Supporting Women's ICT-Based Enterprises

A Handbook for Agencies in Development

2005

Richard Duncombe, Richard Heeks & Sharon Morgan
IDPM, University of Manchester, UK

Shoba Arun
Manchester Metropolitan University, UK

Written by: **Richard Duncombe, Richard Heeks & Sharon Morgan**
Institute for Development Policy and Management (IDPM)
University of Manchester, Precinct Centre, Manchester,
M13 9QH, UK
Tel: +44-161-275-2800
Fax: +44-161-273-8829
Email: richard.duncombe@manchester.ac.uk
Email: richard.heeks@manchester.ac.uk
Email: morgansh_2003@yahoo.co.uk

Shoba Arun
Dept. of Sociology, Manchester Metropolitan University
Rosamond Street West, Manchester, M15 6LL, UK
Tel: +44-161-247-3439
Email: s.arun@mmu.ac.uk

View/download this handbook from:
http://www.womenictenterprise.org

**View/download additional handbooks concerning ICTs and enterprise
development at:**
http://www.sed.manchester.ac.uk/idpm/research/is/index.htm

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1. Audience, Purpose and Content of This Handbook

Should I Read This Handbook?

Yes, if you come from any of the three main reader groups:

1. Staff in government or donor agencies that plan and fund ICT, gender, enterprise or community development initiatives.

2. Staff in NGO, government, private sector or community organisations that support women- or ICT-related small enterprise.

3. Women who run – or want to run – ICT-based enterprises.

Specifically, this handbook is designed to help anyone working to support women's ICT-based enterprises; specifically micro- and small-scale enterprises (MSEs) in developing countries.

More generally, if you have anything from a general interest in women and ICTs, to a direct working relationship with women's ICT-based enterprises, then this handbook is for you.

Why Should I Read This Handbook?

ICT-based enterprises are a new way of harnessing digital information and communication technologies (computers, Internet, software, etc.) for socio-economic development.

They can provide women with immediate and direct benefits from ICTs: jobs, income, skills, empowerment, etc.

Reading this handbook will help you understand how this happens and how you can get involved. The overall aim of the handbook is to deliver more and better women's ICT-based enterprises. It has three more specific uses:

1. **Promotion**: use it to persuade others to fund or support women's ICT-based enterprises [*Sections 2, 3 and Agency Advice Sheet 4*]

2. **Initiation**: use it to work out how to set up new women's ICT-based enterprises. [*Sections 4 (enterprise) & 5 (how agencies can help)*]

3. **Improvement**: use it help improve existing women's ICT-based enterprises. [*Sections 4 (enterprise) & 5 (how agencies can help)*]

What's In This Handbook?

The specific objectives and content of the handbook are as follows:

- To help you understand what we mean by "women's ICT-based enterprise" and give real-world examples of these enterprises and the women who work in them (*Section 2*).
- To help you understand why women's ICT-based enterprises are worth supporting by explaining the benefits they are delivering to poor women in developing countries, though balanced by an understanding of risks posed (*Section 3*).
- To explain a set of analytical tools you can use to understand women's ICT-based enterprises (*Sections 4a & 4b*).
- To provide you with good practice guidance on the business (*Section 4c*) and gender (*Section 4d*) aspects of women's ICT-based enterprises.
- To provide you with clear guidance on how best to support women's ICT-based enterprises (*Section 5*).
- To guide you towards further sources of information (*Section 6*).

Which Bits Should I Read?

See the bullet point list just above, or the following table:

My question …	The answer …
What's this all about?	Look at Section 2
Can these "ICT-based enterprises" really help the women I work with?	Look at Section 3a and the cases and stories in Section 2
How do I set up a new women's ICT-based enterprise?	Follow the analysis guides in Sections 4a/4b to see if it is feasible.
How do I improve an existing women's ICT-based enterprise?	Use the advice sheets in Sections 4c/4d
How can my organisation help?	Work through the steps outlined in Section 5
Where can I get more information?	Look at Section 6

Who Wrote This Handbook?

It was written by a team from Manchester, England, who – between them – have more than fifty years' experience of working in ICTs and development. The handbook was written from data collected in a research project on women's ICT-based enterprises funded by the UK Department for International Development: views expressed here are those of the authors and not those of DFID. Data has been drawn from a variety of developing countries, particularly via the project's dGroup workspace, and from an international workshop held in India in September 2005. Through the support of the State Poverty Eradication Mission in Kerala State, India and the research activity of consultants Planet Kerala, in-depth investigation has been conducted on a series of women's ICT-based enterprises set up under Kerala's Kudumbashree initiative. Thanks are due to all those who have given up their time and data to enable production of this handbook.

2. What are Women's ICT-Based Enterprises?

2a. Defining "Women's ICT-Based Enterprises"

A simple definition asks the question, "Would this enterprise exist without ICTs?". If the answer is "no", then that is an "ICT-based enterprise". It is a "women's ICT-based enterprise" if it is majority-owned or majority-managed by women. Specific cases of such enterprises are included in Section 2b but typical examples could include:

- A women's cooperative that assembles personal computers.
- An individual woman running her own cybercafé or telecentre.
- A female entrepreneur plus staff managing a shop selling computer supplies.
- A woman graduate designing Web sites for local businesses.
- Two women providing IT training classes and word processing services.

More academically, we can categorise three main types of ICT-based enterprise:

- *Those producing ICTs as an enterprise output*: enterprises that produce hardware, software and telecommunications products.
- *Those using ICTs as a primary, processing technology*: enterprises that provide data entry services, ICT-based business services, software customisation, ICT-based distance learning, etc.
- *Those providing other ICT-related support activities*: enterprises that provide computer training, consultancy and other services.

Importantly, then, we are not looking in this handbook at all uses of ICTs in enterprises. We are excluding "traditional" enterprises that are starting to use ICTs – for example a women's food-processing cooperative that creates its own Web site; or a female clothes-maker who starts to use e-mail – these are not counted. There will be lessons in this handbook that are useful to those supporting such enterprises; but they are not our main focus here.

In talking about "enterprise", we are also mainly thinking of entities with a business focus: i.e. an interest in sales and income and perhaps even profit. However, we do recognise a continuum of women's ICT-based enterprises: see Figure 1.

Figure 1: Continuum of Women's ICT-Based Enterprises

Welfare Focus	Mixed Focus	Business Focus
CBO/NGO Support	Government Support	Private Sector Support
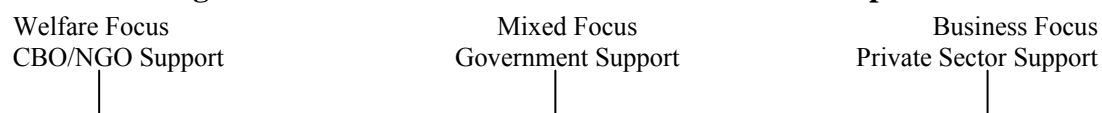
At the right end of the spectrum, we have business-focused enterprises run by women entrepreneurs who are interested in business, growth and profit. They are likely best supported by private sector agencies. At the other end, we have groups of often marginalised women brought together for mainly social welfare purposes. They may have vulnerabilities and situations that prevent a clear focus on business, and they are likely best supported by community-based organisations (CBOs) and other NGOs. In between, we have the kind of women's enterprise supported by government; some of which may move towards a business approach; some of which may drift towards a more self-help, welfare focus.

2b. Case Sketches of Women's ICT-Based Enterprises

The following eight case sketches provide examples of women's ICT-based enterprises from a range of countries (based on more detailed case studies that can be found on the project website http://www.womenictenterprise.org/). All the enterprises are currently trading and each sketch outlines the significant benefits (employment, income and social benefits) women find from such enterprises. Each case also highlights challenges for the enterprise and suggests links to advice sheets in this handbook that provide guidance for meeting those challenges.

Female IT Technician at Work in Nigeria

Case Sketch 1: Rodwel Foundation, Zimbabwe
Contact: Gladys Mabaso, Enterprise Manager
rodwel@telco.co.zw

Location:	Mbizo, Zimbabwe
Date of Formation:	1996
Main Activities:	Computer training, training in e-commerce, and the International Computer Driving Licence, Internet services to the community, typing services, preparation of curriculum vitae and project proposals. The customers are mainly unemployed housewives, school leavers and young adults seeking computer literacy before securing employment or venturing into business.
Turnover:	(2004) US$5100 (from IT training, typing services, Internet sales) with a profit of US$3500 (US$1500 in 2002).

Brief History: Rodwel Foundation was formed and registered as a women's co-operative by ten women.   The women purchased computers for the project after pooling their finances and with partial assistance from TIPS/UNDP. The aim of the co-operative was to set up a project for the benefit of women, by women, to train women in the use of computers and their benefits. The initial capital required to set up Rodwel was US$325. The money was used to purchase one personal computer, one printer and one photocopier. TIPS/UNDP provided one extra computer. More recently, the enterprise benefitted from the acquisition of a modem, which connects the organisation to the Internet, thus diversifying activities into e-commerce and information retrieval for businesses, as well as technology training, computer short courses, email and typing services.

ICT Resources
Hardware: four personal computer workstations; Internet connection; printer. Software: Pastel Accounts Version 4.

Employment
The number of employees increased from three to six in 2005, plus the Director/Founder. There is an Internet instructor, technician and IT trainer. Two others teach on the City and Guilds Diploma and Advanced Diploma courses in Information Technology on a part-time basis.

Enterprise Analysis
Success Factors:
- Continuous training for staff in information technology, e-commerce and entrepreneurship.
- A central location that enables easy accessibility for all clients, customers and students.
- Services offered at an affordable rate to the community.

Benefits:
- An improved standard of living due to employment and earnings.
- Increased levels of skill, due to staff development and training.
- Greater interaction through the Internet and the telephone, for marketing and networking.

Main Challenges:
- Women perceived as departing from social and cultural norms, as the women in this enterprise work in a traditionally male-dominated domain (see Gender Advice Sheet 1).
- Lack of trained personnel, as few men are prepared to be employed by a women-run enterprise (see Gender Advice Sheet 4).
- Lack of knowledge and/or expertise in repair and servicing of equipment.
- Problems raising capital and funding (see Business Advice Sheet 3).
- Cultural barriers to introducing the Internet to potential customers.

Case Sketch 2: Pandora Box, Mozambique
Contact: Fernanda Cabanas, Partner and General
Manager panbox@mail.panbox.co.mz

Location:	Maputo, Mozambique
Date of Formation:	1997
Main Activities:	IT training, data entry, web design; repackaging of data in CD-ROM and Internet formats (e.g. data base of government laws and regulations, data on registered companies, and census data).
Turnover:	2002 US$175,000 (243 CD-ROM collections sold). 2004 US$200,000 (but US$25,000 taken out and invested in Internet café where enterprise's CD contents are made available).

Brief History: In 1997, seeking to fight against the decay of Mozambique's library and information infrastructure, the two founders decided to try to digitise documents and deliver them direct on CD-ROM to users. They selected the official government gazette (Boletim da Republica) which contains all laws and regulations of the country. Funded by family savings, they visited ten libraries and had to travel to South Africa to find a suitable scanner. A few clients prepaid so they could cover the costs of replicating 200 copies. Some of the difficulties faced at start-up were: suspicious nature of the public sector due to the culture of secrecy about information, and a lack of comfort in dealing with the private sector. By 2000 they had created a searchable database with summaries of 12,895 pieces of legislation published in the gazette classified by subject keywords. In 2004, an "Internet Cafe with contents" was introduced where all products (CD-ROMs) were made available.

ICT Resources
Hardware: 15 PC workstations, Server, Internet connection. Software: CDS/ISIS – Winisis Adobe Acrobat, Adobe Photoshop, Microsoft Office, Flash Macromedia, PixEdit, FineReader, FileOpen.

Employment
There are 13 core women who work in various capacities such as partners, legal adviser, IT manager, finance controller, quality controller, and marketing. They have qualifications at undergraduate and post-graduate levels. There are nine other employees, out of whom give work full-time in data entry, and maintenance and support services such as image file cleaning and customer care. Thus the total number of staff working is 19; out of these five are men.

Enterprise Factor Analysis
Main Success Factors:
- Quality and reliability of the products.
- Honesty amidst widespread corruption practices locally.
- Good working environment that is open, enjoyable and co-operative.
Main Benefits:
- Monthly salary for individual women.
- Excellent IT skills measured against typical patterns for the country.
- Working time flexibility.
Main Challenges:
- Staff retention (see Business Advice Sheet 2).
- Market for IT products is small, with a risk of not recouping investments (see Business Advice Sheets 1 & 6).
- Shortage of skills such as language skills to operate with software (reading instructions, study manuals, etc) and marketing skills (see Gender Advice Sheet 4).
- Corruption in dealing with business contracts.

Case Sketch 3: Technoworld, India
Contact: Kudumbashree
spem@asianetindia.com

Location:	Kumarapuram, India
Date of Formation:	1999
Main Activities:	Data entry – digitisation of public sector records (ration cards, land registration);

training – basic computer instruction for school children during school vacation.

Annual Turnover:	2002 US$22,222 (50% arrears payments from earlier years). 2004 US$15,555.

Brief History: This data entry micro-enterprise was set up as part of the Kudumbashree initiative. Members of various self-help groups with basic skills were selected to form the first ever women's group enterprise in data entry in Kerala State, aided with a series of training programs in data entry, software integration, marketing and accounting. The initiative had a budget of US$6445 raised through a bank loan, members' contributions and a small subsidy. The initial client was the Employee Provident Fund Department for the digitisation of personnel records. For the initial 18 months of operation the unit functioned in the corporation office before moving to a rented building. The unit repaid all its initial loans after three years of operation.

ICT Resources
Hardware: 27 workstations networked to three servers, Internet connections, printers and other peripherals. Software: Windows 98 & XP, Linux, Office XP, Script Easy (Malayalam software), Shree Square, Page Maker, Photoshop, Corel Draw.

Employment
There are ten qualified group members both general and IT personnel with a mix of diploma, undergraduate degree, and graduate diploma qualifications. They now employ a large number of other women working doing data entry work on a piece-rate basis.

Enterprise Factor Analysis
Main Success Factors:
- Support of Kudumbashree agency as it gives the unit more credibility in undertaking assignments.
- Unity and coordination of the members due to their social and economical cohesion.
- Ability to provide employment to a wider group of poor women.

Main Benefits:
- Employment and income generation, ensuring financial security.
- Emergence of leadership qualities among women.
- Improved personal skills, both at home and at work due to continuous training and interaction.

Main Challenges:
- Decrease in government contracts with increased computerisation (see Business Advice Sheet 1).
- Lack of exposure to compete with the private sector, which offers specialised services such as web designing, colour printing, etc, rather than low-skill data entry (see Business Advice Sheet 6).
- Delayed payment from the government departments (see Business Advice Sheet 7).

Case Sketch 4: Divine Computers, India
Contact: Kudumbashree
spem@asianetindia.com

Location:	Calicut, India
Date of Formation:	2002
Main Activities:	IT Training to high school students, and some short-term vacation computer courses to general public.
Annual Turnover:	The number of students trained in 2004-05 was 485 (144 in 2002), mainly as two more classes were added. Total value of sales (2004) was US$2,377 but only 80 per cent of this amount has been received so far.

Brief History: The local government advertised the state's IT@School programme in the local newspaper, calling for qualified applicants from below-poverty-line families to start a group enterprise. A team of six determined women mobilised a group loan of US$4,444 from the State Bank of Travancore under a Federal Government poverty alleviation scheme. The group members contributed US$222 while the rest was paid through a subsidy. The micro-enterprise is involved in the training of school students under the IT@School Programme. The school collects monthly fees from the students (US$0.50 per student), out of which US$560 is directly paid to the bank account against the loan per month, and the rest is given to the women in Divine Computers.

ICT Resources
Hardware: six personal computer workstations with Internet connections. Software: Windows 98, Windows XP, MS Office, Linux, C++.

Employment
There are six members in the group enterprise, with members having both educational qualifications plus computer training in areas such as desktop publishing and MS Office. One has passed a Computer Teachers Training Course.

Enterprise Factor Analysis
Main Success Factors:
- Unity and collective decision-making.
- Determination to run own enterprise, driven by ambition and pressuring family situations.
- Strong attachment and pleasant relationship with the students.

Main Benefits:
- High status within community of 'teacher': something they could never imagine becoming.
- Regular monthly income (despite no payment in the initial months).
- Interactions, networking, and enhancement of personal freedom and esteem.

Main Challenges:
- Irregular payment from the school (see Business Advice Sheet 7).
- Gender discrimination in many instances (see Gender Advice Sheet 1).
- Difficulty in juggling household duties, childcare and work (see Gender Advice Sheet 2 & 3).

Case Sketch 5: Computer Club 'VIRTUAL', Ukraine
Contact: Natalia Tutukova
zeus_club@rambler.ru
Katerian Pilipchenko
postmaster@liga.donetsk.ua

Location:	Snezhnoe, Ukraine
Date of Formation:	2002
Main Activities:	IT training, also: computer services, computer games, copying services, typing and printing of documents, computer-based training for personal growth for parents and children.
Turnover:	(2004) US$5,500 (12,000 hours of computer games, 60 people trained on computer courses).

Brief History: In 2001, a business plan for opening a computer club was initiated at the local Women's Business Support Centre. The initial finance was based on unemployment benefit. In March 2002, the computer club started functioning with three computers. By the end of 2002 there were ten computers. In 2003, the Club became a member of the Donbass Association of Computer Clubs. In 2004 a youth-based NGO was created for youth leisure. In 2005, it is aimed to increase the number of groups on computer courses, and also conduct training on personal growth through computers.

ICT Resources
Hardware: ten personal computers with Internet connection via modem. Software: Windows XP , Star Office, computer games.

Employment
There are two core members of the micro-enterprise (owner and administrator) with a degree and teaching qualification. Other employees are one male and two female (one working part-time).

Enterprise Factor Analysis
Main Success Factors:
- Availability of unemployment benefit for starting the business.
- Initial subsidy of staff salary, which helped to survive in difficult initial business conditions among a low-income population.
- Individual approach adopted to every client.
- Comfortable and pleasant atmosphere.
- Interesting programmes for youth.

Main Benefits:
- Monthly salary for women.
- Employment of two women.
- Opportunities for women to improve their computer skills during their work.

Main Challenges:
- High costs of legal purchase of computer software licenses for commercial use (see Business Advice Sheet 4).
- Unfair competition from other computer clubs, as they operate unlicensed programs for attracting youth.
- Problems with public utilities for operating central heating system in winter.
- Loss of clients as more people buy personal computers and create home computer networks (see Business Advice Sheets 1 & 6).

Case Sketch 6: Cyber Café, Nigeria
Contact: Hettie Soriyan, Information
Systems Researcher/Practitioner
hasoriyan@yahoo.com

Location:	Ile-Ife, Nigeria
Date of Formation:	2002
Main Activities:	Accessing the Internet, surfing the web, sending and reading email messages,

transferring and saving files, Internet telephoning, and sending or printing fax messages.

Turnover: Average monthly value of sales in 2004 was US$3,375.

Brief History: The cyber café was established by two academics (one a woman) who had lived abroad for a number of years and wanted to meet some of the communication needs in Ile-Ife; a city in South-Western Nigeria. They conducted a local feasibility study and got more ideas from looking at cyber cafés in other cities. Realising that the venture was capital intensive and the interest on bank loans was too high, they decided to bring on board a number of people to raise the financial base.

ICT Resources:
30 personal computers were purchased from the US, the network was designed, and all the cables laid and terminated. The phone uses a Max 4 gateway. The hardware includes personal computers and printers, telephone boxes, switches, masts, Motorola radio, scanner, Webcam, and a fax machine. The software includes a billing software package (Café Pro) and a virus scanner (Norton).

Employment:
The female owner is in charge of hiring staff. With input from other staff members, she actively undertakes problem solving and management decisions. The day-to-day operation of the enterprise is handled by a male employee. Five women are employed full-time together with three more men (two full- and one part-time) in the enterprise. The female staff undertake various technical activities. They maintain the systems, switching them off and on, and updating files. If the system slows down, they check for viruses, and check the radio on the mast by pinging the radio both at the site and the providers end. They also check to ensure the volume of bandwidth consumed is as requested.

Enterprise Factor Analysis:
Main Success Factors:
- Management's involvement in the day-to-day running of the establishment and their strategy of leading by example (including staff mentoring).
- The quality of interpersonal relationships.
- The enthusiasm of the staff, especially the women, to overcome limitations imposed by the organisation and by society.

Main Benefits:
- The opportunity to work and earn money in a traditionally male-dominated business.
- The opportunity for self-development and the acquisition of ICT skills.
- The fact that wages are not gender-dependent but determined by educational level. For example, a female with high-school educational level starts on the same amount as her male counterpart.

Main Challenges:
- The technical nature of the job (see Gender Advice Sheet 4).
- The need to regularly update their ICT knowledge to respond to customer requirements.
- Making decisions that affect the organisation (see Business Advice Sheet 5).

Case Sketch 7: Millennium Computer & Electronic Services, Tanzania
Contact: Aurelia Kamuzora, Researcher
aureliakamuzora@hotmail.com

Location:	Morogoro, Tanzania
Date of Formation:	2002
Main activities:	Assembly, sales and maintenance of IT, sales of computer consumlables, IT training, data entry, and offering solutions to various ICT-based problems.
Turnover:	Total sales in 2004 were equivalent to about US$150,000.

Brief History: Millennium Computer & Electronic Services (MICES) was set up by Mrs Kilasara using her own savings. She is an entrepreneur who was employed at Sokoine University as a computer technician where she started to help the university employees with their computer-related problems. Through her work experience, she became motivated to start her own ICT enterprise. Since then her skills in ICT sales and solutions have enabled her business to grow. This was achieved through three institutional repair contracts, the repair of 30 PCs, the sale of forty printers, the delivery of eight IT training courses, and the assistance of twenty interns (for whom no charge is levied). Customers include the municipal council, universities, private sector investors, banks, private individuals and the Regional Commissioner's offices in Tanzania.

ICT Resources
MICES uses one landline phone, two mobiles, one laptop and two desktop computers. The dialup Internet connection is no longer used as the high monthly charges made it uneconomic. Windows XP and MS Office are the main software used.

Employment
There are four full-time members of staff including Mrs Kilasara, another woman and two men. Mrs Kilasara, who is married with three children, has a (UK) HND in Electronics and Instrumentation, her two male employees (a computer repair manager and a field assistant) have Diplomas in Electronics from Dar es Salaam Institute of Technology and her female secretary has a secretarial certificate. The enterprise also offers internships to various Tanzanian ICT institutions and currently has four part-time interns. One additional electronic engineer has been taken on since 2002 and sales have increased by 25%.

Enterprise Factor Analysis
Main Success Factors:
- The owner's own knowledge of and confidence with ICTs, including her expertise gained from working as a university ICT technician.
- Ambition to have ICT activities as both hobby and profession .
Main Benefits:
- A salary for the individual women employed at MICES of around US$20 per month.
- Job creation for these women – MICES has employed three women over the course of its life to date.
- The benefits that use of income brings: e.g. the owner is able to pay her children's school fees.
Main Challenges:
- Women have to work harder for recognition than their male counterparts in ICT business enterprises. Many (male) customers are sceptical that Mrs Kilasara can solve their problems so she has to work hard to convince them (see Gender Advice Sheet 1).
- It needs courage to start convincing men about a new product since it is traditionally seen as a man's role to approach women rather than vice versa (see Gender Advice Sheet 1).
- Capital and space: Mrs Kilasara needs more capital in order to expand. She also needs a larger space to properly house a repair facility (see Business Advice Sheet 3).

Case Sketch 8: InfoShree Systems and Peripherals, India
Contact: Kudumbashree
spem@asianetindia.com

Location:	Kasargod, India
Date of Formation:	2003
Main Activities:	Hardware assembly, installation, service & sales for local councils, schools, banks, shops, DTP centres; occasional data entry or computer training work.
Annual Turnover:	(2004) US$8,400 (160 PCs sold, two training courses offered and one data entry contract completed).

Brief History: Following an initiative by the local council to set up a hardware assembly enterprise to meet growing demand for PCs, Kudumbashree – the local poverty alleviation agency – organised a group of women from low-income families to form this enterprise. Financial support was given through a bank loan, and local council subsidy, to set up basic infrastructure and to purchase equipment. Further IT training – in areas such as assembly, installation and maintenance – was provided by a local centre, along with assistance from a marketing company for hardware purchases. The micro-enterprise has also been given enterprise-related training through a Performance Improvements Programme (PIP). Presently the enterprise supplies orders in five local districts. In order to utilise spare capacity, diversification of activities, such as IT training and data entry is taken. Two extra staff were employed after the first year of trading.

ICT Resources
Hardware: one personal computer/workstation, Internet connection (not in use) plus printer and uninterrupted power supply systems. Software: Windows 98 & XP, Linux, Office XP, Script Easy (Malayalam software), Page Maker, Photoshop and Corel Draw.

Employment
There are ten group members, most of whom have diploma qualifications. They employ four men full-time to work on contracts that require significant travel and/or overnight stays away from home.

Enterprise Factor Analysis
Main Success Factors:
- Excellent customer care and service.
- Publicity in print and TV media (in addition to the reputation of Kudumbashree).
- Unity among members.

Main Benefits:
- Economic and social support to extended family.
- Independence and freedom of movement due to confidence of family in employees.
- Development of communication skills and self-confidence through varied interaction.
- Improved knowledge in the computing field.

Main Challenges:
- Future competition from other Kudumbashree hardware units (see Business Advice Sheet 1).
- Problems of continued involvement of women after marriage (see Gender Advice Sheet 2).

2c. Individual Stories of Women Working in ICT-Based Enterprises

The following six individual stories show how the lives of women have been changed for the better through involvement with ICT-based enterprise. In particular, the stories show how training in ICTs has enabled women to respond to new opportunities, gain their independence in the workplace, and raise their personal and social aspirations.

Life Story 1: Never Too Late
Ms. Cissy Nyarwa @ NVIWODA

At fifty-one years of age, many people might think of giving up on enterprise but Cissy Nyarwa is different. She is still an active entrepreneur, trying to push forward women's emancipation.

As our photo shows, Cissy was a secretary by profession but, in 1991, decided to involve herself more directly in women's economic empowerment. She therefore helped start NVIWODA – the Ntulume Village Women's Development Association. At first, together with other founder members, the focus was on traditional activities such as jam making. But Cissy felt constantly that there must be opportunities in ICTs.

She gained the impetus she needed from a Commonwealth Foundation scholarship that enabled her to go for entrepreneurship training in India. On her return, she set up the Entrepreneurship and Career Development Centre, which she determined would have a significant focus on ICTs for women. She then crossed two further roadblocks. First, by enrolling at a local computer school she obtained her own necessary ICT expertise. Second, with fellow NVIWODA members, she saved enough to afford their first PC with a second – a laptop – being donated.

From this base, she become one of the country's first women ICT trainers, travelling from place to place teaching women about ICTs, especially how to use ICTs for the growth and development of their own enterprises.

Cissy's ICT training enterprise is now a core focus for her own economic success, and a model for what other women can achieve. However, Cissy herself prefers to focus on the benefits of the ICT training that she imparts. Thanks to ICTs, her women entrepreneur trainees have now acquired information that has been vital in the growth of their businesses. They have been able to improve the quality and marketability of their products as well as accessing new markets.

From: Chris Butegwa

Life Story 2: ICTs Can Support A Whole Family
Ms. Agnes Wadda @ AICOM

Agnes is a single mother with very full responsibilities including two children of her own and two adopted orphans to look after. She has found ICT-based enterprise as the route to provide economically for the family's needs.

Her involvement with ICTs began in 1998 when she was marketing manager for a media production company. Intrigued by the possibilities of ICTs, she pressed her boss for more ICT-related skills and was rewarded by being sent for training on various aspects of multimedia production such as website design and CD-ROM production. She was then able to transfer from marketing to manage production in the firm and was then promoted to General Manager.

In 2001, she felt it was time to set up on her own and she registered the company "AICOM", standing for "Apt Information and Communication". Her company deals with ICT training and consultancy, plus production of communication materials in various digital and other formats. Main outputs include websites, radio/TV programmes, and CD-ROMs.

This ICT-based enterprise now forms the sole source of Agnes' income and, thanks to this, Agnes is able to support her family of five despite being the only wage-earner for the household. The money from her enterprise has enabled her to house, feed and cloth her children, and provides enough to meet both their health and educational needs.

She feels that the future looks bright for work in the IT sector, though she fully admits there are challenges. Because of her domestic commitments, it is sometimes hard to save up enough money to pay for the constant technology updates that are required. It has also been a challenge to get others to accept that a woman can work as well as a man in this field.

Her advice, though, to others is clear. Working with ICTs is faster and easier than working without the new technology. Transform your beliefs and attitudes, and make sure you look out for ICT-based working whenever possible.

From: Daniel Semakula

Life Story 3: Challenging Traditional Roles
Ms. Fatima Suhra @ TechnoWorld

Fatima's life is about tackling economic and social challenges by utilising opportunities through IT. She belongs to a poor Muslim family that, despite deprivations and loss of family members, was able to support her to study for a degree.

She then began working for the local unit of the National Literacy Mission and as Secretary for the local Development Society. These roles brought her into contact with the state agency that was encouraging women to join together and create ICT-based enterprises. She decided to take the plunge and was lucky because two of the original ten women members of the enterprise dropped out due to inability to afford the initial investment.

Fatima herself was worried about this. US$30 may not seem like much to many people, but it was a very great sum for her family, particularly as she was personally liable. Nonetheless, she went ahead and found thanks to the success of the IT enterprise that she was able to pay it off relatively quickly. She now actively supports her household, contributing to expenses with an average monthly earning of US$60. She not only financially supports her brother for his education, but also guides him in his career.

In this way, she has been able to challenge not only material deprivation but also the traditional gender conservatism of her community. She is now held in high esteem in her community and seen as a role model – as one who made such a difference to her life, by hard work and dedication. Fatima feels that she has successfully overcome some gender-based restrictions in her life, but she has also seen the strength of women working together in an ICT-based enterprise – she appreciates very much the unity and mutual support of this women's cooperative that is shown through their collective decision-making.

Life Story 4: Women Can Prove Themselves In The IT Sector
Ms. Mable @ Technovision

Mable's story is that of a girl from a poor family who found herself unable to continue her studies owing to financial constraints, and yet has now transformed herself through IT into a confident young woman who is currently the main breadwinner and decision maker in her own family. Mable is the eldest in the family with a younger brother and sister. Belonging to a below-poverty-line family, Mable found it difficult to continue her studies after age 16 because her father fell ill and could not continue with his job.

Alongside this bad luck, it was at this juncture that she had an opportunity for computer education under a Community Development sponsorship From this she got involved with a cooperative women's IT enterprise. There was practically no income in the first year and all of them had to depend on their families even for their personal expenses. She says without support from home they would never have overcome the situation. They had to work late at night at times and her father used to come and pick her up in spite of his illness. She was also sustained by the atmosphere of team working and solid relationships between women in the enterprise. "We knew it would take time. So we tried to be optimistic", she adds, and it was this group solidarity that helped them overcome their initial difficulties.

She is now able to support her family, and is the main breadwinner of the family with a greater role in household decision-making. "My family place me in high esteem", she says. In the early stages of the unit they were mocked in the locality as a bunch of girls who have no other work to do. The very same community members now come to them seeking IT training and wanting IT-related jobs. Overall, the local community now hold them in good esteem. Her communication skills have improved and she is able to interact with others for personal or business dealings. Her technical skills too have improved in the four years since she joined the micro-enterprise. From basic training in computers (MS Office and DTP) in the initial stages she has grown up to acquire new computing skills around data entry and analysis, and new enterprise skills such as office management.

Mable's message to other women is that they should come forward and take initiatives. Women can do much in IT. "Women too can prove themselves in the IT sector. Our work has developed my confidence to tell you this. There is nothing women are unable to do in the IT field."

Life Story 5: Sailing Against The Odds
Preetha @ Divine Computers

The life of Preetha, 26, is the story of a woman born into a scheduled caste family (one the lowest caste groups in India). She was born to economically poor and illiterate parents, but has strived to become a member of an ICT-based enterprise. With a large family of six sisters, she lives in a community housing project for the poor. Her father encouraged his children to be educated, although Preetha had to work from the age of eleven to support her education. She could not complete her degree due to the cost of buying books but still cherishes the dream of becoming a degree holder one day.

After dropping out from her studies, Preetha started attending some state-funded tuition classes for the students in neighbourhood. After training in Desk Top Publishing and Microsoft Office courses, and with a strong urge to get an economic livelihood, she ventured to join in the proposed creation of an enterprise that was going to undertake IT training in the nearby school. It was daunting to take out a loan for this, but she felt confident as it was part of a group loan. Now, not only is she teaching IT skills to school students and learners from the community, she is the group leader of the enterprise.

Preetha is very satisfied with the venture, as she says "People like me could never expect to get a job with low qualifications. Now I have a job and my family has benefited". Preetha is now able to financially support the household and guides her younger sisters. From a shy girl, now she is very confident – able to interact with people in official circles, and feeling able to enjoy the freedom of travelling without the restrictions of time and distance that she felt previously. Now the group members share their dream of starting their own individual enterprises. Her parents are delighted that their daughter is a "teacher"; a role that brings high status in her community even though her success sometimes attracts envy as well. Overall, though, involvement with ICTs has brought the most important achievement in her life – that Preetha is a now a teacher in her Alma Mater, which brings joyful tears to her eyes.

Life Story 6: Via Entrepreneur To Politician
Ms. Rita @ Technoworld Digital Technologies

Rita, 33, belongs to a poor community and lives with her mother and grandmother. Her mother was a member of a local self-help group and it was natural that Rita would join, too. She became secretary of the group in 1997, and around that time also became interested in the possibilities of computers.

She received some basic computer training via government-funded courses during a time when she was working in tuition for young children. Through the encouragement of project officers in a government agency, she began to think about helping to set up an ICT-based enterprise. This she did with a group of other women from the community, setting up to work on a combination of IT training and data entry work.

Working in this ICT-based enterprise has brought an income to Rita but it has brought much more. She now has Diplomas in Computing Applications (DCA) and Desk Top Publishing (DTP). Much more, though, her work has challenged her own view of herself, and the view of others. The norms in her community were that men travel about to formal work, but that women are confined to odd jobs locally or in the home. Rita has been a "change maker", showing that women can travel out and have an entrepreneurial job. Seeing herself in this way has encouraged Rita to move ahead. She is group leader of her enterprise, but has also moved up the hierarchy of self-help groups to become President of the Community Development Society. Subsequently, she was elected as Municipality Councillor, holding an important position in local politics.

Juggling the pressures of home, IT work, and political work means a very full life, but it is one that Rita welcomes and one in which her work colleagues support and encourage her. She confidently asserts that if only opportunities are available and there is appropriate motivation to properly make use of such opportunities, any woman can do wonders in life, as is the case with her in her present enterprise.

3. Why Support Women's ICT-Based Enterprises?

Why should your agency – or others – support women's ICT-based enterprises (IBEs)? One answer is that these enterprises bring benefits to both women and to agencies; as detailed in this section. However, there are risks, as well, which should be recognised.

3a. What Are The Benefits To Women?

The benefits of supporting IBEs for women can be seen from different viewpoints, as shown in Table 1.

Table 1: Different Benefits from Different Viewpoints

Viewpoint	Benefits Focus	Benefit Example
Enterprise	Performance of the business	Growth of a sustainable enterprise
Livelihood	Changing livelihood assets of individuals or families	Generating stable employment and income
Gender	Approach to gender equity	Changes in opportunities for women or cultural attitude changes to the choices open to women and the role they can play

From real cases of women entrepreneurs working in ICT-based enterprises (including those in Section 2c), we find some of the following as benefits. These are drawn from a mixture of the livelihoods and gender viewpoints, illustrated in Figure 2.

Figure 2: Categories of Livelihood/Gender Benefit for Women's IBEs
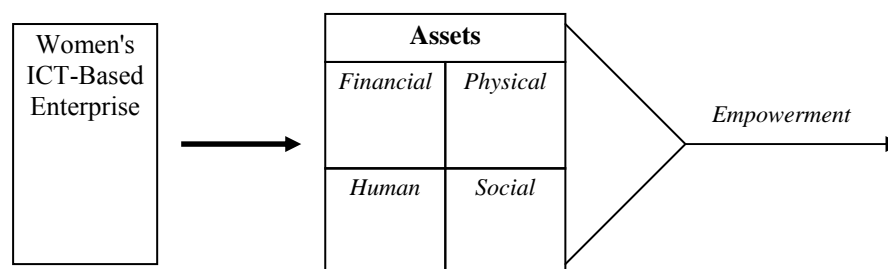
- **Improved financial assets:** regular income from work in ICT-based enterprises has enabled women to contribute to their family welfare (such as healthcare, education or payment for marriage of siblings) and even to add regularly to savings, when previously they might be unemployed with no income.
- **Improved physical assets:** regular income from ICT-based enterprises has enabled women to purchase land, housing, gold or physical goods for their family,

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and also to purchase hardware and software equipment for use at work where previously that would not have been possible.

- **Improved human assets:** women develop personally and professionally through work in an ICT-based enterprise, particularly in terms of technical skill development and in personal confidence. Many become involved with management activities and decision-making, and some develop entrepreneurial skills such as an understanding of cash flow, customer service, etc.
- **Improved social assets:** women working in an ICT-based enterprise see improvements in three main areas of social relations: links to customers and suppliers (business linkages); links to support agencies plus banks or credit unions (other institutional linkages); and links to other women working in the enterprise or in similar/nearby enterprises (social and community linkages).
- **Empowerment:** women working in ICT-based enterprises seem to talk about this more than anything else. They talk about gaining confidence to apply new skills, to tackle problems, to deal with businesses and agencies. They talk about new "respect", "recognition" and "acceptance" within their communities. As a result, they can make some inroads into traditional gender biases: taking on management roles traditionally seen as "men's work"; hiring and managing men as employees; taking on traditionally-male activities like working late or travelling with their work; and having a different role in their families due to their new income and status.

Additionally, potential gender-related benefits for women involved in ICT-based enterprises can include:
- employment and financial independence particularly in the absence of social safety nets;
- the opportunity for skills development in a women-only environment;
- work that is suitable for disabled women who might otherwise have very limited options;
- the opportunity to increase competitiveness, both within the economy as well as in relation to men; and
- a means to involve women in ICT policy making.

There may also be broader benefits. These women are likely to act as role models for others. Their enterprises may create a "business node" that encourages other businesses – including women-run businesses – to set up. They may start to create a critical mass of skilled women, making migration of those women to other areas and other sectors less likely. More generally, they start to close the gender digital divide.

3b. What are the Benefits to the Agency?

We have talked about the benefits to individual women of involvement in ICT-based enterprises, but what could be the benefits for your agency of involvement with this type of activity? Potential benefits include the following:
- Achieving your own goals (e.g. getting donor funding, or expanding the range of your operations).
- Achieving social welfare objectives (e.g. poverty alleviation via sustainable employment and/or skills development; empowerment of women).

- Gaining recognition or improved performance appraisals (e.g. building the agency's "label" or "brand").
- Gaining kudos in the community and/or an improved corporate image (e.g. generating good publicity).
- Contributing to enhanced entrepreneurship development and employment, and growth in the market (e.g. helping to generate a skilled labour force with sustainable skills)

Picking up on the first benefit, the case examples presented in Section 2 and Section 5 show that women's ICT-based enterprises can deliver against a whole range of agency goals, as summarised in Table 2.

Table 2: Meeting Agency Goals Through Women's ICT-Based Enterprises

Agency Goal	Potential Benefit from Working with Women's ICT-Based Enterprise
Empowering women	Enabling women to gain employment (and be an employer) and have earnings that enhances their position (and perceived position) in the community. See case sketches and life stories in Section 2.
Poverty alleviation	Women from below-poverty-line families can own and work in ICT-based enterprises. They see a significant increase in their income, their physical assets, and in what they are able to spend on their families, helping lead to household poverty alleviation. See, for example, the India case sketches and life stories in Section 2: all relate to women from below-poverty-line families.
Gender equity	When women set up and work in ICT-based enterprises, they seem to help close many "gender divides", thus increasing gender equity. This relates to "hard" factors such as money, goods, savings, technology. But it also relates to "soft" factors such as skills, social position and power. As seen in the Section 2 case sketches and life stories, these women are now employers of men, they take a more equal role within the family, and they have an enhanced status in their communities vis-à-vis men.
Sustainable employment	Entrepreneurial skills and ICT skills are in-demand and often in short supply. Supporting women to develop these skills makes their employment sustainable, even if their particular enterprise were not to sustain. The IT sector is also a good choice because there is ever-growing demand for IT, unlike the situation found in more traditional employment sectors typically used by agencies helping women.
Social development	Social development goals vary but women's involvement with ICT-based enterprises can help achieve these goals particularly through the income and empowerment that these enterprises offer. For example, the income helps women afford better social development – such as health and education – in the present. The investments and savings women make also helps their social protection in the future.
Information society development	The creation of ICT-based enterprises helps to create a small direct pool of ICT skills and infrastructure. But women's ICT-based enterprises can also be a catalyst. Through their ICT training, or providing other ICT goods and services such as Internet access, they may have an important effect in building the foundations for an information society in the wider community.

3c. What are the Risks?

There are many potential benefits to supporting ICT-based enterprises for women. But there are also potential risks and challenges to be faced.

Cost Investment and Funding
* ICT equipment (hardware and software) tends to be expensive, both at initial setup and with ongoing costs. Constant upgrading is needed. This means funds must be found from somewhere (see Agency Advice Sheet 4). Further skills training may also be required.

Skills and Capacity Building
* ICT-based enterprises require ICT skills in their labour force. Basic skills may be sufficient for some work of the enterprise (such as data-entry, word-processing, Internet searching, etc) but more advanced professional-level knowledge and skill is required for controlling and managing IT infrastructure and for carrying out more specialised services (such as Web-site development and hosting, e-commerce application development and management, database applications development and management, network management, and so on). Finding the skills needed for the enterprise (particularly from women who are less likely to be educated in science and technology) can be a challenge (see Gender Advice Sheet 4).
* Scarcity of such skills means that staff departures can have a drastic effect on the enterprise (see Business Advice Sheet 2). Planning for contingencies such as departures is important: not just thinking about how to replace staff members, but also how to cope with any consequent drop in motivation of those left behind.
* Capacity building can be a continuous, long-term undertaking, particularly since the technology changes constantly and skills quickly become out-dated. A lack of commitment to further skills development by staff can lead to enterprise failure (see Business Advice Sheet 2).

Sustainability
* ICT is fast-changing and therefore there is a need to constantly update and to be flexible to change and finding new markets. For instance, women working on digital data entry work face various threats: that their customers will run out of paper records that need digitising; that their customers will build an in-house set of staff to do the work previously outsourced to the women's enterprise; or that new technologies like voice recognition or scanning will remove the need for typing in of data. Entrepreneurs and agencies, then, must always consider the medium- and long-term future of any market which a women's ICT-based enterprise wishes to enter. Uncertainty means that an enterprise may also need to think about diversifying into other areas of ICT-related activity.
* Women may be particularly vulnerable if they come to rely on the income that the ICT-based enterprise provides. Agencies may need to help them think of ways of budgeting and saving to avoid immediate problems if their enterprise should close down (see Gender Advice Sheet 3).

Cultural Gender-Specific Issues

- Women have a triple role: family, business and community. Different cultures have different expectations about this triple role; and this can affect women's contribution to any ICT-based enterprise. For example, in cultures where women are expected to take the full responsibility for childcare or other domestic duties, their flexibility to work late or at short notice for the enterprise may be limited. More long-term, it may be an expectation of marriage or childbirth that the woman will no longer continue her enterprise work (see Gender Advice Sheet 2).
- Many ICT jobs are culturally gendered (e.g. seen as "men's work") and this may impact on the relationships between women ICT entrepreneurs and their customers or other stakeholders (see Gender Advice Sheet 1).

Women in India Running an eGovernment Service Centre

4. Planning and Managing Women's ICT-Based Enterprises: *The Enterprise Perspective*

4a. How to Analyse

As noted at the start of Section 2, there are many different types of ICT-based micro- and small enterprises (MSEs): they can be run by government, such as the Kudumbashree project in Kerala; they can be run as private businesses serving private markets; they can be run by non-governmental organisations (NGOs) or international donors. Such a broad range of organisations will have an equally broad range of social, economic and business objectives.

For this reason, your agency will require a range of flexible tools for the analysis of both socio-economic impact and business performance.

Three possible approaches for the analysis for ICT-based MSEs are:
- *A gender-based approach.* Issues of gender will inform analysis of MSE operation, support, and impact, and are concerned with the gender-relations (gender equity and the competing domestic, social and economic roles of women) that underlie business activity.
- *A livelihoods-based approach.* Issues of livelihoods will inform analysis of MSE support, and impact, and are concerned with the social relations and institutions that affect the lives of the poor. A livelihood comprises the capabilities, assets (including both material and social resources) and activities (including MSE activity) required for a means of living.
- *An enterprise-based approach.* This approach will inform MSE operation and support, and is concerned with the business issues that underlie MSE activity. Analysis focuses on the relationship between key enterprise success factors and financial/business outcomes.

No matter what approach is taken, you will need to understand your client group. This is because the process of data gathering provides a means of establishing communication links, and building trust with your clients. The way in which your agency approaches analysing the needs of clients will inevitably impact upon the working relationships that are built with clients. For example, it will be necessary to take full account of, and be sensitive to, the social interactions that underlie MSE activity – such as those influenced by family ties, cultural conventions or community politics.

There are two basic ways to carry out analysis (see Figure 3):
- *Top-down analysis.* This involves providing assistance based on the capabilities and resources that your agency has to offer. For example, your agency may provide a common training package or business diagnostic to all clients irrespective of their particular needs. This 'one-size-fits-all' approach can end up meeting the needs of agency staff rather than the client. However, such an approach does make it clear what the agency has to offer in the way of assistance, and it may well be efficient.
- *Bottom-up analysis.* A more 'grounded' approach gets those involved with the women's ICT-based MSE to provide their own data and analysis. This approach

is participatory, and asks your female clients to describe their perceived needs, and to articulate their viewpoints in relation to social and business-related factors. This approach may be more successful in identifying key enterprise-specific factors, but there are weaknesses. Often business demand factors are overlooked, with clients focusing on the areas where they think your agency can provide solutions (such as through finance provision or other subsidised services) rather than areas where the client may need to act.

Figure 3. Top-down and Bottom-up Approaches to Enterprise Analysis
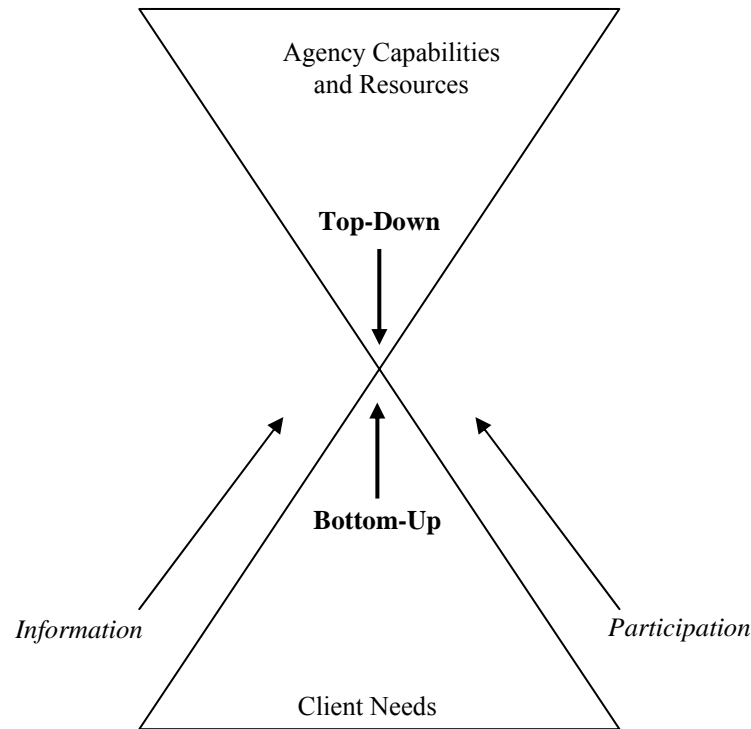
Top-down approaches may be more relevant to independent private businesses that may present more uniform characteristics that can be addressed with packaged solutions. Bottom-up approaches are more appropriate for women's ICT MSEs that are membership or community based. Relevant methods of participation and analysis include story telling, group discussion, individual questionnaire surveys, key informant interviews, document analysis, and observation. Many of these can be incorporated into a case study framework. However, such approaches can be time consuming. It is also important that your clients can see the value of giving up their time to participate in such activities. The best way to ensure client participation is to offer some tangible benefits to clients, such as feedback from the process that will help the MSE.

4b. What to Analyse

You can use the following analysis tools – value chain; enterprise analysis; context analysis; and other tools – to:
a) Plan and assess a new women's ICT-based enterprise activity (e.g. as part of a business plan).
b) Evaluate the performance of established enterprises.

i. The Value Chain
The value chain describes the range of activities from supply all the way to final delivery to the customer.

The following example maps a typical value chain for a women's data entry MSE: TechnoWorld IT Centre. The value-chain map shows the chain of input—output relationships that surround the core activities carried out by the women-run MSEs that specialise in data entry outsourcing. You could construct a similar map for the type of MSEs that your agency is supporting.

Figure 4: Value Chain Mapping of Women's Data-Entry Enterprise TechnoWorld IT Centre

Internal Value Chain

Data transfer

Initiation	Pre-planning	Core activities	Delivery		End-user Customer	
-Contract	-Software installation -Pre-training	-Data entry -Further training	-Quality control -Monitoring	Data transfer		Secondary customers

Inputs
-Market information -Technical knowledge	-Finance -Labour -Hardware/ software -Premises -Skills	-Data -Training requirements	-Bench marking

Actors
-Kudum-bashree -Customers	-Trainers -Kudum-bashree -Customers	-Employees	-Employees -Customers

External Environment
- Governance
- Competition
- Demand
- Contracts and Payment
- Risk

Value chain mapping is particularly valuable to help do two things:
a) Find ways to increase the efficiency of a women's ICT-based enterprise.
b) Find ways in which the "outside world" has an important effect on a women's ICT-based enterprise.

Value chain mapping can also help you to:
- Identify the key activities required to initiate, to plan, to carry out and to deliver the product or services offered by a women's ICT-based enterprise.
- Map the key input—output relationships that link activities together.
- Identify resource inputs required in order that the key activities can be carried out (see Business Advice Sheets 2, 3 & 4).

- Identify key indicators (quantitative and qualitative) required for value chain analysis.
- Identify the key actors in the value chain, and assess their role and influence.
- Consider ways of improving the operation of the value chain (see Business Advice Sheet 5).

The map can help you to identify what data already exists about each activity, what data is needed, and where it might be obtained. Indicators (both quantitative and qualitative) may cover number of enterprises, employment, gender composition, earnings, non-financial rewards/benefits, efficiency and effectiveness indicators as well as critical success factors (CSFs).

Value chain mapping will also help you distinguish between internal and external influencing factors. This is useful because it will help you identify where interventions may need to be directed. Examples are given next of both internal and external analysis.

Example 1: Internal Value Chain Analysis to Identify Efficiencies
Internal value chain analysis involves identifying and analysing the key processes that are required to carry out the core activities of a women's ICT-based enterprise. In the case of TechnoWorld IT Centre, the core activity is data entry. The key processes that make up the core activity are:
- initiation (obtaining a contract);
- pre-planning (installation of software, and training provision);
- the core activity itself (data transfer, data entry and allied training services); and finally,
- delivery (quality control, monitoring, and transfer of digitised data to client).

A key objective of internal value chain analysis is to maximise internal efficiency. In general terms, efficiency can be measured both in terms of 'cost of labour' and 'costs of capital' per unit of output. However, this does not mean that squeezing labour costs is the route to greater efficiency. In fact, the opposite will likely be the case, as a low paid workforce that receives few benefits is likely to underperform and remain demoralised.

Better efficiency gains can be achieved by making improvements throughout the value chain. The following examples can be illustrated from the TechnoWorld IT Centre map (Figure 4).
- *Controlling non-labour (fixed) costs* – this will entail looking at costs of inputs at all stages of the value chain and deciding which management costs and overheads can be minimised.
- *Shortening lead times* – this means reducing the time taken from initiation of the contract to delivery to the customer. Shorter lead-times will further improve efficiency due to more productive use of labour.
- *Introducing labour flexibility* – this can benefit both the enterprise and the workforce by adapting working hours to suit the needs of (female) workers, whilst also allowing the enterprise to increase the overall hours of operation of the core activity (data entry) during a 24-hour cycle.

- *Increasing capacity* – this can only be achieved by obtaining more or larger contracts. Further capital investments can then be sought at the pre-planning stage in higher performance ICT or further training.
- *Improving quality control* – poor quality work may need to be re-done. Quality control should be exercised at all stages of the value chain, in terms of how contracts are specified, pre-planning requirements, carrying out the core activity and delivery to the client. Quality will depend upon the skills and performance of the workforce and the ability of management to coordinate activities.

Example 2: Internal Value Chain Analysis to Identify Efficiencies
Table 3 provides another worked example of an internal value chain analysis for an ICT-based women-run MSE: Technoshree Digital Technologies. This enterprise employs ten women doing a mixture of data entry, IT training, and desktop publishing work. 80% of their income comes from government departments. In its latest financial year, the enterprise achieved a total value of sales of US$20,000 and an operating profit of US$560.

Table 3: Internal Value Chain Analysis for Technoshree Digital Technologies

Value Chain Analysis: enterprise internal efficiency			
Efficiency Indicator	*Strategies Adopted to Increase Efficiency*	*Constraints on Efficiency Improvements*	*Critical Success Indicators*
- Cost control	Slim but effective management. Rewards-based system for achieving targets. Sanctions for absentees/ punctuality.	Worker sometimes feel over-stressed and under too much pressure to deliver.	Teamwork, commitment, rewards.
- Lead times	Strict time management. Fixed and time bound contracts prioritised ahead of non-urgent work.	Overtime increases costs. Can impose heavy workloads.	On-time delivery.
- Flexibility	Day and night shifts introduced. Workers have a degree of self-organisation of their work patterns.	Problems of recruiting night workers. Variations in skills of day and night workers. Differing pay rates for members and stand-by employees.	Overall staff satisfaction for members.
- Capacity	Full utilisation of capacity through 24-hour working.	Places strains on people, processes and equipment.	Capital/labour intensity per unit of output.
- Quality	Use of externally-provided quality training. Strong links with customers. On-going training.	Requirements vary between contracts. Problems of quality variation between day and night work. Some software problems.	Level of work returned for re-entering. Negative feedback from customers.

Example 3: External Value Chain Analysis
External value chain analysis involves you identifying and analysing all the external links that are required to:
a) carry out the key activities and processes of the women's ICT-based enterprise;
b) ensure effective delivery to customers;
c) understand the political, social and economic environment factors that determine how the value chain is governed and controlled.

Key external links are those related to:
*   *Accessing resource inputs* – the links required to locate skills/labour, money, technology/equipment, materials, information, and ICT/other infrastructure (see Business Advice Sheets 2, 3 & 4).
*   *Entering markets* – links required to locate and retain customers (see Business Advice Sheets 1 & 6).
*   *The external environment* – links with individuals and institutions that influence the operation of the value chain and determine how it is governed. These include other value chain participants (particularly dominant buyers); other market actors, market conditions and competition; and the regulatory impact of government or other large institutions. All these factors govern the level of risk that a women's ICT-based enterprise takes when entering a market.

If your analysis concludes that any of the input or market links are not in place, then you may either need to change the business plan or consider not supporting the micro-enterprise. Table 4 provides a worked example of an external value chain analysis for Technoshree Digital Technologies. This analysis helps to identify whether external links are in place or not.

Internal value chain analysis can be used to help your clients manage their operations more successfully by seeking to improve the efficiency of their businesses (see Business Advice Sheet 5). External value chain analysis should focus primarily on access to markets. It is only through the supply of new customers that your clients will be able to sustain their businesses into the future. External value chain analysis will help you highlight areas of weakness in the sales and marketing techniques of your clients (see Business Advice Sheets 1 & 6).

Value chain analysis will also help your client identify business strategy options for the future of their businesses, and suggest solutions in terms of specific operational requirements and actions (see Business Advice Sheet 8). Solutions may include technical upgrading via investment in new ICT; skills upgrading through targeted training programmes; and upgrading of managerial capabilities through training, mentoring, etc.

Table 4: External Value Chain Analysis for Technoshree Digital Technologies

Value Chain Analysis: effectiveness of external links			
Access to	*Input—Output Links Identified*	*Constraints Associated with Links*	*Critical Success Factors (CSFs)*
Labour/staff	Tend to be informal through word of mouth via previous staff.	High staff turnover due to competition between women's ICT units.	Improving staff retention.
Technical Skills	Through local training organisations, consultants and individuals.	None.	Continued support from government agency.
Management skills	From government agency and internal supervisor.	None.	Leadership and organisational support.
ICT	Via government agency and local private companies.	None.	Continued support from government agency.
Finance	Rolling loans sourced through formal banking sector.	Late payment from government departments a significant problem.	Effective financial management.
Information	Via government agency. Local business and social networks.	None.	Continued support from government agency.
Access to Markets	Via government agency advising of contracts. Individual marketing.	Overdependence on dominant customer. Insulated from private markets.	Maintenance of continuous contact with customers.
Other institutional linkages	Government departments.	Rules and regulations of dealing with government.	Favourable government policy towards outsourcing.
Other external factors	Competition between women's ICT units.	Increasing competition from larger private sector providers.	Keeping prices down.

Data Entry Staff at Technoshree Digital Technologies
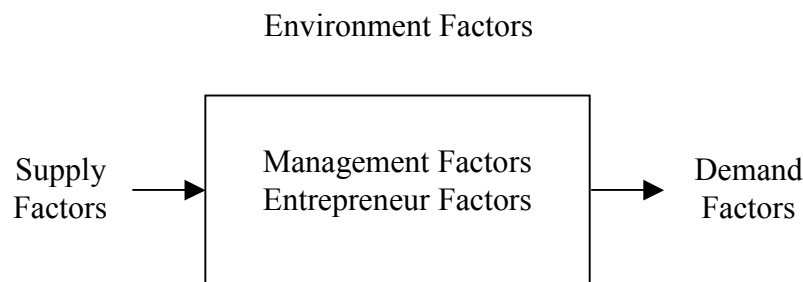
ii. Enterprise Analysis

Enterprise analysis looks at five key areas that underpin the success or failure of a women's ICT-based enterprise (see Figure 5) – the entrepreneur(s), enterprise management systems, market demand, supply of inputs and the external business environment. This approach will help you to identify areas of strength and weakness in the enterprise and the positive and negative factors associated with each area.

You can then use the analysis to assess:
a) the viability (financial and otherwise) of a proposed or existing women's ICT-based enterprise, and/or
b) the sustainability (financial and otherwise) of an existing MSE.

You may then move on to identify gaps in resources or capabilities that can be remedied through intervention by your agency, or that can be facilitated via other providers.

Figure 5: Enterprise Analysis Model

Environment Factors

The five areas of analysis can be looked at in more detail:

- *Entrepreneur analysis* – focusing on the managerial aptitudes and skills of the women entrepreneur(s). This helps because if the enterprise fails (which many do) the efforts will not have been wasted as the same entrepreneur may use her new skills to restart another business. An entrepreneur focus can help to build the personal skills that are required to interact effectively with customers (see Business Advice Sheet 6). However, a good balance of personal, managerial and technical skills is the ideal combination for running a successful women's ICT-based enterprise.

- *Management analysis* – focusing on the managerial systems and methods that the enterprise has in place. If any weaknesses are found they are typically around the issue of improving financial management (see Business Advice Sheet 7); management of the value chain (see previous section); or operations management (see Business Advice Sheet 5).

- *Demand (market) analysis* – focusing on the size and nature of the market that exists for what the women's ICT-based enterprise is producing. Even though demand in the ICT sector is strong, there can still be problems finding customers for what a particular enterprise proposes to, or does, produce (see Business Advice Sheet 1). A demand focus involves not only understanding the market, but also

assessing the capabilities of the enterprise to fulfil market requirements – their ability to provide the right ICT-based goods/services, to the right place, at the right time, and at the right price.

- *Supply analysis* – focusing on access to inputs such as infrastructure, finance or technology (see Business Advice Sheets 3 & 4, and also the notion of external value chain analysis, covered in the previous sub-section).

- *Environment analysis* – focusing on external factors such as policy, regulation and competition. These often have only an indirect impact on a women's ICT-based enterprise but that impact can sometimes be quite significant.

Table 5 presents a worked example of an enterprise analysis for our case example. You would then use this as the basis for decision-making: e.g. whether or not to help a new enterprise start-up; whether or not it was worth offering assistance to an existing enterprise.

Table 5: Enterprise Analysis for Technoshree Digital Technologies

	Analysis of Positive and Negative Factors
Entrepreneur Analysis	*+ve factors:* participation in the enterprise has had positive influence on women's personal and social skills (greater confidence/motivation). Women have benefited through targeted training ; also from on-the-job training and participation in performance improvement programmes. All women have 12 years of schooling. Women are pre-selected on the basis of high educational achievement. Women have achieved greater social esteem. *-ve factors:* pressure of work can put strain on women's family role. Some negative social outcomes in terms of attitude of some local community members.
Management Analysis	*+ve factors:* Enterprise emphasises cost-competition/expanding market share strategy. Enterprise emphasises quality improvement and greater efficiency through better use of technology and upgrading skills. *-ve factors:* over-dependent on public sector contracts for 80% of turnover.
Demand Analysis	*+ve factors:* some product/service diversification into training provision and PC assembly. Well located in urban area. Good linkages established through Kudumbashree agency and other government departments. Good linkages to established customers. *-ve factors:* growth strategy dependent on demand from government departments.
Supply Analysis	*+ve factors:* good informal networks for accessing inputs through word of mouth via previous staff. Good business networks through local companies, consultants and individuals. Formal training role undertaken by a local training organisation. Other inputs via Kudumbashree officials and internal supervisor. Capital funding via initial start-up subsidy and rolling loans (primarily for purchase of computer equipment). *-ve factors:* partly subsidised inputs (e.g. premises) may lack sustainability if government support is withdrawn.
Environment Analysis	*+ve factors:* bi-partisan monitoring arrangements to ensure financial transparency of initiatives. *-ve factors:* sudden change in government procurement policy could cut off supply of work – subject to political considerations as well as market fluctuations.

iii. Context Analysis

Business analysis tools are important for assessing the viability of women's ICT-based enterprises. Other factors also need to be taken into consideration concerning the social, political and institutional environment of the enterprise. These factors include the impact of policy, education and the cultural status of women in society. Below there are listed three methods of analysing contextual and environmental factors.

- *Stakeholder analysis*: the impact of external stakeholders of the enterprise.
- *Livelihoods analysis*: the vulnerabilities that the enterprise employees and their dependents face plus the institutions and processes that impact upon enterprise activity.
- *Gender analysis*: the particular challenges that women entrepreneurs face.

Stakeholder Analysis

A stakeholder is any person, group, organisation or institution that is likely to impact upon the operation of the women's ICT-based enterprise. They can be divided into *primary stakeholders* (those who are most directly impacted upon) and *secondary stakeholders* (those who have some influence or intermediary role but are not directly impacted upon). Some stakeholders will be more important than others. *Key stakeholders* are those that have the power to significantly influence the operation of the micro-enterprise. Stakeholders can exert positive or negative influence. *Stakeholder participation* (through involvement in decision-making and action) is usually a key requirement for positive impacts to be realised.

Figure 6. Identification of Stakeholders for Women's ICT-Based Enterprise
(Example from Kudumbashree project: primary and key stakeholders and key relationships are shown in bold)
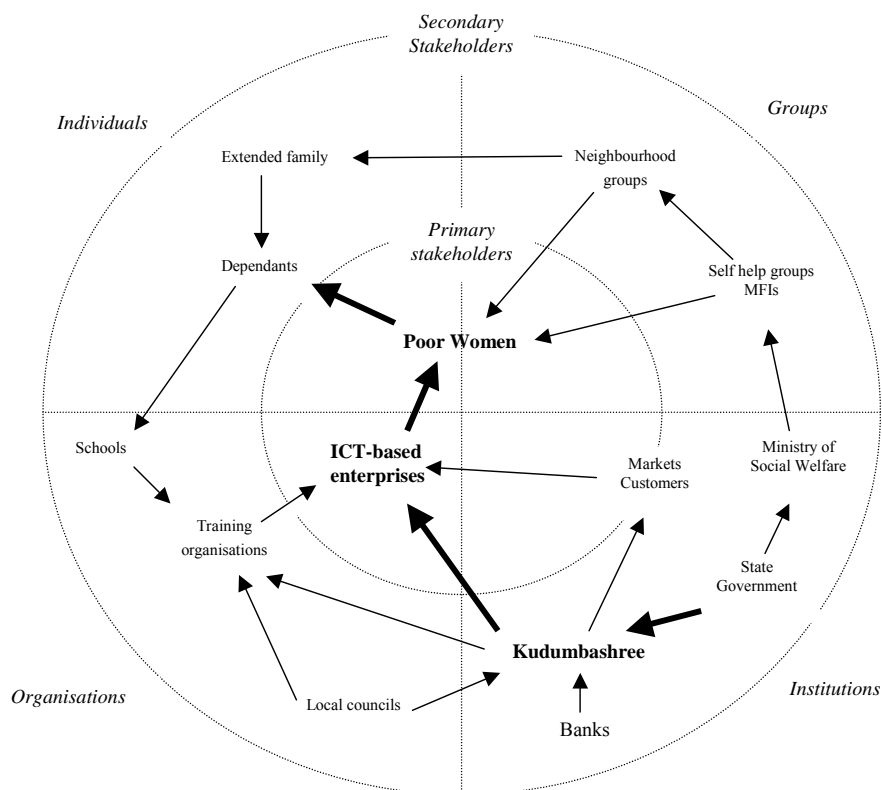
Stakeholder analysis needs to:
1. Identify primary, secondary and key stakeholders. As shown in Figure 6, these could be divided into individuals, groups, organisations and institutions.
2. Assess the level and form of influence they have over enterprise activity.
3. Understand the relationships between different stakeholders, including areas of potential cooperation and conflict.
4. Assess and encourage levels of participation by stakeholders (particularly primary stakeholders).

Stakeholder analysis can take the form of simple stakeholder diagrams (as indicated in Figure 6) or more complex analysis that assesses each stakeholder's importance according to their relative power and influence, and identifying risks and assumptions that impact upon success or failure of initiatives (links to further information can be found in Section 6).

The main uses of stakeholder analysis are:
a) Simply to understand the important players affecting any particular women's ICT-based enterprise.
b) To identify potential areas of conflicting interests that might cause problems for the enterprise.
c) To identify other key risks for the enterprise.
d) To identify key relationships that need to be strengthened, for example, via participation of stakeholders.

Livelihoods Analysis
The starting point for livelihoods analysis is the understanding that women's ICT-based enterprises in developing countries cannot just be viewed from a business perspective. Women – often from poor communities – face particular vulnerabilities due to economic and other uncertainties, and these need to be understood. If they are not, then a naïve approach to enterprise may actual increase rather than decrease women's vulnerabilities.

A livelihoods analysis applied to ICT-based enterprise for women would highlight the following (see Figure 7 for an overview):

- *Vulnerabilities:* For ICT-based enterprises run by women there are specific vulnerabilities, e.g. lack of entrepreneurship and skills, market fluctuations, increasing costs of technology and staff, financial vulnerabilities caused by non-payment of monies owed, corruption and market competition.

- *Assets:* ICT-based enterprises are able to cope with vulnerabilities by employing their assets. Assets can be financial (access to loans or grants), socio-cultural (networks of local contacts), political (contact and influence over local councils and government departments), physical (premises, computer hardware, software, networks, etc), human (skilled and trained workers) and natural (access to other resources such as land).

- *Structures and Processes:* Assets are accessed and modified through structures and processes. These include 'social relations' (e.g. gender, caste); 'institutions'

(e.g. agencies, local councils, policies, contracts, performance appraisal, etc); and, 'organisations' (e.g. training providers, women's groups).

- *Livelihood Strategies:* Livelihoods strategies aim to strengthen the assets of the poor (an example would be attempts to do this by setting up cooperative ICT-based enterprises involving groups of women). As outlined in the stakeholder analysis women's enterprise initiatives typically involve multiple actors coordinating a range of complementary strategies that are required for the initiative to succeed. These will include key purchasers of ICT goods and services (i.e. the customers for the women's ICT-based enterprises), training providers, local self-help groups and finance institutions, providers of investment capital, technology and infrastructure.

- *Livelihood Outcomes:* Positive livelihood outcomes of women's ICT-based enterprise can be measured according to tangible indicators (e.g. increased income and savings, secure premises, access to technology) or intangible indicators (e.g. greater confidence, higher social status, gender empowerment).

Figure 7. The Livelihoods Framework for Analysis
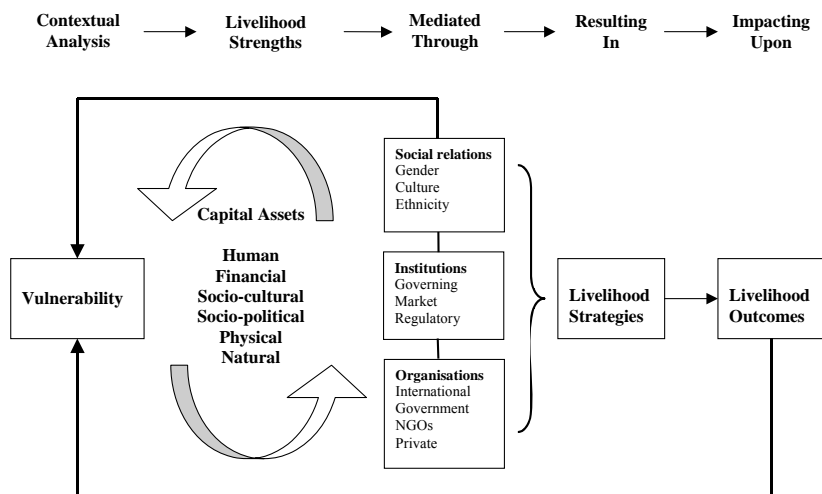
The main uses of livelihoods analysis are:
a) To understand the realities of women's lives and the likely impact of a proposed or actual ICT-based enterprise on their lives.
b) To understand how women cope with the uncertainties and vulnerabilities they face, and how this may impact their role in an ICT-based enterprise.
c) To understand how best to support such women in relation to an ICT-based enterprise.

Gender Analysis
Gender analysis (see Figure 8) is particularly relevant for understanding ICT-based enterprises that are women-run. However, gender relates to both sexes and is a form of analysis that can be used, for example, to understand the position of women in male-dominated environments. The IT sector is one such environment where men tend to occupy managerial, skilled and professional jobs, and women unskilled (e.g. data entry) and clerical positions.

In addition, there are wide variations between men and women in terms of access to ICTs. This is reflected in the growing digital divide within societies. In many countries women have less access to ICT resources and thus less control over decisions that affect their lives. As with a livelihoods analysis, gender analysis is concerned with material outcomes (e.g. improving women's incomes/status, etc). But, gender analysis also provides an analysis framework that can lead to positive action to modify the social/power relations between men and women in society.

Figure 8. Key Stages of Gender Analysis for ICT-Based Enterprise Initiatives
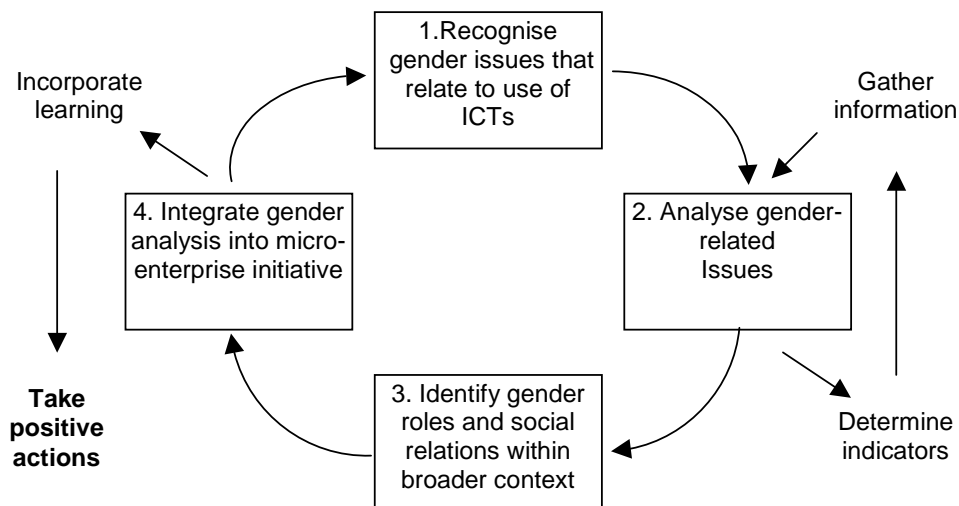
The case studies described in Section 2 and the content of Section 3 show that ICT-based enterprise can bring many benefits to women. Involvement in ICT-based enterprise enables women to improve their skills, raise their confidence and social status, and reduce their marginal position in their communities. This brings far greater benefits than, for example, lower forms of participation in ICTs such as accessing information via the Internet. Thus, gender analysis considers the broader social, economic and political benefits of ICT in the context of how the position of women can be strengthened in their communities, culture and society. Key action areas are: a) increasing social and economic empowerment, b) strengthening of assets, c) strengthening of social and physical well-being, d) improving the cultural status of women in society, and e) sustainability of outcomes.

iv. Other Analysis Tools

Two other tools can be used to analyse women's ICT-based enterprises:

SWOT Analysis

SWOT analysis will help you to identify areas of strength and weakness for a women's ICT-based enterprise as a whole, as well as the market opportunities and the market threats that the enterprise faces:

- Strengths indicate areas where internal and external business factors are strong and where constraints have been overcome.
- Weaknesses indicate areas that are still significant constraints.
- Opportunities show areas of possible growth and positive environmental factors.
- Threats are external factors that might jeopardise the future of the enterprise.

We can identify, combine and summarise the positive and negative factors from the enterprise analysis into a simple SWOT diagram as illustrated in Table 6.

Table 6: SWOT Analysis for Technoshree Digital Technologies

Strengths	Weaknesses
-Teamwork and commitment of the members. -Support and recognition from government agencies and higher authorities. -Favourable location of the unit in centre place. -Supportive policy environment towards education , literacy and women's empowerment. -Protected market for Kudumbashree units. -Strong linkages between government departments (e.g. through linkages provided to education establishments and schools). -Effective local IT sector support providing low cost solutions (hardware, software & training support).	-Rented building. -Problem from some non-active members. -Stand-by employees earning more than the members as they gain higher operating speed.
Opportunities	**Threats**
-Policy of digitisation of records followed by government departments. -Preferential purchasing agreements and sole suppler status given to Kudumbashree. -Latest IT developments towards e-government at local level. -Limited number of competing enterprises. -Scope for exploring new areas like hardware, programming etc. -Scope for expansion of the unit infrastructure and space. -Government support for improving local ICT infrastructure.	-Threat from the absentee members. -Possibility of the discontinuation of the government support and lack of long-term business strategy. -Competition from other government-supported units. -Continued cultural constraints (e.g. on working hours and attitudes of husbands, etc)

SWOT is a quick, structured approach that can be used both to analysis a proposed new ICT-based enterprise, or an existing enterprise. Where weaknesses and threats, for example, seem to outweigh strengths and opportunities, this might raise serious questions over a new ICT-based enterprise. There are also other interventions that may follow from a SWOT analysis. Business strategy (see Business Advice Sheet 8)

should build on the strengths of the enterprise. Action may need to be taken to remedy or lessen the impact of weaknesses, and the business owners will need to be made aware of future opportunities and encouraged to research and assess their potential. The seriousness of the threats posed will also need to be considered, and whether or not they require urgent action to forestall.

Sustainability Analysis
The degree of sustainability of a women's ICT-based enterprise can be assessed in four key categories:

- *Financial sustainability.* Financial sustainability requires access to sufficient capital investment funds (such as loans to upgrade ICT equipment); recurrent funds (to pay wages, bills, overheads, etc); and short-term credit to manage cash flow (such as a bank overdraft). It also requires that the enterprise earns sufficient income to cover costs, and makes a profit on that income that can be re-invested in the business (see Business Advice Sheet 7 and Gender Advice Sheet 3).

- *Human sustainability.* The continued efficient and effective delivery of ICT goods and services will depend upon the quality of human capital tied up in the enterprise. It will be important to sustain workforce skills and build managerial capacity; as well as create and sustain a motivational, rewarding and satisfying work environment (see Business Advice Sheet 2).

- *Technological sustainability.* In a fast moving sector such as ICT, there is a requirement to continually update technology and associated skills to be able to respond to changing customer needs. This requires continuous investment in training of staff and awareness of the new technologies and working methods (see Business Advice Sheet 4).

- *Market sustainability.* A single large customer creates dependency, but they can provide guaranteed work. An alternative – and more sustainable – market strategy would be to build a diversified customer base. Women entrepreneurs can do this through diversification of products and services offered and by attracting a greater number of customers. However, this is difficult for many small enterprises to achieve (see Business Advice Sheets 1 & 6).

Financial sustainability is the key to business success – the ability to recover investment costs and to be able to update and maintain skills and equipment year on year – and thus be in a strong position to locate new customers and sustain business into the future.

4c. ICT-Based Enterprise Business Good Practice

Guidance on good practice in various areas of enterprise activity is given in the advice sheets shown here.

Business Advice Sheet 1: Finding Customers

Women's ICT-based enterprises often find it difficult to locate new customers, due to their small size and lack of links to wider markets. Potential customers for such enterprises fall into five main types:

- Contracts from government agencies and other large public sector organisations.
- Sub-contracts from large private sector organisations.
- Markets and customers identified through donor support and assistance from NGOs.
- Business from other small enterprises or organisations in the locality.
- Individual customers and members of the community.

The most important requirement for finding customers is to penetrate the market networks that are most relevant to the particular products and services that the women's ICT-based enterprise has to offer. This may involve making contact with, and building relationships with, key officials in government agencies; it may involve convincing a large private company that efficiency gains and cost savings can be achieved by dealing with a small-scale supplier of ICT services; or it may involve seeking out donor/NGO support via the Web (see Section 6). It is important to realise that ICT is a growth sector and, as such, will provide significant opportunities for outsourcing of work, as demand for ICT services in most countries vastly outstrips supply. For most ICT-based enterprises, however, their customer base is likely to consist of other small enterprises and small organisations. It will be important, therefore, to network effectively within the local business community and build a good reputation in the locality.

In order to find customers, women's ICT-based enterprises need to identify the growth sectors in their locality for ICT-based goods and services, as well as spot specific market opportunities. Then they need to establish initial contact with potential customers and customer groupings.

In order to gain market entry three sets of skills will be required:

- *Specific skills*: to respond to market opportunities (e.g. how to respond to offers for tender from large organisations).
- *Business skills*: to effectively match enterprise product and service offerings with customer needs and requirements.
- *Personal and social skills:* to interact effectively with potential customers (e.g. through confidence building, effective communication, and negotiation skills).

Agency assistance can be offered by:

- Selling to large organisations the value of outsourcing some of their ICT-requirements to local women's enterprises, by stressing the advantages (i.e. greater efficiency; lower cost; timeliness of delivery; convenient location; ability to expedite small orders).
- Providing information to women entrepreneurs about subcontracting opportunities from large companies or procurement contracts through government departments.
- Facilitating links to international donor organisations that are looking to support MSE activity, and which may provide linkages to international markets for ICT-based services.
- Facilitating collective action through cluster support, support of business associations, or joint bids for government procurement contracts.
- Encouraging networking between potential providers of services and customer groupings through the use of a database, and web-based communications.
- Facilitating workshops, and other forums, that encourage and help large organisations to work with small (e.g. through mentoring or business associations).
- Assisting in the initiation of new business – through facilitating contracts, access to technology, skills, finance, training, local networking etc. These activities can be fee-based, and will aid financial sustainability for the agency.
- Facilitating local business networks and business growth for the ICT goods/services sector.

Business Advice Sheet 2: Retaining Staff

High levels of staff turnover will have a negative impact on any business. This is particularly so for the typical women's ICT-based enterprise that employs a small number of workers, and where the skills and experience of key staff cannot be easily replaced. Staff terminate employment for many reasons. Some may leave for reasons that are unavoidable (to improve their career prospects; maternity; etc). But others may leave because they are dissatisfied with their work or because they feel they have been treated unfairly.

Retaining staff (staff retention) will likely have a positive impact on the performance of the enterprise. It will provide continuity and stability, and it will give the managers or workers within the enterprise a sense of belonging that encourages them to take greater pride in their work. It is the case, however, that work for ICT-based MSEs is likely to fluctuate. For this reason, owner/managers will need to employ a flexible approach to staff retention and layoffs.

Client enterprises need to be able to:
- Plan staffing effectively in accordance with changing market requirements.
- Ensure that the required skills are available for particular jobs of work in order to respond to fluctuations in demand.
- Provide an organisational culture that is motivational, and provides sufficient financial reward (incentives) for employees.
- Understand and make use of non-financial rewards (e.g. making the best use of capabilities and skills; providing continuous training; effective team working; and flexible working arrangements to manage work/life balance).
- Put in place appropriate contracts/terms of employment and procedures for staff dismissals/layoffs.

Agencies can help by:
- Encouraging enterprises to consult with their staff, assess how satisfied they are or what problems they may have, to treat staff fairly and provide support.
- Providing analysis and monitoring of staff and staffing in client enterprises, and advising on local recruitment opportunities.
- Encouraging enterprises to keep staff records and to involve staff in the appraisal of their work..
- Encouraging enterprises to introduce approaches to recruitment, interviews, training and team working that fall into line with accepted best practice..
- Facilitating collective training provision within an ICT-enterprise cluster that will benefit all the enterprises in the cluster (thus enabling enterprises to more effectively share workers and cope with fluctuations in demand).
- Facilitating the use of interns and volunteers who can be provided with training in ICTs and work experience. Local ICT students may consider a college placement in ICT-based enterprises as part of their programme of studies.
- Encouraging ICT-based enterprises to offer training in ICT as part of their business portfolio or to partner with a local training provider. This will then provide a pool of potential employees with relevant skills.
- Taking on a greater role in planning and coordinating training requirements that provide specific ICT skills that can be utilised by many enterprises (such as for maintenance of hardware/networks or software development).
- Encouraging internally provided continuous 'on-the-job' training.

Overall, there is no single action that can improve the retention of key staff. It is often necessary to look at the enterprise as a whole and assess the cultural and organisational factors that influence and affect employee decisions. Creating a positive working environment that values the contribution that staff make, and involving staff in decision-making processes, is often of equal importance to providing increased financial reward.

Business Advice Sheet 3: Obtaining Finance

Finance is essential for establishing and growing an ICT-based enterprise, or for making the necessary investments in an existing enterprise that wishes to take on new business. The financial needs of any enterprise are three-fold:

- *Capital investment funds* – in the form of loans to pay for start up costs (for a new enterprise), or additional capital requirements (such as upgrading of ICT equipment) for established enterprises that wish to grow or take on new business.
- *Recurrent investment funds* – the funds necessary to keep the business going (e.g. to pay wages, bills, etc). Payment in advance from customers, prompt payment upon completion of contracts and effective debt collection ensures that cash keeps flowing through the business.
- *Short-term credit to manage cash flow* - such as provided through overdraft facilities or micro-credit. This is required to manage the peaks and troughs in the business cycle.

Micro-finance/credit has emerged as a key strategy for providing financial resources to poor women who run small enterprises. There is mixed evidence concerning the extent to which ICT-based enterprises are making use of micro-finance/credit. The term micro-finance/credit can be used to describe different forms of financial assistance that can be accessed by MSEs.

For women-run ICT-based enterprises there are three primary sources of micro-credit:

- Informal credit from family and friends, money lenders, or small customers (e.g. in the form of advance payments for services rendered).
- Credit from institutions (such as banks) that is directed at specific sectors (in this case the IT sector) or via activities such as outsourcing arrangements (e.g. loans provided via the financial institutions associated with large customers such as government).
- Credit via cooperative or self-help means – such as micro-credit based on savings and loans schemes, revolving credit, credit unions, etc. These are often facilitated by NGOs acting on behalf of women's producer groups.

There is evidence, however, that ICT-based enterprises may also benefit from other forms of financial assistance:

- Favourable credit terms from banks supported by credit guarantees provided by agencies.
- Supplier credit – favourable terms from suppliers of ICT equipment and software.
- Investment through the supply chain – financial assistance from dominant customers including the direct provision of loans or delayed/flexible payment schemes.
- Direct provision or leasing of capital items (technology/software/training) as part of subcontracting/outsourcing arrangements.
- Equity financing – selling a stake in the business or in owned property in return for capital.

Agencies can respond to the financial needs of clients in four main ways:

- By facilitating contact with financial institutions and other sources of finance.
- By encouraging effective financial management (see Business Advice Sheet 7).
- By ensuring that women's ICT-based enterprises prioritise the repayment of loans – thus obtaining and retaining a good credit rating.
- By acting as a financial guarantor for commercial loans.

Business Advice Sheet 4: Buying Technology

Introducing new ICT or technology upgrading will be critical to the future sustainability of an ICT-based enterprise. Women entrepreneurs need to make the right decisions concerning the procurement of ICT equipment and software. A clear understanding of the business and financial benefits that will accrue from the investment should drive decision-making processes.

Key identifiable benefits should demonstrate how buying new ICT can:
- *Increase business* – through attracting new customers/contracts.
- *Cut costs* – through reduced expenditure on administration or communications.
- *Increase efficiency* – through greater flexibility in working practices.
- *Encourage business innovation* – through the introduction of new methods only possible through using ICT (e.g. remote working or email marketing).

The expected benefits should fully justify the costs incurred.

The costs associated with the purchase and use of ICT equipment need to be considered in full. They include the *initial costs* of purchase and the *on-going costs* associated with running and maintaining ICT systems. These make up the *total costs* (see table below).

Agencies should encourage female client entrepreneurs:
- To use and become familiar with computers before they purchase.
- To make cost effective investments in ICT systems that meet the business needs of the enterprise and its customers.
- To make ICT choices that build on, and which are compatible with, existing systems (if those systems are to be retained).
- To make ICT choices that can meet future demand as well as existing requirements.
- To choose simple (and usually cheaper) off-the-shelf solutions rather than more expensive customised software packages.
- To seek good advice and information – from other business users; through market research using computer magazines or the specialist trade press; or by talking to service providers.
- To treat with great care any claims of computer sales staff about costs or benefits.

Initial Costs	On-going Costs
Hardware purchase – of a computer will be a large investment for your business. Don't be disappointed if, six months after purchase, your computer has been overtaken by a faster model, costing the same price.	*Consumables* – printer ink/toner can become expensive, particularly if you are volume printing.
Software purchase – the computer you buy may not include the operating system and software you need for your business. The total cost of purchased software may exceed the cost of the computer.	*Communication access charges* – you will need to add in your local call charges to your ISP and the monthly access charges. If there is no ISP in your town/village then you will need to connect to the nearest large town/city, which will be more expensive.
Peripherals – you will probably need a printer and maybe a scanner. These costs must be added in.	*Staff training* – continuous staff training will be required for new software, systems, and upgrades. Help and advice from another business user may more valuable (and cheaper) to you than formal training.
Consultancy and advice – you may need specialist advice on initial purchases.	
Installation of hardware and software – all the necessary infrastructure and networking requirements plus items that protect against physical risks (power surges, flooding, etc) and virtual risks (virus attack, spam email, etc).	*Software support* – additional external support may be needed for upgrades or to troubleshoot software problems.
	Training time – time will be lost when managers and employees have to go on training courses.
Staff training – required to initiate the systems and get them up and running. There are many private computer schools and firms offering computer training. Compare their prices and talk to previous students or business owners who have taken the courses before you enrol.	*Time spent on-line* – dial-up connections can be very slow. This will add to costs associated with the up-loading and down-loading of data if it is done on-line.
	Other non-tangible costs – associated with the need to climb the learning curve, incurring time and personal costs that may detract from other business priorities.

Business Advice Sheet 5: Managing Operations

Managing operations involves transforming enterprise inputs into outputs. Inputs include those already covered: including staff and skills (see Business Advice Sheet 2); finance (see Business Advice Sheet 3) and technology (see Business Advice Sheet 4). We can also consider other inputs such as technical infrastructure (access to telecommunication networks) or social infrastructure (access to business networks, or information concerning rules, regulations or legislation). Outputs of the enterprise are the goods and services that the enterprise produces and sells in the marketplace to customers (see Business Advice Sheet 1).

How well the women's ICT-based enterprise transforms inputs into outputs will be a measure of enterprise efficiency. For an ICT-based enterprise three areas of operations management will be critical for achieving operational efficiency:

1. *Managing the performance of staff* – the speed and effectiveness of staff will affect every aspect of operations – some key areas to consider are:
- The need for workable and achievable performance objectives that are arrived at on an agreed basis.
- The need for time management systems that optimise performance but also allow for flexibility of staff.
- The need for effective and agreed record-keeping systems such as for absenteeism and logging on/off of work.
- The need for flexible skills that allow for switching of staff between jobs.

2. *Managing ICT resources* – securing information, systems and networks so that they are not subject to downtime, virus attack, etc. – some key areas to consider are:
- The need to take network security seriously such as by taking basic precautions for protection against computer viruses.
- The need for all staff to understand the importance of data security.
- The need for effective back up and storage of data.
- The need to protect against risks of electricity outages, fire, flood, etc.
- The need to protect against fraud and sabotage through effective documentation, and controls over the access of individuals to systems (such as through use of passwords, etc).

3. *Managing quality of ICT products and services* – through internal quality management and/or certification for recognised international quality standards (e.g. ISO9001). Some areas to consider are:
- The need to respond to customer requirements for quality standards.
- The need to apply effective quality control to management systems and processes as well as to final\products and services.
- The need to conform to recognised quality standards in areas where they apply to the delivery of ICT goods and services.

Managing performance, managing ICT resources and managing quality are all operational areas where owner/managers of women's ICT-based enterprises are likely to require support. Agencies, themselves, may not be able to provide specialist advice. Agencies can play a pro-active role in providing information, and linking women entrepreneurs to sources of specialist providers of knowledge and advice. There is a large range of web-based advice available (see Section 6), and locally-based consultants may be able to offer assistance.

Business Advice Sheet 6: Sales and Marketing

Successful ICT-based enterprises are not usually successful by accident. They are likely to have spent a lot of time understanding and getting to know their customers: finding out what their customers want to buy, why they want to buy it, and how much they want to pay for it. They will also be keeping a sharp eye on competitors, identifying strengths and weaknesses, as well as thinking ahead by making use of sales planning and forecasting techniques.

Most women's ICT-based enterprises are small and will achieve new or on-going sales through direct contact with new or existing customers. Agencies should focus on this area – by building capacity that reinforces and builds the interpersonal skills that are required for effective sales and marketing. Agencies should encourage:

- *Effective market research* – of existing and potential new customers, their organisations, the markets within which they operate or the activities they undertake.
- *The identification of public/private contracting opportunities* – whether to tender, responding to tender requirements, how to tender, submission of tenders, etc.
- *Targeting the right people* – those people within customer organisations who have the power to make and influence decisions concerning the awarding of contracts/business.
- *Making contact with right people* – by choosing the right time, communication method and personal approach.
- *Developing the right sales approach* – by emphasising the benefits (to the client) of the goods and services that the enterprise has to offer, rather than outlining the features it may have.
- *Working through sales agents and marketing intermediaries* – this may have the advantage of easier market access, lowering overheads and cost effectiveness, but the disadvantage of loosing control to a third party.

ICT can also be useful to assist in the marketing of products and services. **The Internet** may provide a means of marketing products and services and building the profile of an ICT-based enterprise. The Internet should be used alongside other media like telephone (such as a help line), radio and newspapers/magazines. A web site will not provide a solution to marketing problems but it may become as necessary as other forms of media – particularly if competitors also have web sites.

To be effective, web sites need to attract the right customers. A high proportion of people who visit a web site find it through a search engine or directory. Search engines generate lists of web addresses in response to particular queries entered by the potential customer. The sites most likely to be visited are those at the top of the list. Web pages, therefore, need to be designed so that they are located high on lists produced in response to relevant keywords.

A web presence can assist sales and marketing in the following ways:
- *Branding:* customers tend to stick with tried and trusted suppliers rather than risk buying an unknown brand. An enterprise's web site needs to integrate its brand into the customer experience of visiting the site. The brand (e.g. Amazon.com) should be associated with an easy to use website that offers high value in terms of information and services, has a trustworthy reputation, and is visually appealing.
  Personalisation: customer information (names, addresses and registration details) can be used to track preferences and tailor the contents of a web site to suit individual tastes. For example, an enterprise's site can suggest products that a particular customer might be interested in, based on his or her purchasing history or the pages they have already viewed.
- *Email marketing***:** email is likely to be the most cost effective way to market a women's ICT-based enterprise. A signature file should be added to all emails. This is the same as using headed paper or attaching a business card. Most email software enables this to be done easily.
- *Testimonials:* these are genuine comments that satisfied customers have made about an enterprise's products or services. Effective use of testimonials builds credibility and makes customers feel more secure – especially for online purchasing. Effective testimonials will be unedited, genuine, freely given, used with the author's permission and accompanied by the author's name and location.

Business Advice Sheet 7: Financial Management

Obtaining finance (see Business Advice Sheet 3) is essential for any women's ICT-based enterprise. Effective management of finances is an equally important objective. Poor management of internal finances is one of the most common reasons for business failure. The key financial issues for most enterprises are "credit", "debt" and "cash flow", and most other issues such as record keeping, security, fraud, etc, are connected in some way to the simple question – has the enterprise sufficient money ("liquidity") to pay the monthly (and other) outgoings. An enterprise that runs out of cash is likely to fail.

Women's ICT-based enterprises can reduce problems of internal financial management by:
- Employing effective financial management systems to monitor and control the flow of cash through the enterprise.
- Employing effective means of controlling credit and creditors (people to whom the enterprise owes money).
- Employing effective means of controlling debt and debtors (people whom owe money to the enterprise).
- Employing effective pricing structures for ICT-based products and services. Prices charged for services rendered need to be competitive, but they also need to cover all fixed and variable costs incurred, and earn sufficient profit to keep the business running.

Some basic advice for enterprises on extending credit to customers:
- If at all possible, avoid giving credit. Insist on payment up front or receipt of total payment prior to the service being delivered in full.
- Where credit is required to secure business, demand part payment or deposits in lieu of services rendered.
- It is unwise to extend credit to new customers that can produce no business reference or proof of previous credit performance (i.e. they have no credit rating).
- Offer only small amounts of credit to new customers, and larger amounts only to those customers with a proven track record of settling their accounts.

Dealing with large customers:
- Dealing with government or other large organisations raises a different set of issues. Here credit becomes unavoidable, and the prospect of lengthy delays (30-60 days or longer) in getting paid for work undertaken must be taken into account in the overall financial planning of the enterprise.
- There are also issues of delays experienced in tendering processes (again 30-60 days or longer) when prices quoted can become uneconomic due to rapidly rising or unforeseen costs. These risks should be factored into quotes for tender for government or private sector contracts.

General advice on dealing with cash flow problems:
- Debtors are a problem but there are two sides to the coin. The enterprise can also take advantage of credit offered by suppliers, thus keeping cash in the enterprise for longer.
- Arrange a bank overdraft or access to revolving micro-credit in order to manage cash shortfalls, or spread the risk by finding another source of cash – such as running another enterprise or cash-generating activity.
- Employ effective financial record keeping (see Section 6 for sources of further information concerning financial record keeping in small enterprises).
- Pay particular attention to keeping separate personal/household expenses and business expenses.

Business Advice Sheet 8: Choosing a Business Strategy

You choose a business strategy based on identifying critical success factors that will lead to successful outcomes for the women's ICT-based enterprise. For most enterprises the overriding goals will be to increase sales and/or profitability. Achievement of goals will require operational requirements to be prioritised and specific actions to be taken.

Most ICT-based enterprises are selling into markets that are competitive and require competitively priced or low-cost products and services. A very straightforward approach to understanding whether or not an ICT-based enterprise has a low-cost business strategy is to compare the prices of goods or services it produces with the price of equivalents provided by other enterprises.

Another way to understand business strategy is to analyse the market segments or market niches that ICT-based enterprises are able to attack. We can distinguish between *market creators* and *market followers*. Most ICT-based small enterprises are market followers and will seek to enter established mature markets (e.g. for ICT training, data entry, assembly of PCs, etc.) by adopting a *low-cost business strategy*. Market creators, on the other hand, are able to identify new applications of ICT in the form of new products and services (e.g. based on growing technologies like m-commerce or open source software). These entrepreneurs will be innovators and are ahead of the market – seeking to provide new ICT-based solutions to meet new demands for information processing and communication.

Strategy choices will be determined by a combination of the characteristics of the enterprise and markets within which the enterprise is operating.

- *Strategy choices depend on the type of the products or services the enteprise offers.* Generally speaking, small enterprises are better able to compete in ICT goods and services that are "labour intensive" (i.e. that require a lot of human effort and cannot easily be automated). Data entry and the production of custom software fall into this category.
- *Strategy choices depend on the location and the type of market the enterprise is operating in.* In some markets small enterprises may have an advantage. The market may be reserved for small enterprises only. Another example may be an ICT enterprise in a small town where it is the sole supplier: the town is too small and remote to attract competition from other firms.
- *Strategy choices depend on the willingness of the women in the enterprise to force their own costs down* – through paying lower wages or getting longer hours from their staff compared to those in a larger firm; or through avoidance of other costs associated with larger firms such as taxes or licence fees; or through the use of cheaper technologies and materials than those used by larger firms. An example might be a small ICT training firm that pays its staff less than a larger firm, and only provides one PC per two trainees compared to one PC per trainee in a larger firm.
- *Strategy choices will depend on other factors that relate to effective marketing and customer loyalty.* Customers that are well connected to the enterprise owner may be willing to pay a premium for the services because of their personal loyalty to her, or because they believe that the service offered by her ICT-based enterprise is better suited to their needs (in terms of timing of delivery or provision of credit, for example) than that of a large provider.

If ICT-based enterprises in developing countries cannot compete on cost, then they must turn to the other strategies such as "product/service differentiation": doing something different that other enterprises do not do. The chances of a true differentiation strategy – producing a new good or service – are extremely unlikely for small enterprises since they are almost always imitators rather than innovators. Non-cost strategies will therefore tend to rely on serving a particular niche market.

Listed in Table 7 are a number of strategy options that could be applicable to women's ICT-based enterprises, together with suggestions for specific operational requirements and actions, and an example of each.

Table 7: Strategy Options for Women's ICT-Based Enterprises

Strategy	Specific Operational Requirements	Specific Actions	Example
1. Increase sales to existing customers.	Help build repeat orders. Develop customer loyalty. Expand range of products or services.	Increased advertising and promotion. Better communication. Better customer service. Broaden range of goods/services.	An enterprise manufacturing and selling PCs can also sell networking and installation and software and training to the same customers.
2. Increase sales by locating new customers in existing or new markets.	Expand domestic markets. Explore export markets. Enhance marketing skills.	Better market information. Attendance at trade shows. Better cross-border business networking.	An Internet service provider could expand its geographical reach by trying to attract customers from nearby towns.
3. Increase sales by diversifying products and services.	Development of new products or services.	Market research. Use of consultants and/or technical assistance.	A telecentre could also take on a training role or develop and sell software solutions.
4. Increase profitability through increased internal efficiency.	Fixed costs control, shorter lead times, greater flexibility, increased capacity, quality control.	Standards compliance. Employee involvement. Training and skills development.	A data entry enterprise could introduce 24-hour shifts and flexible working.
5. Increase profitability through reducing costs of inputs.	External supply chain efficiency improvements.	Better purchasing. Workforce/resource planning. Training and skills development.	A micro-enterprise developing software could switch to open source.

4d. Other Good Practice For Women's ICT-Based Enterprises

The advice provided in Section 4c was business-oriented; recognising the positive role that IT sector business can play in women's livelihoods. In addition, though, we need recognise some of the specific issues facing women from poor communities in developing countries who become involved in ICT-based enterprises. The advice sheets in this section reflect such issues, focusing particularly on gender issues that can sometimes be overlooked when there is a strong focus on business.

Gender Advice Sheet 1: Being Gender Aware

In managing or supporting women's ICT-based enterprises it is important to consider factors that are gender-specific, particularly since women are in the minority when we look at engagement in ICT. Though some challenges faced by these entrepreneurs are common to men and women, others are not. These issues are discussed elsewhere in this handbook but some key points are summarised here:

- the "non-gender-neutral" nature of technology: in other words, ICTs do not have the same impact on men's lives as on women's lives;
- engaging with ICTs means more than just participating with them: it also means taking control;
- engaging with ICTs appears to be universally gendered (i.e. women globally appear to share a marginalised position); and
- gender relations are embedded in their environmental context.

It is important for enterprises and support agencies to be aware of how this impacts on women in ICT-based enterprises. Considering the following can help to become more gender-aware.

- **Understand the multiple gender roles that women take and how these can affect each other:** these multiple roles (family, business/income, and community) may affect a woman's choice of profession, what hours she can work, where she can work, how flexible she can be, etc.
- **Understand how far women are really engaged with the ICT-based enterprise, rather than simply participating:** evaluating the real engagement of women with ICTs covers many aspects, including judging how far they are:
  – participating as *ICT users*;
  – participating in the *decision-making and control* of ICT deployment;
  – involved in the *design and use of the hardware and software* components;
  – involved in the *design and form of information content*;
  – participating and interested in the *training and education programmes* available;
  – successfully participating in the *ICT employment culture* in all levels of ICT professions.
- **Understand how far the more strategic needs of women are being met, as well as their more practical needs:** not only evaluating what women need to survive in their socially accepted roles within existing power structures but also supporting their more general empowerment in the community, which may include challenging existing power structures.

What Women in Enterprises Can Do
There are a number of ways that women entrepreneurs can themselves respond to the issues of gender awareness within their own enterprises:

- **Address gender norms**: be considerate of cultural barriers and constraints affecting women's roles as active members of the enterprise and accommodate these. For instance, culturally it may be difficult for women to travel away from home. Find more flexible ways of working.
- **Build capacity**: women are more likely to need more advanced ICT training, and entrepreneurial skills training. Develop appropriate further training, tailor-made to their needs, and encourage life-long learning. Provide access to knowledge-sharing forums.
- **Foster control**: knowledge, skills, confidence, etc. are needed to help women be more active as decision-makers (e.g. by handling external connections etc). Encourage female staff to participate and engage in decision-making bodies and responsibilities.
- **Take other women seriously**: the self-employed in general, and young and inexperienced women in enterprises may not be taken seriously initially. Use networks to strengthen bargaining power and increase confidence.

- **Balance roles**: in most societies women bear responsibility for family and childcare and domestic duties. Recognise the difficulties women may have in juggling these with their work responsibilities and build flexibility to accommodate them (e.g. limit the working day, etc).

What Agencies Can Do

Agencies can respond to the gender needs of clients in women's ICT-based enterprises in several ways:

- Address the social responsibilities of women entrepreneurs by tailoring their programme training schedules to allow greater flexibility.
- Offer specific training programmes for women.
- Include gender-specific content in the training provision that is provided.
- Incorporate discussions about ICT gender-related issues in training modules for women entrepreneurs.
- Sensitise policy-makers and other stakeholders to the specific barriers that women face.
- Encourage and motivate women to learn more about the technology and how they might use it but avoid oversimplifying the learning curve and recognise possible hurdles.
- Relate the technology to women: anchor the use of technology to the issues important/relevant to them.
- Help provide access to credit/funding sources.
- Support specific access to other services for women.
- Offer actions to enable and build networks of women entrepreneurs.

Women ICT Trainers in India

Gender Advice Sheet 2: Work, Household and Community

When enterprise agences support women's ICT-based enterprises, they must take account of gender. Gender is about differences in the way men and women are seen and are treated and can act. It is built into the social and economic and cultural and political fabric of all societies. It can be useful to see the difference between *strategic* gender needs – that relate to women's position and power in a society - and *practical* gender needs – that relate to women's more specific material needs such as access to credit, technology, education etc. A support agency may well assist with the latter while doing nothing to address the more deep-rooted differences between men and women that are represented by the former.

For women particularly it can be useful to think about all this in relation to their "triple role": the role they play first in the workplace, second in their own families and households, and third in their communities. We can consider each of these in a bit more detail:

Workplace: In the work sphere, women entrepreneurs face issues that are *generic* to ICT enterprises and that which are specific to *women as entrepreneurs*. The generic aspects could be related to access to technology, credit, staff/skills, infrastructure, marketing and business strategies. However, barriers *specific to women* could relate to *social norms* that restrict women:
- from working late or unsocial hours,
- from travelling alone to distant places or during unsociable hours, or
- from spending more time at work, especially those with household responsibilities.

Therefore, in general, women tend to rely on coping strategies such as increased reliance on male employees to work late shifts or to supervise work or reliance on other family members to support them when they work. This can be difficult, especially for younger women.

Household: Issues of power and powerlessness are strongly reflected for women in the household where they may find they are:
- Limited in their ability to make decisions about household affairs.
- Pressured to contribute to household expenses
- Pressured to give up work after marriage or child birth or by those in the household seeking more assistance themselves.

Community: Social norms play an important role in communities often shaped by religion, culture or position in society. These norms often restrict women – defining whether or not they should work, or defining what sort of work they should do, or making it harder for them to follow particular choices. Self-employment in an ICT-based enterprise may not be seen as a suitable option due to the type of work, irregularity of income, contact with variety of customers, lack of community controls, etc.

Assistance on this may take several forms:
- Promoting the value of self-employment, especially for young unemployed women.
- Providing information on the need for flexibility within ICT-based enterprises that results in working unsocial hours.
- Facilitating community linkages and household networks to support women entrepreneurs and to project them as role models in the community.
- Facilitating networks that tackle discriminatory gender and social barriers, e.g. community networks.
- Facilitating infrastructural support for working late and travelling late hours, e.g. security, transport.
- Encouraging working women with household responsibilities to identify and address the social pressures they are under.
- Identifying specific needs such as child care, care of elderly, and facilitating "family-friendly" policies.
- Facilitating institutional provision of gender-sensitive measures such as maternity leave and pay.

Gender Advice Sheet 3: Reducing Financial Vulnerabilities

By entering ICT-based micro-/small enterprise poor women are creating a means to secure a livelihood for themselves and their families. However, they are also leaving themselves open to financial vulnerability. The particular vulnerabilities that poor women face may result from:

- Over-dependence on a single source of income.
- The threat of losing income temporarily due to a downturn in demand.
- The threat of losing their livelihood completely if the enterprise goes out of business.
- The need to work long hours for relatively low rates of pay.
- The possibility of being unable to work due to illness.
- The loss of time and energy that could be directed at other (possibly) more sustainable income-generating activities.

These can be exacerbated by ICT-based work because the ICT market can be quite volatile.

Poor women can lessen the risk associated with ICT-based either individually or collectively. Actions the individual can take include:

- Offer services to more than one enterprise; i.e. be in a position to move quickly between enterprises and follow the work as it arises.
- Improve skills in specific areas – such as through undertaking training in particular software applications or IT services that are popular locally. Displaced women workers will get re-employed more quickly if they have skills that are in demand.
- Diversify sources of income and allow enough time and energy to earn other forms of income that are not dependent on the ICT-based enterprise activity.

Actions that can be taken collectively include:

- Become part of a pool of women that are able to sell their services locally. These may be organised informally by the women themselves, by working through local enterprise support agencies, or by forming into a formal cooperative enterprise (the model for the Indian enterprises described in Section 2).
- Participate in local micro-finance initiatives that cater specifically for poor women. These are intended to provide a means to save, to access loans and to take out forms of insurance that are suited to the poor. These forms of revolving loans and credit can help groups of women workers provide collective financial security for those who are members.

If women are to become more involved in ICT-based enterprises then action needs to be taken to reduce the risks associated with employment in the sector – which can be highly competitive, volatile and demanding of women's time. Agencies can take a number of steps to assist groups of women that are working in this sector:

- Agencies can carry out surveys of local employment trends and collect information concerning the particular needs and vulnerabilities of women workers, and make that information available locally.
- Agencies can act to bring women together to form associations of ICT-based workers or enterprises. The former would be collectives of women workers, valuable in situations where many of the women are individual entrepreneurs offering their services to others. The latter would operate like a business association of women's ICT-based enterprises.
- Agencies can pressurise large private sector customers and government departments to provide opportunities for poor women in ICT-based enterprises, through creating favourable conditions for outsourcing of work (such as flexible working hours and opportunities for part-time work for women with families). These requirements could be written into the contracts given to ICT-based enterprises.

Gender Advice Sheet 4: Technology Skills for Women

Women face particular challenges in getting the skills needed for work in ICT-based enterprise. These include:

- The global division of labour: women in developing countries continue to be assigned those jobs with the least skilled level of work and lowest payment. This is also true of work in the IT sector more broadly.
- ICT-related skills are, of course, central to work in an ICT-based enterprise. The kind of basic skills (such as word processing) sufficient for some enterprises are possessed by a number of women. But other enterprises need higher-level skills and knowledge (such as the ability to develop databases or e-commerce applications) of the type of that few women have.
- If women are to gain the higher-level skills and jobs required in ICT-based enterprises, they will typically need an educational background in science and technology. Yet, female participation in science and technology world-wide is lower than male participation at all levels of the education system.
- Capacity building for women needs to be a continuous, long-term undertaking, particularly since the technology changes constantly and skills quickly become out-dated.
- If women are to be truly supported in making advances in ICT-based enterprises, they need understanding and support among those who are making policy and strategic decisions about ICTs. Yet, for example, few senior government officials in charge of ICT in developing countries are women: estimated only about 5% in 2001.
- The image of the world of computing and the kind of work culture and conditions women can expect there is an important factor deterring women from choosing to work with ICTs.

With this in mind, it is important for enterprises and support agencies to be aware of how this impacts women in ICT-based enterprises. The following interventions can help overcome some of these challenges and enable women to acquire the appropriate skills and experience.

What Enterprises Can Do

- **Build capacity**: find ways to obtain the training needed to develop advanced ICT training, and entrepreneurial skills. Look at ways to build skills "on-the-job". Find ways to access to real-world or online networks sharing ideas and skills about ICTs. Look for women-specific training schemes or scholarships that can be used to build ICT skills.
- **Build responsibility**: higher levels of responsibility within the enterprise should typically mean a build-up of knowledge and skills. Finding ways to build responsibility will therefore help; e.g. by mentoring, seeking support from outside agencies, enabling staff to have a short secondment in another enterprise, sharing activities with other ICT-based enterprises, etc.
- **Challenge stereotypes**: encourage and support women who are considering building their ICT skills and challenge any stereotypes that see higher-level ICT activities as "men's work".

What Agencies Can Do
Agencies can respond to the gender needs of clients in several ways:

- Offer specific technical training programmes for women, including offering – or providing access to – higher-level ICT skills training.
- Include gender-specific content in training that would seek to encourage/motivate women to gain ICT skills – including higher-level skills – whilst recognising some of the barriers they may face.
- Seek external funding or support – e.g. from government or donors – for schemes that would build ICT skills, especially higher-level skills, for women.
- Create skills/knowledge forums that allow women to share ICT experiences and expertise.
- Develop other initiatives – mentoring, secondments, etc. – that enable the diffusion of ICT skills to women in ICT-based enterprises.

5. Supporting and Evaluating Women's ICT-Based Enterprises: *The Agency Perspective*

This Section focuses on you – the support agency – and gives guidance on how best to encourage more and better women's ICT-based enterprises. Using examples from several such agencies, details of the type of support that is useful and how best to provide it are discussed.

5a. *What* is a Support Agency?

Just as we have seen in Section 2 that there are different kinds of ICT-based enterprises, so there are different kinds of support agencies. They differ in terms of their size, their clients, their socio-economic emphasis, their funding basis, and their ability to influence policy. Support agencies may belong to any of the following:
- International non-governmental organisations (INGOs)
- National/local NGOs
- Cooperatives
- Banks
- Government agencies
- Business associations/private sector

Three agency case sketches are presented here:
- *ELIF Business Solutions*, a private sector organisation in Zambia that supports enterprises in vulnerable and under-served communities;
- *BusyIncubator*, a short-term donor-funded agency within a private-sector organisation in Ghana which aims to help develop sustainable enterprises through ICT deployment and entrepreneurial skills;
- *Kudumbashree*, the State Poverty Eradication Mission set up in the State of Kerala, India, which aims to support enterprise development as a means to empowering poor women over a ten-year period.

These cases show different ways in which ICT-based enterprises for women can be supported and the different forms (and goals) that supporting agencies may have. As a support agency it is important to consider what areas of support you can provide. For instance, several agencies surveyed provide financial support, technical and business training, and access to knowledge and infrastructure. Some of these are private sector organisations and some funded through donor organisations and NGOs. Other support agencies provide a link to relevant markets for the enterprises: for instance, *Kudumbashree* help women's ICT-based enterprises get contracts for government work.

One final note. Research shows that agencies tend to work best with enterprises that are "like" the agency. So, private sector agencies are often best for private business enterprises, NGO agencies are often best for community-based enterprises. Perhaps this is simply because they have shared values and norms but, as an agency, it is important to consider the influence you may have on an enterprise and the type of enterprises you work best with.

Agency Case Sketch 1: ELIF Business Solutions (Zambia)

Formed in 2003, ELIF Business Solutions is a private sector organisation, aimed at establishing leadership in media communication, marketing and business development services provision in rural areas and underserved communities, to contribute to community development and women's empowerment. It receives donor funding and supports several women's IBEs, such as a rural women's development information network, and the Kalomo Bwacha Women ICT Enterprise, which is involved in a number of ICT activities such as a multi-purpose community telecentre.

Agency Support is determined through a participatory appraisal approach to find out women-specific and enterprise needs. Support provided by this agency includes:

- *Finance:* non-repayable grants of up to US$400 to purchase ICT equipment and partial infrastructure development.
- *Training:* basic ICT training to run the enterprises and to be able to train other communities or offer internet access, email and other related ICT services.
- *Business and technical advice*.
- *Technical assistance:* necessary software and installation support and internet connectivity.
- *Marketing:* publicity and advertising through radio, internet and newspapers.
- *Social welfare*: assisting development of social welfare aspects of women's groups.

This support is provided via:

- Sub-contracted training / advice sources depending on the required needs.
- Tailor-made support through the use of self-assessment models.
- No specific gender-sensitisation but general sensitisation to needs and capacities.

Monitoring & Evaluation:

- Women's ICT-based enterprises are monitored by pre-planned budgets with expected time bound deliverables which are set for each enterprise activity. Quarterly reports are presented to cooperating partners. There is an external evaluation, with an "all-stakeholders" meeting.

Critical Success Factors:

- Capacity to respond and act on the broad range of all enterprise enquiries and issues.
- Capacity to strategically market the women's ICT-based enterprise to various sectors.

Challenges:

- Poor/ inadequate ICT skills capacity (see Gender Advice Sheet 4).
- Inadequate enterprise and management skills capacity (see Agency Advice Sheet 3).
- Limited funding opportunities for women's ICT-based enterprises (see Business Advice Sheet 3 and Agency Advice Sheet 4).

Good Practices and Lessons Learned:

- Use a participatory approach for women-owned and -managed ICT enterprises, which encourages the women involved to drive the whole process from planning to implementation; leaving the agency to only a facilitatory role.
- Do not pre-charge for agency services (paid by donor/ sponsors).
- Facilitate the development of self-capacity in the core implementation team of the enterprise, including the building of team-working skills among the women involved.

Contact: Edwin Zulu - ezulucamp@yahoo.com

Agency Case Sketch 2: BusyIncubator (Ghana)

BusyIncubator was formed in October 2004 in Accra, Ghana and operates within BusyInternet, one of the largest privately-owned ICT centres in Africa as a collaboration between two investment companies. It provides internet access through cafés and offers office accommodation to assist ICT-enabled enterprises, and e-commerce enterprises which are majority-owned and managed by women.

Agency Support provided includes:
- *Infrastructure*: physical premises and wired space with subsidised rent.
- *Training*: in-house training and technical assistance on a one-to-one basis.
- *Business Advisory Service*: such as marketing, management, accounting, and assistance with search for funding.
- *Technology*: providing computers and internet broadband connectivity; plus technical expertise.
- *Marketing*: various assistance such as quick market analysis, advertising, promotions, publicity and branding to make products distinct in the local market.
- *Other*: legal assistance; access to community of like-minded entrepreneurs for networking and knowledge sharing, building confidence, etc.

This support is provided via:
- Use of their own modules for training, but is now linking up with specialised business and ICT training institutions.
- Tailor-made programmes to meet the specific needs of the incubatees.
- Costs are subsidised (by donor funding) with a minimum fee of 10%, charged to the incubatees.
- Gender sensitivity, e.g. schedules tailored to provide flexibility to women with family responsibilities.

Monitoring & Evaluation:
This is achieved via records of daily transactions, monthly reports on progress, baseline activities, needs, and contracts. Information on financial performance is submitted and discussed with the Finance Manager (evaluation systems are in the process of being developed).

Critical Success Factors:
- Commitment, publicity and support from all stakeholders (e.g. incubatees, incubator company, donors, related government bodies, other fundres).
- Management expertise for the incubator through the experience of BusyInternet.
- Exposure to similar incubators in other countries.

Challenges:
- Funding: short funding programme duration for donor funding; lack of access to institutional credit; risk of early exit due to difficulty of raising the necessary capital (see Business Advice Sheet 3 and Agency Advice Sheet 4).
- Market: Sustainability of the enterprise in a difficult market terrain including competition from foreign companies (see Section 4B).
- Training: need for effective training programme (see Agency Advice Sheet 3).
- Reputation: failure by any of its incubated enterprises might damage agency's reputation.

Good Practices and Lessons Learned:
- Undertake sound financial modelling for enterprise to build financial projections.
- Disseminate company profiles to improve funding and gain more clients.
- Make effective use of shared resources to develop a community of women entrepreneurs.
- Build start-up capital for women's ICT-based enterprises into donor support for the agency.
- Inculcate the value of continuous learning or upgrading of business skills into women entrepreneurs.

Contact: busyincubator@busyinternet.com
Web: www.busyinternet.com

Agency Case Sketch 3: Kudumbashree (India)

Kudumbashree is the Kerala State Poverty Eradication Mission set up in 1998 with the support of the central government, with an objective to eradicate absolute poverty within ten years. It aims to do this by (i) increasing capability, competency and confidence of poor women; (ii) networking of poor families into community-based organisations; and (iii) setting up micro-enterprises for women with certain skills, such as IT, as a tool for enterprise development and empowerment. The skills and literacy levels are already existent in this socially developed region, so Kudumbashree's main role is as a facilitator. Since 1999, various government initiatives – computerisation of government records, and introduction of ICT classes in schools – have created an opportunity for women's ICT-based enterprises. To date, there are 234 women's IT units (enterprises) working on data entry, IT training and hardware assembly.

Agency Support provided includes:

- *Selection of groups:* women are selected from self-help groups through interviews and testing of skills to set up an enterprise.
- *Initial capacity building* in setting up and running an IBE: e.g. training in account keeping, team working and staff/enterprise management, general IT skills plus enterprise-specific IT skills.
- *Facilitation of institutional loan:* (via banks, which is usually impossible without collateral security) as a component of the state micro-finance programmes.
- *Tight evaluation/monitoring.*
- *Intermediation* with public sector customers to secure orders and ensure quality of outputs.

This support is provided via:

- Free and standardised integrated provision during the initial phase, after which all support is customised (e.g. region-specific, or higher order skills, etc) and a service charge is introduced.
- Other costs are also charged to the women's IT unit.
- Over a four-five year period, support has been gradually phased down, with units increasingly undertaking their own sales/marketing.

Monitoring & Evaluation:

- A tight M&E programme is built into enterprise activities. Unit performance is monitored at regular intervals (covering aspects such as financial management, loan repayment, work contracts accrued and completed, etc). Annual reports are required and annual audits take place for accountability of finance.
- Use of the Web and email as a medium of communication assists transparency, with a publicly-available performance ranking system based on measurable indicators..
- Monitoring is done by Kudumbashree local staff; for example undertaking occasional quality checks of all completed work from the women's IT units.

Challenges:

- Dependency on Kudumbashree for some work contracts (see Business Advice Sheet 1).
- Staff retention: as women take new jobs or take leave-of-absence for marriage/childcare (see Business Advice Sheet 2).
- Changing technology: need to develop skills and invest in new hardware and software (see Business Advice Sheet 4).
- Competition from other enterprises seeking similar work (see Business Advice Sheet 8).
- Non-payment/late payment from government sector work (see Gender Advice Sheet 3).

Good Practices and Lessons Learned:

- Sharing of information between the women's IT units through criss-cross learning; inter-unit visits, and more informal get-togethers.
- Tight monitoring and evaluation enabling easy assessment for women of comparative performance, and early identification of problems.

Contact: spem@asianetindia.com
Web: www.kudumbashree.org

5b. Identifying *Whom* to Support and *Why*

Why should you support women's ICT-based enterprises? Section 3b highlights several potential benefits to you as the supporting agency. These include:
- Achieving your own goals, e.g. getting donor funding.
- Achieving social welfare objectives.
- Gaining recognition or improved performance appraisals.
- Gaining kudos in the community and/or an improved corporate image.
- Contributing to enhanced entrepreneurship development and employment, and growth in the market.

For instance, *Kudumbashree* (India) sees that the enterprises it supports serve as a backbone for an information network, significantly helpful for social welfare in the state. This has increased liaison with local government departments and helped develop a credible Kudumbashree brand. *BusyIncubator* (Ghana) sees its work as a social responsibility and community service to catalyse the development of women entrepreneurs, as well as building a good corporate image in the country. *ELIF Business Solutions* (Zambia) sees the main benefit in helping women's ICT-based enterprises is to contribute to development and women's empowerment, and secondly for the good publicity it generates.

It is important to clearly define the **role** you wish to provide as a supporting agency. If the enterprises (or the entrepreneurs) are to be sustainable, it is important to avoid a culture of dependency forming between your agency and the enterprises. For instance, in the case of *Kudumbashree*, support appears to be more intense for the first three years of the IT units' life; after which it is scaled back to more occasional advice, marketing assistance and quality checks.

Figure 9: Tensions in Prioritising Which Clients to Support
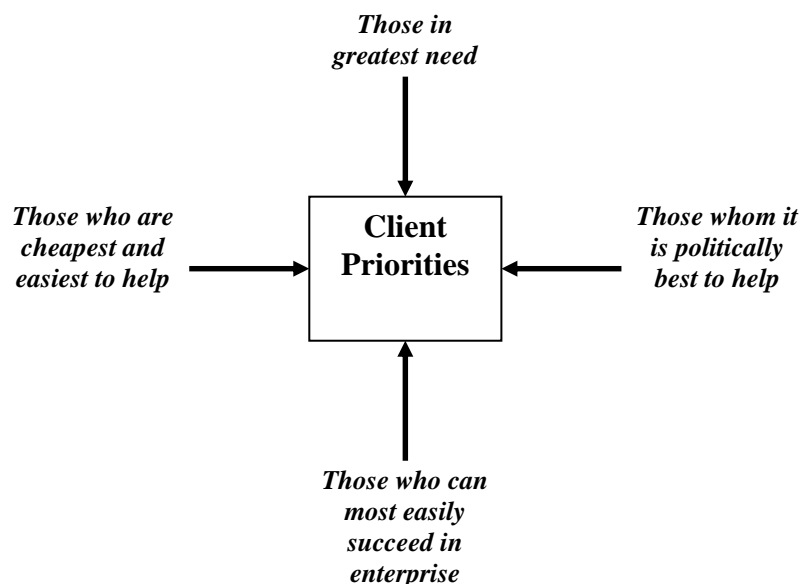
As well as thinking **why** you want to support women's ICT-based enterprises, you also need to decide **which groups** you are going to focus on. Your agency's choice could be based on:

- *Enterprise potential*: do you want to support those most likely to be able to grow their enterprises, or support those who have least entrepreneurial knowledge and experience?
- *Location*: do you want to support rural women, or urban women, or women in a particular community locality?
- *Income*: do you want to support only those women living below the poverty line?
- *Other*: do you want to support particular members of the community, e.g. young women, or women from a particular ethnic group?

But you must recognise there may be tensions between different priorities for your help, as illustrated in Figure 9.

Key Questions

| |
|---|
| What are the goals of your agency? How do they relate to helping women's ICT-based enterprises? (For example to issues about business vs. social welfare orientation; and to issues of enterprise impacts and sustainability?) Do you already have a particular set of clients you work with, or are you making a free choice? Will your choice of programme and client be affected by the size of your agency, or the funding sources available? How will you answer the questions about which group to support? How will you manage the tensions between different priorities? |

5c. Determining *What* Support to Provide

i. Support Options

What are the support needs of your client enterprises? Studies show that "one size does not fit all": different enterprises require different support, and different agencies are better equipped to provide different types of support.

The success of an enterprise (at start-up and in its ongoing survival) is affected by several factors (see Figure 10).

Figure 10: Different Support Needs of an Enterprise
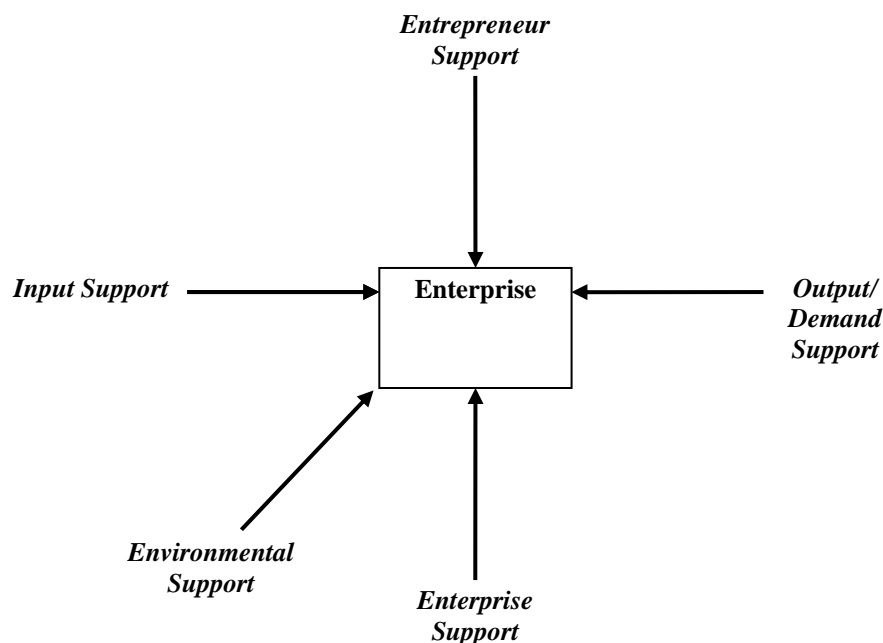
Support options you may consider providing for women's ICT-based enterprises are:

Input Support: addressing the inputs an enterprise needs in order to function. These include the finance, premises, equipment, raw materials and so on needed by the enterprise, as well as access to information and skilled labour. In the case of *Kudumbashree*, for example, the agency provides **financial** loans to each enterprise at start-up, and assists with the procurement of **equipment** and **premises**. Additionally, the agency provides a network through its community links to relevant **skills training**. Most emphasis here is on start-up support; once the women's enterprise is running it is expected to be self-financing and to identify and recruit its own staff.

Entrepreneur Support: assisting the specific needs of the entrepreneur(s) herself. Different types of entrepreneur can be distinguished as follows:
- *Survivalists*: who have no choice but to take up the income-generating activity.
- *Trundlers*: whose enterprise turnover is roughly static and who show no great desire or no great capacity to expand.

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These two categories may depend on agencies for finding markets, for finance, for capacity building, and for motivation.

- *Flyers*: true entrepreneurs who have taken up enterprise because they see opportunities for growth.

For this category, building business linkages is important and information access may be a top priority.

Differences between male and female entrepreneurs have also been identified. For instance, it has been suggested that women focus on different goals, being more concerned with their family's survival than business growth. Others argue that women entrepreneurs tend to be more sensitive to the needs of other people and value the well-being of the group rather than purely profit maximisation or enterprise growth. Because of this, they have different support needs to male entrepreneurs and so your agency's support should have some sensitisation to women entrepreneurs' specific needs.

Output/Demand Support: helping create demand for what the enterprise produces. The agency may assist in marketing the goods/services of the enterprise to reach new markets, or may directly provide clients/contracts for the enterprise. For instance, *Kudumbashree's* links to local government have enabled the women in its IT enterprises to apply for government work **contracts**. *PTPNM* enables networks of women-owned enterprises to join forces to compete for **contracts**. *ELIF* provides internet access and **marketing** assistance.

Enterprise Support: addressing issues regarding the running of the enterprise. An agency may provide advice and/or training on any aspect of running the enterprise. For instance, several agencies (e.g. *BusyIncubator*) provide business **advice**; *Kudumbashree* provides monitoring and evaluation **procedures**; *PTPNM* forms a **public-partnership** with the women's ICT-based enterprise.

Environmental Support: addressing environmental factors within which the enterprise operates. Several agencies support enterprises by enabling them to **network** with other enterprises to form partnerships and/or cooperatives to share knowledge, bid together for contracts, etc. (e.g. *BusyIncubator*, *PTPNM*). Others lobby government or raise awareness in other social/community groups for **policy change** (e.g. *WomensHub*).

Figure 11: The Enterprise Lifecycle
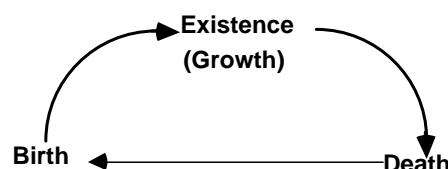
The lifecycle of the enterprise – illustrated in Figure 11 – is relevant in indicating the types of support that may be needed. So, whether as an agency you are able to

support **start-up** enterprises or **existing enterprises** (which are already established), or both, needs to be determined.

For instance, the agency case sketch from Ghana, *BusyIncubator*, illustrates how support for women's ICT start-up enterprises are targeted: they are first located in the agency's incubator environment where they are provided with infrastructure, free training and capability building until they become established and move on. Other agencies focus on providing enterprises with a web-presence and networking infrastructure to connect them with potential business alliances and customers, throughout their lifecycle.

The nature of the support required may need to be **tailor-made**. For instance, start-ups may need basic and specific information about input supplies, whereas existing enterprises may need information on supply improvements. Other assistance may be of a more **generic** nature e.g. enterprise skills development training, or technical and business support. More discussion of this can be found in Section 5d.

Kalomo Bwacha Women's ICT Club in Zambia with ELIF Support Staff

Table 8 highlights some examples of agency support from around the world.

Table 8: Examples of Agencies Supporting Women's ICT-Based Enterprises

Agency	Agency Type	Target Enterprises	What Interventions	How
ELIF (Zambia)	Private sector; donor funded	Vulnerable communities especially women; start-ups and ongoing	Finance; training; business advice & info; software support & internet access; marketing; links (to donors)	Tailor-made via self-assessment; participative needs analysis; sub-contract training; costs covered by donor
BusyIncubator (Ghana)	Private sector; donor funded	Small businesses in ICT services; particularly women; start-ups only	Subsidised premises, equipment & infrastructure; training (technical and business); business advice; marketing; knowledge-sharing & links (to other enterprises)	Tailor-made via informal needs assessment; gender sensitive; costs subsidised by donor (client pays 10%)
Kudumbashree (India)	Public sector	Poor women with skills; mainly start-ups but some ongoing	Finance (loan facilitation via bank); training & capacity building (technical & business); staff selection; evaluation & monitoring procedures; links with state contracts	Initial setup facilitated via community groups; standard initial training (free) then tailor-made training & support; support free to enterprise in initial phase (start-up) then charged and support reduced over time.
ASODIGUA (Guatemala)	NGO (telecentre)	Poor local communities, particularly women start-ups and ongoing	Infrastructure (equipment & premises use); training (technical & enterprise); marketing	Free use of facilities & training for all
WomensHub (Philippines)	NGO (ICT & gender policy)	Women in general in ICT policy; schools start-ups and ongoing	Training (technical & gender); software development; networking; policy advocacy	Tailor-made support & training; gender-specific content; software development done with commitment from enterprise for training in self-maintenance; client charged (subsidy available).
PTPNM (Indonesia)	State-owned enterprise	Micro/small enterprises (poverty alleviation) start-ups and ongoing	Finance (public partnership offered); training (business); advice; technical; links (to other enterprises and markets)	Public partnership enables direct support (expertise, advice etc); networking MSEs enables increased bargaining power; client charged but subsidised

As a support agency, when selecting who you can support and what support you can provide, you must also consider **challenges** particular to helping ICT-based enterprises. Some of these are discussed in Section 3, and identified as:

- *Cost Investment and Funding*: high initial and ongoing costs associated with ICTs.
- *Skills and Capacity Building*: problems associated with finding staff with the appropriate skills (particularly amongst women) and keeping up-to-date.
- *Sustainability*: the instability of operating in a fast-changing, competitive market.
- *Cultural Gender-Specific Issues*: challenges peculiar to women because of cultural attitudes and norms.

As we saw in the three agency case sketches, other challenges may exist particular to the local context. Table 9 summarises how these more generic challenges have been addressed by these agencies.

Table 9: Examples of Agency Support Addressing Challenges facing Women's ICT-Based Enterprises

Challenges/Risks	ELIF	BusyIncubator	Kudumbashree
Money: initial & ongoing cost of investment & funding for ICT	*Seen as a major challenge.* Non-repayable grants used to purchase ICT equipment and partial infrastructure development.	*Seen as a major challenge.* Infrastructure (with subsidised rent) & technology provided to all via donor funding.	*Seen as a major challenge.* Facilitation of institutional loans.
Skills: finding appropriate skill base	*Seen as a major challenge.* Capacity building (initial & ongoing) that is tailor-made.	*Seen as a major challenge.* Capacity building (initial & ongoing) that is tailor-made.	Initial capacity building. Initial assistance with selection of staff.
Skills: need for constant skills upgrading	Capacity building that is tailor-made.	Capacity building; knowledge sharing. Inculcation of the value of continuous learning.	*Seen as a major challenge.* Technical assistance provided.
Turnover: staff turnaround in scarce skills		Links to other entrepreneurs & networks to help with recruitment.	*Seen as a major challenge.* Assistance with new recruitment to replace departed staff.
Sustainability: of enterprise in a constantly changing market	Marketing & business advisory assistance; technical assistance	*Seen as a major challenge.* Marketing & business advisory assistance.	*Seen as a major challenge.* Intermediation with public sector customers to win contracts. Encouragement to identify new markets.
Sustainability: for women if employment unstable	Facilitate the development and funding of social welfare project		Encouragement of savings and links to broader women's groups.
Gender: cultural gender-specific issues (e.g. women's multiple roles impacting on employment)		Gender sensitivity incorporated into training programmes.	Work with customers, banks, communities, etc to overcome negative gender stereotypes.

ii. Support Analysis

How do you find out what help your women's ICT-based enterprises need? As discussed in Section 4, two general approaches have been identified:

- *top-down/"supply-driven"*: this means agencies plan what they should provide for enterprises on the basis of *what they can provide*.
- *bottom-up/"demand-driven"*: this means agencies plan what they should provide for enterprises on the basis of *what enterprises say they need*.

A third approach may be classified as:

- *"needs-driven":* based on an investigation of *what enterprises actually need* in order to survive or grow, using an *analytical approach* (such as those outlined in Section 4) to examine the factors.

The best approach seems to require a combination of **all three** approaches:

- listening to and involving the entrepreneurs;
- adding an analytical perspective to help ensure interventions meet needs and are not distorted by inaccurate demands (see Section 4 for more details of possible tools); but
- setting choices about interventions within the constraints of what the agency and others can realistically provide.

Women ICT Entrepreneurs Participating in an Analytical Meeting

In supporting women-led enterprises it is also important to ensure that gender-related needs are identified. Various tools exist to help do this (e.g. the Gender Evaluation Methodology: http://www.apcwomen.org/gem). Aspects to consider include:

- **The multiple gender roles that women take and how these can affect each other:** for instance, rather than simply considering a woman's employment needs (i.e. her productive or income generating role), it is important to consider the impacts on that employment that her family and childcare responsibilities (reproductive role) have, and also that her community has (community role). These multiple roles may effect her choice of profession, what hours she can work, where she can work, how flexible she can be, and so on, and support may be needed by addressing some of these wider areas.
- **How far women are fully engaged with the ICT enterprise, rather than simply participating:** ICT skills can be classified at different levels and the more lucrative (and sustainable) work requires more advanced ICT knowledge and skill. Women tend to be employed at the lower end of the ICT professional spectrum. Equally, employment in the enterprise is only one aspect to engagement – the control of resources and participation in decision-making is important, as are other factors (e.g. access to and development of knowledge). Support may not be needed in helping women to participate, but may be required to help them fully engage.
- **How far the more strategic needs of women are being met, as well as their more practical needs:** the more immediate interests of women have been termed their practical needs – what they need to survive in their socially accepted roles within existing power structures. Support may be easy to identify and provide (such as helping with childcare facilities, assisting with start-up provision, advising on how to accommodate cultural restrictions, etc). However, identifying and supporting more strategic needs to enable general empowerment in their community may be more difficult. E.g. how to challenge cultural taboos regarding the jobs women should have, or the hours of the day women can work, etc.

Findings from research indicate the following general areas of need exist for women-based IBEs. All of these needs may require specific support:

A. Typical Mainstream Needs
- **Capacity building**: ICT-based enterprises are slightly different from other enterprises in that they need to accommodate constantly changing information technology – this has implications for training and skills development, upgrading software versions and operating systems, and being flexible to new markets.
- **Funding investment**: both initial start-up costs and ongoing costs are high for an ICT-based enterprise.
- **Infrastructure**: ICT-based enterprises need access to reliable electricity. Some – though by no means all – need access to telecommunications infrastructure.
- **Human resource management**: higher education, skills and experience beyond entry-level IT skills are needed to be able to participate in many ICT professions. Also as staff skills become more in demand there is a need to constantly handle staff turnover.
- **Competition**: small enterprises in particular in the IT sector can find it difficult to compete with larger organisations and global competition.

B. Typical Specific Needs of Women

- **Effects of gender norms**: though some aspects of IBEs can be convenient for women balancing their multiple roles (e.g. ability to work from home), others can affect work possibilities (e.g. constraints on working late, travelling to customer sites, safety issues, and so on).
- **Capacity building:** women are more likely to possess only low end ICT skills and need more advanced training to fully participate in an ICT-based enterprise.
- **Being taken seriously:** it can be difficult for women – especially young and inexperience women – to be taken seriously in the ICT field given gender stereotypes.
- **Having more control**: knowledge, skills, confidence etc are needed to be more active as decision-makers (e.g. by handling external connections etc) since there tends to be a dependency on men to do this.
- **Reliance on men**: for night shift or for elements of work that require travel can present a problem for women: they have to adopt a managerial approach to men, which may challenge their own and others norms.
- **Access to credit/funding sources**: is typically harder for women than for men.
- **Motivation:** for developing a sustainable enterprise but also for developing ICT skills can be time-consuming.

Key Questions

- Have you classified the enterprises according to their stage of growth, location, sector, characteristics of entrepreneurs?
- Have you identified their specific needs, viz, training, demand, markets, finance, linkages, etc?
- Are these needs driven by the agency or the enterprise? Have you included some analytical tool to help identify those needs? Has the target enterprise(s) participated? Is there a balance among the interventions provided?
- Have you included gender-related needs?
- Have you focussed on policy advocacy for better policy-level interventions (macro approach) or more on single enterprises (micro approach)?
- Do you focus your support on supply-related factors or demand-related factors?

## 5d. *How* can you Provide the Support Interventions?

Having identified the support needs of the women's ICT-based enterprises, you as a supporting agency, also need to determine how best to provide that support. Which interventions should you focus on? Can other agencies provide that support better? How can you best make an impact by working with other agencies? Should the enterprise be charged for the support you provide? Can they afford it? How can you motivate and encourage the enterprise to become independent (and eventually be sustainable in its own right)?

i. Making Use of Existing Provision
Rather than looking at the enterprise's needs and what support you can offer in isolation, it is important to consider what other provision is already available in the environment. You may discover that some of identified areas of support are/can be provided by others but the enterprise has difficulty accessing them. Your support agency may then decide on an appropriate approach to take (see Figure 12):
- *Parallelism:* provide assistance directly in parallel to existing interventions that do not and cannot reach your target women. For instance, *WomensHub* provides tailor-made support and training with gender-specific content to target women.
- *Access:* help the enterprise get access to existing resources/support. For instance, *ELIF* sub-contracts some specific training to other providers and helps its women's enterprises to access that training. Other agencies provide links to donors (for providing financial support) and to other enterprises (for supporting knowledge-sharing, bargaining power, etc).
- *Integration:* formally coordinate with the existing provider, or provide greater integration. For instance, *Kudumbashree* acts as a financial guarantor for bank credit applications.

Figure 12: How Do You Deal With Existing Support?
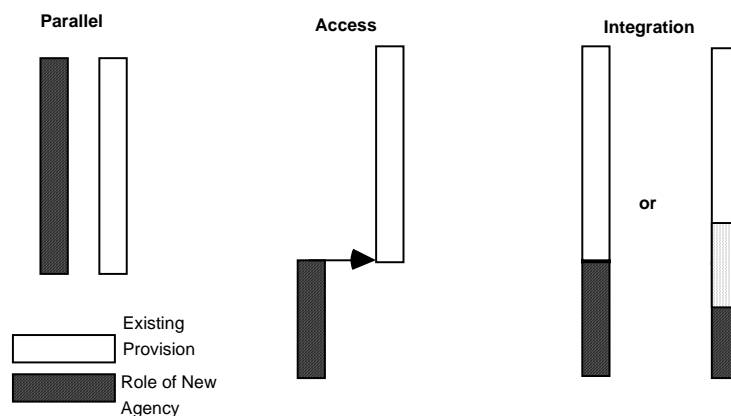
ii. Providing Customised or Standard Provision?
As discussed earlier, some support needed may be of a generic nature (such as training in enterprise and business skills), while other support may need to be more tailor-made (such as, more specialised ICT skills development, e.g. website development tools). Obviously if supporting several similar enterprises, common needs may be identified and it can be more cost-effective to develop a standardised

programme of provision. For example, *Kudumbashree* provide support that is integrated and common to all enterprises during their initial start-up phase. After that all inputs and support is customised, based on the type of ICT work the enterprise carries out, its location, and so on. There can be a difficult trade-off between focussing on standardised provision (cheaper) versus customised provision (more likely to meet enterprise needs).

Gender Sensitive Provision
As discussed earlier, several gender-specific areas of support have been identified when supporting IBEs for women. Several agencies try to be sensitive to the specific needs of women. For instance, *BusyIncubator* attempts to address the social responsibilities of women entrepreneurs by tailoring their programme schedules to allow greater flexibility, and *WomensHub* include gender-specific content in the training provision they provide. Awareness of these issues by you as a supporting agency and sensitisation of policy-makers and other stakeholders is important if these specific barriers that women face are to be adequately addressed.

Support for Free or Payment?
The issue of whether to charge enterprises for the support you provide needs to be carefully considered. On the one hand, you may want to reach enterprises that are operating in poor communities or with entrepreneurs who have limited access to funds, and may not be able to afford to pay for support. On the other hand, there are several reasons to consider including a charge – even if only a small one – for receiving your support:
- Charges can encourage commitment from the enterprise/entrepreneurs.
- Charges can prevent a dependency culture developing (between the enterprise and your agency).
- Charges can encourage the enterprise to focus on longer-term sustainability.
You may also be surprised if you do start charging. *Kudumbashree* initially provided all training for free but then discovered through a survey that 99% of the women it supported would pay for training provision.

Some agencies provide free support, others provide free support for a limited period, such as at start-up, and others charge a subsidised fee for their support (usually depending on what the enterprise can afford). Selecting a suitable model requires careful consideration of your goals, your target enterprises and the environment the enterprise is operating under.

Key Questions

- Are other organisations already operating to support some of the enterprises you serve? Are there barriers preventing the enterprise accessing that support?
- Could you facilitate access to, or integrate provision with existing agencies for the enterprises you serve?
- What provision can be standardised and what needs to be tailor-made?
- Are you being sufficiently sensitive to the impacts of gender relations when designing support interventions?
- What charging model is best suited for these interventions?

5e. Monitoring and Evaluation: *How Effective* is Your Assistance?

i. Evaluating Women's ICT-Based Enterprises

There are different perspectives and tools that can be used to evaluate IBEs for women. In part, your choice depends on the objectives of both your agency and the clients/enterprises it supports. But – unless you do evaluate – you can have no sense of whether or not your support interventions are of value or not.

An evaluation example was provided in Section 4. This highlighted the use of "value chain analysis" for *Technoshree Digital Technologies* which specifies clear performance indicators and critical success factors for evaluating internal enterprise efficiency. A support intervention may be identified to help the enterprise improve in this area and so targets could be set for particular indicators, say "quality". This would then require data to be collected regularly by the enterprise on their performance, say by monitoring some/all of the critical success factors identified ("Level of work returned for re-entering", and "Negative feedback from customers").

Several mechanisms may be used for evaluating enterprise performance. Some may be determined by/required by other stakeholders, such as government regulation, donor requirements, public expectation, etc. Others will be determined by what perspective you as the supporting agency (and the enterprise itself) wish to take. The mechanisms selected will dictate what aspects of performance (and impact) need to be monitored and evaluated, and therefore what particular data needs to be collected. Some examples are summarised in Table 10.

Table 10: Different Approaches to Evaluating Women's ICT-Based Enterprises

	Focuses On:	**Typical Data Collected:**
Enterprise Approach	How well the enterprise is performing as a business venture.	Numbers employed, types of jobs created, amounts invested (or value of capital assets), profits, sales and exports, etc
Livelihoods Approach	How poverty is being alleviated by providing an insight into how livelihood assets and outcomes of the poor have been affected.	A full range of asset impacts (e.g. levels of human capital through training, professional development, etc; levels of social capital through notions of social relations and networking with institutions; levels of financial assets such as income and savings; extent of physical capital invested in such as ICT equipment or household goods;). Plus vulnerabilities, security, and the institutional context.
Gender Approach	Empowerment of women entrepreneurs by examining how gender relations have been affected.	Specific gender indicators (e.g. gender aggregated statistics on employment, training, promotion, membership of decision-making bodies, etc.), views of stakeholders, and so on.

As an enterprise support agency it is vital that you infuse good monitoring and evaluation practices in the enterprise.

For example, *Kudumbashree* addresses monitoring and evaluation of the enterprises it supports by:
- building a tight M&E programme into the enterprise activity, monitored at various levels, and
- monitoring all enterprise performance at regular intervals (evaluated up to 4-5 times ever year), based on income, expenditure, financial management, loan repayment, work contracts accrued, completed and so on.

Specific areas of emphasis within the *Kudumbashree* M&E approach include:
- Financial accountability: a financial audit is carried out annually.
- Good and transparent management: email is encouraged as a medium of communication; a website was developed that displays M&E information, allowing enterprises to compare against each other (and also placing responsibility on units to obtain all information and to share information).
- Credibility and competitiveness: the *Kudumbashree* team conducts random quality checks of work done by the women's ICT-based enterprises to help ensure ongoing trust and competitiveness of these enterprises.

One of their most innovative mechanisms for supporting competitiveness is a unique performance ranking system, developed by the *Kudumbashree* IT co-ordinator, based on amount of increase in assets, re-investment, number of shifts per day, number of employees, loan repayment, profit, whether they own premises, whether they access any free services from the government etc.

Such mechanisms require regular and accurate data collection by the enterprise and formal procedures for reporting back to the supporting agency. They also impose costs that must somehow be recouped.

ii. Evaluating Agency Support

Just as it is important to monitor and evaluate the enterprise, it is important to monitor and evaluate the support interventions you are providing for them. Doing so will be beneficial for a number of reasons, including
- helping you to ensure you are achieving the goals you set;
- assisting you in quickly identifying changes affecting the enterprise so you can respond to emerging needs;
- helping with communication between you and the enterprise and making it clear to all concerned what the impacts and achievements are;
- providing you with useful (evidence-based) data for your own monitoring and evaluation responsibilities (e.g. to your donors) and for making future assistance proposals.

The areas to assess may include:
- the extent of programme reach and selection of appropriate clients (have you achieved your goals on *whom* you should be supporting?);

- the management of credit programmes (data may include what loans are overdue, income from loans, etc);
- the effectiveness of technical assistance provided (have the skills of enterprise staff improved? and has this contributed to overall enterprise performance?);
- the effectiveness of training programmes (was the training relevant to the enterprise needs? is there evidence that these new skills were felt to be useful?);
- the cost-effectiveness of the programme (e.g. what percentage of the budget was used in administration?);
- the sustainability of the programme (is the intervention managerially and financially sustainable?);
- organisational development (is their evidence of ability to be self-critical and to learn, ability to bring in other resources, ability to resolve conflict, etc?);
- human qualities (e.g. how far have staff participated?);
- political linkages and policy change (e.g. is there public respect for the institution, is it seen as a model to duplicate, etc?).

As with enterprise evaluation, support interventions can be evaluated against goals and targets set at the initial planning stage. Tools such as logical framework analysis can help here. Just as in analysing support needs (see Section 5c), when assessing gender impacts it is important to consider the wider more transformative (and long-term) effects of the intervention. The Gender Evaluation Methodology is an example of a useful tool for this. Some gender impacts to consider are shown in Table 11.

Table 11: Sample Gender Issues

Aspects	Questions to Ask
Gender Practical Needs:	
Gender division of labour	What jobs are women being involved in (and which are they not), what jobs do they want, why are they getting or not getting these jobs?
Access to technology	What education/training is being offered to these women, what education/training would they like/do they need, do they have access to information they need?
Control of resources & empowerment	Are women having an (equal) share in decision-making powers (e.g. deciding which contracts to take)?
	Are women having an (equal) share in strategy and policy development (e.g. regarding the direction of the organisation)?
Gender & technology	What are womens' use and understanding/meaning of the technology (e.g. what are their perceptions of technology, gendered professions, etc)?
Gender roles	What is the interaction between the technology and women's triple gender roles (e.g. how have their roles at work, home and community been affected)?
Gender Strategic Needs:	
Gender inequities	What are the transformative effects on society & inequities (e.g. is there evidence of change in the community's views/treatment of women)?

5f. Agency Advice Sheets

These sheets provide guidance on good practice in various areas of agency support for women's ICT-based enterprises:

Agency Advice Sheet 1: *How Should Your Agency Analyse What Support To Provide?*

Generally:

1. Be more needs-driven.
2. Incorporate analytical tools.
3. Include gender aspects.
(See Section 5c for further details)

Specific Recommendations:

Be more needs-driven
- Listen to and involve the women entrepreneurs.
- Infuse an analytical perspective to help ensure needs identified are not distorted by inaccurate demands.
- Determine what other agencies/services you may be able to call on in providing support (see also Section 5d).
- Set choices about support interventions within the constraints of what you and others can realistically provide for the women and their enterprise.

Be rational
- Conduct a prior assessment of the basic skills and competency of the women entrepreneurs involved.
- Avoid over-enthusiasm (e.g. setting up enterprises in a small, poor region where there will be few sales).
- Conduct market feasibility.
- Carefully consider the choice of strategic location, critical numbers according to region, etc.

Analyse gender-specific needs
- Consider factors affecting women's full engagement with the technology (control and decision-making, content development, application areas, understanding and knowledge creation of the technology, etc).
- Consider the impacts of women's multiple roles in their cultural context and specific needs arising.
- Determine both the immediate practical needs of women (what support they need to work within existing power structures) and also their wider strategic needs (how far they wish to challenge existing power structures).

Agency Advice Sheet 2: *What Type Of Support Should Your Agency Provide?*

Generally:

1. More Pull, Less Push

Enterprise support agencies think far too much about *supply/push* factors and far too little about *demand/pull* factors.

For example:
- They help women's ICT-based enterprises too much with information about *input supply* (finance, skills, technology, etc.) and too little with information about *output demand* (new and existing customers).
- They help women's ICT-based enterprises too much on the *supply side* (providing microfinance, giving training, developing new technologies) and too little on the *demand side* (customer surveys, market research, sales/marketing assistance).

2. More Policy Advocacy, Less Single Enterprise Activity

Enterprise support agencies spend too much of their time intervening with individual enterprises. Although this can be valuable, more often such activity has been found:
- to be costly in terms of the high overheads of treating individual women's ICT-based enterprises;
- to have limited reach (and thus be inequitable for those enterprises – typically the majority – which are not reached); and
- to frequently fail to achieve the intended impacts.

Agencies should focus more on policy advocacy, pressing for better policy-level interventions, particularly in terms of (i) ICT infrastructure, and (ii) policies to increase the market/demand for the kind of outputs produced by women's ICT-based enterprises.

Specific Recommendations:

Input Support: addressing the inputs women's ICT-based enterprises need in order to function.
- Finance: investment needed for equipment and infrastructure can be high both at start-up and in terms of ongoing costs; enterprise start-up costs can be high. It is often good to use guarantees for existing schemes rather than new agency loans.
- Technology and technological assistance: e.g. providing subsidised access to ICT infrastructure.
- Premises: e.g. subsidised/free rent for a limited period.

Demand Support: helping create demand for outputs from the women's ICT-based enterprise. E.g.:
- provide a network for enterprises to form alliances and increase their bargaining position, and/or
- help create business chains linking to business customers to maximise profit and expand markets.

Enterprise Support: addressing issues regarding the running of the enterprise.
- Provide business consultancy/advice/information plus technology and technological advice.
- Charge for services to ensure ownership by women entrepreneurs.
- Make use of demonstrator enterprises.
- Make use of networking for keeping up-to-date.

Entrepreneur Support: assisting the specific needs of the entrepreneur herself
- Provide individual training/support for the entrepreneur.
- Helps the entrepreneur with initial selection of enterprise staff or with handling staff turnover.

Environmental Support: addressing environmental factors within which the enterprise operates.
- Policy advocacy: lobbying government around issue of demand, infrastructure and gender equity.

Gender Sensitisation:
- Offer training programmes specifically designed for women.
- Incorporate discussions about ICT gender-related issues in training modules.
- Consider gender sensitisation of agency staff and policy makers.
- Support specific access to other services for women.
- Offer actions to enable and build networks of women entrepreneurs.

Agency Advice Sheet 3: *How Should Your Agency Provide Support?*

Generally:

1. Remember "one size does not fit all" and include tailor-made support as well as generic support.
2. Beware encouraging a dependency culture that makes women depend on your agency for ever.
3. Act as a good role model.
4. Incorporate gender-sensitised support.
5. Integrate support provision with other providers more than trying to provide support on your own.

Specific Recommendations:

Focus On Capacity Building
- "Train" rather than "do it for them".
- Require client to commit to learning and taking over themselves after agency support.
- Facilitate particularly the development of self-capacity in the women owner(s).
- Contract existing experts to train and mentor or give business advisory services.

Encourage Commitment, Publicity And Support From All Stakeholders
- Gain support from government for the right enabling policies and business environment.
- Build a network that can share management expertise when the enterprise is confronted with difficult situations.
- Where appropriate, encourage community involvement with the enterprise.
- Develop capacity to market the enterprise to corporate partners and the general community and to actively attract business/community sponsors.

Financial Support
- Seek funding for the agency and the women's ICT-based enterprises (see Agency Advice Sheet 3).
- Consider national and international donors for funding technical assistance provision.
- Consider supporting financial sustainability for enterprises via e.g. public partnerships.
- Charge entrepreneurs for services even if only partly covering costs.

Incorporate Network Building/Contacts
- Maximise the effective use of shared resources and environment to develop a "community of women/ICT entrepreneurs".
- Encourage sharing information and criss-crossing across enterprise networks.
- Share case studies of women's/ICT enterprises, especially with lessons about finance, markets and sales.
- Make use of existing support providers rather than assume you must always "do it yourself" (see Section 5d).

Keep In Touch And Up-To-Date About Technology
- Encourage constant daily use of technology by the agency to enhance internal skills.
- Invest in good information systems administration.
- Share knowledge about the latest in technology with other agencies through joint events and activities.

Be A Good Role Model
- Offer good financial modelling for the enterprise to build their own financial projections.
- Encourage good governance principles, including use of monitoring and evaluation procedures.

Avoid Turning Women Off
- Encourage and motivate women to learn more about the technology and how they might use it but avoid oversimplifying the learning curve and recognise possible hurdles, including social hurdles.
- Relate the use of technology to the issues important/relevant to the women entrepreneurs.

Monitor And Evaluate
- Monitor the enterprise and your own performance to evaluate how effective your support interventions are. See also Section 5e.

Agency Advice Sheet 4: *How Can Your Agency Itself Get Financial Support For Women's ICT-Based Enterprise Projects?*

Generally:

1. Be clear about what financial support your agency needs and who might provide that support.
2. Take a holistic approach: you may find you can seek financial support for different aspects from different sponsors.
3. Consider taking a syndicate approach with other agencies.
4. Target your proposal to the sponsor's interests and priorities.
5. Include details of measurable deliverables and longer-term plans.
6. Include benefits to all stakeholders.

Specific Recommendations:

Clearly Identify What Financial And Other Support Is Needed And Why
*   Groundwork may include drawing together key stakeholders to work on the project (from the target women and their communities plus relevant local government, NGO and private sector actors). It may also involve integrating your project into a broader project that is gaining momentum in its search for sponsorship.
*   Identify and prioritise needs around women's ICT-based enterprises: what is it that cannot be internally developed by the project which requires an external sponsor, and why?

Identify Sponsors And Address Their Priorities
*   As a starting point, filter potential sponsors to eliminate those that will not support such projects.
*   Identify the sponsor's own interests and priorities, and analyse how the impacts of women's ICT-based enterprises could be aligned with those. These enterprises can be "sold" to sponsors in many different ways but the "sales pitch" – gender equity, capacity-building, income generation, microenterprise formation, job creation, knowledge economy development, etc. – needs to match the sponsor's agenda. Fortunately, women's ICT-based enterprises lie at the intersection of many different development agendas, and so can be sold to quite a broad range of sponsor agendas. With governments, this might mean alignment with national poverty strategies.

Target Your Proposal
*   You can choose different approaches when putting together your proposal: the optimistic (focusing on the benefits) or the realistic (focusing on both positives and negatives) or somewhere in between. Which one you select is a matter of knowing your audience: does the sponsor just want to hear good news, or will they mistrust someone who only talks of benefits?
*   Any sales pitch needs to sell **benefits, not features** – this will mean clarity about measurable deliverables that align with the sponsor's own performance indicators or objectives. Having made the point about specificity, however, most sponsors will want to see some continuity plan for **sustainability** (financial and otherwise) of the project once their support starts to be withdrawn. For poor women, at least, ICT-based enterprises may take some time to become financially self-supporting, and this needs to be recognised. More generally still, sponsors will need to see a credible action plan for the project, with evidence of a) multi-stakeholder participation, and b) assessment of local needs.
*   Sponsors are generally more likely to be swayed by the tangible than the intangible, so factual **case evidence** will help. Success stories from elsewhere can be a good starting point; for example, presented in short video format. Even more, actual local pilot/demonstrator projects will help.
*   **Foundational arguments** will also be helpful: the contribution of women to national development; the more socially-developmental ways in which they spend their income compared to men; the way in which they have been systematically excluded as new economic waves have developed – first manufacturing, then services, and now the knowledge economy which is already showing signs of the gender digital divide, something that calls for urgent attention but which can be addressed thanks to the particular opportunities provided by the IT sector.
*   In addition to selling the benefits to the women and their families/communities, also include the benefits to their clients of the IT goods/services they provide. These will vary but, in a number of cases, client beneficiaries could be communities (e.g. provided with access to IT skills, or access to

e-government services) or government (e.g. provided with support for their computerisation or automation or e-government programmes).

- For government sponsors, encourage them to consider outsourcing their IT requirements (e.g. data entry, digitisation, hardware/software purchase, IT training, computer servicing and maintenance, etc.) to these enterprises. Traditionally, governments have developed a large in-house IT function or have outsourced their purchasing of IT goods and services to the existing private sector; often to multinational subsidiaries. Now, there is a "third way": outsourcing to "social enterprises" such as cooperative IT enterprises created by poor women (for instance as the Keralan government has done).
- There is gender-specific evidence that may be of value: that women-run IT enterprises tend to have a better quality orientation, be more sustainable, and achieve a broader range of customers than male-run equivalents.

Agency Advice Sheet 5: *How Can We Turn An Existing Women's ICT Project Into An ICT-Based Enterprise?*

Generally:

1. Undertake an enterprise analysis – considering input/supply, entrepreneur, demand, enterprise and environment factors – to see if it is viable to make an enterprise.
2. Look ahead three or four years – what will make the enterprise sustainable.
3. If there is potential for an enterprise, identify main challenges and their solutions.

Specific Recommendations:

Enterprise Analysis

- Sections 4a and 4b of the handbook (and Section 5ci) provide a guide to analysing to see whether there is potential for an enterprise. You can use this to see whether an existing women's ICT project could be turned into an enterprise.
- These sections give guidance on five different set of factors to analyse: input/supply factors (such as supply of skills and technology); entrepreneur factors (such as the expertise and motivation of the women involved); demand factors (such as whether or not a market exists for what the women could produce); enterprise/management analysis (such as the capacity to manage customers and finances); and environmental analysis (covering things like ICT infrastructure).
- All five sets of factors are important but two key issues would be motivation and demand. If the women involved do not have some basic entrepreneurial drive – some interest in making money and working with ICTs in an enterprise – then no enterprise can be created. However hard everyone works, there will be no viable enterprise unless some accessible market exists for the ICT goods or services the women will be producing.

Sustainability

- It is one thing to convert the ICT project into an enterprise; it is another to make it sustain for several years. No-one can fully predict the future, but a basic sustainability analysis would look at at the five sets of enterprise analysis factors and ask whether and how they are likely to change over the next few years. Once again, motivation and demand are likely to be among the most critical sustainability factors.

Challenges And Solutions

- If conversion of the project to an enterprise seems viable, then Section 5 in general, particularly 5c and the other Agency Advice Sheets should help you identify your agency's action priorities to create and sustain the women's ICT-based enterprise.

6. Sources of Further Information

Web sites with more details about:

Main Sites

http://www.apcwomen.org/
Part of the Association for Progressive Communications, the APC Women's Networking Support Programme is a global network of women who support women networking for social change and women's empowerment, through the use of ICTs.

http://www.genderit.org
Aims to broaden awareness of gender and ICTs and to offer a practical tool for ICT advocates, especially women's organisations and movements to ensure that ICT policy meets their needs and does not infringe on their rights.

http://www.webgrrls.com/
The Webgrrls site is quite US-oriented but aims to be international and to provide "a forum for women in or interested in new media and technology to network, exchange job and business leads, form strategic alliances, mentor and teach, intern and learn the skills to help women succeed in an increasingly technical workplace and world."

Guidance on Running Enterprises

http://www.ilo.org/public/english/employment/skills/informal/method.htm
Links to Start & Improve Your Business (SIYB) management training programme, funded by SIDA and implemented in over 80 countries. SIYB concentrates on improving small business practices in developing and transitional economies.

http://www.seepnetwork.org/bdsguide.html
This SEEP Business Development Guide offers services which help identify and establish new markets for small enterprise products with commercial radio programmes, advocacy and business management training, databases, etc.

http://www.un.org.kh/undp/ict4dtoolkit/
Toolkit that "aims to assist and provide guidance for those wanting to explore setting up an ICT-enterprise in developing countries." via stories, lessons and checklists.

Guidance for Support Agencies

http://www.apcwomen.org/gem/
Guide to integrating gender analysis into evaluation of initiatives using ICTs to determine if their use is really improving women's lives and gender relations. Uses the Gender Evaluation Methodology.

http://www.itrainonline.org/itrainonline/women/index.shtml
This section of the itrainonline site – which is aimed at both trainers and end users – offers links to resources specifically targeted at women. The resources are divided

into the following categories: General women- and gender-related training resources; and Women-focussed ICTs resources grouped by topic.

http://www.wiego.org/
Women in Informal Employment: Globalising and Organising (WIEGO) provides reports and statistics on women in the informal sector and world-wide links to organisations working to promote their interests.

Other Relevant Sites

DFID's Business Linkages Challenge Funds
http://www.challengefunds.org/blcfhome.htm
BLCF provides cost-sharing grants to established businesses to form links with and between enterprises in developing countries to enhance competitiveness and generate benefits for the poor.

Enterprise Development website
http://www.enterweb.org/
Clearing house on all information to do with enterprise development and micro-finance, women, environment, marketing, education, donor activities etc. Lists and rates websites on women and business.

ICT and Enterprise Development
http://www.manchester.ac.uk/idpm/dig
Provides two sets of handbooks for entrepreneurs and for enterprise support agencies in developing countries – one generally on ICTs and small enterprise; one more specific on e-commerce and small enterprise.

http://www.ilo.org/dyn/empent/empent.portal?p_lang=EN&p_prog=S&p_subprog=WE
This is the part of the International Labour Organisation's web site that focuses on Women's Entrepreneurship Development and Gender Equity. Details are available of ILO's work on developing the knowledge base, developing innovative support services and products, promoting advocacy, developing strategic partnerships and measuring impact. Many reports and resource guides are available and there are links to further sources of information.

UNIDO's Industrial Subcontracting & Supply Chain Management Programme (SPX)
http://www.unido.org/doc/4547
Provides technical assistance to developing countries for establishing and operating "Subcontracting and Partnership Exchanges" (SPXs) using rosters, supplying technical information, promotion, match-making etc.

Women, ICTs and Enterprise
http://www.womenictenterprise.org/links.htm
Set of online resource links of relevance to women, ICTs and development.