

I N F O C U S P R O G R A M M E

S e e d

boosting employment through
small **e**nterpris**e** **d**evelopment

**Making for the market:
Facilitating User-led Innovation
The FIT Manual**

The FIT Manual Series



International Labour Organization
Geneva

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Foreword

This series of manuals reflects the experiences of the ILO's FIT programme, gained over several years in various countries. The original mandate of FIT was to consider how donor-funded supporting services for Small Enterprise Development (SED) could be made more accessible to a larger proportion of the total target group. The challenge was thus to increase both the quantity and the quality of employment opportunities in the small enterprise sector, in ways which were harmonious with the dynamics of the private sector itself.

The manuals make FIT's experiences to date available to all those wishing to achieve similar goals. They document an approach which has aimed to tailor services to meet demand as precisely as possible. By being fully demand-led, the approach respects the perspective and priorities of those in the small businesses. By working as much as possible through private-sector channels, the approach also aims for sustainability and so for substantial scale and outreach.

More information about the FIT approach can be found on the ILO web site (www.ilo.org), and in various publications, including "The Wheels of Trade: Developing Markets for Business Services", published by IT Publications of London, UK.

This manual has been written by Timothy Nzioka and Milena Hileman, based on the experiences of several organisations and private trainers in Africa; the work of the Kisumu Innovation Centre in Kenya is acknowledged with particular gratitude. The inspiration for the development of this methodology came from the principles of Participatory Technology Development, but FIT subsequently worked to make the process more commercially sustainable, and therefore coined the term User-Led Innovation. Many people have made comments on drafts of this manual, and their contributions have also been much appreciated.

The FIT programme was launched with funding from the Government of the Netherlands, and this is gratefully acknowledged. Various other donor agencies have funded discrete activities that have enriched the experiences outlined in this manual; these agencies include the Government of Austria, UNDP and the European Development Fund. Again, these contributions are gratefully acknowledged.

Those who are interested are invited to contact the FIT team at the ILO headquarters in Geneva for further information. In particular, this manual is also available in Spanish, on request. In conclusion, we trust that it will increase opportunities worldwide for people to have access to Decent Work.

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1. About this manual

The target group

This manual describes the service of facilitating “User-Led Innovation” (ULI) by bringing together entrepreneurs from productive, small-scale enterprises and their customers to develop more marketable and more appropriate products. There are clear indications that this service is in demand by both customers and producers. The service provides substantial benefits and can be offered in a self-sustaining way. To achieve sustainability, however, implementation must be both imaginative and business-like. The manual, therefore, presents the findings to date, describes how to replicate such findings, and suggests possibilities for future improvements.

This manual is for agencies encouraging the development of micro and small enterprises (MSEs), in order to promote the creation of high-quality employment. More specifically, it is aimed at those agencies that are interested in promoting self-sustaining business development services (BDS) which can also deliver high impact.

This manual may also be used by agencies to work in collaboration with private-sector business service providers. Since agencies are striving to operate in a more business-like manner themselves, the manual is presented essentially along business lines, with opportunities for private-sector involvement highlighted.

This manual will also be of interest to all agencies involved in the process of action research, where experiments can be tried, evaluated, modified and refined in a rapid and collaborative manner. Action research will be necessary to develop further innovative and sustainable business development services.



Methodologies for group-based savings and credit have apparently achieved both financial sustainability and an outreach to the poorer and smaller MSEs. This achievement has not yet been matched in the field of BDS.

The need for business development services

However, most practitioners see the need for BDS if MSEs are going to expand or innovate. There are many constraints to business growth that financing cannot solve (or can even make worse). As a result, there is widespread interest in the development of BDS which can become self-sustaining.

The rationale for User-Led Innovation (ULI)

User-Led Innovation is closely related to “participatory technology innovation development” (PTD). PTD assumes that communities can and should develop their own technologies to meet their own needs. In harmony with the general shift in development practices, PTD aims to put beneficiaries at the heart of the development process, involving them in both planning and implementation of activities. ULI follows these principles, but adds another, putting emphasis on developing services that will eventually be self-sustaining or even profitable.

The term “User-Led Innovation” includes a focus on product development for a market and for a profit. End-users (customers) contribute in the modification or development of new products, and MSEs become more responsive to their customers. In the same fashion, agencies offering ULI services should become more responsive to the needs and demands of MSEs, adopting their perspective and tailoring services appropriately. Vocational schools, NGOs, or government agencies may all have a role to play in facilitating ULI, but the goal is to privatize the process as much as possible. Thus, MSEs and their customers are no longer



“beneficiaries” but “clients”.

Micro and small-scale entrepreneurs, who are close to local markets and in day-to-day contact with end-users, have the potential to manufacture products that are more responsive to customer demands than large-scale manufacturers or importers. By encouraging end-users to interact with MSE producers in the design and testing of new or improved products, FIT has found that better products can be developed which are accessible to end-users and can potentially increase productivity for all parties.

Until recently, it was often assumed that the best way to further the development of MSEs was to offer a comprehensive package of support measures. The cost of providing a package of many services makes sustainability impossible, and in addition it has been difficult to know whether these packages have achieved significant impact.

Group credit schemes and other methods for providing financial services to MSEs depart from the big-package-of-support model. Instead, they have offered a uniform product that MSEs have wanted and have been willing to pay for. How they use the service (the credit) has been up to them; service providers have only had to monitor repayment rates. Repayment rates are generally very high, often as much as 98 per cent. Interest charges have been able to recover the full costs of providing the service.

So instead of asking what non-financial or business development services an expert would recommend, it is surely more appropriate to ask: What services do MSEs feel they need *and* what would MSE customers like to see MSEs provide? If customers are involved in product design, a more marketable, more profitable product should result.

Customers already give feedback to the MSEs from whom they purchase products. Sometimes a customer may even provide an order for a design or modification to an implement that leads to the regular production of the new product. But rather than wait for these special customers, ULI speeds up the process: facilitating meetings to generate ideas, test prototypes, and market new products.

FIT’s experience suggests that MSEs are often willing to cover all the direct costs of services that facilitate innovation, provided they are perceived to be appropriate to their needs, and ultimately profitable. Private-sector trainers are now being hired by local businesses to facilitate ULI efforts. Similarly, some pilot activities have been spontaneously imitated by nearby MSEs. In addition, in order to advertise their own products, suppliers of inputs to production may be willing to partially fund ULI services that reach large numbers of MSEs.

***On what experience
is this manual
based?***

Ultimately it is the private sector that should provide most of the services that MSEs need and use to enhance their effectiveness and their potential for growth. FIT is therefore working with local partners on a range of other services which have the potential to be provided, not only sustainably but also as commercial operations.

***How is this manual
structured?***

A range of methodologies for the dissemination of commercial information to MSEs through self-sustaining channels is now being developed. A manual on exchange visits which suggests ways to facilitate enterprise visits, where MSEs are exposed to new production technologies, new products, new management skills, and new markets and supplies, is available (Facilitating enterprise visits as a business opportunity: The FIT manual).

This manual is based on the experiences of about 330 MSEs and their customers, supported by over six collaborating agencies in Kenya, Uganda, Ghana and Togo. A chronological listing of the experiences gained, including references, is attached as Annex A. The manual is most closely drawn from FIT's experience in Kenya, where efforts to develop financially self-sustaining interventions are more advanced than in West Africa.

Chapter 2 further develops the case for facilitating ULI. Development agencies will want to know if the support provided shows a demonstrable impact on the participating MSEs and also whether the service is in demand. For-profit organizations which might be able to provide particular services involved in ULI will just want to know if the services are in demand. The following chapters provide a step-by-step approach to facilitating User-Led Innovation through a brokering workshop, support to prototype development, and marketing strategies for the new products.

Chapter 3 outlines the general framework of a ULI programme as it has been implemented by FIT partners and describes general principles learned so far.

Chapter 4 covers designing and researching the "market" for a ULI programme: the end-users and the producers. For FIT the producers have all been metal workers. Techniques for surveying the MSE population and for surveying the end-users are suggested. Annex B provides suggestions for interviewing techniques. Promotional measures for attracting participants and liaising with other actors are suggested.

Chapter 5 takes up the issue of what to innovate and suggests a step-by-step outline of how to hold a brokering workshop between MSEs and end-users (or suppliers).

Chapter 6 considers what it takes to develop the prototypes of new products.

Chapter 7 covers marketing. Suggestions on how to evaluate the impact of ULI are provided in Annex C.

2. The benefits of User-Led Innovation

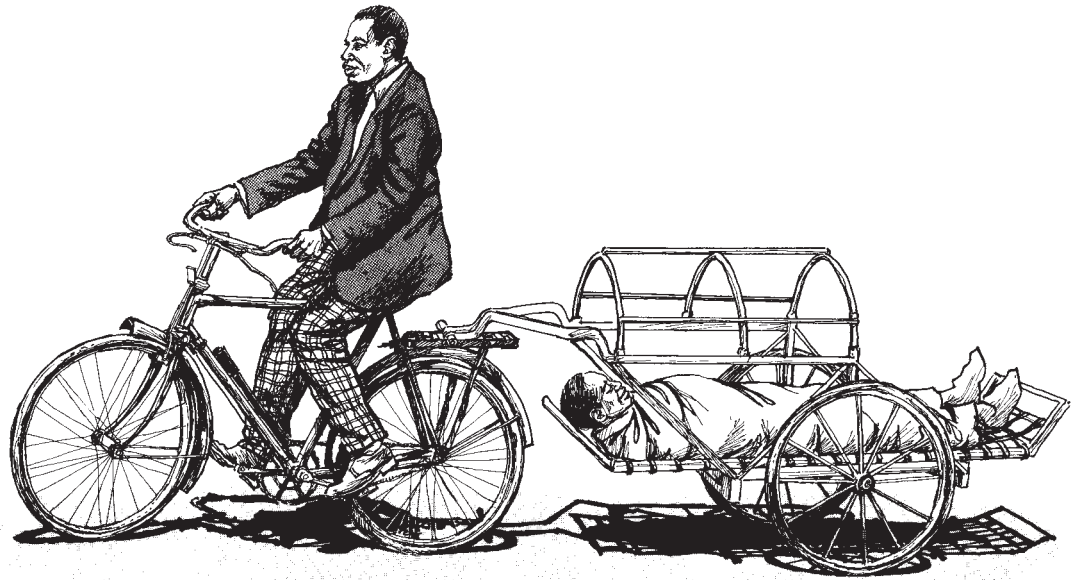
The qualitative impact of User-Led Innovation

User-Led Innovation refers to a process that starts with an idea for a new or innovative product, through its development to its marketing. (A new product may not be entirely new, just new to the area.) Most innovations occur without the aid of specially designed programmes. FIT's experience suggests, however, that facilitating ULI at first may lead to more sustainable efforts on the part of the participants, their colleagues, and the private sector. There is still some way to go in discovering how best to promote financially sustainable ULI, but experiments on this are under way, especially in Kenya and Uganda. Independent evaluations conducted after the completion of the programmes listed in Annex A cited a number of qualitative benefits. First and foremost, new or improved tools and implements were developed - for example, better weeding tools in Ghana and non-motorized transport in Kisumu (where there are few cars and relatively flat land) such as water carts, farm carts, and attachments to bicycles to carry the sick. In Embu cultivators and ploughs and in Ghana tools to process cassava were also developed. While some of these items require further refinement, users were enthusiastic about the needs they answer.

Other benefits from the project included:

- new or improved skills, especially in the planning, drawing, standardizing and pricing of new products;
- improved relationships between MSEs and their potential customers. MSEs have often been viewed with distrust, as sort of second-class





producers. Users learned exactly what MSEs can produce and what constraints they face. After the project, customers expressed willingness to finance the construction of prototypes or to place orders before the item is made.

A woman purchasing an innovative water cart which she took back to have the brakes modified (Kisumu) stated that “These Jua Kalis (small businesses) are not as bad as people think. They do take instructions and accept their mistakes.”

A local leader at a promotional show noted that “These new products we see have changed my perceptions of the Jua Kali. I have realized they are no longer only a mass of uneducated, thoughtless people. Many are capable of creative thinking. I think they are no longer copy cats.”

- Increased awareness of the value of innovation and willingness to take the risks involved. After the projects, there was increased willingness to pay for prototypes or workshops to bring together users and producers. At least one MSE voiced concern about obtaining a patent — no longer afraid of innovating but of how to protect a good design from competitors.

A metal worker from Kenya: “Before the project, I thought money was my only problem. Now I know that good products and marketing are more important aspects of business.”

A metal worker from Kisumu on the non-motorized transport project said “Initially I thought I was a technical person, and knew all there was to do with my work. After working with the buyers of my products, I have realized we have a lot to gain from them.”

- Increased awareness of the importance of testing and especially marketing new products. This was also expressed in an increased willingness to pay for marketing activities.

A metal worker from Kenya stated “I am very grateful to KIC-K (Kisumu Innovation Centre-Kenya). Not only have we acquired skills to make new products; we learned that the success of any business idea lies in letting people know that what you have if it is of good quality. I now do my own marketing.”

- Improved information on sources of raw materials, spare parts and technical assistance.
- New networks established between metal workers and increased cohesion among the group of metal workers. In Embu and elsewhere, metal workers joined forces to purchase raw materials and save on price and transport costs. Collaboration in marketing was also an outcome of the programmes: at least two MSEs in Kisumu have established new “branches” among their colleges in the towns where the promotional shows were held. Some MSEs may also have benefited from becoming more familiar with formal research and extension organizations.

An MSE metal worker from Kisumu: “Fundis (artisans) should train their fellow fundis so buyers can buy from the best. This will give us a level playing ground and the skills won’t be a monopoly of the established shops and factories. Let the buyer choose!”

- Improved productivity due to the new or improved products or their increased availability. For example in Ghana, improved weeders saved farmers time and possibly increased yields. In Kisumu, water carts free women’s time for more productive tasks.

The quantitative impact of User-Led Innovation

There are a number of ways the impact of ULI can be measured quantitatively. Information is not available for all of the FIT-sponsored efforts in all of these areas, but what has been measured is encouraging. The measures include:

- The number of tools or implements which were formerly unavailable in a given area; at least 25 new (new to the area) or improved tools were introduced under the FIT-sponsored programmes.
- Increases in productivity due to the new tools: higher yields for farm tools, time saved for non-motorized transport, etc.

- Returns on investment: In Kisumu, metal workers received \$70 toward costs of materials to produce prototypes and invested on average an additional \$120 of their own funds. Sales resulting directly from their innovations in the following four months averaged \$780, yielding \$590 profit (on average, certain individuals recorded higher four-month profits, especially those who marketed more than one new tool.) Other products were sold during the advertising shows as well; for example, during the Kisumu non-motorized transport shows about \$200 of other products were sold. Out of four blacksmiths in Ghana, two report increases in sales over 50 per cent and one said he anticipated greater and greater increases.
- Ongoing sales from new or improved products: In Kisumu, six out of seven metal workers who had been monitored right after the project were monitored six months later. Three out of the six had continued sales resulting from the new products. For three of these metal workers, sales had increased significantly. For the most part, those with the largest sales were manufacturing more than one product.
- Willingness to cover costs: In some places, farmers and other end-users expressed a willingness to pay for similar support activities in the future. In other places, metal workers expressed the same sentiments.

3. Steps toward facilitating User-Led Innovation

The general framework

MSEs are often competing in crowded markets; innovation is necessary to gain a competitive edge and to grow, offering employment to more people. *Fostering awareness* of the need to innovate and the advantages innovation offers to MSE producers is the first step required to innovate. Further, MSEs need to understand what to do next, what type of innovation may be successful. They need to know how to *acquire the services, information, contacts and equipment to turn an insight into an innovation* and how to *offset the risks and investment* that are involved. This includes making sure that new and improved products are tested and do justice to the original plan. Finally, *marketing* of the new products in a way that reaches the target customers is essential.

While there are numerous ways of going about each of these steps, one process that FIT has developed in partnership with local intermediary organizations can be summarized below:

- *Designing the programme*: Organizers need to spend some time developing the principles and outlines of the ULI programme. Target groups among end-users and producers must be chosen or a means of selection determined (advertising, for example, is a means of self-selection). The amount of time, money and logistical requirements should be determined. Potential partnerships with the private sector, such as companies that market the tools produced or that supply materials to produce the tools or equipment can be explored. Cost-sharing arrangements should be outlined.
- *Raising awareness*: This can begin with identifying target groups among MSEs and end-users. While conducting surveys or mobilizing participants, organizers discuss the goals of the programme and the needs it addresses. If there is adequate publicity and the potential pool of participants is large enough, participants may be self-selected, ensuring that everyone involved already sees the need for innovation in partnership with end-users. The awareness-raising process continues with the first formal meetings or workshops and continues throughout the programme.
- *The first brokering workshop: facilitating dialogue and deciding how to innovate*: The first meeting between the two groups will need to break down barriers to communication that may be present. MSEs are often viewed by consumers with a certain degree of prejudice or distrust. Once dialogue is established, the group can work together to identify problems to be addressed in the creation of new or improved products. Effective facilitation is essential. During the first workshop, discussions with end-users might lead to new designs or modifications of existing products, which can then be tested in the

marketplace. Samples or illustrations of implements or tools used in other places could also be demonstrated to end-users and their response used to help determine whether to create a prototype for testing. Willingness to pay needs to be a key indicator for deciding on whether to design a prototype. The price has to be within the limits that end-users are able and willing to pay.

- **Developing a prototype:** Using the information garnered from the workshop with end-users, MSEs will produce plans for prototypes of the new designs. The FIT programmes have all offered some financing for materials to develop the sample prototype. A number of designs were submitted, along with cost estimates, to the intermediary organization for consideration. Other inputs may also be welcome at this stage, as MSEs are not usually accustomed to planning for new or improved products (drawing and pricing). Ideally, if finances permit, a second workshop, perhaps only for half a day, can be held between MSEs and end-users to allow for further modification by end-users and give them a role in determining which prototype will be financed. After plans are finalized the first prototype can be created. To avoid costly mistakes, technical assistance is often important during this phase.
- **Testing the prototypes:** MSEs should try to test their new products themselves before allowing end-users to try them. Testing means more than just trying out a product. Tools and implements need to be tried in a variety of situations and under worse-case scenarios. Modifications should be made to improve the prototypes before they are marketed. In some programmes, models were judged by a panel of end-users at a promotional show and their comments used to improve the samples. If collaborating end-users are involved in the testing, a third half-day workshop can be scheduled to record their feedback.
- **Marketing the new products:** Under the FIT programmes, new products were marketed through local promotional shows that included demonstrations of the products. Non-motorized transport products were paraded through the towns. Brochures were also used to advertise the new models to end-users. Marketing is often a new field for many MSEs and the need for marketing strategies should be stressed.

The methodology documented here reflects one area of FIT's experience, especially in Kenya, in facilitating User-Led Innovation in partnership with local NGOs or religious bodies. It is assumed that an intermediary organization will work with local MSEs and end-users in developing the process. Ideally, the private sector can be brought in

wherever possible. A local MSE organization or a local business may be interested in helping to market products or promote the programme. A consulting firm may be interested in organizing a brokering workshop, where fees would cover part of its costs and the remainder might be provided by an NGO. The more the private sector is involved, the greater the chances of financial sustainability in the future.

There are other ways in which innovation may be fostered. Below are a number of methods which FIT has found successful and which are discussed in greater detail in other FIT publications (for an overview, see FIT Working Document No. 15: *User-Led Innovation: Enabling MSEs to develop improved technologies*, by Jim Tanburn) :

- *Exchange visits*: When MSEs visit their colleagues in other locations, or when MSEs visit large-scale enterprises, new ideas and techniques can be acquired.
- *Brokering or training workshops*: Workshops that bring together MSEs from various locations allow them to compare their products, services and technologies. This may also help MSEs see the need to innovate.
- *Rapid market appraisal*: A short training course has been developed by FIT to help MSEs carry out their own research into potential markets for new products. The experience also helps MSEs see the need for innovation.
- *Meetings between MSEs and traders*: Traders often have a good idea of what their customers want and what may sell in a competitive market. Meetings with traders can help MSE producers better understand the market. In Embu, traders brought samples of products they purchase in Nairobi which they would be willing to purchase locally if they were available. Subsequent orders were made for the new products.

General principles

The experience gained so far points to the following general principles:

- The entire programme should not take more than a year, and ideally about six months. It is difficult to maintain enthusiasm when programmes drag on too long. The first brokering workshop should give everyone a chance to air his/her views. While prejudice and negative attitudes may be expressed, it has been found that after people have had a chance to make their complaints they can begin to work together constructively.

- There should be maximum effort to involve relevant actors within the private sector. A large company which may market the products is one possibility. Those who manufacture the tools and materials needed to produce the new products is another. Minimally, these actors should be encouraged to attend the brokering workshop, at least briefly, and the marketing shows. At the workshop, these individuals or innovative successful producers of new tools and equipment may give brief talks to provide role models or encouragement.
- End-users should be involved in selecting which designs will be produced. For example, a contest can be held, with a panel of end-users selecting the winners.
- Facilitation should be on a minimalist basis. Extensive preparation and follow-up do not change impact significantly, but do raise costs.
- Where possible, elements of the programme should be facilitated by a commercial organization and costs recovered for services: e.g. professional workshop facilitators, hiring technical assistance for prototype production, hiring a local association to organize a promotional show, etc.
- MSEs which are provided with partial funding for the production of prototypes should enter into a contractual agreement with the funding agencies, where rules and responsibilities are laid out on paper and signed.
- Ample time and attention needs to be paid to testing new products. This stage must not be skipped. MSEs should also consider offering free servicing of new products until all the problems with production are sorted out.

4. Getting started with User-Led Innovation

Developing and designing the product

A certain amount of preparation is needed before bringing together MSEs and end-users to determine what to innovate. Organizers need to have a fairly clear picture of what their programme will entail. A brochure or fact sheet outlining the goals and activities of the programme will be useful to inform potential participants, key resource people, and local authorities. The programme budget, of course, will be one of the critical limiting factors in determining what activities will be undertaken. The following questions need to be addressed early on by the organizers:

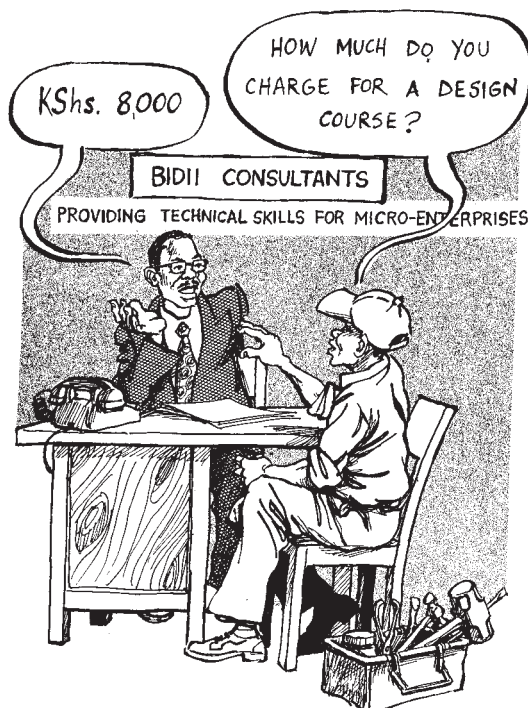
- Which market is being targeted (farm implements, transport, etc.)?
- Who will participate (producers and end-users only, or end-users and traders, any local resource people such as extension agents and private sector representatives)?
- How many people should participate?
- How many workshops should there be and for how long?
- What type of cost-sharing arrangements will be required?
- Is there any possibility for local suppliers of raw materials to help finance the programme in return for advertising their products?
- Will materials for prototypes be financed by the intermediary organization, or will MSEs or MSEs and end-users cover all costs?
- How will the final products be marketed, and who will cover the costs entailed?

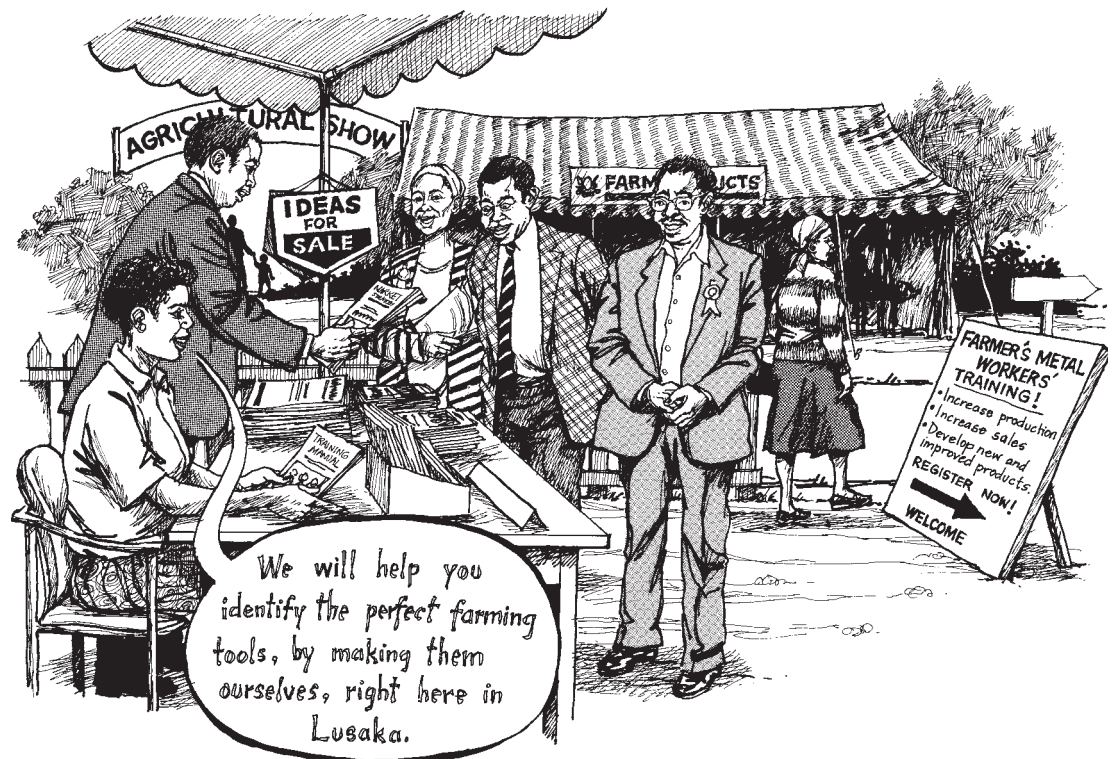
Public relations

Cost-sharing is essential, particularly for developing and marketing the prototypes. Some fee for the workshop should also be considered. When participants contribute resources to the project, they are more

likely to be committed, give their best effort, and feel responsible for the results. While all participants will contribute their time and labour, a nominal cash fee at the least is important for establishing a business-like tone to the operation. Furthermore, if MSEs understand what costs are involved and learn how to make the price of innovation cost-effective, they are more likely to continue the process themselves without support from an external agent. In all the FIT programmes, participants paid for their transport and most of their subsistence during the scheduled activities. Often they helped pay for the production of prototypes.

The involvement of the private sector is especially important. Companies that manufacture the tools or material needed to produce the new products may be interested in helping to sponsor the programme in exchange for advertisement and endorsement of their products. They may be willing to provide





materials for the prototypes at a reduced cost. Merchants or large-scale retail stores may also be interested in being involved. They may be willing to help market the new products. Finally, successful entrepreneurs or large-scale manufacturers might be willing to give a brief presentation on the value of innovation and how it has helped their own companies. Minimally, this type of actors should be encouraged to attend the workshop, if only briefly.

Developing the market: Raising awareness and identifying participants

It is hoped that once a critical mass of MSEs realizes the importance of innovation, marketing, and soliciting customer feedback, associations of MSEs might undertake to organize ULI programmes themselves, merely soliciting the technical assistance they require. Eventually it might even be possible for business service organizations to sell ULI services on a for-profit basis. To this end, organizers should record how they go about setting up the programme, how much it costs, and any lessons learned.

The next step is to determine who will participate in the programme. This might begin by identifying existing networks of farmers, food processors or other end-users, as well as metal workers, in the target area. Extension agencies, research projects, and local NGOs or church development organizations can be useful here. Discussions with local leaders and authorities can help facilitate future activities. Those who seem particularly knowledgeable might be useful to invite to the brokering workshop(s). Likewise, for certain types of tools that are mostly marketed by traders, it could be important to have traders represented – they will have valuable information about prices and customer needs.

End-users

In the past, FIT has worked with various extension agents or ongoing projects to identify participating farmers. Efforts may be made to cover a diverse area, instead of focusing on a single town, which may help increase distribution when it comes to marketing the new products. Care should also be taken to see that women are among the participants in the programme. In Africa women are often the ones who use tools, though they may not be responsible for purchases.

End-users

Generally, end-users have been found to be very enthusiastic about participating in the programme, even to the point of being willing to help cover costs. Some of the programmes which FIT has sponsored have used a questionnaire to help identify participating farmers or end-users. The questionnaire also helped to provide some background information for future impact evaluation of the programme. Topics covered included:

- questions to help establish a baseline and help choose farmers who are experienced: they might include the number of years of farming, the number of employees, and estimated profits per annum;
- questions to indicate what the needs of the end-users are: the type of crops grown, tools used and where purchased (if owned) and where repaired, what other tools they require and why.

Although not reflected in the questionnaire, efforts were made to choose farmers who had a history, known by local government extension agents, of willingness to try out new ideas on their farms. Another criterion that can prove useful is to choose a farmer or other end-users who are leaders among their peers. They may have experience promoting change within their community.

A similar questionnaire can be asked of food processors or other end-users, establishing how long they have been in business, how many employees they have, what they do and who they serve, as well as MSE producers giving a rough idea of what their requirements for tools and equipment are. With this information, a group can be formed which represents a variety of requirements which might be met by the MSE producers.

In Kisumu, Kenya, KIC-K found participating metal workers through advertising. The participants were therefore self-selected. This has the advantage of ensuring commitment to the programme and eventually will probably be the method that self-sustaining or for-profit agencies must employ. Advertising, however, does not allow organizers to choose a mix of people based on age, gender, or capability.

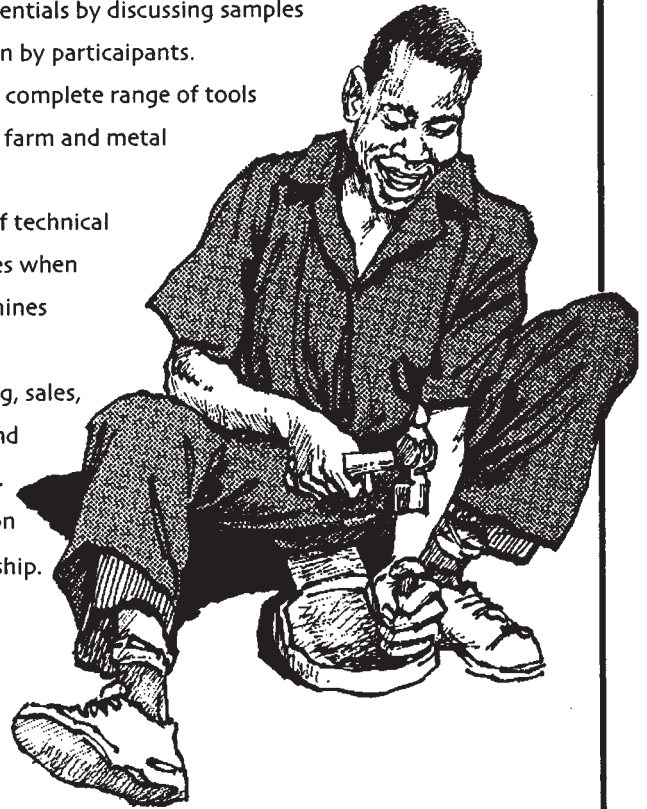
This is IT!

You can now increase your turnover rates like never before.

KIC-K invites all farmers and MSE metal workers to one day educational workshop at the Kibuye Market Center on 14/6/97.

It is a great chance for you to interact and share experiences on a wide range of issues including:

- ◆ Identifying the appropriate technologies and tools required for efficiency.
- ◆ Operational and management training for affordable and profitable capacities.
- ◆ Studying product potentials by discussing samples of products brought in by participants.
- ◆ A demonstration of a complete range of tools and machines for the farm and metal workshop.
- ◆ Training on the use of technical drawings and sketches when designing tools, machines and products.
- ◆ Training on marketing, sales, customer relations and business cooperation.
- ◆ Creating awareness on funding and sponsorship.



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Admission is free

Another programme in Kisumu used a questionnaire to select metal workers to participate in the programme. A similar set of questions to those asked of the farmers can be used to survey local metal workers, such as:

- Background information: How long have they been in business, how many employees do they have, what are the stock turnover rates, monthly or annual profits, etc.?
- Current capacity: What products are made and how much do they sell for, what tools do they own, what training do they have, have they ever used technical drawings or sketches, what materials do they use, who are their customers, and what types of techniques do they employ?
- What particular problems do they face in their business?

The Embu programme employed this type of interview to select participants. It may be useful to try to target MSEs that are highly skilled or recognized among their peers as being especially motivated or talented. Organizers may also want to ensure that the group possesses a good mix of tools and equipment. It may also be worthwhile to try to get a group that is diverse in age and experience. If there are any female metal workers, efforts should be made to include them.

One of the advantages of undertaking a survey of local MSEs and end-users is that organizers can use the information gathered to begin to identify existing technologies from other places that may answer some of the needs that have emerged. Efforts can then be made to supply samples or drawings for discussion at the first workshop.

For tips on how to conduct interviews, see Annex B.

5. Holding a brokering workshop

The brokering workshop between end-users and MSEs has four major goals:

- Identify the needs that end-users have for tools and provide some approximation of how much they would be able to pay for such tools.
- Identify which of these tools MSE metal workers can produce and what obstacles they face in trying to produce these tools.
- Improve communication and trust between end-users and tool producers.
- Promote new linkages between producers and the private sector (retailers, traders, and suppliers of raw materials and production tools).

The workshop is the first step to getting the communication process started. Ideally, it will continue after the workshop, perhaps during organized meetings at first, as well as informally through new relationships. The ultimate goal of the process would be for the beneficiaries to take up these types of services themselves on a fee-collecting basis.

Who to invite to the workshop

In addition to MSEs, end-users, and relevant members of the private sector, organizers may want to invite local resource people to the workshop. They may have valuable information to contribute and may serve as role models. Extension officers, opinion leaders, or NGO agents may also prove useful. Care should be taken, however, that resource people do not outnumber the MSEs or end-users. The workshop will be most effective if the total number of participants is not too high. Ideally, the group should total no more than 30 people.

During the stage of programme preparation, organizers should make efforts to acquire a measure of the capacity of the MSE producers, as well as some impression of the needs of their potential customers. This need not be a lengthy exercise, but when participants are selected some baseline information should be gathered as well. There may be existing technology which is not locally available that would serve well to answer the needs of the end-users. User-Led Innovation does not imply that all innovative products may be entirely new. They may only be new to the local market. There are many advantages to adapting existing technology to local conditions.

Products which have been marketed in other places have already been tested to some degree; and there may be documentation on low-cost production, including designs. When organizers can provide samples,

or at least drawings, of products which are new to an area, they can be evaluated by metal workers and end-users during the workshop. This was the case in Embu, Kenya, and Ghana; samples were evaluated or modified with positive results.

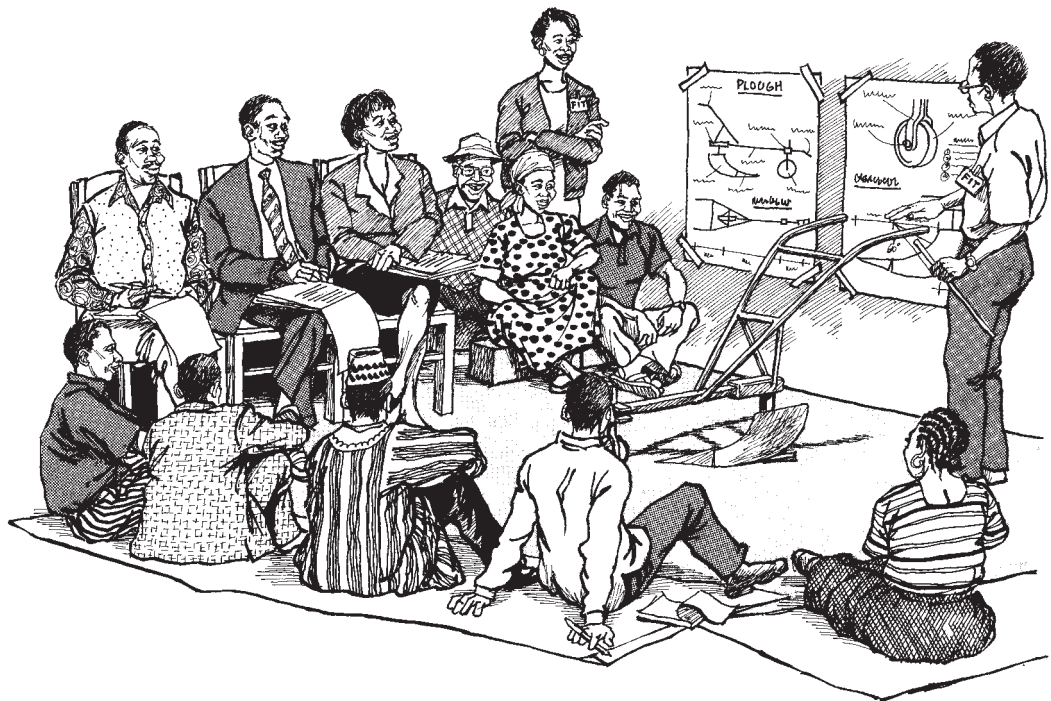
Technical assistance for producers at the workshop

Some of the FIT-funded innovation efforts have also provided training to metal workers to assist them in producing items which were previously unavailable locally. For example, in Kisumu, metal workers attended a wheel-making course. This assistance could be conducted before the workshop, so that items produced during the training can be demonstrated to end-users and suggestions on their modification made or to get an idea of whether there is a demand for them. Technical assistance after the workshop may also be important, as well as assistance with procuring supplies and tools for production, so that time and money are used efficiently to develop the initial prototypes. Technical training and assistance could be charged separately or could be part of the contractual agreement between organizers and producers of the prototypes.

Outline of the workshop

A general schedule for a one- to two-day brokering workshop between end-users and producers is as follows:

- Introductions: exercises to establish rapport



- Brief and concise explanation of the programme and its goals
- Exercises to help MSEs and end-users understand each others' needs
- Group work: exercises to document needs/constraints
- Lunch and tea breaks, for informal discussion
- Presentation of sample products or drawings
- Presentation of MSEs' first suggestions
- Feedback by end-users
- Next steps: planning what happens next
- Evaluation of the workshop by participants

The workshop could take place over three or four days in the evenings or at another time which is convenient to producers and end-users, but the best scenario would be if there is continuity over one or two days. The only requirement is a relatively quiet place to work and a blackboard. The setting of the workshop should not be too far from the MSE or end-user environment (i.e. not in a large hotel in a distant city). Lunch and tea breaks are very important aspects of the workshop, because they allow people to exchange views and information informally. Issues raised during the course of the formal discussions can be followed up, and experts can be consulted individually. Ample time for socializing must be scheduled.

Breaking the ice at the workshop

The format of the initial workshop may vary considerably, depending on the goals of the programme. For example, a programme that focuses on developing weeding tools only, such as was undertaken in Ghana, will limit discussion to the problems farmers face with weeding only. Sample innovations could certainly be made available, and a relatively final decision on what the MSEs could produce could be made during this first workshop. A second meeting would not be necessary.

Ideally, a second brokering workshop would be held, once the MSEs have drawn up concrete plans for possible prototypes. This workshop would be much shorter, more like a long meeting, with a single agenda. It would determine which of the plans are the most viable (and potentially eligible for funding). It would also give end-users a further opportunity to provide feedback for modification. A mini willingness-to-pay assessment of the proposed products should be included.

Attention should be paid to the seating arrangement used in the workshop. A U or circle formation of chairs is more likely to facilitate a relaxing and egalitarian atmosphere. It allows people to make eye contact with each other and encourages participation by all. Attention should also be paid to the facilities provided: Is the building quiet and comfortable? Are restroom facilities accessible? Are arrangements for tea and lunch breaks adequate and do they allow an opportunity for informal discussion?

Introductions should do more than simply letting participants know each other's name and occupation. They should help people feel comfortable together and establish rapport. Most facilitators have exercises they like to use for this purpose.

Suggestions for introductions

- Have each end-user introduce an MSE and vice-versa, preferably someone who is not already familiar to them. They should tell the group their partner's name, describe their business, and mention one unique or interesting aspect of the person or his/her life history.
- Ask each person to introduce him/herself and the occupation by adding an adjective that begins with the same letter as the first name and business, e.g. "I'm serious Steven and I make marvellous metalwork"; "I'm wild Wanjiku and I prepare perfect posho," etc. The exercise establishes informality and helps people remember the names.

Explaining the programme of the workshop

This should be a very brief explanation of the objectives and modalities of the programme. The benefits of innovation and the way MSEs and end-users may serve each other's needs should be stressed. An outline of everyone's roles and responsibilities within the programme should be presented. What the organizers expect to contribute to the effort should be mentioned, including the expertise or financing anticipated. Any expectation of what participants will be expected to contribute in terms of time, labour, money or materials should be explicitly stated. The principle of cost-sharing should be reiterated. The fact sheet used during the fieldwork stage could be distributed to supplement oral explanation. A few moments for questions should be allowed, with the understanding that there will be an opportunity for more later in the afternoon.

The methods used here may include a brief lecture, complimented by exercises where participants go around the room and tell what they expect (hope to get) from the programme and what they plan to contribute to it.

Developing rapport at the workshop

To establish better understanding between MSEs and end-users in the Kisumu workshop, a problem-solving activity was employed for this purpose. Metal workers and end-users divided into small groups (of no more than six) and each tried to imagine what it is like to be who they are not (an end-user or MSE metal worker). Each group listed the major constraints they imagined they would face. Next, these were presented to the group as a whole. Further discussion refined the points

raised to paint a closer approximation of the actual constraints faced by farmers or metal workers.

An alternative exercise is to divide the participants into groups of about five, according to occupation, and ask each to write down a problem he/she commonly faces in his/her work. Then each group takes one of the problems from the opposite occupation and attempts to solve it. Problems and solutions are presented to the whole group for further refinement.

During these exercises, it is possible that prejudice towards metal workers could emerge; this was the case in Kisumu and Embu. Airing these feelings openly and giving metal workers an opportunity to respond did much to break down the stereotypes. Once negative ideas are articulated, they can begin to change.

***Group work at
the workshop***

To document needs and constraints, divide participants into small groups of four or five. Groups can be made up of either metal workers or end-users, or a mix, but one or the other should predominate in each (e.g. groups made up mostly of metal workers or groups made up mostly of farmers). The aim here is to document what constraints users face in their work that they think could be addressed by improved tools



Determining what to try

or implements. Suggestions on new types of tools or technologies could be made - imagining what to buy if it were available and affordable to help in their work. Next, groups switch roles. Groups of metal workers could either make guesses about what end-users would most like to have or end-users would try to list the constraints they imagine metal workers face who try to innovate: for example, what materials are they confined to, how much do they spend on a product without a firm order, what limits are dictated by their tools or experience, etc.?

If the need that the new or improved product is going to address has been determined before the workshop (e.g. weeding tools or transport), this time could be devoted to more detailed discussion of what makes a product beneficial and marketable. Small groups of metal workers or end-users would list and rank the qualities they find most important. These are likely to include:

- ease of use, including ability to transport where applicable;
- durability;
- affordability;
- maintenance requirements, including where the product can be repaired;
- finishing;
- usefulness — how much time or effort is saved by using this tool;
- flexibility — if it can be used for more than one function.

Presentation of samples

If the number is not too great, the organizer should make an effort to describe or demonstrate to the group sample products which meet the needs that have been raised. These would consist of tools or implements which are not already available in the local area. Most of the FIT programmes have had some type of samples (or books describing samples) available for the first brokering workshop. In many cases MSEs used these models directly or with some modifications in material or design.

In some situations, farmers had already tried out the sample products before the workshop. In this case, discussion would focus on what limitations or benefits they found in the trials. Otherwise, discussion can be directed to the hypothetical: whether end-users would buy them and why, how much they would be willing to pay, what qualities they would look for before purchasing, etc.

If actual samples are available, metal workers can take them apart and focus their discussion on what constraints they would face in trying to produce them. Otherwise, there should be an effort to see that metal workers understand the drawings and written explanations before turning to the possible constraints in production.

After thoroughly viewing and discussing the samples, each smaller group (or individuals, if numbers are not too large) of metal workers would then draw up a list of products they would like to try and present their suggestions to their entire group. End-users would offer feedback, explaining what they would look for in such a product and how much they think they would be willing to pay. They may want to make suggestions on possible modifications of the original design. What would make it worth spending money on this product?

The choices that MSEs make here may not be final. Metal workers will probably want some time to think and reflect on what they have learned during the workshop. Then they will need to carefully plan how they would go about making their proposed products and document how much it would cost to produce the prototype.

At the end of the day, the organizers should reiterate what they expect

Costing the prototype

In order to cost the prototypes, estimates need to be made for the cost of:

- material
- equipment (rental, if it is not available; otherwise, operating costs and spare parts)
- labour
- testing
- modifications

Starting with the base production costs, it might be safe to assume that at least 50 to 100 per cent more of the costs of materials, labour and equipment will be spent refining, modifying or remaking the product after testing. For some products, more than one sample will need to be produced for testing.

to happen next. In most cases, metal workers will now have to come up with their final choices for a prototype, which they will submit to the group at the next meeting (or to the organizers, if there is only to be one brokering workshop.) The facilitator should explain how the submissions will be judged and the criteria used. Time should be provided for questions and the date of the next meeting confirmed. The next meeting should occur no more than six weeks later.

Feedback from participants at the brokering workshop

The brokering workshop should be evaluated professionally six to 12 months later. However, participants should also be encouraged to give feedback at the end of each day. This will help organizers learn from the experience of the workshop. Facilitators may have their own methods for gathering feedback, but the following are simple and fast:

Break into groups, and have each group quickly respond to a specific

list of topics such as:

- things I liked;
- things I did not like;
- suggestions for improvement;
- what I found most difficult;
- what I found most valuable.

Have each group present its findings to the whole group, using newsprint to summarize.

Go around the room and have each person complete the sentence “I didn’t like it when ...”. The sentence may refer to anything that happened during the workshop. Each person offers his/her own comment (if there is one) and should not repeat the sentiments already expressed. They may, however, repeat the sentence with different observations as many times as they feel is necessary to describe what they did not like. Next, the same process is repeated to express what people appreciated about the workshop. Each person completes the sentence “I liked it when ...”. This way the workshop ends on a positive note.

Feedback gathered in this manner may be used when planning the second workshop. It is also possible to schedule a little time after the morning session to evaluate the workshop in progress and then try to incorporate the critique into the afternoon session.

6. The prototypes resulting from the workshop

Developing the prototypes

MSEs will benefit from technical assistance to help plan and produce the prototypes. If funding for the production of the prototype is to be provided, the metal workers will be expected to submit plans and financial proposals of their tools, along with some explanation of why they have chosen it. In Embu a local artist was employed to help metal workers formulate drawings of the item they wished to submit. The drawings were not highly technical, but were made to scale. It was found that metal workers were able to follow the drawings to produce samples. Assistance in costing or technical considerations may also be welcome, and the organizers should offer this type of help to metal workers. The local municipal engineer may be a possible source of technical assistance in some localities. School-leavers with some formal training and maths would be another way for metal workers to hire low-cost technical assistance with costing all the inputs involved in the production of the prototypes. Technical training institutes may be another source. Otherwise, the organizers should endeavour to have an engineer available to answer questions and give guidance if necessary.

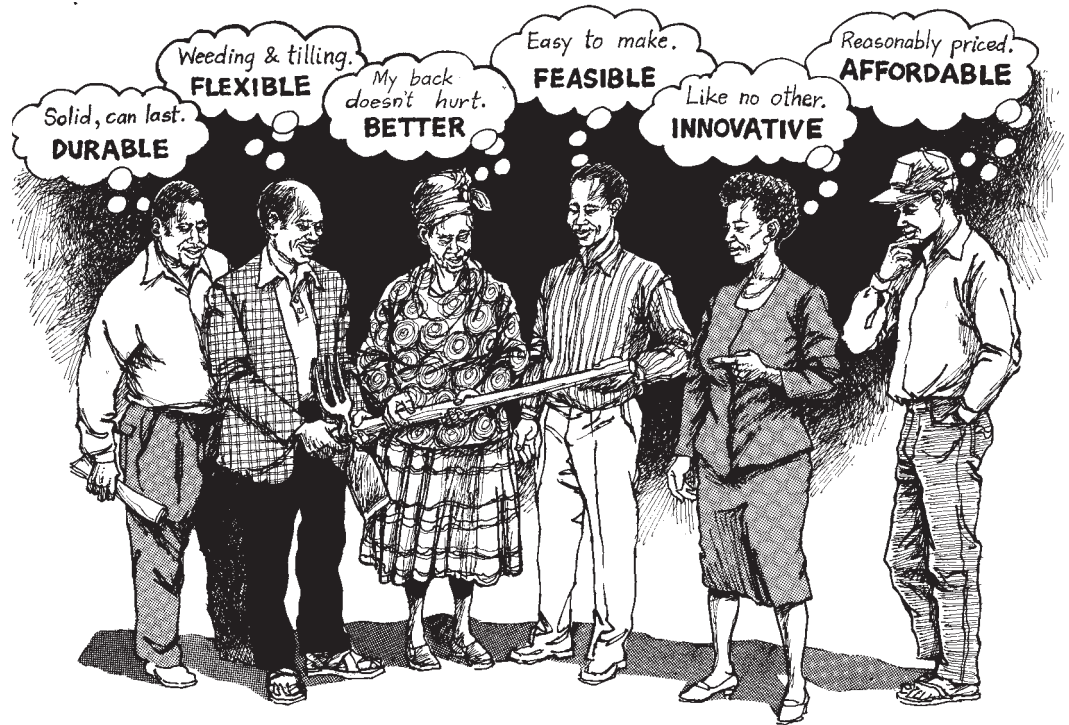
Another problem that metal workers may face is lack of the best tools for production, which may force them to compromise on quality. Organizers could encourage the group to share tools with each other, or they may want to facilitate a way of renting the necessary tools from larger firms. Tools commonly needed are drills, grinders, lathes, heavy-duty welders, and cutters for thick steel.

From the workshop, metal workers should have a fairly clear idea of the criteria that will be used to judge their submissions for funding. These should include durability, affordability, flexibility, feasibility and whether the tool is in fact innovative for the local area. Specific criteria for specific types of tools may also apply, such as portability for farm implements. If end-users are also going to provide input in deciding which prototypes will be funded, the factors they value in deciding to purchase a tool should be documented and provided to the metal workers during or immediately after the workshop.

Cost-sharing the prototypes

Cost-sharing the prototypes

All of FIT's User-Led Innovation programmes have included some financial assistance for the production of prototypes, but metal workers contribute their own cash as well as their labour and equipment toward the effort. Grants have ranged from \$10 to about \$100. With the larger grants, participants more than matched the programme's contribution. In Embu, efforts were made to ensure that moneys went for the work involved by only reimbursing for verified receipts of materials purchased.



Experience in Ghana suggests that if metal workers are offered any funding toward the production of the prototypes, a formal contract or memorandum of understanding, laying out the responsibilities and obligations of each party, should be drawn up and signed. It should be specified that the sample produced will not be sold, but used to solicit future orders.

The exact amount of the grants will depend on the type of tools or implements that are to be manufactured. Non-motorized transportation tends to be more costly than weeding implements. Producers should be encouraged to work together to reduce costs by purchasing materials in bulk or sharing costly equipment. They can also be encouraged to share information on where to purchase raw materials.

Companies that supply materials for production of prototypes may also be interested in getting involved in the User-Led Innovation programme. In exchange for free advertising and a minimum order, perhaps lower costs or even a grant to help fund the development of prototypes could be procured. Traders and retailers may also be willing to contribute in exchange for access and input into the products. Organizers should make every effort to find support for the programme, wherever possible.

Testing the prototypes

It is important to adequately test and refine the new tools before marketing them. When costing the production of prototypes, this aspect should not be overlooked. Some of the programmes FIT has sponsored did not devote enough time for testing. In some cases, tools were tested as they were promoted at mini-shows to introduce the tools to the public. This may be fine for products which function well, but unfortunate for those which were not perfected. Customers have to be

convinced that the problems with the product are solved, instead of merely being convinced that they are worth buying.

Ideally, the end-users involved in the brokering workshop should participate in testing the new products. It might be useful to consider offering the tools to them for a special discounted price. If they do not live too far away from the metal workers, the dialogue about the new tools can be ongoing and occur at their places of residence. This is preferable, because it will help form stronger relationships than those facilitated only by organized workshops. However, logistics may make it necessary to hold a third half-day workshop, where end-users report back on the performance of the new products and make recommendations for modifications.

The time involved in testing new products will depend on their functions. Agricultural tools and implements may need to follow the agricultural calendar. In Ghana, new weeding tools were tested during the weeding season (two to three weeks), with subsequent modifications made. Plans were made to test them again the following year in the next weeding season. Tools that are expected to work in different conditions should be tested in a representative sample of those conditions. For example, ploughs and cultivators should be tested in a variety of soil types. Carts or wagons should be tested with above-average loads on various terrains. Since rains are infrequent in many places, it may be necessary to simulate wet conditions. Simulating various working conditions for the tools allows the testing process to be speeded up. While impact evaluation will take time, testing and developing the prototype should occur as quickly as possible to reduce costs and maintain interest.

Ideally, more than one sample of each tool should be tested. This will give metal workers some experience in trying to achieve standardization and will ensure that the tests are accurate for future products.

In addition to testing the product before selling it, metal workers may want to consider offering a service guarantee to the first customers. Participating end-users will probably be among the first customers. Metal workers can offer to repair or modify the new product for a given length of time after purchase, without charge. This was the strategy employed by one metal worker in Kisumu, which was highly appreciated by his customers. It may prove a valuable marketing strategy as well.

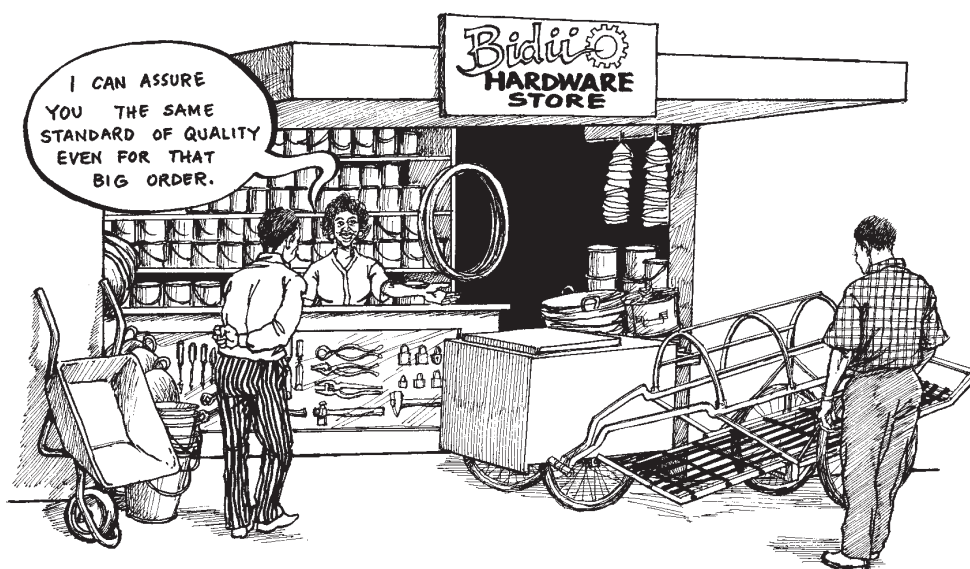
7. Marketing the new products

MSEs often do not realize the importance of marketing their products. Most tend to sell their goods to those who happen to come by their place of business. Traders serve an important function for many, as they take the responsibility of selling directly to customers. In follow-up evaluations, metal workers found the marketing efforts of the programme very valuable, and many requested further assistance with marketing. Finding at least a few initial customers goes a long way to maintaining enthusiasm for the User-Led Innovation process.

In order to market a product, it is important to have a working sample. A number of metal workers in Kenya involved in the FIT programmes sold their samples, perhaps not realizing the short-term gain could prove a longer-term loss. Organizers should consider insisting that any prototype partly financed by the programme only be used as a sample for generating sales and not be sold outright. This should be one of the conditions of the contract signed by both parties.

Local resource people, particularly any who were involved in the brokering workshop, may be useful when it comes to marketing. Extension workers can let farmers know about particular tools. In Kisumu a local NGO helped its clients purchase non-motorized transport items on an instalment basis, and they kept a display of the products in their offices. NGOs that provide credit to the poor could consider offering loans to purchase tools that will help their businesses. In order to assist resource people and others in marketing, a brochure or flyer describing and illustrating the tools would be useful.

Brochures or flyers could also be distributed on market days by street hawkers, as well as through channels such as churches and social service agencies. If the cost is not too high, advertising in the local paper could be considered.



Another marketing avenue which is not very exploited by MSEs is the use of retail shops. Retailers who have a chance to see the products may be interested in selling them in their shops, provided they can be sure of a given standard of quality. Hardware stores could be approached to consider selling, or at least displaying and taking orders for, the MSEs' products.

In Kenya the results of the metal workers' innovations were publicly demonstrated and displayed at mini-shows, usually held near open markets on market days. Brochures illustrating and describing the tools were also produced in a number of cases. Posters advertising the shows and the products were also employed. In Ghana marketing was mostly confined to the network of the collaborating NGOs, which had branches all over the country.

Mini-shows

Mini-shows are a good way to bring producers, traders, customers, and the press together to promote and display the new products. They also are a good way of spreading the benefits of innovation further, as other metal workers may themselves attend and get ideas for new products. The metal workers have the advantage of being able to physically demonstrate the product to potential customers and can attract further publicity through the press. The mini-shows organized under the FIT programmes also included a contest to judge the best new product, which proved very popular.

Cost-sharing and sustainability of the show

In order to promote sustainability, metal workers, and end-users if they are interested, should participate in all aspects of the show's organization and implementation. Eventually, mini-shows might be a service that groups or single MSEs sell to others. During the first brokering workshop, participants should be aware of the plan to hold a show, and the organizers' expectations of MSE contributions should be aired. Evaluations of programmes in Kisumu indicated that metal workers would now be willing to help finance the shows. It might be a good policy to insist on a degree of cost-sharing for any marketing activities, including the shows.

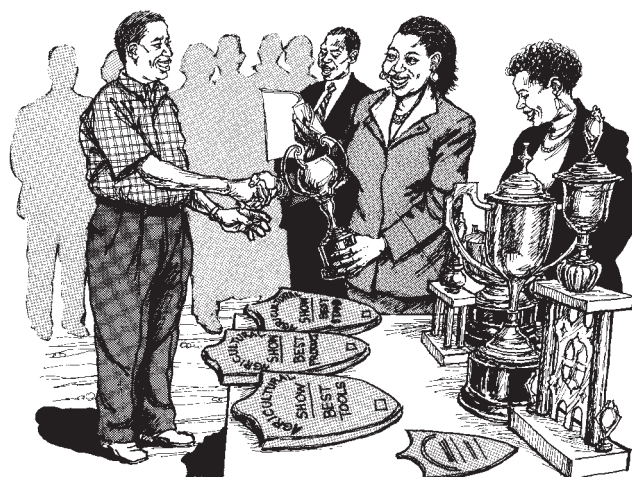
Planning and organizing the show

A successful show requires careful organization. The local authorities will need to be consulted to determine the date and the venue of the show. In Kenya the shows were often held on market days next to local markets. This is a good strategy. It was found that shows held slightly out of town had a much lower turn-out.

Once the venue and the date have been determined, efforts should be made to publicize the show. Metal workers and end-users involved in the programme should be encouraged to spread the word through whatever organizations they are a part of.

Contests for best products

In Kenya publicity efforts included posters, leaflets, radio announcements, announcements in local churches, a large banner displayed on the day of the show and, also on the day of the show, a vehicle-mounted public address system announcing the show. For the non-motorized transport shows, products were displayed in a parade around the town, once in the morning and once in the late afternoon. This proved to be a good way of drawing the public to the event. Special efforts could be made to invite traders and retailers to the shows, if they have not been participating all along.



Metal workers who have produced the new tools or implements need to be present during the show to answer questions. They should not simply send one of their workers. Organizers need to make sure that transport is possible so that MSEs will be able to attend promotional events. They should also help with setting up, which might include erecting barriers, ensuring that a public address system is working, and arranging a display of their products. A public address system is important, both for addressing the crowd and to play music that will draw attention to the area. It is also important to notify the local press and ensure that some coverage of the event will be given.

In Kenya the shows followed a set schedule, including introductions outlining the programme and explaining the products, followed by questions. Demonstrations of the products and a contest for the best examples, followed by prize giving, were also included.

The contest among metal workers for the best products is a good way of harnessing the competitive spirit. In Kenya the prizes included the chance to exhibit the products at the national agricultural show. The top three winners were chosen by a panel of end-users. These could include those involved in the development of the tools. Panellists should judge the new products according to a predetermined set of criteria, which may vary according to the type of tools or implements considered. In Embu the criteria for agricultural implements included:

- type of materials used (whether they are appropriate for the job);
- workmanship;
- function - both the flexibility of functions and their efficiency;
- price, including cost implications of any power source (human or draught animal);
- durability;
- applicability to different soil types;
- portability;
- originality or degree of innovation;
- suitability for use by women.

In Kenya the shows generated quite a number of sales. Evaluations indicated that greater sales could have been made if there were more of the product available at the show. Most artisans only had a single sample for display. If feasible, shows should be held after producers have had time to invest the capital necessary to make at least a few of their items for sale at the shows. Or they should have materials and equipment ready to quickly produce new products from orders generated at the show.

Oyugis Mini-Show

A mini-show was held in Oyugis, Kenya on 23 July 1996 to promote non-motorized transport products developed by metal workers and end-users in Kisumu. About 1,000 people attended, the majority men.

MSEs participated in most aspects of setting up and running the event. Organization of the show was handled by the local NGO, KIC-K, Kenya. It visited the site four times before the show to identify the venue and solicit collaboration from other development actors in the area.

The show was intended to be more than a marketing event. Feedback from potential users was solicited to improve on the designs of the water barrows, carts, mobile shops and bicycle carts and ambulances. Artisans demonstrated their product to those attending the show, and potential buyers were also given a chance to try out the products. Time was set aside for artisans to formally meet with those who had tested their products, to obtain feedback and solicit sales. Potential buyers were also given the opportunity to publicly announce (over the public address system) their assessment of the products and to sign a comments book.

Some of the designs of the products were modified according to the feedback gathered at the show. Sales amounting to about \$130 were made. New marketing channels were established. MSEs from Kisumu made contact with their counterparts in Oyugis, and two are now displaying their products at open-air display sites. Two hardware shops asked to stock some of the items.

The need for more careful testing of, for example, a bicycle cart was recognized. No one could answer the customer's question of how heavy a load the cart could handle.

The participating metal workers realized the importance of marketing and were enthusiastic about the event. Some MSEs were reported to be discussing among themselves how to organize similar shows at lower cost.

Annex A: Fit's experience in facilitating User-Led Innovation

Since 1995, FIT has been involved in a number of efforts to facilitate ULI in various locations in Kenya, Ghana and Uganda with largely positive results. This manual is based on the organization and evaluation of those efforts, which are listed in chronological order below. The experience has provided useful lessons, particularly in the area of testing and marketing new products. Further documentation is available from FIT on request.

Agricultural Tools Programme, Embu, Kenya, 1994-95: Working with the Kenya Agriculture Research Institute's (KARI) Drylands Applied Research and Extension Programme, farmers and MSE metal workers developed or modified a number of tools, including ploughs, a cultivator, a weeder, a planter, spray pumps and manure forks. Tools were displayed at shows and open days and farmer and agricultural tools groups formed. Some of the tools were not made of strong enough materials to be satisfactory to the farmers.

Farm Tools Programme, Kisumu, Kenya, 1995: The Kisumu Innovation Centre-Kenya (KIC-K) brought farmers and MSE workers together to determine tool needs and to present tool designs to farmers. Nine tools were developed by the MSEs, two improved and seven new. They included a chaff cutter, push weeder, toolbars with cultivators or plough attachments, charcoal refrigerator, seed drill, rice thresher and a rice weeder. The tools were promoted and tested at five promotional shows around Nyanza, and a tool brochure was produced. A number of tools were sold but some were not adequately tested before marketing.

Weeding Tools Development Programme, Ghana, 1995: The Association of Church Development Projects (ACDEP) in the three northern regions of Ghana and the Ecumenical Association for Sustainable Agriculture and Rural Development (ECASARD) in Southern Ghana both undertook to develop weeding tools with over 200 farmers and MSE metal workers in a number of locations. Farmers tested the tools during the weeding seasons, and appropriate modifications were made. Further testing and promotion were planned for the following year, as initial testing was inadequate.

Food Processing Equipment Pilot, Ho, Volta Region, Ghana: Working with the EP Church Programme (a member of ECASARD), the pilot addressed the question of whether the relatively more complex equipment used in food processing would also be amenable to ULI. Cassava processors and metal workers participated in a one-day workshop to develop cassava graters and gari processing equipment.

Non-Motorized Transport Programme, Kisumu, 1995-96: KIC-K and the Intermediate Technology Development Group (ITDG) collaborated with FIT to develop and promote non-motorized transport

alternatives in Western Kenya. Twelve MSEs were trained in wheel production and then undertook to design prototypes suited to local conditions. Among these were bicycle carts, ambulances, farmer's carts, and water carriers. A meeting with 11 users to test the prototypes made during the training and to present other ideas for new products was undertaken thereafter. Products were further tested and promoted at four promotional shows. The innovations were widely applauded, but further testing and more reasonable costing of the products is required.

Food Processing Equipment Programme, Machakos, Kenya 1996-97: The Small Enterprise Development and Employment Creation Organization is working with ten food processors and 20 MSE metal workers to develop improved equipment. A large list of potential products and their specifications was compiled during a workshop, and presently one of these is being tested (a chipper) while other prototypes are being developed. Demonstration and promotional workshops are planned.

Training of Trainers in ULI, Uganda 1997: Trainers from the private sector were trained in the facilitating of ULI events. Early monitoring indicates that local businesses are commissioning such events, at their own expense, from the trained trainers.

Annex B: Interviewing techniques

While questionnaires were employed in the Kisumu programmes, in Embu semi-structured interviews were used. A semi-structured interview consists of predetermined topics only. It is hoped that new questions or insights will arise as a result of the discussions. Flexibility allows the interviewer to diverge from the check list when interesting information arises. Good interviewing depends on self-critical awareness, perceptive listening and careful observation. Using a check list of topics that one would like to cover during an interview allows for divergence to other areas of interest and probing to more clearly understand what is being said. Probing questions like “But why?” or “Please tell me more about that” or “Anything else?” allow the speaker to go a little further in answering what, where, when, who, why and how. A few basic principles should be followed:

- Use a checklist or interview guide - know what areas you wish to discuss before starting the conversation, explain why you are conducting the fieldwork (a brochure or fact sheet describing the programme will be helpful).
- Be sensitive and respectful to everyone involved. Make sure the interview situation is comfortable. Sit on the same level, or join in with a task that someone is doing.
- Listen carefully and be prepared to learn, not teach.
- Ask open-ended questions using “Who? What? Why? Where? When? and How?”.
- Probe responses carefully to learn more.
- Judge responses (fact, opinion, or rumour).
- Record responses and observations carefully.

Questions should be phrased in such a way that they are not leading or ambiguous. Here are some examples of how *not* to ask questions:

- Is it true that it is difficult to purchase scrap metal in this town? (leading)
- How do you get your customers? (ambiguous)
- Wouldn't you prefer to sell a lighter cultivator if you know how to make it? (leading)
- What do you do as a farmer? (ambiguous)

- Isn't this Jua Kali shed wonderful? (leading)
- Do you sell your jembes (hoes) to all kinds of people? (leading and ambiguous)
- Wouldn't you be better off if you had the tools to make ploughs? (leading)

Leading questions tend to make respondents answer with a "yes" or "no". Open-ended questions will generate more explanation. A check list will probably change as you go along, reflecting what you learn about your area of interest and what you learn about asking questions.

A good way to get an interview started with an MSE or farmer is to ask what they are doing at the moment. This will provide a description of the business and its basic operations. Asking what business was like in the past will allow them to express their achievements and give some historical information. Asking what they plan to do in the future can get into some of the constraints they face, which would be one of the most important things to note.

Recording the interviews

Without recording the fieldwork, valuable information will be lost. In addition to providing information to help organize the programme, the fieldwork will prove useful when it comes to monitoring and evaluation. Again, a few basic principles should be observed when recording the interviews:

- Ask permission of the interviewees to record what they say.
- Use a small notebook (not a big clipboard or writing pad).
- Record the details of what is said and, whenever possible, what is not said but can be sensed (hesitation or tension can also be important).
- Record what you observe and how the interview developed.
- Record details of who said it (male/female, young/old, better-off/worse-off).
- Make follow-up notes after the interview.
- Record personal impressions.

Annex C: Evaluating the impact of User-Led Innovation

It is important to have some idea of what impact the ULI programme has on its beneficiaries. A careful evaluation will justify moneys spent and may lead to a better programme in the future. Ideally, the evaluation should be carried out by an agent who has not been involved in the programme and should be conducted some four to six months after the programme has finished. For a detailed guide on evaluating the programme, see the FIT document *Guidelines for evaluating FIT activities, including evaluation forms* (Bert Wesselink, April 1995).

Clearly, the first indication of the impact of the programme is the existence of the tools or implements themselves. If end-users are involved in judging the final products, say for a contest at a mini-show or simply as part of the programme, a record should be kept of why they did or did not approve of the products. Tools that are now available that formerly were not or tools that somehow make a task easier or better done, are all indicators of project success.

The second obvious area of project impact is financial. Have metal workers been able to make profits from the production of innovative tools and implements? Have end-users been able to be more productive when using the new tools? The second is more difficult to measure than the first.

In order to facilitate the evaluation, metal workers should be encouraged to keep records of the number of products they sell, to whom, and how their customers came to know about the product. It would also be helpful if they keep a running record of the costs involved in purchasing materials to make the tools. If they receive any further feedback from users, this would also be useful to have recorded.

Metal workers may also be questioned on how they perceive the change in business (if any) and whether they think innovation is worthwhile. Estimates of the present profits may be compared with any information they supplied in the initial survey to identify participants. In addition, evaluators may ask the metal workers questions about how they liked specific aspects of the programme, how much they participated, how they think the programme could be improved, and in what areas they would appreciate further assistance. These more general questions would also be appropriate to ask the end-users who participated in the programme.

To truly evaluate increased productivity of the users of the new or improved tools, one would have to be able to discount all the external factors such as fluctuations in the local economy or climate. Ideally, a

control group of users who do not have access to the new tools could be used, but finding a control group that exactly matches the user group requires a fairly large sample. This may not be feasible because the programme itself may not be that large. If it is possible to organize a control group, the information generated would be valuable. Otherwise, evaluators may have to rely on what is perceived by the users themselves, which is likely to be accurate anyway. Purchasers of the tools may also be asked why they purchased the tool, how they think it has helped them, how easy it was to acquire, and how they plan to maintain it.

Specific questions for participants in the programme will also depend on what type of tools the programme aimed to produce, e.g. agricultural tools or non-motorized transport. Agricultural tools may look at increased yields as well as time saved.

Finally, evaluators will want to examine whether there has been a change in attitude. Metal workers may now see the importance of market research, the benefit of modifying production to suit consumer demands, the value of offering innovative products in a competitive market, and the need for advertising. End-users may realize that MSE producers are not second-class manufacturers and may have an increased awareness of the constraints they face. They may also realize that offering feedback or suggestions to MSEs can result in better, and easily available, products.

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