SUGGESTIONS
PART – D – SUGGESTIONS

There is no magic formula for a successful local ICT’s appropriation process. It depends on local specificities, and the designs should be relevant to local needs. There is no single successful model applicable to all, success depends on the capacity of adapting the model to best of local opportunities and synergies. No local plan/solution should be designed far away from the community. Top down solutions tend to be big failures.

Connectivity and technology are important but not enough nor sufficient to produce endogenous socioeconomic development nor to improve community’s living conditions.

The ICT appropriation strategy have to be designed aiming to strengthen local social, economic and institutional existing capacities and advantages. The “virtual” must strengthen the “real” world potential. The ICT projects have to work with local organizations, build upon with what is already there.

There should be an permanent feedback from the local processes to the authorities in charge of the national ICT plan implementation, through appropriate channels, to permanently adapt strategies and support the local actions.

The financial sustainability issue is indeed critical but must be considered within the local development process sustainability, together with technical, social, political and cultural aspects. The infrastructure alone is not what has to be self-sustainable. Also, where the main objectives are bettering education, health services or local organizations capacity, the facility by it self can’t be self sustainable. Furthermore some specialists suggested that guarantying the “communications access rights” are a state obligation (as public security or education) especially when market driven initiatives can’t do it. But this is still a controversial issue.

Local telecentres operators are the strategic resource. They are not only the facility managers, they act as trainers, facilitators, motivators. It is essential that they receive special attention and training so they can develop a strategic vision of their role, raise
community awareness, train for a productive ICT use and facilitate the appropriation process. Many experiences have show that women do better act as community facilitators in that sense.

**Other critical tasks** are **training users with an awareness** on the ICTs potential for their empowerment, support the development of **locally relevant content**, and the development of community and thematic communications **networks**.

It is important to integrate or traditional communication and information means, as community radios, papers, cultural activities with strong message component, informal communications networks, etc,

Addressing the **gender issue goes beyond promoting equal access and use** of the facilities. It demands developing specific strategies that answer specific women needs and integrate their specific vision and values to enable their empowerment.

Permanent monitoring, **self evaluation and learning** mechanisms must be implemented at the community level, assessing progress or failures towards improving community welfare objective’s.

It is recommended that the tariff of telephones be reduced and a practical policy be pursued to encourage the use of ICT in all the sectors.

Government should extend, maintain and build infrastructures related to ICT and take them to rural areas as well.

ICT parks and ICT zones can be promoted in different regions of the country to help reduce the digital divide between regions.

Scholarships to ICT colleges should be designed with the digital divide in mind. It is recommended that ICT related education start from the school level.
Quality of training provided by private firms and computer training centers should be standardized.

There should also be a plan to include ICT professionals in the government’s manpower export policy.

Computer programming should be developed in the Hindi language for labourers, who are mostly just literate and opportunity to upgrade their ICT skills provided. Minimum health hazards of ICT use must be insured and standards set with regard to the equipments used.

Workers should not be forced to work under hazardous conditions.

Appropriate breaks in the work schedules, sitting arrangements and protective gear should all be part of the health risk mitigation plan which should be mandated by law.

The study recommends gender sensitive programmes to include ICT in their plans as ICT use has shown direct benefits to women’s employment.

The study concludes by suggesting regular monitoring of the effects of ICT on employment, income, output, income distribution, etc. and that preference in filling new ICT vacancies, should go to old workers after training them, rather than hiring new ones and firing the old.

The study also suggests that social dimensions of ICT adoption, like environment protection, should also be part of industrial concern.

At present, the local ICT-industry (products and services) in most countries is dominated by the subsidiaries of large multi-national computer/ consultancy companies. For
a number of reasons, therefore, development of nascent locally-owned ICT-enterprises (i.e., the local ICT sector) should be promoted.

Private-sector business membership organisations should be considered as effective and sustainable information providers for both 'livelihood' and 'growth' enterprises in the South. However, low-income enterprise operators face market failures in the provision of ICT-based, and non-ICT-based, business development and information services, and interventions to address such constraints will be required.

ICT-capacity should therefore be built within associations representing different (small) business sectors, chambers of commerce, umbrella associations, and employers associations. Interventions should concentrate on support for facilitation, technical assistance and incentives to encourage competitive performance of new and existing BDS providers, innovations, and the development of appropriate service products.

The ICT uses prioritised by different MFIs are likely to relate closely to the different core objectives found within the sector (ranging from prioritising financial sustainability to tight targeting of the poorest and most excluded entrepreneurs).

Full participation in e-commerce and the widespread adoption of ICTs for enterprise operations will require expansion of the ICT infrastructure and other essential services (such as electronic banking), the development of a strong user base to make it easier for enterprises to enter into e-commerce, and support services for telecentres.

An objective of international organisations should be to support governments in the north and central India to establish the business environment, the skills base, the infrastructure and support services to facilitate and encourage ICT use.

Poor infrastructure
Poor infrastructure hinders information flows - a fact borne out by the statistic that 75% of the world’s phones are in 8 of the richer nations. ICTs are essential to the infrastructure of small and larger enterprises. The legal and regulatory policy should provide the framework and favourable market conditions to allow the private sector to provide communication services, but a physical infrastructure is also needed.

This includes upgrading systems; installing new telephone systems; faster links such as fibre optics and increased mobile phone coverage away from urban centres. This infrastructure needs to be reliable, accessible and affordable. Indicators to monitor the success of Government policy include:

- Internet access in urban and rural centres
- Mobile telephone infrastructure in urban and rural areas
- Prices for access and accessibility for the poor
- Rural connectivity
- Masterplans for upgrading telecommunication network

Alongside the telecommunications infrastructure is the need for electricity and transport infrastructure. Enterprises need ICTs to be reliable and power interruptions or poor roads to transport the equipment will not encourage the development of ICTs.

Some policies will have a direct effect on the uptake and use of ICTs. Examples of these are business competition policy, privatisation of telecommunication industries, regulation of telecommunications, import duties on equipment and concessions/subsidies to encourage access in rural or poor areas; provision of telecom infrastructure in rural areas. Other policies and strategies have a more indirect effect and ICTs are a cross cutting issue in their delivery and achievement.

**Human Capacity**

The development and encouragement of human resources is essential for the sustainable uptake and development of ICTs. At the Government and policy level there needs to be a
long term objective for the development of IT skills and expertise through the education systems. This should be at all levels - primary, secondary, university and adult education. Key indicators for impact assessments are:

• Increased number of schools and university with internet access
• Increased number of courses in ICTs at all levels
• Increased number of distance learning students
• Certificates and standards for ICT courses
• Increased number of students from urban and rural areas

Effective regulation

Effective regulation is needed both for telecommunications and for ecommerce. For telecommunications there are clear international models and accepted approaches such as the World Trade Organisation agreement on telecommunications. E-commerce has still not taken off in the majority of enterprises in Africa, Asia and Latin America, and there are large loopholes in the legal provisions in those countries that do have ecommerce (UNIDO, 2000). The regulatory requirements are also wide-ranging and technically problematic. They need to cover:
• Electronic standardisation
• Security of data and payment
• Intellectual property rights and patents.

Foreign Investment

Policies to encourage foreign investment from developed countries in developing countries are one way to encourage technological transfer and thus narrow the ‘digital divide’. Foreign ownership can potentially lead to improved productivity, access to new markets and access to investment capital in the enterprises that receive the foreign investment, although there is less evidence to show that it benefits the economy as a whole.
Foreign investment can also be an effective way for enterprises in the region to gain access to new technologies and knowledge. This is not just technical knowledge transfer and access to new technologies (such as machinery and equipment) but also access to generic knowledge such as improved management skills or internet training.

Appropriate policy would not only bring in foreign investors in the sector but lowering costs through appropriate policies would boost ICT use.

**Taxes, Duties**

The impact of duties and taxes can seriously hinder small enterprises from benefiting from ICT development. In the whole country the service tax on ICT services have reduced the margin of profit and caused the upgradation process down to requirement. Although the Government eradicated duties on computers and other ICT equipment. This led to a significant increase in the number of PCs - although mainly in the urban areas. But it is not enough to help ICT field.

**Rural Access, Subsidies and Concessions**

In most developing countries the majority of the population live in rural areas and this is where access to ICTs is the lowest. Government policies to increase rural access are therefore important. One way Governments can target access in poor, rural areas is to encourage and promote private investments in ICTs through subsidies. The subject of subsidies and whether they really improve access of the poor to services is a debate currently going on with regard to water, electricity and telecoms services in particular.

**ICT and Education**

Educators and policymakers alike agree that information and communication technologies are of paramount importance to the future of education. ICT in education initiatives that
focus on the following areas are most likely to successfully contribute to meeting the Millennium Development Goals:

- Increasing access through distance learning
  IKTs can provide new and innovative means to bring educational opportunities to greater numbers of people of all ages, especially those who have historically been excluded, such as populations in rural areas, women facing social barriers, and students with disabilities.

- Enabling a knowledge network for students
  With knowledge as the crucial input for productive processes within today’s economy, the efficiency by which knowledge is acquired and applied determines economic success. Effective use of IKTs can contribute to the timely transmission of information and knowledge, thereby helping education systems meet this challenge.

- Training teachers
  Large numbers of school teachers will be needed to meet the Millennium Development Goals for education. The use of IKTs can help in meeting teacher training targets. Moreover, IKTs provide opportunities to complement on the job training and continuing education for teachers.

- Broadening the availability of quality education materials
  Network technologies have the potential to increase the availability of quality educational materials. Their interactivity and global reach allow for customized sharing of knowledge, materials, and databases, quickly and cheaply over long geographic distances. Furthermore, online resources offer teachers access to a vast and diverse collection of educational materials, enabling them to design curricula that best meet the needs of their students.

- Enhancing the efficiency and effectiveness of educational administration and policy
New technologies can help improve the quality of administrative activities and processes, including human resource management, student registration, and monitoring of student enrollment and achievement.

**Stakeholders & Baatchit project**

The previous section discussed the policies that can impact on the development and use of ICTs in developing countries. The development and implementation of these policies calls for a wide range of stakeholders to advise Governments. ICTs can enable more people to have access to information about Government policies and so strengthen civil society.

A stage further than just informing about policies is to use ICTs to create a forum for discussion and debate about the particular policies and laws, with a view to modifying them. ICTs can assist such a forum and were used in the recent process that a number of Governments have completed. Involving local people fully in ICT projects is also critical for their success. The Baatchit project in Tikawali village, 40 kms from New Delhi, described below offers a good example of this.

I hope that These outputs will be applied toward bringing about the intended outcomes described in the preceding section, i.e., the shifts in perception, attitude, policy, and investment toward information activities and their role in the development agenda.