

Developing Women's ICT-Based Enterprise **Summary of an International Knowledge-Sharing Workshop**

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Executive Summary

This report presents the findings from an international workshop on "Developing Women's ICT-Based Enterprise" attended by 38 participants from South Asia, South-East Asia, Southern Africa, East Africa, Central America and the Caribbean. The report is divided into four main parts:

- An overview which describes the emerging reality of IT sector enterprises being run by women in developing countries which are delivering direct developmental benefits from use of ICTs; something that many "e-development" projects fail to do.
- A report on the large-scale creation of IT sector enterprises by poor women in Kerala State, India. The report reviews the supportive context of Kerala state; the nature, history and work of these IT sector enterprises; and a set of lessons learned from field visits to two of these enterprises.
- The findings of a set of group knowledge-building activities that provided new ideas on how to get support from sponsors for women's IT enterprise projects; on how to support such projects with handbook resources; and on key challenges – and their solutions – for such projects.
- Pointers are provided to a set of case presentations of women's IT enterprises from Southern Africa and India, from which a set of overarching issues are drawn out.

This report ends with details of the workshop timetable, with delegate evaluation – offering ideas for those wishing to run similar events – and with acknowledgements for the workshop which was funded by the UK Department for International Development; organised by IDPM, University of Manchester and the University of Kerala; and supported by Kudumbashree, the Kerala State Poverty Eradication Mission.

There are many learning points provided in this report, including good practice suggestions. A few overarching points can be noted here:

- Women's IT sector enterprises – data entry, cybercafes, IT training, hardware assembly, Web design, etc. – are already a reality in all developing countries, including many enterprises involving women from poor families.
- Unlike e-government, e-health and similar projects which often fail or deliver only peripheral benefits, these enterprises show how ICTs can directly deliver fundamental development benefits – jobs, incomes, skills and empowerment – including delivering such benefits direct to poor communities.

- Initial support can be crucial for such enterprises but there are many models for such support – from government, from the private sector, from NGOs. And many women's IT enterprises are being set up without external support.
- One important emerging model is the developmental use of IT outsourcing from government. 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 data entry, digitisation, hardware/software purchase, IT training, computer servicing and maintenance, etc. to "social enterprises" such as cooperative IT enterprises created by poor women.
- Every situation has unique features but Kerala's initiative with women's IT sector enterprises shows what can be achieved: from a standing start five years ago, it now has over 200 such enterprises employing 4,000 previously-unemployed women from below-poverty-line families.

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A. Workshop Overview

Dr Richard Heeks, IDPM, University of Manchester

The workshop - and the women's ICT-based enterprises it focuses upon - are part of an emerging trend in the field of ICTs and development: the growth of "new" rather than "traditional" applications of ICTs to socio-economic development:

- Traditional applications of ICTs (what may also be called "intensive" or "IT consumption" applications) are those that apply ICTs to existing activities; for example, e-government projects or use of new technology by traditional micro-enterprise. The problem is that such projects face many constraints in becoming operational; make a relatively limited impact; and have a high failure rate.
- New applications of ICTs (what may also be called "extensive" or "IT production" applications) are those that do something entirely new. In particular, this means creation of enterprise activity that never existed before ICTs: word processing; data entry; hardware assembly; software programming; Web site design; running a computer spares shop; doing computer servicing and maintenance; IT training; running a cybercafe; etc. These show benefits - jobs, incomes, skills, empowerment - that a) are a direct result of ICTs and b) appear more sustainable than those produced by traditional ICT application.

The growth and potentially-greater benefits demonstrated in extensive/IT production projects have three implications:

- Those involved with "e-development" should be giving more attention and a higher profile to this type of project. As yet, though, the field – for example the interest of donors and most governments – remains dominated by traditional ICT applications.
- Current e-development projects should be looked at in a new light; giving equal recognition to the extensive/IT production part of such projects and the benefits and issues arising from that side of the projects. For example, telecentre project assessment and evaluation has focused too much on telecentre users and not enough on the telecentre as itself a microenterprise that provides a job and income for its operator.
- We need to build more knowledge about extensive/IT production projects: about their impacts, experience, models, and issues.

With this last point in mind, we held an international "knowledge-sharing workshop" on ICT-based enterprises for poor women to build knowledge: about the impacts of such enterprises on women, their lives and livelihoods; and about business models and strategies for developing such enterprises. The workshop was an invitation-only event that brought together 40 stakeholders - from South Asia, East/Southern Africa and Latin America/Caribbean - involved with ICTs and women's development.

The workshop is part of a larger project funded by the UK Department for International Development and led by IDPM, University of Manchester that aims to create more and better women's ICT-based enterprises in developing countries. The workshop itself had three specific objectives, each associated with particular workshop content:

- i) To share experiences of support and operations of women's ICT-based enterprises among the participants, drawing on their expertise. This was undertaken by a

series of presentations from entrepreneurs who have created or supported the creation of women's ICT-based enterprises, and from focused group activities developing knowledge about issues such as obtaining support for women's ICT-based enterprise projects, and finding solutions to key challenges

ii) To contribute to development of a handbook on women's ICT-based enterprises, through a brainstorming session on ideas for amendment and dissemination/use of a handbook giving guidance to agencies on the formation, support and improvement of women's ICT-based enterprises.

iii) To provide workshop participants with some direct experience of Kerala's "Kudumbashree" IT units, which are operated by women from poor communities.

This was done through presentations on the Kerala context, the Kudumbashree projects and its IT units, plus field visits to two women's IT enterprises: a data entry unit, and a hardware assembly unit.

A press conference and personal learning/action point session were also included in the workshop. Details of the workshop timetable are provided at the end of this report.

B. The Kudumbashree Women's IT Unit Project

This section describes various aspects of the IT sector enterprises run by groups of poor women that have been set up as part of Kerala State's Kudumbashree initiative.

B1. The Kerala Context

Mr Vijayanand, Secretary, Dept. of Local Self-Government, Kerala

The Kerala model of development provides a very specific context that should be understood as shaping the fate of the women's ICT-based enterprises within the state's Kudumbashree initiative. Four particular features of this model and context stand out:

- A strong emphasis on human development with, for example, health indicators not far from industrialised country norms. This emphasis had initially been associated with low rates of economic growth in the 1970s and 1980s, but that growth rate had now increased within the state to around 5% per annum; perhaps due to the strong foundation of human development that had been laid earlier. This had certainly provided a foundation of skills that the women's IT units tapped into.
- A strong emphasis on local government with concerted decentralisation efforts. This has provided a growing market for IT goods and services that the women's IT units have tapped into.
- A strong emphasis on participation and bottom-up approaches that involved community organisations. Such organisations were formed within the overall Kudumbashree programme, and were the framework within which women's IT units were formed.
- A strong emphasis on women's development such that, for example, literacy rates among women were much higher in Kerala (c.90%) than in the rest of India (c.60%). Again, this was a valuable foundation for the formation of ICT-based enterprises by women's groups.

One implication is that one cannot simply "photocopy" the Kudumbashree initiative in other places: models and lessons learned must be modified according to the prevailing context.

B2. The Kudumbashree IT Unit Initiative

Mr TK Jose, Executive Director, Kudumbashree

The Kudumbashree Structure

At the bottom of the pyramid are c.160,000 Neighbourhood Help Groups (15-40 "below poverty line" (BPL) families each represented by a woman) which has a committee; between c.8 and 15 of these form an Area Development Society (of which there are c.14,000); around 15-30 of these form the Community Development Societies (CDSs) of which there are c.1,050 in the state of Kerala.

There is a pyramid of stages that the NHGs are seen to move through from meeting weekly and up through stages like basic savings to a plan of action to implementation of the plan to microenterprise (which is where the ICT-based enterprises come in) to empowerment.

Kudumbashree has ten focal areas - such as human resource development, health, housing, microfinance - of which enterprise is just one.

In total, under Kudumbashree there are more than 21,000 group enterprises, the vast majority in rural areas. The group IT enterprises are only one small part of this overall. The groups could be the whole of one NHG or part or shared between members of different NHGs or could be family members of the actual NHG members.

To be eligible to join a Neighbourhood Help Group (the first step before a woman could become part of an IT unit), the family must be classified as BPL: below poverty line. For this to happen, a family has to meet four of the following nine criteria (in urban areas):

<i>Below Poverty Line Criteria</i>		
<200m ² land	Safe drinking water >150m away	Scheduled caste or tribe
Dilapidated or no house	Woman-headed household	No colour TV
No sanitary latrine	No regularly-employed (>10 days per month) person in household	Family member with mental or physical disability or chronic illness

For rural areas criteria are similar except allow <400m² land and change TV to having a household member who is illiterate.

This approach is seen as simpler and more transparent compared to income-related measures of poverty because people may be unaware of or may seek to conceal true income whereas the nine factors are things that others in the community can easily see. Kudumbashree get volunteers from within the community, give them training and they then do the surveys to identify which families are BPL.

In all 31% of families in Kerala are BPL; a slightly higher percentage in urban areas; slightly lower in rural areas. In total, there are 3.2m BPL families in the state (which has a population of some 32m).

History of the First Women's IT Units

Within the overall Kudumbashree initiative, due to availability of a line of financial support from the federal government (DWCUA under SJSRY) a particular set of enterprises ("units") were set up, and these included the women's IT units.

Kudumbashree officials identified a number of potential sectors in which women's enterprises could operate, including ICT, at the end of the 1990s. At that time, inclusion of ICT needed a top-down push because it would not have risen naturally from within the NHGs (due to lack of awareness, skills, and confidence).

The first unit was started on 15 September 1999, as a result of Kudumbashree staff identifying a market opportunity in data entry for digitisation of government records.

A training and filtering process was begun to identify women from BPL families who would join the unit. Finance was also sought - the bank managers approached were rather negative about providing funds for the women. For financing the very first IT

unit, Kudumbashree staff approached six banks. In all cases, the reaction was one of derision. In the seventh bank, there was agreement to give a loan but only once the two main Kudumbashree officials had offered their own salary statements as collateral. (This despite a clear order that banks should provide loans without a requirement for security.)

For the first data entry job, they were aware of three other bids from competing institutions in the range Rs1.5-2.5m (US\$33,300-55,500). They costed the job using the Kudumbashree IT unit and came up with a bid of just Rs.364,000 (US\$8,000). Despite this being so much cheaper, the uncertainties caused meant that the two main Kudumbashree officers had to personally guarantee the work and agree to being put under disciplinary action should there be any problem.

Through hard work, the first data entry job went well and that helped to create the basis for goodwill and reputation. Kudumbashree then arranged for its district officials to come and see the unit. The result was that the Kudumbashree team set a target that they would have 36 IT units operational by March 2000 (in fact, they managed to create 48). At first, it was the district officers themselves who had to be prime movers in their areas in order to get IT units set up. However, Kudumbashree central officials invited women members of the CDSs to visit the first IT unit, and they got 2-3 day attachments with the unit for a few other potential unit founders. In addition, there was significant exposure within the media about the IT unit. As a result, after just a very few more IT units had been set up, there started to be much more bottom-up interest and then demand for creation of IT units from the CDSs.

Demand for, and supply of, women's IT units further gathered momentum in 2000 when the state government IT department agreed to give an order that state government departments could give orders for IT services direct to Kudumbashree without need for tendering. Subsequently a similar order was issued for local governments throughout Kerala. Initially, government departments did send work to Kudumbashree from a measure of arm-twisting or compulsion but latterly the demand has been self-driven because of the cost and efficiency of IT work from Kudumbashree units. What had initially been seen only as a one-year start-up activity – undertaking outsourced work from government – thus continued to be a mainstay because of the strength and size of demand from government (which provides around 80% of custom for the IT units).

The Work of Kudumbashree IT Units

There are three different types of women's IT unit: 80 are data entry units; 151 are "IT@School" units that undertake IT training, mainly in secondary schools (taking the Vidyashree brand); 3 are hardware assembly units. 30 of the 80 data entry units are located in rural areas where power can be an issue, though a UPS is included as part of the initial investment package.

The 80 data entry units have around 10 core members each; in addition they employ a further 3,000 staff (both women and, to a lesser degree, men). The 151 IT@School units have around 6 core members each; and no further employees. The 3 hardware assembly units have around 6 core members each; and no further employees. In total, then, more than 1,700 women are core members in the IT units with a rather greater number employed as staff: at least 4,000 women from poor families in total.

The IT@School units stick to IT training. The hardware units undertake assembly and also servicing and maintenance, including annual maintenance contract work. The 80 data entry units of Kudumbashree are a little broader in their scope of work: they are principally involved in data entry work (e.g. digitisation of electoral rolls, or of licence records) but they also do other work:

- Basic data analysis work: for example, typing in survey data and then summarising that data into a report.
- Web design: initially staff from the central Kudumbashree IT unit or hired staff (male) undertook design of the page outlines, with women in the units filling data to complete the pages but later the women themselves started to undertake Web commissions.
- Human resource supply: IT units can supply staff to those government departments that require it; for example the state government's first call centre was staffed by women from a Kudumbashree IT unit.

These units are also used by Kudumbashree itself as part of a state-wide management information system to monitor the performance of all units.

IT Unit Operational Practices

- There is a rotation system of responsibilities within the units with posts such as Group Leader, Secretary, etc. rotated every 2-3 years (these members get an extra Rs.250 (US\$5) per month which tops up an average salary earned by women in these units of around US\$33 per month).
- Data entry units work a two shift system (7.30-1, 1-6.30); where there is a work overload a third, overnight shift is operated but staffed by men (some of whom have been trained by the women working in IT@School units).

Constraints Faced

1. Access to finance: see story above of the first IT unit.
2. Barriers to entry for small units seeking outsourced work from government: here the Kudumbashree officials had to intercede to provide assistance, but the seven-day Performance Improvement Programme training provided to all women in the Kudumbashree initiative has also been of assistance, for instance in helping prepare costings for tenders.
3. The lack of entrepreneurship and lack of confidence among the poor remain constraints: something that training can help with somewhat but which only time and experience with enterprise can really overcome. Related to this has been the fact that a salaried government job is seen by most of the poor as a first-choice goal, with anything else as second-best; again this only changes over time with experience and ownership of the IT unit.

Critical Success Factors for the Kudumbashree Women's IT Unit Initiative

1. For those where women are members of NHGs, the fact that they have not tried to move them directly to enterprise as some schemes do but, instead, have gone through the initial stages to build social and financial capital and confidence.
2. Powerful figures - who are themselves familiar with IT - who can drive the project forward and overcome the financial, political and other barriers that arise when trying to do something new. These figures have been able to use their social status and contacts; for example, getting a relative to develop software for the units for free, or getting institutions to provide some free IT training.

3. There has been a critical set of interventions that have kept the IT unit project on track. Examples include helping the women prepare proposals for creation of a unit; disseminating awareness about IT unit success stories in order to generate interest and demand for more such units; persuading banks to lend money to the units; and development of performance monitoring systems.

B3. Lessons from Visits to Kudumbashree Women's ICT-Based Units

Two women's IT units were visited: a data entry unit (*Technoworld Digital Technologies*, Kumarapuram) that has ten core women members and around 50 employed staff, and a hardware assembly unit (*I-Tech Systems & Peripherals*, Vattiyoorkavu) that has six core women members and three employed staff.

The overall lesson drawn from the visits by workshop delegates is that it is feasible and realistic for women-managed IT enterprises to be successful in a developing country. Governments with the right political will could replicate this model, which has already sustained for more than five years.

Some important factors underlie this success:

- Government support has been a critical intervention in the success of the Kudumbashree units; particularly initial marketing and capacity-building for the start-up phase (first two or three years) but on an ongoing basis in the provision of a market for outsourced services which these women's units can supply. For most of the units, government contracts now represent around 80% of their total turnover.
- Other support, though, has also been important - community participation to create the women's groups that are the foundation for members of the IT units; participation of groups of women rather than just individuals in the units; and the support of family members for something that, at least initially, was seen as a risky venture. Perhaps of all these, it is the core collectivity of women that counts most: their sense of unity and team spirit is strong; this, in part, has been helped by the relative homogeneity of the groups (i.e. similar ages and backgrounds).
- Kerala's context must also be recognised: high literacy rates and strong education combined with high levels of unemployment have been the foundation that creates the pool from which these women can be drawn.

In terms of enterprise, the women have travelled far but should not be seen as independent, stand-alone enterprises:

- There is a sense of transfer of ownership. Initially, when the women came to these units, they saw themselves as employed in a government venture but after a couple of years, they come to see the unit as their own.
- On the fundamental skills of enterprise, the picture is "half empty, half full". Accounting practices are quite basic, as are marketing practices. If opportunities are very clear (e.g. local people are interested in IT training or in purchasing computers) then the women can see those and take advantage of them, but they are rarely proactive in analysing their competitive positions or in identifying diversification strategies. On the other hand - particularly compared to their starting point where none of them had any idea about business - they have travelled

quite a way; some have expanded their business and hired new staff; some have undertaken local door-to-door marketing and newspaper advertising.

- Kudumbashree has a rolling plan that gradually pulls back support for the enterprises as time goes on. This will shortly lead to creation of a "syndicate": a central service company separate from government that is owned by the women's IT units and which provides them with central support like negotiation of software licences, assistance with marketing and training, etc.

C. Group Knowledge-Building Activities

This section reports findings from three knowledge-building activities: one on ways in which to make the case for supporting women's ICT-based enterprises to potential sponsors; one on ideas for content and dissemination of handbooks to support women's ICT-based enterprises; one on key challenges facing women's ICT-based enterprise projects and their solutions.

C1. Making The Case For Women's ICT-Based Enterprise Projects To Potential Sponsors (Donors, Government, Etc) In Order To Win Their Support

Groups for this activity were asked to produce three priority ideas for how to get support for a project:

1. 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.
2. A filtering of sponsors to eliminate those that will not support such projects should be a starting point.
3. Identification and prioritisation of needs around women's ICT-based enterprises can follow: what is it that cannot be internally developed by the project which requires an external sponsor, and why?
4. Identification of the sponsor's own interests and priorities is a next stage of groundwork, and analysis to see how 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.
5. 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.
6. 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.
7. 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.
8. In addition to selling the benefits to the women and their families/communities, one can 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). 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.
 9. You can choose different paths (or somewhere in between): the optimistic (focusing on the benefits) or the realistic (focusing on both positives and negatives). 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?

C2. Writing Handbooks Supporting Creation and Operation of Women's ICT-Based Enterprises

A draft handbook was circulated before the workshop, and then a group activity was held asking each group to produce two priority suggestions for amendment to the handbook, and two priority ideas for dissemination of the handbook. The handbook's goal is "more and better women's ICT-based enterprises", to be achieved through three purposes for the handbook:

- Promotion: persuading more agencies to get involved.
- Initiation: getting agencies to start up women's ICT-based enterprises projects or programmes.
- Improvement: helping agencies improve the functioning of current women's ICT-based enterprises they cover.

Specific points about this handbook were recorded, but here we report more generic ideas that will be of use to anyone planning handbooks or other resources in support of women's ICT-based enterprise projects:

Handbook Content

1. Introductory Material:

- Include a clear statement at the start that such handbooks have "open doc"/copyleft status; i.e. that the content can be used and modified by others subject to acknowledgement of original source and non-profit usage.
- Provide a graphical summary guide to the handbook content that will grab readers' attention and also give them a quick, clear sense of that content. This could be supplemented with (or consist of) a question and answer format e.g. "How can ICTs provide livelihoods for women in developing countries?"

- Don't make assumptions about what your readers know: make sure you define key terms somewhere (even terms like ICTs).

2. Promoting Projects:

- When you are trying to promote a particular approach (e.g. greater use of ICT-based enterprises to support women's development), take a reader-centred view: try to think of what objectives readers will have for their own work/organisations and match what your approach can deliver to those objectives.

3. Social Development:

- When dealing with poor women, you cannot take a solely business/enterprise-focused approach. You need to ensure that at least some material approaches the topic from a social development/welfare perspective since that is the perspective that will be taken by a number of the agencies involved.

4. Case Studies:

- When you use case studies in a handbook or other general resource, make sure the cases have a clear value for readers: give an overview of them, emphasise the lessons to be learned from the cases, and make a link from any challenges identified to good practice/advice guides listed elsewhere in the handbook.

5. Agency Advice:

- If agencies are your main intended audience, ensure that you are providing the real-world advice that they require. For example, many who might want to help start more women's ICT-based enterprises will begin by needing financial assistance from a donor or from government. So include an advice sheet on how to "play the game" to get such assistance.

Handbook Dissemination and Use

1. Ownership and Localisation:

- The danger with dissemination activities – even when, as planned, there will be translations of the resource and dissemination in book, CD and online format – is that they produce an external, top-down resource that a) is never owned by anyone other than the originating authors, and b) never quite matches the exact needs and factors present in any particular national or regional context. In order to create the ownership needed (that will provide motivation for local dissemination and use), and the customisation to local context, you need not just translation but true localisation of material. A local organisation takes ownership of, and responsibility for the handbook, and they then amend the content through provision of some or all of the following: issues of local context; illustration of models with local cases; replacement or addition to include local case sketches; locally-appropriate diagrams. The handbook then becomes "their baby", for them to own and use.
- A related way to do this would be to identify existing projects or programmes that could take up the handbook as part of their project activities.

2. *Regionalism and Nationalism:*

- A tension that was ultimately unresolved was the scale of dissemination activities: is it better to aim for regional-scale (shallow but broad) or national-scale (deeper but narrower) or state-/province-scale (very deep but very narrow)? In practice, this may vary from place to place. In India, for example, state-level approaches may make sense given size of population and linguistic variations. In Africa, national-scale activities may make sense. In Central American/Caribbean, a regional approach may be logical. The criteria used, though, should be the likelihood of actual use and impact of activities: better to address one district and get two agencies actually taking action than to address ten countries and get no true momentum for action.

3. *Sustainability/Longevity:*

- Creating local ownership, as suggested above, helps make a resource more sustainable. In addition, one can post materials on an open Web site with encouragement for people to post in new cases and materials.
- Since most activities related to producing handbooks and the like are one-off projects with time-bound funding then one way to at least assess longer-term sustainability would be to find out how much agencies would be willing to pay for such a handbook, and seeing whether that could produce sustainable financing. (Having said this, care is needed since such resources typically represent "public goods" of the type that private purchasing will not sustain.)

4. *Identifying Target Institutions:*

- One difficult issue with a useful resource, like a handbook, is identifying the target institutions that would find it useful. Ideas for doing this included: a) asking on already-identified email lists for people to identify likely target institutions; b) asking all participants at any workshops/events held to come along with a list of ten possible target institutions; c) adopting a "pyramid-selling" approach (though without the pressure tactics) getting each identified start person to identify four target institutions; then contacting each of them and asking that they identify four further target institutions; then contacting them ... and so on.
- For any local event held, ensure that the media – newspapers, radio, TV – are invited and try to get a clear message about the resource available and who would find it useful. This may lead other target institutions to come forward.

C3. Women's ICT-Based Enterprises: Key Challenges and Solutions

Groups for this activity were asked to identify three key challenges facing women's IT sector enterprise projects ... and their solutions.

Start-up Challenges Around Context

1. Socio-Cultural Barriers

- *Challenge:* barriers to acceptance of women working, including working in the IT sector.
- *Solutions:* setting up and running a women's ICT-based enterprise (WIBE) can be the best way to address these issues, demonstrating - as Kudumbashree and others have done - that women can operate in this sector; some agencies (with non-gender-based remits) have taken a different approach, selecting whoever they feel is most appropriate - men or women - from the local community, regardless of sex (but this does tend to mean that involvement is dominated by men since it fails to address the greater barriers that women face); others see that socio-cultural issues need to be exposed within communities and then discussed.

2. Skills

- *Challenge:* the general low level of ICT skills within communities in developing countries; and the specific low level of skills that women often have due to the additional barriers that they face.
- *Solutions:* at a macro-level, these issues can only be solved by government policies that incorporate ICT training into school curricula, that provide the required investment in ICT and teacher infrastructure, and that address gender-based barriers to education; at a more project-specific level, most WIBE initiatives are likely to have to provide some form of ICT training at the start of the project.

3. Technical Infrastructure

- *Challenge:* the generally low-level of ICT and related (e.g. power) infrastructure in developing countries.
- *Solutions:* as a generic, this issue is something that lies beyond the scope of most WIBE initiatives though it may well be that the agencies supporting these initiatives will also devote some of their energies to lobbying or guiding government in relation to building up e-readiness within the country. As a specific, agencies can provide the basic ICTs required by the woman on a gift or repayable loan basis. In particular circumstances, there may be a need or opportunity for particularly innovative ICT solutions such as wireless, solar panel, radio-based, and similar technologies.

4. Finance

- *Challenge:* the general difficulty of obtaining funding for IT sector enterprises compounded by the additional problem of getting such funds for a) women, and b) women from poor communities.
- *Solutions:* in part, this is a two-way awareness issue. First, agencies should familiarise themselves with the various different sources of funding that exist, which may relate to different vectors of WIBEs: there may be women-related

finance streams; or microenterprise-related schemes; or poverty-related streams; or even microfinance projects that could be tapped into. Second, agencies may need to engage with banks and other financial institutions to help them understand more about what is being intended; perhaps to offer some collateral or other sureties to the banks. Broad-based discussion may also throw up an individual or institution that is particularly sympathetic to the idea of WIBEs. Experience suggests that the main problems occur just for the initial enterprises under any scheme; once these have begun (and assuming they are running acceptably well) they can be used as demonstrators/case evidence to financial institutions. It may be that government assistance has to be sought to act as leverage on financial institutions.

5. Lack of Government/Other Sponsor Support

- *Challenge:* lack of support from government and other potential sponsors for WIBE initiatives.
- *Solutions:* see material above developed from the specific group activity on building support from sponsors.

Start-up Challenges Around Markets

1. Market Opportunities

- *Challenge:* the lack of market opportunities for WIBEs.
- *Solutions:* probably greater than imagine; there are some areas one could think about: a) a market between WIBEs; for example, where one supplies assembled PCs to others; one provides IT training to a data entry or other services-based WIBE.; b) although this does not yet exist it is possible that fair trade in IT services could be created as occurs with certain produce and products from developing countries.

2. Competition

- *Challenge:* the competitive nature of the IT sector, with requirements for tight deadlines that force overtime working, and challenges of competition from existing formal enterprises.
- *Solutions:* awareness-raising with women of the nature of the sector and participative discussion of how to deal with workload issues; good market analysis that identifies how WIBEs will compete - on price, market served, innovation, etc. - and which looks for particular market opportunities.

Start-up Challenges Around Entrepreneurs Themselves

1. Identifying Entrepreneurs

- *Challenge:* when faced with a locale or a community or with an idea about WIBE, how does one identify which women will be most suitable to own or manage or work in that enterprise?
- *Solutions:* for some initiatives this may not be an issue because women are self-selecting - i.e. because the agency's role is just to support existing enterprises, or to react to enterprise plans submitted by women. In other cases, though, where the agency takes a proactive role, then this is an issue. One approach can be participative: as in Kudumbashree, using community groups or women's groups to

identify likely candidates. This bottom-up approach, though, may need to be combined with more top-down filtering. One can take a quasi-psychological approach, using interview or related data-gathering to see if the women fit the profile of entrepreneurs; this might include looking for evidence of past entrepreneurial activity. For more technical skill issues, one can provide some form of assessment; such as an exam provided at the end of an ICT training programme. One can also take an approach of hurdles: placing some kind of filters or barriers that women must surmount and which test their resolve or motivation. Examples can include undertaking a training programme and passing an examination, but might also include demonstrating a financial commitment by investing their/their family's money in the nascent enterprise. Another filter used is a requirement for a certain level of educational qualifications, or some past experience with ICTs.

It must be recognised that almost all these approaches will tend to screen out the poorest and most excluded women within any community.

2. Ownership

- *Challenge:* that WIBE initiatives that are initiated by external agencies may not be owned by the women involved.
- *Solutions:* ensure that women have to make some financial commitment and also take on some longer-term financial obligation that pushes them into enterprise (note the 70% drop-out rate in Kudumbashree IT unit projects once women understood they would have to take on a loan; though also note that this then excluded the poorest and most vulnerable women); ensure that communities and families are involved in as many decisions as possible (these could be selection of families and individuals to be involved in the enterprise; or location of the enterprise; or identification of the best market sector; and others); try out group rather than individually-run enterprises since these foster a sense of group enterprise and ownership.

Ongoing Issues

1. Sustainability

- *Challenge:* that some WIBEs may not be sustainable over the longer-term.
- *Solutions:* this is something that must be kept in perspective. First, a large proportion of small enterprises fail within their first years: even if not a "natural" process then at least there is nothing unusual about it. Second, enterprise failure may have some justification: put another way there may be limited justification in continuing to support a WIBE if, say, it is failing because there is no market for its goods/services or because the women involved have no motivation for the enterprise. Third, even though an enterprise may not sustain, many things may - its IT assets; the women's IT and business skills; their feelings of empowerment: many if not most entrepreneurs who fail start up another business. Having said this, agencies should recognise two things. First, that support for WIBEs will often not just be a case of helping them at start-up; some - maybe many - will require a gradually reducing level of support over a two- or three- year period or even longer. Second, where there is more of a welfare than business angle to the WIBE, longer-term support may be justified. Third, support can come in many different forms - it can mean helping the women to help themselves.

2. Technical Change

- *Challenge:* ICTs are constantly innovating, with the danger that equipment, skills and market segments become obsolete.
- *Solutions:* in all cases there is only one solution (and that not a guarantee) which is forward planning of some kind. In relation to technology, there must be financial planning that builds in ways of replacing hardware and software every few years, and which allows for upgrades. In relation to skills, the issue is not quite so acute - in a number of areas, once those involved become confident with computers, they can pick up new skills on a learning-by-doing basis; in other areas, though, some provision will need to be made for investment in ongoing training. Probably the most serious issue is that of market segments dying out due to technological change. Three points here. First, even the best don't have 20-20 foresight (witness Microsoft's very belated discovery of the Internet), so one should not expect too much of a small WIBE in a developing country. Second, diversification within the enterprise may help (though of course it does bring its own problems) because not all eggs are in one basket: if one area dies away others are likely to continue and permit a transition. Third, innovation is a coin with two sides: for every threat there is an at-least-equal opportunity opening up. Nevertheless, WIBEs would do well to adopt some sort of "scanning function" of the market environment - talking to other IBEs, reading a regular IT magazine - to ensure that they have some level of informed understanding of the local impacts of technical change.

D. Women's IT Sector Enterprises Presentations

This section gives pointers to, and reports issues from, three real-world case presentations of women's IT sector enterprises.

Case 1: Rodwel Foundation

Gladys Mabaso, Zimbabwe

This case can be found at Web page: <http://www.womenicenterprise.org/rodwel.htm>

Case 2: Pandora Box

Ana Melo & Fernanda Cabanas, Mozambique

This case can be found at Web page: <http://www.womenicenterprise.org/pandora.htm>

Case 3: Drishtee

Satyan Mishra, India

Details of the Drishtee project can be found at Web page: <http://www.drishtee.com>

Overarching Issues/Ideas

Issues and ideas that arose as a result of the presentations included:

- **Pricing:** two issues arose here. First, that of calculation - ensuring that pricing took into account a full understanding of actual cost within the enterprise, including accounting for longer-term costs such as depreciation/replacement of IT. Second, that of salary/income for women - the tension between selecting a sum that was low enough to make the enterprise competitive (or viable in, say, a rural community where there was no effective competition) but not so low as to be exploitative and/or make the women's income level unviable. A number of women's ICT-based enterprises are themselves paid on a piece-rate basis, and some also pay their staff in the same way; e.g. per transaction facilitated, or per trainee trained.
- **Networks of support:** a reminder that, given the intersecting nature of interests represented by women's ICT-based enterprises, there were a number of support networks that could be tapped into - women's associations, ICT associations, enterprise/business associations, community groups. Such networks may also be able to provide mentors who can support women in the early stages of starting up an IT enterprise.
- **Staffing:** women's ICT-based enterprises can consider internships for school, college or university students as a way of getting temporary staffing inputs, and these interns may develop into longer-term employees.
- **Technical support:** all ICT-based enterprises require some presence of "hard" technical skills such as IT installation, upgrade and repair. There has been some tendency to hire local men (who more typically have these skills) but the barriers to gaining such skills are not great - either through self-help or, more likely, via a local training course; so women in IT enterprises can themselves take on these skills.

- ***Local languages and niche markets***: most women's IT enterprises tend to serve some niche local market that - due to distance or social contacts or specific needs - is somehow protected from larger national or global IT firms. One example of this that women could build on is the local language market, which is growing quite rapidly in most developing countries as IT penetration rates increase.
- ***Business culture and corruption***: for certain kinds of contracted work, there is a norm that some kickback will be paid. This is a difficult issue to face because no payment means no contract. It is possible in some cases to do a market analysis and identify those market segments that are "clean" or "cleaner" and only deal with those. It may also be possible to identify likely future needs of a potentially problematic client - typically government - and then provide these, so that one becomes the natural supplier. Examples of such "looking ahead on the curve" would lie in digitisation of government records, and provision of e-government services.
- ***Identifying women entrepreneurs***: tapping into some form of community-level organisation can be valuable because such organisations have valuable local knowledge. However, they do not have any formalised understanding of precursors to entrepreneurship, and their choices may be affected by local socio-cultural norms. Therefore some external input to the process of entrepreneur identification can be of value.

E. Evaluation and Acknowledgements

This final section presents the timetable, evaluation and acknowledgements for the workshop.

E1. Workshop Timetable

Day 1:

<i>No.</i>	<i>Item</i>	<i>Timing</i>
1.	Inaugural welcome to workshop from Mr Vijayanand, Secretary, Department of Local Self-Government, Kerala State	10.00-10.30
2.	Overview of the workshop: its purpose and content	10.30-11.00
3.	Overview of Kudumbashree IT unit initiative plus questions	11.00-1.00
4.	Introduction activity to identify delegates, their work and interests	1.00–1.30
5.	Discussion of workshop content	2.30- 3.00
6.	Group discussion activity 1: Gaining support for women's ICT-based enterprise projects from sponsors	3.00-4.00
7.	Case presentation 1: Rodwel Foundation, Zimbabwe	4.30-5.00

Day 2:

Two two-hour visits to a women's data entry enterprise, and a women's hardware assembly enterprise that are part of Kerala State's Kudumbashree initiative.

Followed by a one-hour group activity on lessons learned from field visits

Day 3:

<i>No.</i>	<i>Item</i>	<i>Timing</i>
1.	Group discussion activity 2: Good practice in content and dissemination of handbook resources for women's ICT-based enterprise projects	10.30-12.00
2.	Case presentation 2: Pandora Box, Mozambique	12.00-12.30
3.	Group discussion activity 3: Key challenges and solutions for women's ICT-based enterprise projects	2.00-3.00
4.	Case presentation 3: Drishtee, India	3.00-3.30
5.	Personal agenda activity: three personal learning points and three personal actions from the workshop	3.30-4.00
6.	Workshop press conference	4.00-4.20
7.	Workshop thanks, close and evaluation	4.20-4.45

E2. Workshop Evaluation

Of the 31 delegates responding, 19 rated the workshop "very good", 7 rated it "good", 4 rated it "excellent" and 1 rated it "fair".

Delegates were asked about the most useful part of the workshop. Overall, delegates rated the "visits to the two women's IT enterprises" as most useful; from which they felt they had been put in touch with the realities and practicalities of women's ICT-based enterprises, and saw what can be achieved by poor women. Three elements – "the presentations", or "the discussion sessions" or, more generally, "experience sharing" – were each rated as most useful by around six delegates (roughly equivalent in total to the 17 that rated the visits as most useful). The general benefits identified were learning and access to new data or new knowledge; some more specifically identified this in terms of practical lessons or "solutions". A small number saw that their workshop learning would be transferred into plans for new initiatives or pilot projects.

Only seven participants identified a "least useful" component. There was no agreement on this: all seven were different; a number stated that the element was still useful - just relatively less so compared to other parts of the workshop; the main sense was that participants had found the particular component less useful because it was already familiar (e.g. the discussion topic or the presented case or the Kudumbashree units).

Delegates were asked about missing elements in the workshop, and also asked to make other comments: in practice, responses to these two overlapped in terms of content. There was no overriding issue that emerged, and no specific issue was mentioned by more than three participants, so care must be taken with guidance of the following comments since they may well just represent a small minority opinion.

- Facilities: eight people had comments about the facilities, such as requests for provision of more IT and stationery, and one suggestion that all delegates be issued with name tags.
- Missing content: there were individual comments requesting more discussion about contextual factors, including ICT policy, and development of a clear action plan or roadmap from the workshop.
- Content limitations: a few delegates wanted more time; for example, for individual participants to describe their work to others, or for presentations from more different regions of the world.
- Participants: three participants suggested representatives from donor organisations should be included in such workshops.
- "Extra-curricular" issues: two asked for more of a cultural programme to be provided.

Finally, seven delegates gave further comments of thanks or positive reflection on their workshop experience as part of the "other comments".

E3. Acknowledgements

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