing the competitiveness using computer aided design and Internet based transactions.

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- ICT platform was used to help the weavers for increasing designs and their knowledge base. This platform has successfully revived the traditional craft of carpet weaving and improved the competitiveness.
 - The low cost technology developed by IIT-Madras has increased the rural connectivity and acted as a facilitator for dissemination of information, helping to communicate easily and obtain information.
 - Tata Kisan Kendra is an initiative for providing value-added services such as “Precision Farming” for improving the farm-productivity. Using Geographic Information System they have been able to enhance the income of farmers.
 - The ICT platform embarked by Apollo and Care Hospitals explains us, how the healthcare facility can be provided in the rural area using the telemedicine platform.

These Case Studies are explained in the subsequent section.