Lessons learned across the programme

During 2002, managers of the **Disability and Healthcare Technology Knowledge and Research (KaR) Programme** visited many of the funded projects to assess progress and talk with project staff about their work. After these visits a questionnaire was sent to all projects to gather further information about lessons learned. A number of common, recurring themes emerged.

The reference numbers that appear throughout this report, for example, **D1,** *correspond to those printed at the top right hand corner of the first page of the various project and programme write-ups in this pack.*

1 Disability – An important yet neglected area

The KaR programme is committed to supporting both disability and health-care technology activities, and consequently has supported projects in both areas. In general, those working on disability initiatives particularly welcomed this support. This is because they feel that local communities, governments and the international donor community often overlook disabled people.

This view was articulated by Harold Shangali, the Principal of the **Tanzania Training Centre for Orthopaedic Technologists,** who linked the experiences of disabled people at local levels to global trends and activities **D8.** He reported that in local communities in Tanzania, particularly in rural areas, disabled people often experience rejection. He said that this situation had improved in the past because of interventions from outside of the country that influenced the government to focus more on disabled people. However, he felt that this momentum had now been lost, with the attention of the donor community diverted to other issues, such as malaria, HIV and AIDS.

This view supports the findings of *Perspectives on Disability, Poverty and Technology*, a study commissioned by the KaR programme, conducted by the **Overseas Development Group** at the **University of East Anglia (UEA).** The full text of this report can be found at **www.kar-dht.org.** The report concludes that in relation to the UK Department for International Development (DFID) in particular *"there is as yet little evidence of an integrated and coherent approach to the issue. Disability remains institutionally as well as conceptually and practically marginalised, with responsibilities within DFID itself fragmented" (Recommendation 7.1).* A dual approach is proposed to remedy this. *"Disability should be mainstreamed into all development programmes*

(Recommendations 7.2 and 7.3), and *specific initiatives focused on disability should be supported, such as a dedicated Knowledge and Research Programme for disability alone." (Recommendation 8.2)*.

Although the UEA study argues strongly for the adoption of a social approach to disability, it recognises that: "*Technology and its outcomes (buildings, transport systems, assistive equipment, etc) can dramatically affect the environment within which people live and work and may itself significantly increase or decrease the barriers which prevent disabled people from participating fully in social life. Technology can be immensely liberating and empowering for disabled people if developed within a framework that prioritises their real needs as well as their genuine participation at all levels. The provision of appropriate technological solutions in a manner which empowers the users should not be seen as outside or opposed to a social-model approach, but as a critically important element in this approach. For example, for millions of poor disabled people, the lack of low-cost, appropriate mobility aids and assistive equipment is a major barrier to social integration." (Recommendations 2.8 and 2.10)*.

This view is shared by the **Voluntary Service Overseas** project that is introducing community-based rehabilitation approaches for disabled children in Kenya **D9.** They reported that assistive aids, such as callipers and hearing aids, were of value in allowing disabled children access to education, and argued that these should be both accessible and affordable.

A nurse working with the **Institute of Child Health** project in **Kenya** commented on another way in which disability is overlooked **D4.** She said that although she felt happy when children in the paediatric ward she worked on survived cerebral malaria, health professionals often overlook the impairments and resultant disability that can affect children following cerebral malaria.

2 Effective management of healthcare technology – a key emphasis

A number of healthcare technology projects funded by the KaR programme emphasised the need to concentrate on effective management of healthcare technology, rather than on initiatives to design new pieces of equipment. This was the theme of a round table meeting convened by the KaR programme in London in June 2002. In this meeting Yunkap Kwankam from the **World Health Organization** reported that medical equipment was often not useable in developing countries **P2.** The reasons for this varied from the equipment not working because of poor maintenance, to a lack of trained staff to operate the equipment effectively. He argued that management of healthcare technology should not focus on medical equipment only, but also on other elements needed to operate the equipment effectively, such as drugs, human resources and facilities.

3 Information technology – revolutionising healthcare?

Some projects emphasised the need for financial support for innovative approaches in making healthcare technology from developed countries useful and accessible in developing countries. This is particularly the case with information technology (IT). The **Baobab Health Partnership** introduced computerised hospital information management systems in **Malawi** **HCT2.** The project uses computers operated by touch-screen technology rather than a mouse and keyboard, allowing staff with little IT background to learn the system quickly and with little formal training. The **International Federation for Medical and Biological Engineering** project also recognises that technologies cannot simply be imported from developed countries, but need to be adapted for use in different environments **HCT5.** In particular, websites aimed at users in developing countries need to take into account poorer telecommunications, relatively high costs of connection and limited bandwidth.

4 Designing a project – factors to consider

Careful project design is essential for the eventual success of a project. Several organisations reported on lessons they had learned about project design during the course of phase one of the programme, either by recognising things that had gone well, or by identifying things that could have been better.

The **Baobab Health Partnership** commented on the importance of careful observation of existing practice in guiding project design **HCT2.** In their case, this involved observing what information-recording activities took place at different stages of a person's 'journey' through the healthcare system at Central Hospital, Lilongwe, and what information was required and used at different points in that journey.

Peter Heimann, of the **African Federation for Technology in Healthcare** project, stressed the importance of careful design of a project and said that this was a priority above seeking to attract funds. Well-designed projects would be supported financially provided that somebody actually wanted the end product. He described the various mechanisms that had been used to ensure effective project design **HCT1.** These included:

- establishing an eight-person review committee composed of people from the **World Health Organization (WHO),** the **South African Ministry of Health** and external consultants
- intensive lobbying work on the need for the project with the Ministry of Health
- support from external partners, including the **UK Department for International Development** and **WHO**
- seeing design as an ongoing collaborative project – the project director makes 4-5 visits per year to other organisations to ensure that the way the project is developing still meets their expectations and needs

- using training to shape the design of the project. Training was carried out in several countries including Ukraine, Jordan and Egypt.

A number of projects felt that the key to successful project design was taking into account local needs and the availability of local resources. **Mobility India** **D6** and **Motivation** **D7** emphasised this in relation to the production of mobility aids – orthoses and wheelchairs respectively – while the **International Federation for Medical and Biological Engineering** emphasised this in relation to website design **HCT5.**

5 Good projects take time to set up

Most projects found it difficult to adhere to implementation timetables outlined in their proposals, and some requested – and were granted – extensions. There are several possible reasons for this, including over-optimism about schedules derived from wanting to present a positive scenario in order to secure funding, poor planning skills including assuming optimal conditions when planning the project, inadequate time for initial planning, and the inherent uncertainties which exist in work of this nature.

The **Voluntary Service Overseas** project admitted that they had thought that what they were proposing was a relatively straightforward activity, but found that raising awareness of the project in communities was a 'long and tedious' process **D9.** This was particularly the case in urban settings, where it proved particularly difficult to identify and mobilise appropriate community structures.

The **Teaching-aids At Low Cost** project, with hindsight, would have allowed more time for setting up of the project – including installing equipment, finding premises and recruiting staff – and more time and funds to research the current state of information technology available in developing countries **HCT7.**

6 Good plans are flexible plans

Several projects reported making changes in their plans after starting work, based on lessons they were learning as the projects developed. **Mobility India** changed several elements of their project based on practical experience of carrying out activities and seeking to solve problems that arose **D6.** These included:

- adopting metal as the material of choice for the die following trials of certain materials
- identifying the most effective way of making dies
- adopting blow-moulding as the technique for manufacturing the orthoses
- finding ways of accommodating the fact that shrinkage of materials occurs, and at different rates in different environments
- experimenting with different methods of reinforcement.

The **Baobab Health Partnership** emphasised the importance of small-scale pilots before moving to full-scale projects, as this gives the opportunity to refine and revise project design based on practical experience **HCT2.** Several projects, including **Mobility India** **D6** and **Motivation** **D7,** emphasised the importance of iteration in project implementation. Using this approach, the design of the project is refined by experience. The original design is regarded as a loose framework to be adapted, rather than a rigid structure that has to be adhered to regardless.

7 Good projects require good people

Good plans are essential if a project is to succeed, but they are worthless unless carried out by competent, motivated people.

All projects agreed on the role of effective leadership for clarity of vision and motivation. Chapal Khasnabis, of **Mobility India,** was told that what he was planning was impossible. He said: "Although people were telling me that my ideas wouldn't work, I didn't give up. I knew that they would work." This determination and drive were critically important in overcoming the many problems and setbacks that the project encountered during implementation **D6.**

However, a project leader is not able to implement the project alone, so motivated and skilled staff are equally important. This was recognised by many organisations, for example, **Mobility India** **D6** and the **International Federation for Medical and Biological Engineering** **HCT5.** In some projects, like the one managed by **Teaching-aids At Low Cost,** loss of key staff at critical points in the project resulted in significant delays **HCT7.**

8 Partnerships

Many projects were managed by two or more organisations working in partnership. Even those managed by only one organisation were not as discrete or self-contained as they might appear. A particularly good example of this is the project being implemented by the **Institute of Child Health** in **Kenya** **D5.** This project has been made possible by a huge amount of research work carried out by the **Wellcome Trust** and the **Kenya Medical Research Institute** in the past. Such work includes detailed mapping of the project and preliminary screening and identification of children who might have impairments in their communications.

In most cases project staff did not work in isolation. Rather they drew on experience from other organisations and sectors. This was acknowledged as another key factor in the success of projects. For example, **Mobility India** drew on invaluable experience from colleagues in the Indian plastics industry **D6.** Similarly, **Voluntary Service Overseas (VSO)** implemented their project with and through the **Kenyan Ministry of Education** **D9,** while **Motivation** delivered their training course for wheelchair technologists through an existing **Ministry of Health** training facility in **Tanzania** **D8.**

The **Institute of Child Health** recognised the capacity of women's groups in rural **Kenya** to be involved in identifying and treating children with communication impairments **D5.** The **Baobab Health Partnership** emphasised the importance of building on existing activities within Central Hospital, Lilongwe **HCT2.** **Motivation's WorldMade** project initially planned that one chief designer would handle wheelchair design, but the later inclusion of a seating specialist greatly enhanced the end product **D7.**

Although technical skills and expertise are important, they need to be combined with generic programme management skills. Partnership working is often the best way of ensuring that this blend of skills is achieved. For example, **Mobility India** reported that the initial project proposal they had produced with support from the **Jaipur Limb Campaign** proved very helpful in planning and reporting project activities. This was brought home graphically by a visit to the Mobility India workshop in Calcutta where a chart showing the timeframe had been stuck on the workshop wall. Tasks had been ticked off as they had been completed **D6.**

There is a need to invest in the training and development of staff working on project activities. Although some of this training may be of a technical nature, it may also cover more general areas. For example, the visit of KaR programme managers coincided with a VSO workshop on management being offered to project staff. Another way of developing staff may be by linking together people working on similar activities/projects. For example, the **African Federation for Technology in Healthcare (AFTH)** project was originally conceived as two separate and distinct projects **HCT1.** These were brought together at the suggestion of **KaR's Programme Advisory Group.** Although 'twinning' of this nature increases the work of co-ordination, it adds significant value.

However, partnership is not without its problems. For example, while the previously mentioned AFTH project benefited from the contribution of the **World Health Organization (WHO)** in relationships with the **South African Ministry of Health,** there were also some problems, such as the delays caused by WHO bureaucracy. The **GIC Ltd** project also found that engaging with WHO led to delays **HCT4.**

9 Lessons learned need to be shared

A key focus of the **KaR** programme is the generation and sharing of knowledge. The **KaR Programme Advisory Group** raised concerns during the first round of funding that projects had not prioritised this sufficiently in their planning. Information distributed to advertise the second round of funding advised organisations applying that proposals emphasising sharing of learning would be given greater priority. Despite this, many projects found it difficult to identify lessons learned when contacted for this report. Even if lessons learned were clearly identified, many projects had no strategy for disseminating them widely. This raises the question of what the programme can do to ensure that these problems are not repeated in future projects.

Possibilities include:

- More careful selection of projects, giving greater weighting to this element. It may also involve commissioning more work from organisations with proven information dissemination capacity.
- Building in processes that stimulate reflection and learning, for example, review meetings, workshops, field/exchange visits.
- Giving the programme managers more responsibility and resources for this purpose – developing existing information sharing outlets (the website and the programme newsletter), and creating new ones.

One reason that learning is not always seen as a high priority within a project is that the people managing the projects become understandably more concerned with day-to-day operational matters. For example, although the **Voluntary Service Overseas (VSO)** project was clearly presented to the KaR programme at application stage as being focused on generation and sharing of learning, it appeared that staff implementing the project did not share this emphasis **D9.** Instead, they concentrated on developing and delivering an improved service for people in their communities. They appeared to regard an emphasis on learning lessons as an external donor agenda and a distraction from the more important work of delivering services.

Despite this, several projects did make significant efforts to share learning. Often the first place that learning is shared is within the organisation that is implementing the project. **Mobility India** reported that experiences in implementing their project had affected the way other parts of the organisation worked, by increasing awareness of quality issues **D6.**

Several projects reported on the value of learning from other organisations and projects, particularly in the early phases of implementation. For example, several of the **Education Assessment and Resource Centres** working on the VSO project reported that they had visited other similar programmes early on in the life of the project, and that this had been of immense value **D9.**

Although much learning is shared between organisations informally, a number were taking steps to formalise and codify learning. **Motivation** produced a wealth of written materials to support their training course, recognising that such materials were invaluable as a support to any training activities **D8.** They also stressed the importance of feedback from the target audience in improving and strengthening these materials. The **Baobab Health Partnership** produced some checklists related to the work they were supporting in Malawi **HCT2.** The **Institute of Child Health** project in **Kenya** has already given presentations about its work in Kenya and the UK **D5.** It now plans to document the intervention by producing a booklet for publication. This was not costed into the project initially, but funding has now been found to start this work. There are also plans to write an article reporting the results and publish this in the academic journal sector. The **Natural Resources Institute** project has conducted an area-wide workshop, that included presentations by colleagues and peers working on similar programmes related to tsetse control, and papers are being prepared for publication in international journals and for presentation at international conferences later this year **HCT6.**

Another point which was stressed by the **Baobab Health Partnership** was that lessons need to be learned when projects have unexpected benefits. For example, nurses in **Central Hospital, Lilongwe,** were using the information management system to locate patients in response to enquiries from friends and relatives. This had not been an intended benefit of the system but was one that helped nurses and relatives alike. It was important in that it built up the perceptions of value about the system and encouraged the nurses to actually use it.

10 Scaling up to the market place

A number of KaR-supported projects produced compelling evidence that their products could be immensely useful in practice, particularly for the benefit of poor, disabled people. Examples include the adaptive eyeglasses produced by **Adaptive Eyecare Ltd** **D1,** the wheelchairs produced by **Motivation** **D7** and the mass-produced orthoses designed by **Mobility India** **D6.** However, all these projects have found it difficult to attract the investment needed to manufacture these products on a large scale. It appears that relying on simple market forces to do this is not effective in such cases. Consequently, the **KaR Programme** has commissioned **Beaufort International** to conduct a study into this issue and to look at what steps could be taken by development agencies, non-governmental organisations and private companies to overcome this problem. This report will be added to this learning study when it is available.

In conclusion, it is clear that the projects supported by the KaR programme have been a rich source of learning in many areas. However, the programme has discovered that identifying and analysing learning is not always easy, particularly for organisations with a strong focus on delivering results, such as providing services or making products. It is therefore important that learning is actively planned for when a project is designed and actively encouraged during its implementation. It also requires a mindset that seeks opportunities for learning throughout the life of a project and not just at the end. The programme has also found that there are very valuable opportunities for learning between projects as well as within them. There is a key role for the programme in co-ordinating and promoting these opportunities.