

FlexWork Blueprint No. 003

(Issue v.01 – 24/07/01)

Access to employment for people with disability

Getting to work on the Net.

This is one of a series of 'blueprints' designed to illustrate models of flexible working. It is designed for use by business advisors as a resource when providing assistance to SMEs who are investigating flexible working for their business, or whose business development might benefit from consideration of flexible working.

Prepared for FlexWork by: Interaction Design Ltd, UK. <http://www.i-d.co.uk>
More FlexWork materials are available at <http://www.flexwork.eu.com>

FlexWork Blueprint No. 003 (Issue v.01 – 24/07/01)

Access to employment for people with disability

Getting to work on the Net.

1. Overview

This blueprint illustrates a number of ways that flexible working can be implemented to allow access to work by people with disability. The variety of opportunity is quite wide, and ranges from simple ‘teleworking’ as an individual, to setting up special work programmes in a more structured way. A set of cases has been used to provide elements of the generic ‘usage scenario’ and each included several different solution paths. They are combined to provide a generic description and all statements are derived from practical experience.

2. Rationale and Target Audience

This blueprint is relevant to any SME’s who may seek to employ people with disability, either for regulatory reasons or for reasons of community support. It is also applicable to community business development either as extension of activities to include people with disability, or to create new ventures that respond to their needs. The rationale is different in different cases and includes:

- Access to workers who may not be able to travel to work or whose needs cannot be accommodated within existing infrastructure.
- Reduction of social dependency by regional networks concerned both with business development and increase of employment to reduce social burden.
- Creation of work opportunities for people with disability as part of a social programme including community business development.
- Provision of business advice to community business groups or to people with disability.

Benefits

- Increase of skilled work force.
- Increase of independence for people with disability.
- Reduction of social burden.
- Creation of community business and new business start-up as part of larger regeneration activities.

3. FlexWork Usage Description

The ‘usage scenario’ for this blueprint is extracted from a set of separate projects and cases where promotion of flexible working addressed the needs of people with disability directly. They are brought together to illustrate similarities and differences of approach to more clearly show the breadth of opportunity. Any organisation seeking to find ways to employ people with disability can implement any aspects of the general model, as can any community business, organisation for people with disabilities, or collective of people with disabilities. The case of a single person employing flexible work techniques for personal development (e.g. telework) is covered by all blueprints and case studies where remote or home-workers are included, except that assistive technology must often be added to make work possible.

3.1 Background

Every community has a significant number of people with disability. Accident, illness, and effects of age add to the number originating from congenital causes. Most societies have developed support strategies for maintenance of independence where possible, but a large number of people with disability find that they endure a continuing ‘access’ problem. Mobility impairment means being unable to access education and work, and even special transport does not help with all difficulties in the built environment or place of work. Sensory impairments (hearing and sight) generate similar problems and special problems of communication.

A common response is to provide special places for training and support, and one such organisation, ‘The Edge’, heard about flexible working and decided to test some of the ideas as avenues into work for its people. The Edge had run training courses in IT, business administration, and other skills for a number of years but the level of success in getting people into work was quite low. They provided services mainly for people with mobility impairment and with hearing difficulties. In all cases they trained people in the use of standard office equipment, and also in the use of ‘assistive technologies’ which help people with disability interact with equipment.

(The subject of assistive technology is not addressed in detail here since it is very wide and can be accessed via any disability support group in any region.)

The Edge decided to examine a range of flexible work concepts to understand which of these could be deployed, and to select some for implementation.

3.2 Planning for Work Opportunities

A review of flexible work practices showed that a number of successful enterprises operated from a telecentre. This seemed like a good idea for The Edge because it was a centre and had workspace to offer. Examination of specific models and case studies helped them identify 3 possible models for implementation: a call centre; a small design company; a general-purpose telecentre.

Small Scale Customer Call Centre

The study of call centre working was based on careful examination of a single small scale call centre included in Blueprint 002 (see there for further detail). It was identified that a number of people with disability were being trained as administrative assistants, including customer-facing services, and so might be suitable candidates. The call centre model was examined and it was decided that the main problem in adopting this model (services to SMEs) was the need to constantly acquire new clients. They decided that it could be operated with fewer but larger customers and initiated planning on that basis. Examination of the equipment used proved that it was not licensed for use in their region, however they discovered that their regional telecommunications provider could provide 'managed services' and so a 'virtual call centre' could be operated at suitable cost levels. The managed service model also included the possibility of 'home workers' and so could include people with exceptional mobility problems.

In looking for potential clients they discovered that the local municipality was already examining the possibility of outsourcing a number of services. Negotiations produced agreement, in principal, to try the new call centre as a 'one stop shop' for enquiries and assistance in the area of municipal services to disabled and older people. On this basis they proceeded to implement a virtual call centre operated from a single office within The Edge.

Web Design Company

In looking at models for small start-up companies deploying flexible working it was felt that no particular service covered by centre training stood out as a candidate. However there was a group of people with disability (wheelchair users) who had completed courses in Web Design and who wanted to try developing their own business because the prospects of employment in larger companies did not look good. The centre decided to test this idea and provided a single support person with commercial experience to help develop their business plan. The support person quickly took on the role of business developer and set about finding clients to help kick-start the idea.

Deaf Telework Centre

The deaf group within The Edge already had completed a number of training courses covering administrative tasks and ICT usage. Their communication difficulties made it especially difficult to obtain work, but they were using available office space as a 'self learning' workshop in which they operated a number of support activities for community groups. These included editorial and publishing of a magazine for a local charity, conducting email-marketing campaigns for charities and deaf groups, and bookkeeping and administrative tasks for a charity and a community group. It appeared that they already had the basic elements and skills required for a telecentre operation, but communication with the hearing world was the main hurdle. At this point a business advisor from the local business support network was introduced and brought the manager of a local employment agency into the discussion. They developed an operational plan whereby the 'telecentre' would offer services via the employment agency (outsourcing as opposed to temporary employment), and The Edge would assign hearing person as 'front of office' for the deaf group.

3.3 Operating the Flexible Work Systems

The three models of flexible working were put into operation within the same year and the participants in each had joint meetings to share experience and ideas. The experiences of each are summarised in the following subsections.

Small Scale Customer Call Centre

The call centre operation started with engagement of the contract to provide a 'one stop shop' for enquiries concerning local government support services for disabled and older people. The workers at The Edge were domain experts in this area, and knew a lot about the various services, support actions, payments, and regulations that applied. They were equipped with a set of official forms and statutes, and were switched on in parallel to the previous service, which was maintained for a 'handover' period.

The service proved to be quite smooth in operation, with people taking calls and answering enquiries. They could talk someone through an official form, advise them how to obtain a specific type of support, and switch them through, using the managed service facilities, to a person in the municipal offices when appropriate. None of their customers realised that their helper was in a wheelchair instead of an office chair, and it was seen that the service was as good as could be provided anywhere. Workers who chose to try working from home found several difficulties because of the large amount of support material they had to consult, and it was decided to look into putting this on CD ROM to allow on-line access.

As work progressed the service was transformed to an official service. The cost basis was a simple replacement of 2 advice workers and so accounted for only two people's

salary – so further clients were needed. The first additional client to be obtained was a large ‘burger’ chain who wanted to outsource customer support tasks in periodic advertising and promotion campaigns. The work involved receiving calls from customers, data entry of customer details, and sending out forms for the promotion currently on offer. Completed forms were received by post and another data entry task saw the cycle completed (data transferred automatically to customer system).

Web Design Company

The web design team took off from day one. They had noticed their local football club did not have a web site and convinced their ‘business liaison’ person to go and talk to them. The club, it turned out, had toyed with the idea of having a web site and were already committed to supporting community programs. They engaged The Edge team to create draft designs for consideration. This gave the designers the chance to meet the local team face-to-face and to invite the marketing manager to their offices for design meetings – two significant experiences in their evolution as business people. The site was designed and made operational in a very short time, with intense email and telephone discussions between the club and the design team throughout. The use of telephone and email to reduce travel worked well, and the club could view emerging design work online at any time because they were given access to the private development area of the site. Team members who worked from home also used video-conferencing to maintain personal contact. The web design team is now an independent company operated by the core team members, and specialising in ‘accessible’ web site design.

Deaf Telework Centre

The deaf telework centre was designed and implemented as an extension of the existing busy, but non-profitable, operation. Potential clients were nominated by the employment agency, and negotiations conducted by the hearing ‘front of office’ person. Initial work was fairly basic administrative and data-entry tasks, but these gave the team the chance to find their way safely and to develop more commercial rates of work. Work was conducted within the centre, in the main, with only one worker electing to work from home. Videoconferencing links were used between members of the team in-house, and between the centre and the home-worker. The team manager organised work distribution. He also worked as progress-chaser, and used the contact worker for liaison with clients. The group quickly established that the move from non-profit work (for charities, etc.) to commercial work did not affect core competencies very much and the main impacts were in the pressure of work (commercial schedule) and in working with hearing clients via the contact worker.

4. Technology Notes

The technology usage in this 3-part usage scenario was not very complicated and mainly relied on easily available technology, with the exception of video-conferencing and ‘managed telecommunication services’.

Email – was used mainly by the web team and the workers in the telecentre for work discussions between team members.

File transfer – was used by all applications. The call centre used file transfer via FTP to its client’s server (secure space) on completion of data entry batches. The web design team used this to maintain their shared file space, and the deaf telecentre also used file transfer via FTP to one client, and via an ODBC link to another (via its web site) to upload completed assignments.

Shared file space – was used as part of file transfer (see above) and to a limited extent by the web design team for showing work in progress. They also used a shared file space for development work.

Audio telephony – was used extensively in all applications and was heavily used by the call-centre during marketing activities.

Video conferencing – was used within the deaf telecentre using H323 software codecs over IP networks to allow sign language and speech reading between deaf team members. The link from the external worker used an H320 codec because he was connected via ISDN. T120 modules were added to allow shared file access in live sessions but did not achieve high usage levels because the tasks were fairly low level and did not require much detailed discussion.

Managed communications services – was used as an alternative to a dedicated call-centre management system. Managed services are offered by most telecommunications operators and can include self-management options whereby aspects of centre operation are managed from within the centre (allocation of numbers, assigning agents, linking to remote agents, etc.).

5. Business Structural and Process Issues

The three application models illustrated in this blueprint imply several possible structural and process issues. For example, the emergence of a separate ‘call centre’ required the creation of a new management post to co-ordinate that new line of work. The added technical infrastructure of a ‘managed service environment’ demanded that this post be quite technical, and the processes involved in centre operation (flexible working locations and times) also required revision of The Edge’s previous approach to employment.

For the web design team, this became something of a ‘spin-off’ operation. While it was located in the centre it created a ‘new department’, again with a new manager, and so increased overall management complexity. The addition of marketing (of new services) and negotiation (for commercial work) created new business processes, which had previously been absent.

For the telecentre operation, the new manager created the same set of impacts as the other new managers, but also brought increased complexity because of the partnership with the employment agency. The busy team who had concentrated on non-profit activities had to be re-shaped as a commercial team working to typical market deadlines and an amount of 'on-the-job' training had to be undertaken to ensure this change of culture.

6. Deployment Advice

The creation of new work opportunities for disabled people can be undertaken as an extension of existing work or vocational training. It can be developed as part of an existing training initiative or implemented by an employer as a special venture. Similar operations can be set up as a purely commercial venture and can include people with disability as part of the work force (if not all). Furthermore, the usage scenario shows that people with disability can be included in any similar operations that may not have been specially designed for this purpose.

People with disability tend, on the whole, to suffer higher levels of absenteeism because of illness related to disability. This requires increased flexibility in assignment of persons to work tasks and must have a larger margin of safety built in to the process. People with disability may find that they cannot operate at the same rate as their non-disabled colleagues, but this is true only in some cases and so closer attention must be paid to personal ability profiles.

Since most regions have vocational training activities aimed at people with disability, there is opportunity to develop commercial operations either to replace supported environments, or as an adjunct to these. In either case the pressure on commercial performance may not be as great as that on a purely commercial venture. Reduction of subsidy and support may be as important as removal. Furthermore, provision of some level of work may be a significant addition in an area characterised by a complete lack of opportunities.

Selection of technology for call-centres should rely on local suppliers to ensure compatibility with regional telecommunications regulations.

7. Related Cases

The web site at <http://www.flexwork.eu.com> includes a wide set of cases, technical briefings, and advisory documents. A large number of these are relevant to the themes in this blueprint. Items of specific interest include:

Regional cases:

Tele.pdf - Telemarketing programme for blind and partially sighted
Nor.pdf - Creating work and enterprise - teleworkers, telecentres, and SMEs.
DTI.pdf - Save Transport, Time and Energy: Work at Home some Days a Week.
Cepadite.pdf - Employment for People with Disabilities through Telework .
Longford.pdf - Getting into ICT; training and promoting regional telework.
Exeldat.pdf - Excel Data: Denmark's first satellite office
Fincoop.pdf - Sustainable Suburban Economy - Cooperative using teleworking.

Technology Cases:

c1 - BSCW shared workspace system
c6 - t4d telework platform testing (for mobility impaired)
c14 - Careline software and home care services
c24 - Tools for distributed publishing (groupware)
c26 - Distributed software production

8. Related Information Resources

The web site at <http://www.flexwork.eu.com> includes links to a large number of online resources, many of which are relevant to this blueprint. Resources of particular interest include:

<http://www.isdac.org> – disability and access to work and society
<http://www.flexwork.eu.com/> – general flexible working resources
<http://www.gilgordon.com> – general flexible working resources
<http://www.eto.org.uk> – general flexible working resources
<http://www.flexibility.co.uk> – general flexible working resources
<http://www.telecommute.org> – general flexible working resources
<http://orgwis.gmd.de> – groupware tools / collaborative working
<http://www.usabilityfirst.com/cscw.html> – CSCW and GroupWare Index
<http://www.tca.org.uk> – telecottage and telecentre association