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Introduction

Governments are increasingly committed to bridging the Digital Divide—which separates those who can and cannot make use of the Internet—by funding community technology centres, supporting online learning, and encouraging community-wide access and awareness. Teachers, librarians, community groups, public officials and others have to plan how to bring new technologies into their organisations and neighbourhoods.

However, simply providing computers and Internet access can leave people feeling confused, and organisations in disarray. Technology alone doesn't bring people into the Information Age, or make organisations more effective. The divide is not just technical—it is between where we are now and where we want to be. Making The Net Work is a new US-UK initiative to help anyone planning change to think about digital futures, who will benefit, and who must play a part. At the heart of our work is a toolkit funded by the UK Department of Trade and Industry, which draws on the experience of US and UK practitioners. It is outlined here and will be developed on our Web site—details below. Making the Net Work is being launched at the Active Communities Convention, Wembley, on March 2 2000.

WHAT SORT OF FUTURE?

The diagram (right) shows we need to think about our approach as well as technology in moving from now to the future, from old ways to new.

1 Old approach, old technology

- Using phones, fax, print
- Broadcasting one to many
- Closed information systems
- Hierarchical organisations
- Few people in the know

2 New approach, old technology

- Moves to more networking, contacts
- More information access/disclosure
- Aspirations to collaborate, involve
- But... same technology ...
- Too many meetings
- Information overload
- Many still out of the loop

3 New technology, old approach

- Funds for equipment, not training
- Technology-led initiatives
- Decision-makers are stragglers

- Funds target only individuals and existing organisations
- Many still excluded
- Technology cynicism sets in

4 New technology, new approach

- Online access and training for all
- Public services online
- Technology enables partnerships
- Many to many communication
- Training on strategic technology use
- New personal opportunities

MAKING THE MOVE

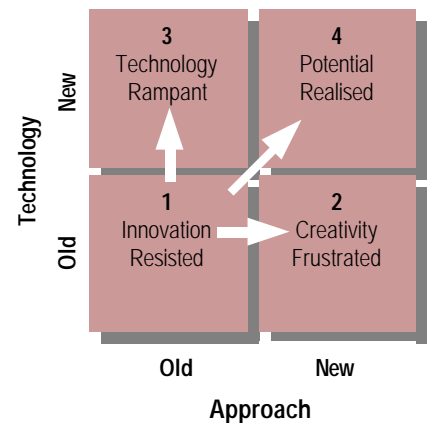
The biggest Digital Divide trap lies in moving from box 1 to 3—because then a move to 4 will mean unscrambling systems, remotivating people. Moving from 1 to 2 can be frustrating—but will help reveal what's needed.

Overleaf we lay out a process of research, workshops and project development which will give innovators the fastest route from box 1 to 4.

In making that move, you will need to think about:

- Vision of what is needed and why
- Ownership of that by key interests
- Commitment to the vision
- Action towards the vision
- Looking after your achievements

... as well as ensuring all parties are confident users of the technology and able to work with each other.



Your vision

This process, we believe, will be similar whether you are:

- Creating a learning access **centre**, or community technology centre
- Making your **organisation** more effective
- Developing a **network** of organisations or interests
- Enhancing the economic, environmental or social capital of a local **community**

In each case you will have to build a vision, choose appropriate technology and involve other interests.

A process to do this is described overleaf, and you will find more ideas and information on our web site

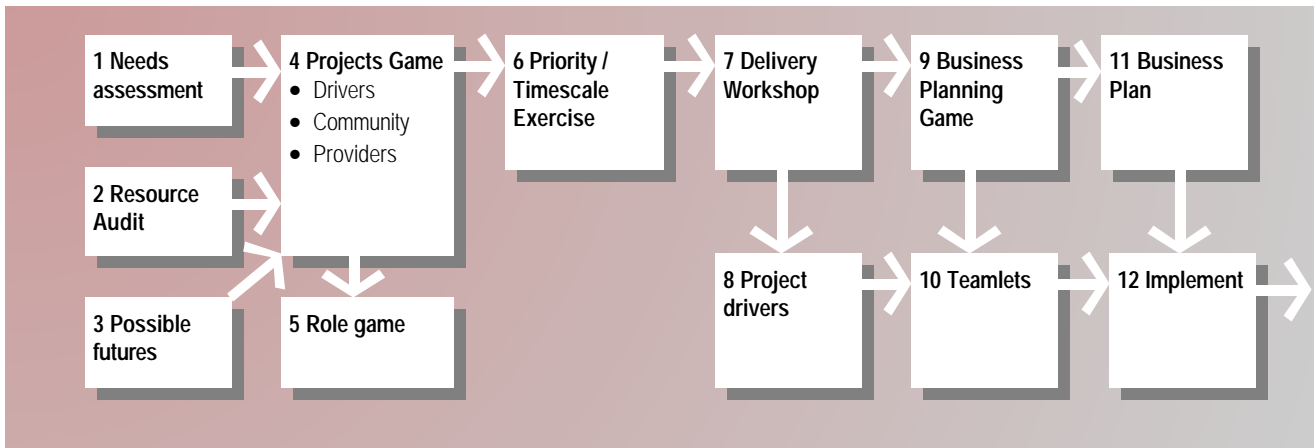
<http://www.makingthenetwork.org> and on other accompanying sheets. ■

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A Process

Our process is based on a number of techniques proven successful with communities and organisations in the UK and adapted for use in the US. It also draws on many years of US experience in community technology projects. The diagram below shows our recommended sequence in which these techniques are used. Users can adapt this depending on where they are in developing a community or organisational technology initiative, or they can accept the sequence shown. Each component is simple and capable of being used without external assistance. The boxes indicate techniques described below and expanded on other sheets. The emphasis in this description is on community-wide action.



1 NEEDS ASSESSMENT

The first step is to assess the needs and aspirations of the community at present. This should be done with the full involvement of the community itself and should take into account the known plans for the area.

2 RESOURCE AUDIT

The community should also assess the full range of resources already available—in schools, libraries, community centres or other locations. The problem may lie in the access to and co-ordination of these resources

rather than simply in the lack of new equipment or of new facilities. Access points and equipment are not the only resources that should be considered. Community information, training, technical and other support services, and the presence of champions and those with relevant expertise should also be taken into account.

3 POSSIBLE FUTURES

Those leading the process should aim to feed in a continuing assessment of the possible changes in technology, policy, and local conditions that

might affect the options that they consider.

4 PROJECTS GAME

This is a simple card game which introduces communities to a menu of potential local projects that will address the “digital divide”. The game starts with an assessment of local issues / needs and uses these to evaluate the possible proposals. Budget limits require the community to prioritise the various options. The game helps communities and others to un-

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Who should get involved?



A group works with the Projects Game during a session at the Texas Telecom conference in Austin in December 1999. A dozen groups in different UK communities also played the game during the development phase. Prioritising various projects within a budget and ensuring that these are appropriate to the community is what the game is all about.

Within any community, organisation or centre, there will be a number of people who should be involved in setting up a network. In no special order these interests are:

- Citizens, residents
- Community leaders /social entrepreneurs
- Non-profit/voluntary sector workers
- Activists
- Local government/council staff or elected officials
- Local industry/business people

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Understand the trade-offs among various networking options. It can be run with:

- Potential project “drivers”
- The wider community
- Supporting agencies

5 ROLE GAME

The Projects Game is extended by looking at the various roles within the community including the agencies and external bodies that might have an impact on it. This is used to start identifying who will take the responsibility for action and what skills and resources each role can bring to the process. The game emphasises the co-operation required between community and the agencies to achieve “joined-up thinking” and “joined-up delivery”.

6 PRIORITY / TIMESCALE EXERCISE

This exercise is used to get communities to think through their programme of action and to draw up a list of priorities in the light of what emerged from the Projects Game. It also gives the opportunity to add supporting or complementary projects that may not have been considered in the initial game.

7 DELIVERY WORKSHOP

It is essential that the projects are realistically assessed as to whether they can be delivered locally. A workshop with the agencies and / or commercial organisations that may have a hand in delivery will clarify the gaps in funding, resources or commercial / political will. Project ideas can then be tailored

to offer the best chance of success. This ensures that the eventual programme is realistic, viable and ‘owned’ by key interests.

8 PROJECT DRIVERS

The Priority / Timescale exercise will have defined the projects that the community wants to do and will have given a timescale and a priority for each. Project “drivers” should now be appointed. These are individuals who will take the individual responsibility for making the project happen (see section on network structure on page 4.) A simple “auction” is often the best way to appoint drivers. One activity should be the preparation of a business plan (and application for funding if this is appropriate).

9 FORM TEAMLETS

A session can now be held in which project drivers form “teamlets” of other project drivers and anyone who has an interest in their project. The purpose of a teamlet is to support each project driver in implementing their project. (the rationale for teamlets is given overleaf.)

Teamlets can be formed in a “trading session” in which community members volunteer their skills and project drivers build the appropriate team to build the project.

10 BUSINESS PLANNING GAME

It is essential that communities should understand the detail of the proposals and how they are to be phased managed and paid for. We are developing a

game to help the community to:

- Understand the components and structure of its business plan
- Suggest management structures for the overall project

A computer spreadsheet is used to test financial assumptions.

11 BUSINESS PLAN

Drawing on the results of the business planning game, a plan should be prepared. The preparation of the business plan will probably be the responsibility of the one of the teamlets. The plan may be the basis for funding bids.

12 IMPLEMENT

Once the business plan has been accepted and other resources committed, the projects can be implemented through:

- Continuing community participation and promotion of online networking tools.
- General awareness raising of the potential of community technology
- Assessing how other communities have done it
- Monitoring / evaluating progress
- Training

The above gives a broad summary of what can be done. The details will be worked out with each community. Ideally groups should move through the process from 1–12, but in practice may use the process to review and supplement a process they have already started. ■

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- Local community networkers and technology volunteers
- Local school officials
- Local college or university officials
- Local library staff
- E-commerce/small business
- Local health centre staff
- Local job developer / employment and training workers
- Regional/county officials
- National policy officials
- Community-of-interest and interme-

diary organizations

The diagram and VOCAL checklist on page 1 make the point that engaging people and developing new ways of working are as essential as installing the appropriate technology.

The interests outlined above are the potential ‘stakeholders’ who will play a greater or lesser part in the success of an initiative.

The process illustrated on page 2 shows a number of techniques which can be used to:

- Bring these roles together
- Establish a common “picture of the

future” for the connected community

- Create shared plans for how to achieve this
- Co-ordinate the actions needed.

It will be necessary to work separately with these interests and undertake a range of research and development work. However, group activities like workshops are both cost effective and help build trust, shared commitment and understanding.

One additional role is crucial—that of the ‘process manager’ who co-ordinates activities and drives the programme forward. ■

New, technology, new ways of working

Networks

On page 1 we suggest that to use new technology with benefit in communities, organisations and groups, change will be needed on two dimensions—technical, and in the way people and groups relate and develop.

The theme common to both dimensions is networking.

Technically it means connecting computers together so that they can share information by email, the World Wide Web and other applications. The networks are physical wires, fibres, switches, hubs, routers... but it is people who are somewhere at the end of the connections, operating the computers. Networks have a number of advantages:

Informality:

People can join and leave a network as they wish, coming together to contribute when most appropriate. The down side is that it is difficult to organise leadership in a network.

Richness:

Networks are potentially very rich structures. The maximum number of connections in a network is $n(n-1)/2$. In a network of seven people there are 21 different potential two person links. A hierarchically organised structure will always have one less number of such links than the number of elements of which it is composed. The same collection of 7 people organised as a pyramid will have only 6 links. The advantage of richness is the way that it can exploit all talents and resources. The advantages of a hierarchy are clear leadership and less potential confusion.

Communication:

As the Internet demonstrates, networks are very good at spreading and generating information. They are less good at controlling the flow of information and ensuring that it corresponds to any particular point of view.

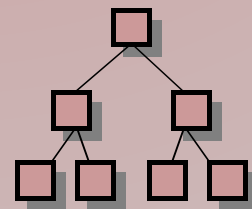
The pitfall of all networks is that as soon as they start to take action, they revert to organisational forms based on the hierarchy rather than trying to continue to work as a network. Thus working parties or project groups divide the network and restrict its potential richness to achieve focus, control and clarity of purpose. But there may be ways of retaining the richness of the net without sacrificing these aims. These should be explored first.

- Value the richness and diversity of the network. Don't break it down into sub-groups unless you must.
- Give each project a "driver" - someone who will have the responsibility to take it forward
- Give each driver a "teamlet" - a small group of people with skills appropriate to the project and the interest to make it happen. Teamlet size depends on which members' skills are appropriate. Teamlet members may be members or drivers of other teamlets.
- Take the process that generated the projects out to the community at large - get them involved and talking the same language
- Make sure agencies also go through the process—get them involved and talking the same language too!
- Use the rich informality of the network to *make things happen!* ■

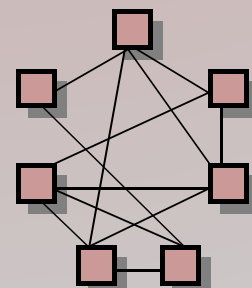
STRUCTURES

The system of drivers and teamlets described on pages 2 and 3 has been devised to take advantage of the strengths of a network. The network is potentially a very rich structure. Dividing it into subgroups (working parties, sub-committees, etc.) lessens the connectivity of the overall group.

The benefit of mapping technological networks on to these new 'people' networks is that the technology enables groups to exploit the richness of their new connections. The Internet becomes both a tool for networking and a model for thinking about how networks can work.



Pyramid: Always one less link than the number of people in the group. 7 people have only 6 links



Network: Much greater richness. 7 people have potentially 21 links.

Who we are—at www.makingthenetwork.org

TERRY GRUNWALD

Terry is a consultant with 10 years experience in the strategic use of new technologies for organisations and communities. She was director of the first state-wide project in the U.S. designed to support nonprofit networking and is author of "Making the Net Work: Online Strategies for Community-Based Organizations".

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David worked as a journalist and then as a consultant in community participation and partnership development. For the past five years he has explored how lessons learned from these fields can be applied to the community use of new technologies.

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DREW MACKIE

Drew has worked with communities throughout the UK for the past 15 years putting together projects for physical and economic development. In some of this work he has used games to test policy or give communities a glimpse of the possible future. He is working with David and Terry to apply these methods to online communities.

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