



The Digital Divide

Better World – Our Commitment to Society

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The Digital Divide

An Independent Commentary by Simon Zadek and Peter Raynard

This Hot Topic, researched and written by Simon Zadek and Peter Raynard, sets out BT's approach to the Digital Divide. The views represented here are those of the authors, not necessarily those of BT.

BT welcomes the recommendations made by the report, and is actively considering them for our future plans in this field. Specifically, we have established two targets on digital inclusion, detailed in the Future Objectives sections of our site, and published a Position Statement on Digital Inclusion. These are available at www.groupbt.com/betterworld/digitaldivide.

You can have your say on the recommendations that are made in this paper, by visiting the Your Views section of the site at www.btgroup.com/betterworld/yourviews.

Introduction

The gap between the technological ‘haves’ and ‘have-nots’ has gained credence as one of today’s most significant social challenges. As with the Chinese character for ‘crisis’, the digital age constitutes both a danger and an opportunity. Some see it as a source of hope that will deliver a safe natural environment secured through ‘e-materialisation’, progressive innovations in work opportunities, and a democratic renaissance based on technology-enabled, direct citizen participation. Others argue that it spells out increased insecurity, the collapse of geographic communities, the loss of privacy, and an acceleration of poverty and inequality rooted in the so-called Digital Divide. Policies and programmes have emerged across this spectrum to address the so-called Digital Divide, driven variously by the world’s largest public and private institutions and its smallest and poorest communities.

What is it?

The Organisation for Economic Co-operation and Development (OECD), defines the digital divide as “the gap between individuals, households, business and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.” OECD – Understanding the Digital

The Divide does exist. Across the world, affluent and university educated people make the most use of, and extract most value from, information and communication technologies (ICTs). There are more telephones in London than in the whole of Africa; most people on the planet have never made a phone call; and less than 2% of the world’s population have even a link to the Internet. Within countries the Divide is just as stark. In the UK, for example, as few as 3% of poorer households have access to the Internet, compared with around nearly half of more affluent households¹.

But does the Digital Divide matter, and if so in what ways? After all, the statistics for lawnmower ownership probably reveal a similarly divided world, but this is quite rightly not the basis for global concerned hand wringing. As one commentator argued following the most recent World Economic Forum in Davos, “Is there a digital divide, or is the economic divide merely going digital”². Indeed, what would a world be like where the Digital Divide was overcome? Digitally enhanced access to health care information does not automatically translate into better access to health care. Even if it did, this in turn does not automatically mean that poor people will be absolutely or relatively healthier. Neither does it mean that black or disabled people will necessarily be any less discriminated against in the labour market. All these things should, and may come to pass. Indeed, the digital economy should have a critical role to play in achieving such a desirable state of affairs. But for this to be possible requires a clear understanding of digital limitations and opportunities and a clear plan of actions to overcome the former and take advantage of the latter.

Dimensions of the Digital Divide

There are then many different dimensions to the inequality in the use and advantage made of ICTs, for example when looking at Internet access:

- a. **Gender.** For Internet use, women are in the minority in both developed and developing countries; only 38 per cent of Internet users in Latin America are women, while in the European Union the figure is 25 per cent, in Russia 19 per cent, in Japan 18 per cent and in the Middle East 4 per cent³. In the US however, the disparity has largely disappeared, by August 2000 44.6% of men and 44.2% of women were internet users⁴.
- b. **Ethnic Group.** There are disparities in internet use between different racial, ethnic and cultural backgrounds. In the US for example, blacks and Hispanics lag behind other groups. Asian Americans and Pacific Islanders enjoy the highest levels of access⁵.
- c. **Economic Group.** In the UK as few as 3% of poorer households are online, compared with 48% of more affluent households⁶.
- d. **Geographic area.** In Canada the urban/rural balance of Internet access is 32.6%/23.7%, Japan 17.7%/13.6%, and the US 42.3%/38.9%
- e. **Size of enterprise.** In business, the smaller the firm the less likely it will have invested in new technologies and use of the Internet⁷.

Section 1: Unpacking the Digital Divide

The Digital Divide is where new information and communication technologies ('the digital') meet existing socio-economic inequalities ('the divide').

The Digital

- Information and communication technologies (ICTs) allow us to access more information, faster and more cheaply across geographical and time boundaries.
- ICTs are becoming an essential gateway to employment, markets, healthcare, education, and other government and private services and a pre-requisite for economic and development.

There is increasing integration between emerging ICTs – whether computers, the Internet, mobile phones, or TV – and diverse information formats, including voice, text, pictures and video. The amount of information you need or can acquire is growing every day, whether you are using a mobile phone or a computer terminal, digital TV or intelligent fridge.

What's New about the New economy?⁸

- a. Speed of change.** The pace of technological development, business cycles and communication is increasing exponentially. The Economist estimates that by 2010 a typical computer will have 10 million times the processing power of a computer in 1975 and will cost less.
- b. Knowledge, innovation and communication.** Intangibles like reputation, knowledge and ideas are increasing in importance over things. As Business Week concluded, "The turn of the millennium is a turn from hamburgers to software. Software is an idea; hamburger is a cow."
- c. Shifting Proximity.** Communication technologies and their utilisation, for example through tele-working, enable people to work across different time zones, as well as bring the store and office to their home.

But the ability to master ICTs is moving rapidly from a fashionable 'can do' to a necessary 'should do' gateway through which to pass in order to access employment, healthcare, education, services and democratic participation. Beyond the individual, it is an essential tool for companies to reap the benefits of new markets and efficiency gains, and an opportunity for countries to 'leapfrog' stages of development. For example, developing countries are now potentially better able to access markets through e-commerce, thereby changing the pathway that economic development has traditionally taken.

The New Economy has been accelerated by, but is also far more than, ICTs. It is an organisational revolution. On the one hand it creates increased volatility and insecurity, and shorter term and contingent careers and jobs. On the other hand, it opens up amazing opportunities for generating economic wealth, and indeed social and environmental gains.

Critically, the New Economy does not create necessary social good or bad effects, but rather new patterns of possible outcomes that need to be variously pursued and offset.

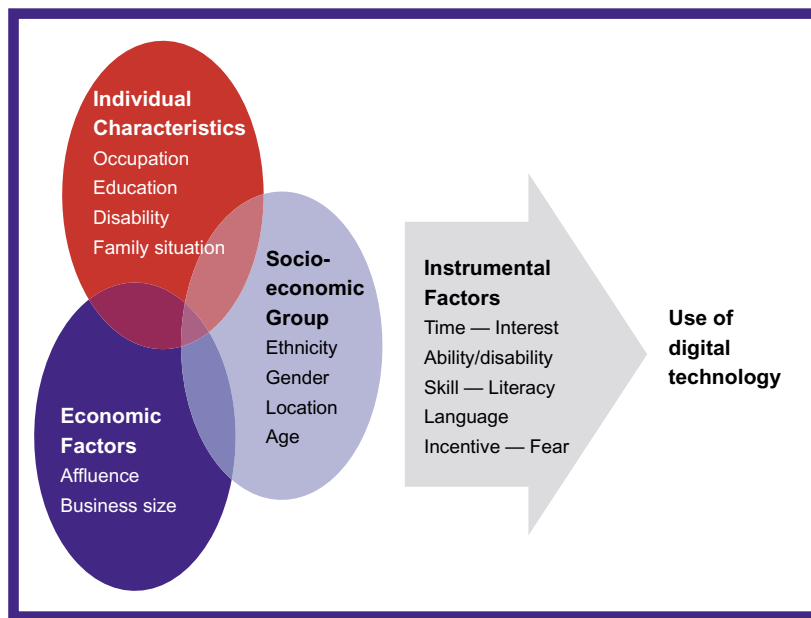
The Divide

- Access to digital technologies is not equally distributed around the world, or even within countries.
- Not everyone is motivated or able to use ICTs for their own social and economic benefit.

There are many Divides that have digital characteristics. Personal, economic and non-economic characteristics such as gender, ethnic group and occupation give rise to digital-relevant factors, including availability of time, interest and skill (see diagram below). For example in the UK, women, the poor, those with minimal education, black people, people in rural areas and small firms use the Internet less than men, the university educated, Asians, people in cities and large companies.

Clearly these individual characteristics are closely related; many of them, although not all, having an economic component. The Digital Divide as it is today lines-up squarely with existing social divisions. Those with most economic and political power have and use ICTs most intensively, purposefully and effectively, particularly in creating economic value. Such inequalities do not necessarily mean that those who use it to optimum effect should be restricted in its use. Neither does it mean that the digital divide is the most critical element of social and economic exclusion. However since ICTs are becoming a pre-requisite for economic and social development, the Digital Divide must either be closed, or it will become one more basis through which underlying social and economic divisions and inequalities will widen.

Key Issues: The Three ‘C’s



Connectivity – basic access to ICT in its various forms

Without being able to get online, people are effectively cut off from the information revolution. Factors include:

- Availability of technology
- Cost of hardware and time online
- Ease of use

Connectivity is about access, or more precisely the terms of access. Although physical supply constraints to enabling technology do exist, the single most important dimension to access is cost, including both cost of hardware and online time. Both have been falling and continue to fall. But they remain a significant impediment to many, and in global terms, access is most costly where the population is least able to pay. According to an UNCTAD study, 20 hours of access a month costs US\$90 in Mexico, equivalent to 15% of average income, compared with US\$25 in America, a mere 1% of average income. In Africa, average access charges top US\$200 per month.

Access costs are influenced by many factors, particularly developments in the technology and diversity of institutional mechanisms for access. Increasingly, access will be achieved through a variety of technological and institutional channels – at home, at work, at school, in public online centres, in community spaces, using computers, mobile handsets, games consoles and kiosks to name but a few.

The OECD sees liberalisation of telecommunication services as having been crucial to the growth of access lines (fixed and mobile), alternative access technologies, price reductions, and Internet access and use⁹. The mainstreaming of new enabling technologies will accelerate access – from WAP and digital TV through to Simputer, designed in India as a low cost, handheld Internet access tool with a touch screen, voice chip that can ‘speak’ different languages, and a smartcard reader.

Connectivity is a short to medium rather than a long-term issue, at least for those societies already far up the curve in providing universal telephony access. Just as the standard phone is

now almost universally accessed in these societies today, ICT connectivity will become rapidly cheaper, and in some cases free. In the UK, for example, Internet can be accessed free of charge at local libraries, ukonline centres and schools. There is every likelihood that connectivity across most of North America and Western Europe, including the UK, at least in terms of line access but also to a certain extent cost of equipment, will not be an issue within the next five years. Even in developing countries, where access is clearly a far bigger and longer-term issue, the biggest long-term issue will concern content and people's ability to create value from it.

Content – the type of information communicated and the way it can be used to facilitate social and economic processes.

- Language
- Appropriate and relevant content
- Overcoming information overload
- Literacy requirement

Content is what makes access worthwhile. It is of paramount importance to understand what enables a person to create meaningful value for themselves out of digital content, particularly economic, but also political, social and cultural value. Technology therefore needs to demonstrate, not only through greater connectivity but also content, that it is relevant to everyone, and can assist in actively overcoming long-standing dimensions of social exclusion.

Content can be broken down into two elements. The first is the basic content, the text, visual and audio information that is embedded within messages, documents, videos, etc. The Internet is estimated to be made up of over 1 billion web pages, a number which is growing exponentially. The second type enabling content, is essentially mechanisms and pathways that define how the content is accessed, presented and used. This second form of content can be usefully understood as a hybrid or bridging element between the other two C's, connectivity (see above) and capability (see below).

Search engines and portals increasingly guide the would-be user to the information they require in a speedier fashion. Online commercial activities unsurprisingly can be easy to use, although even here figures from Which? Magazine show a quarter of the UK population refusing to use the Internet because they see it as irrelevant to their needs. This is an even greater issue when one leaves the relatively straightforward world of consumer retailing. Enhancing access to government services could, for example, offer tangible applications for addressing dimensions of exclusion. Yet today, how easy is it to fill out one's tax returns online, or apply for social benefits? To overcome these service constraints, how many languages will the information have to be provided in, and how sensitive can it be to different constraints to access, such as cultural, gender, disability, etc? A notable example here is Centre Link in Australia (www.centrelink.gov.au) that can deal with 42 languages (see below).

Capability – the ability of different groups to use technology

- Education
- Disability issues
- Time-Wealth
- Interest

Apprehension, lack of knowledge, and broader societal constraints to the application of personal skills or potential are the biggest obstacles to the effective use of new technologies. Aspects of the first two can be overcome by the adequate provision of appropriate education and training. The third element represents, however, a pervasive dimension of the Digital Divide. A Centre for European Reform report states, for example, that no community ICT programme has been

successful without adequate childcare¹⁰. The UK, along with the USA, shares the dishonour of having the highest proportional levels of functional illiteracy amongst the world's richer countries, about 20 per cent of the adult population according to the latest United Nations Human Development Report. The clear message here is that key pieces of the solution to the Digital Divide lie outside of the realm of ICT itself, deeply embedded within the institutional and socio-cultural challenges that extend across the whole of society.

The digital paradox is, however, that technology can be a vehicle to close rather than mirror or deepen existing economic inequalities. Disability is a case in point. Disabled people may and do encounter barriers to technology use at an individual, non-economic and economic level. But the technology can also act as an enabler to get over barriers associated with traditional approaches to creating economic and social value. The Employers Forum on Disability sees the potential for ICTs to enable people with impairments to become more engaged in all aspects of society, including public policy making and work opportunities (www.employersforum.org.uk).

Disability and the New Economy

Including disabled people is integral to business success in a world where 20 percent of the population has some disability and the same number again are carers or friends of people with disabilities¹¹.

- The Do-it-Yourself retailer B & Q has set up an initiative that ensures each shop is connected to a local group of disabled people, which audits their capability to anticipate the needs and expectations of disabled customers routinely.

One of the concerns regarding capability is education and the lack of available skills needed in the new economy. A report by International Data Corp and Cisco Systems Inc, highlights that across the EU the demand for computer-networking skills will outstrip supply by 23% in 2001. If the shortfall is not met, it is estimated that it will cost the EU economies some €100billion a year¹². It is unsurprising therefore that lifelong learning is a crucial issue when addressing the Digital Divide and is being done through the introduction of ICT-learning in schools and as part of company training and development. This will not only build a future pool of skilled workers, but will also raise the education levels of society as a whole. It is particularly important for developing countries where 'virtual universities' reduce the need to find scarce scholarships to study in Northern Universities.

As with the issue of childcare highlighted above, the education system itself, as well as its capability to integrate and utilise ICTs into learning processes, needs to actually change the way in which people are educated. This goes beyond the way we currently understand learning to addressing societal needs of the present and future generations. The digital revolution has made the need to do this more immediate, however once again social policy needs to be directly linked into such changes.

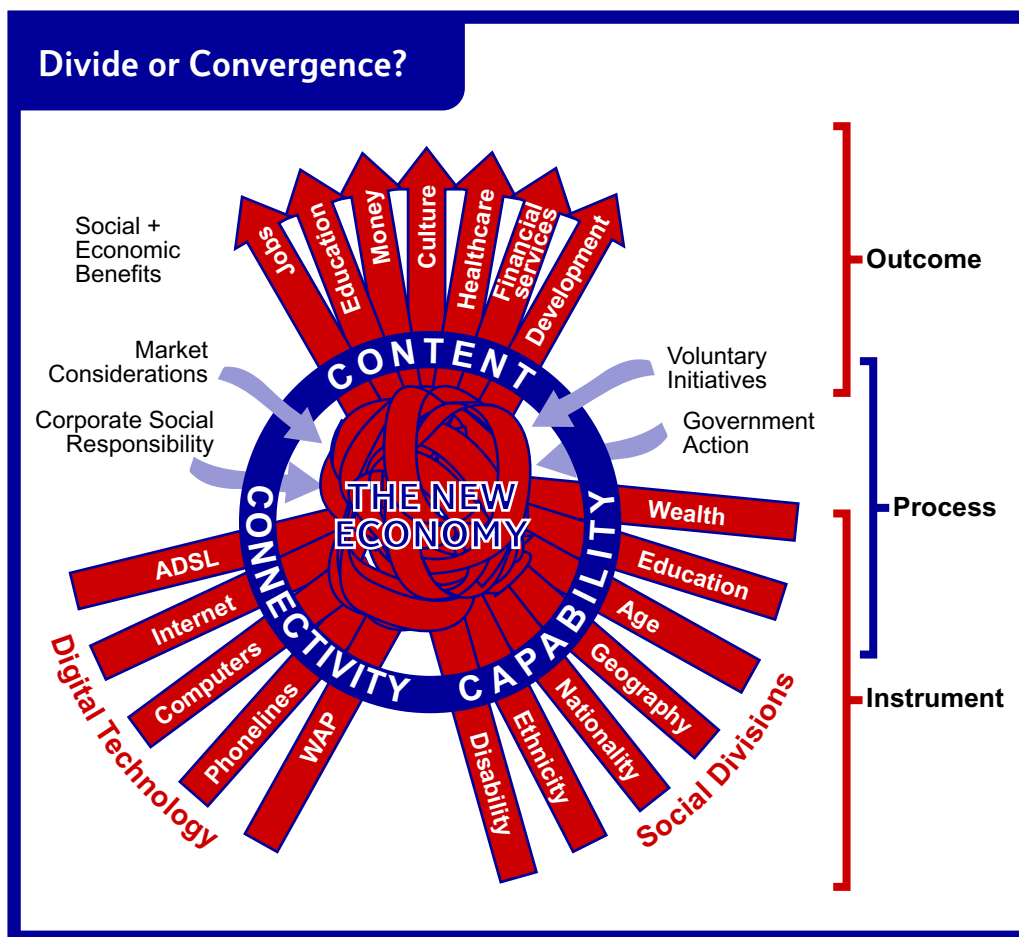
Coping with Overload

One obvious concern is information overload, which leaves workers feeling helpless (a decade ago the average white collar worker processed around 10 items of mail a day, in 2000 that number is around 100 – in the UK, it has been estimated that approximately 360,000 emails are sent each second), consumers confused, and certain sectors of society feeling totally apathetic towards its use.

What Does the Future Hold?

As we have seen, the digital divide is made up of multiple, interconnected strands – different technologies and social, economic and geographic divisions, key issues of connectivity, content and capability mediated by the new economy and by public, voluntary and private initiatives. But a simple run-down of these dynamics does not help us to understand cause or an effect or to predict if the digital divide will close or further diverge.

To understand the digital divide and to look forward to the future it is necessary to unpick this knotted bundle of issues. The diagram below shows how the instrumental factors of new digital technologies and existing social divisions come together. The new economy is the process by which new technologies create the real benefits (or costs) of wealth, health, education and enterprise. The quality of connectivity, capability and content determine whether the positive opportunities offered by technology will be able to close the gap and bring greater social cohesion and equality of opportunity.



Three Scenarios

The different possible views of the significance of the Digital Divide can be represented in simplified form in three possible scenarios:

‘Another brick in the wall’

The Digital Divide will remain as a serious constraint, and new technologies will benefit the few while others are left behind in the new economy.

1

Wall-to-wall technology

The Digital Divide reflects the fact that all innovations have an uneven diffusion over time. It will close as technologies become cheaper and more reliable, but will not change existing patterns of wealth creation and exclusion.

2

‘Breaking down the walls’

New technologies will dramatically change the way the economy and society is organised, allowing traditionally excluded groups to prosper and countries to skip stages in development.

3

Each scenario represents both a different perception of the Digital Divide and a different possible future. Each of these scenarios can be usefully viewed through the prism of the three C’s: connectivity, capability and content.

The 3 Scenarios and the 3 ‘C’s

	<i>‘Another brick in the wall’</i>	<i>‘Wall-to-wall technology’</i>	<i>‘Breaking down the walls’</i>
Connectivity	Access stalls at low levels.	Access rises to mass-market levels as price falls, but there remain a residual of ‘uneconomic customers’	Access rises to 100% due to a combination of price falls and public and community access schemes.
Content	Remains focused on those with a high level of education and disposable income.	Entertainment predominates. E-commerce replicates existing trading patterns.	Content is useful and adaptable with real-life application and significance for a broad range of people.
Capability	Capability is limited to existing elites.	Wide understanding of the basics of how to use technology, but little ability to use it for economic, social or cultural gain.	New technologies facilitate fundamental changes in education systems and growth of life-long learning and enterprise.

There are many different dimensions to the Digital Divide. Each is dynamic, shifting with ever accelerating technological, economic and cultural changes. The three scenarios are not so much distinct options as possible stages that different societies or groups can reach at different times. For example, the gulf in access between men and women in the US has closed, while it remains an issue in Europe; mass market access is coming close to being solved in developed countries by lowering costs and multiplying platforms, but remains a key challenge in developing countries and is likely to continue to be one for the foreseeable future.

The first scenario is therefore unlikely to be a reasonable prediction of where the UK and other developing countries will be, even in the short to medium term. At an international level, however, this scenario is a more realistic depiction of what the medium and in some instances

even the longer term might hold for many communities in the developing world.

“This information technology revolution is at least as major an historical event as was the eighteenth century industrial revolution, inducing a pattern of discontinuity in the material basis of economy, society and culture.” Manuel Castells¹³

The second scenario on the other hand, is an undesirable but certainly possible future for countries such as the UK. In this future, new technologies are widely used, but the majority of people will access it mainly for leisure and entertainment. While having 55 channels to watch and access up-to-date Hollywood gossip over the Internet is not a bad thing in itself, this scenario could bring with it widespread job losses through technological efficiency gains, without the counter-balancing effects of digitally-enhanced education, empowerment, or entrepreneurship.

The third scenario is the concrete utopia that the ‘first great philosopher of cyberspace’, Manuel Castells, spells out (see box). It is a radical vision in which new technologies could bring real change, and where the closing of the Digital Divide could lead to greater social cohesion and equality.

Moving from the first to the second scenario requires that three basic conditions are satisfied to enable ICTs to reach a broad section of the world’s population:

- Mass market access
- Mass market content
- Broad e-capability

Moving from the second to the third scenario, on the other hand, where real economic and social benefits are realised, requires a very different set of three conditions:

- Universal access
- Change-making content
- Deep e-capability

	<i>‘Another brick in the wall’</i>	<i>‘Wall-to-wall technology’</i>	<i>‘Breaking down the walls’</i>
Connectivity	Mass Market Access →	Universal Access	→
Content	Mass Market Content →	Change making Content	→
Capability	Broad E-capability →	Deep E-capability	→

Initiatives to Address the Digital Divide

The underlying conditions required to move from the first to the second or third scenario can be best understood by illustrated practical initiatives that seek to establish each one in practice. There are a myriad of initiatives attempting to address the Digital Divide, and it would be both impossible and pointless to try and list them all. Many are very small in scale or specific in focus taking one or two strands from the bundle of issues described. Within one company or organisation there may be many initiatives which impact on the Digital Divide, each taking a different approach from philanthropy to regulation, to directing core business activities at the problem. Instead, the remainder of this section gives examples of potentially effective strategies

emerging from different sectors across the six conditions set out above. These are not based on a comprehensive review of global initiatives or meant to be examples of best practice. Rather they are illustrative of elements of the pathways described as a basis for understanding BT's approach which is dealt with in section two. Note that examples of BT initiatives have not been included in this section, since they are covered in more depth in the next section.

Mass market access

The opening up of national telecommunications markets to competition has enabled the growth of ICTs and the New Economy in the US, Europe and Japan. Commercial products and services such as pre-payment, Internet cafes and Internet through television and mobile phones are rapidly addressing the need for mass-market access to ICTs. However the regulatory environment in developing countries remains a barrier to market solutions to access, as it is an important revenue for Southern governments.

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
infoDEv	Information for Development Program. Shares world-wide experience and disseminates best practices on the economic development potential of communication and information systems. Channels policy advice and technical assistance to governments in emerging economies to improve the regulatory environment for investors in ICTs.	Governments and businesses (established by the World Bank)	International	Enabling and learning

Universal access

There will always be those whom the market does not reach, both in developed and developing countries. As the Director of UNDP, Mark Malloch Brown, argues, the telecommunications industry alone will never find a viable way to serve the 3 billion people in the world who earn less than £1 a day¹⁴. There is quite clearly a need for public sector and partnership-based approaches to bridge this gap, for example:

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
Grameen Phone	Phone Provides commercial cellular services in Bangladesh in urban areas and services in rural areas via local entrepreneurs, usually women. Each local entrepreneur owns and operates a cellular phone that typically serves an entire village.	Partnership Business/ NGO	National (Bangladesh)	Project

Mass market content

With over 1 billion web pages, clearly the issue here is not quantity but quality in terms of relevance and interests to different groups of people, language and accessibility and trustworthiness. While Internet content is predominantly aimed at those in developed countries with time and money to spare, a number of sites, portals and services are being developed which aim to be relevant to other members of society, for example:

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
TARahaat	Attempts to reproduce online the colourful 'haat' or market that takes place regularly in every Indian village. Advertises goods, services, and even potential bridegrooms across a whole region, pooling the assets and market potential of many villages.	NGO	Local	E-commerce

Change-making content

One of the key challenges must be, not just creating good quality accessible content, but content which can act as a catalyst for change. A number of initiatives illustrate innovative approaches by business, governments and NGOs.

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
World e-Inclusion	Projects focus on broadening access in five areas: telemedicine, on-line education to develop skilled workers, on-line employment opportunities, e-markets and e-money.	Business (Hewlett Packard)	International	Projects
Virtual University Program	Combines structure of the traditional knowledge learning with group learning in a campus atmosphere with new interactive learning tools through the Internet.	Business (WBCSD)	International	Project
Centre Link	Best practice example of online government services. It can deal with 42 different languages and provides a whole range of services and advice for individuals and communities, from job searches to advice on pensions, youth officers, training advisers, as well as a range of related publications.	Government	National (Australia)	Government services

The African Virtual University	High quality university education at a relatively low cost. The emphasis for the students is interactivity and local learner support in English and French.	Universities	International	Projects
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Broad e-capability

A number of initiatives address the need for broad ability to use ICTs. Two examples are:

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
AT&T	Provides Financial support to TeachNet network in the US that trains teachers in the use of ICTs.	Business /NGO Partnership	National (project)	Projects
WorldCom	Has committed \$10 million over the next ten years for programs that promote minority representation in the high technology workforce.	Business	National (US)	Projects

Deep e-capability

More important than the basic ability to use ICTs is the capability to translate this usage into economic, social or cultural benefits through education, entrepreneurship and employment. A number of initiatives have the potential to get to this level of capability:

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>	<i>Approach</i>
The Synergy project	Applies new technologies 'synergistically' to address social inclusion, training and employment, economic regeneration, and commercial multimedia development.	Partnership (ICL UK, University of Ulster and public sector)	Local (Belfast)	Projects
Softbank Corp PRIDE AFRICA	Loans to start-up Internet companies in developing countries.	Business	International	Investment
Viatru Peoplelink	Links artisans in developing countries to global markets.	Businesses and NGO	International	E-commerce
Electronic Commerce for Developing Countries (EC-DC).	It aims to enable developing countries to use existing infrastructures and services to join the digital economy through non-exclusive partnerships with industry.	Partnership	International	E-commerce

Enabling Initiatives

There are a number of national and international initiatives that bring together information and best practice and facilitate partnerships between different organisations. For example:

<i>Initiative/ Organisation</i>	<i>More Information</i>	<i>Key Players</i>	<i>Scale</i>
Dot.force	Will recommend ‘ways in which the international community can work together more effectively and creatively including: fostering policy, regulatory and network readiness; improving access and human capacity; and participation in global e-commerce networks’.	Governments (G8 industrial nations)	Global
Global Knowledge Partnership	Committed to sharing information, experiences and resources to promote broad access to, and effective use of, knowledge and information as tools of sustainable, equitable development.	Governments (hosted by The World Bank)	Global
Comm.unity	Promote and facilitate business strategies aimed at closing the Digital Divide. It demonstrates the business benefits of such an approach and runs an award scheme for companies undertaking the most innovative approaches to such issues.	Business/ NGO Partnership	National

Conclusion to Section One

There are those, such as Bill Gates¹⁵, who believe that concern about the Digital Divide is misplaced and doubt whether access to technology is the key to social development. This is a useful note of caution, although there is equal doubt surrounding Gates’ preferred solution, which is essentially large-scale philanthropy rather than corporate citizenship and suitable public policy interventions.

Nonetheless, ICTs need to be part of solutions that meet social and economic needs by leveraging the potential created through the emerging New Economy, whilst at the same time offsetting its more dangerous elements. At the present time, access and broad content preoccupies many commentators and policy makers, essentially the first and to some degree the second scenario. This is likely to be a short-term issue, in developed countries at least, in terms of its ability to truly close the Digital Divide. However, telecommunication’s companies should respond to these concerns, whilst continuing to highlight the broader dimensions of the both the challenge and opportunity.

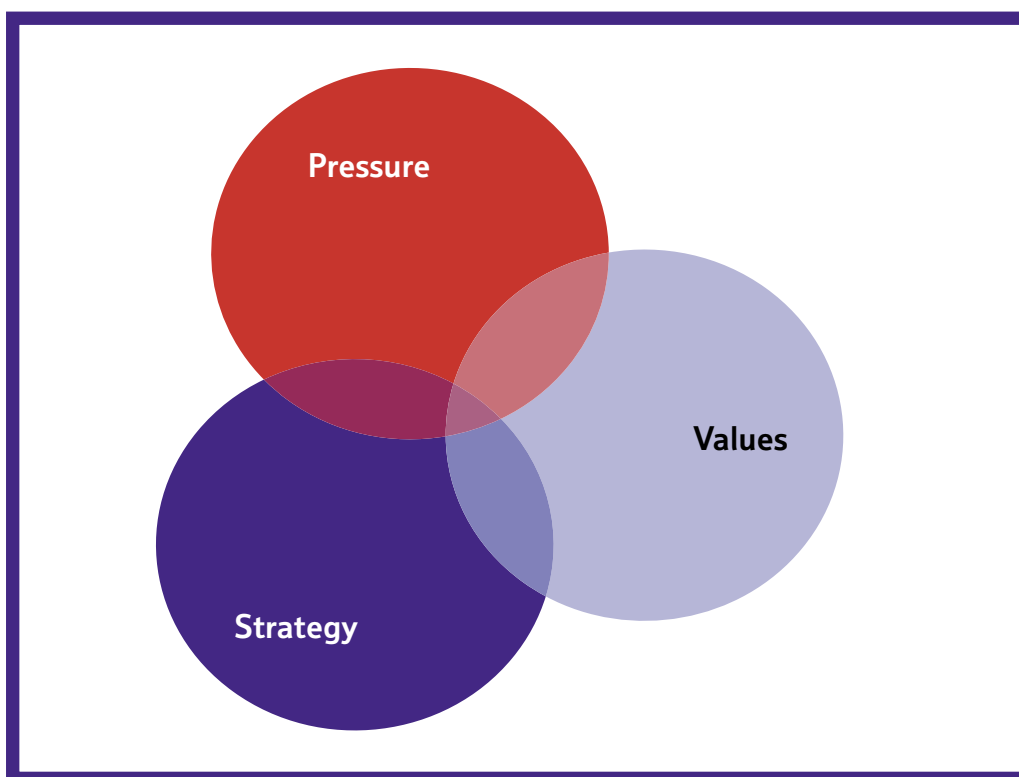
More crucial is the question of content and capability, the heartland of the third scenario. The question of capability is where there are more long-term divides because it is education and life-long learning that lie at the heart of any solutions. This then goes wider than any ability to simply learn how technology works and use it to one’s own effect, as important as this is. It calls for no less than a revolution in education and learning processes, of which ICTs are both the catalyst for change and in part the means for bringing such changes about.

Section Two – BT’s Approach to the Digital Divide

Why is BT addressing the Digital Divide?

The forces driving BT’s approach to the Digital Divide can be understood in terms of three overlapping drivers¹⁶:

- Pressure
- Strategy
- Values



(a) Pressure – Because it has to! BT faces a range of direct pressures that encourage it to take account of aspects of the Digital Divide. BT is rightly sensitive about public reputation, being so significant a player in the UK, and as a less important but nevertheless a global entrant in other markets. One particular aspect of this pressure is that it is regulated by OFTEL and has a Universal Service Obligation (USO) to make basic telecommunications services available to all upon reasonable request. The USO only covers basic telephone services, but this is clearly one important element of access. BT’s implementation of its USO has resultant benefits in terms of addressing social and economic inequalities of communication technology access. But the USO is but one aspect of regulation. For example, Broadband access is becoming a key area of concern (although at present not part of the USO) and much of the heated public debate also relates to the ‘unbundling of the local loop’.

(b) Strategy – Because it makes long-term business sense. It is clearly in BT’s long-term interests to close the Digital Divide as part of its strategy to increase the market in which it operates. ICT is the growth economic area. For example, the ICT contribution to GDP growth of OECD countries was nearly 25% in 1997, compared to only 4% in 1995. This will be particularly true in developing countries over the next decade, although developed country markets will offer enormous scope for increased value-added ICT-based services. University of Michigan business guru, C.K. Prahalad, has pointed out the market opportunity in developing countries – four to five billion people that in aggregate have purchasing power; “selling to the poor may be more profitable than selling to you and me”.

BT's strategic approach in the UK is particularly critical, since its dominant position means that its actions not only grow the market directly, but indirectly through its impact on the economy itself¹⁷. Increasing access for businesses, for example, can lower transaction costs – which affects overall competitiveness as well as the success of individual firms. Similarly, investing in both institutional and individual capabilities should directly benefit BT through use of its own services.

(c) Values – BT has a culture of doing the right thing. The Digital Divide has become a key issue of corporate social responsibility particularly for companies involved in IT and telecommunications. BT is well known for its commitment to corporate social responsibility (e.g. it was the first UK blue chip company to commit to publishing an externally verified social report) which predates the current interest in the Digital Divide and believes that its public reputation and its performance as a company go hand in hand.

At the heart of BT's values is engagement with stakeholders in the development of new products and policies. For example, in relation to the Digital Divide in particular, the company's Social Policy Forum and Consumer Liaison Panels have raised this issue to which the company has responded¹⁸.

The drivers behind BT's concern with the Digital Divide, collectively, need to be aligned to business needs. This is not because of some abstract notion of business purpose, but because of the company's very real position in an increasingly competitive market. Whilst BT clearly has a major contribution to make in addressing the Digital Divide, it is as important to recognise the limits to what it can achieve as it is to identify where its most effective contribution can be. Indeed, it is not always helpful to seek to distinguish one from another driver. As one senior BT executive commented, "CSR is of course moving into the core business area more than ever before, and the advent of the Digital Divide as a CSR issue is part of that process." What this means in practice is that CSR does not lie within a single department but is spread throughout the company. As another BT executive commented, "addressing the Digital Divide must be something that directly affects people's budgets and targets".

So What is BT Doing?

Connectivity

The starting point in understanding BT's approach to connectivity has to be in the context of Oftel Regulation and the Universal Service Obligation which aims to ensure that everyone in the UK who wants one has access to basic telephone services. The relevant issues on regulation outlined below, include price of access, the 'local loop' and broadband, cost of the USO itself and the nature of the telecommunications market at present. The nature of BT's relationship with Oftel and the balance between regulation and market forces is discussed throughout.

BT has made significant advances on price, both for general residential price costs and for targeted schemes for particular groups. A recent study of residential service prices across the industry in the UK by Deloitte & Touche found that customers of other providers would be 'significantly' better off with BT¹⁹. However, retail price controls remain a regulatory requirement on the part of BT. This is something the company feels could best be left to the marketplace. In its recent response to Oftel, BT believes that "the retention of controls in a competitive market is counter-productive to consumers' interests. Increasing market forces and the Competition Act 1998 have made price controls unnecessary. If a minority of customer groupings are unable to obtain the full benefits of competition, the remedy must be targeted – not a blanket price cap."²⁰ This is illustrative of the relationship between regulation and market determination of greater access and is a fine balance that the company must carefully manage.

Special tariffs such as the light user scheme and services for the elderly and disabled, including

bills in Braille, priority fault repair and free conversion to new style phone sockets are illustrative of a targeted approach to access. A more recent example, In Contact Plus, combines a low cost line rental of £9.25 with a BT pre-pay phonecard and has been endorsed by the Director General of OFTEL, David Edmonds, who concluded:

“Our research shows that an estimated 300,000 households in the UK do not have a fixed line phone but would want one if they had the ability to control costs and without high quarterly rental. This type of social telephony is vital if we are to ensure that people are not excluded from having a fixed line phone simply because they are on a low income.”

Another regulatory issue for BT is to ‘unbundle the local loop’ to allow other telephone companies access to its local phone connections. This is the most controversial issue and is crucial to BT’s strategy.

“In the consumer area [of bandwidth ‘plumbing’]...infrastructure and pricing have proved to be major hurdles. In the eyes of many critics, the Becher’s Brook of those hurdles has been none other than British Telecom...For 90% of the population to enjoy Digital Subscriber Line (DSL), they first have to install a DSL terminal in their home and in the local exchanges. Which means touching the copper wire. Which belongs to BT.”²¹

Therefore cost is a crucial issue and one that has many dimensions for the company. This includes the increase in the number of competitors and what it means for BT’s market share.

“Over 250 companies now offer Service Provision and more are poised to enter. Local Loop Unbundling and Carrier Pre-Selection will intensify competition. As BT’s share of the market diminishes it will become increasingly difficult to fund loss making services for the truly needy.”²²

In many ways therefore the unusual nature of the market in which BT operates (i.e. being an ex-state monopoly provider that is regulated far more than other telecommunications companies because of its predominant market share) can dictate to BT the boundaries of its Digital Divide strategies – albeit in a tangential way. For example, as a leading telecommunications company BT had to win one of the 3G licences. But these were very expensive and therefore add to the company’s debt. The scissor effect of the plummet in tech stocks more generally and BT’s in particular, means that:

“responding to the tough economic climate in our industry, BT now intends to concentrate its activities in Europe. These imperatives will prevent much focus on developing countries in the foreseeable future.”²³

BT’s USO carries with it very real costs and also constraints to what services it can and cannot offer in the market. OFTEL estimates the cost to BT of the USO to be of the order of £75-100 million per annum. BT is not allowed, under its licence, to go below cost, or give free services.

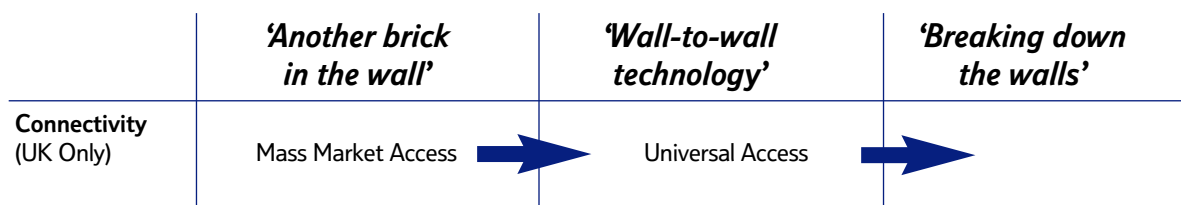
BT then is in the strange position of being pushed towards connectivity through its USO, while at the same time also being constrained by it. For example, in a response by BT to an OFTEL consultation paper on the USO, the company argued that:

“OfTel’s position is that universal service should be funded out of BT’s own revenues. This undermines OfTel’s aim that the USO should be competitively neutral and not inhibit competition and choice. If policy makers are serious about achieving the benefits of effective competition in telecoms markets, and also about maintaining the traditional objectives of universal service, then it is time to disentangle universal service as an industry issue, where all relevant firms serve the loss making sectors, financed where necessary by an industry fund.”

BT has a point in arguing that the current USO constrains its ability to contribute effectively to addressing the Digital Divide without compromising its competitive position. As the significance for social policy of connectivity grows, and BT’s dominance of the UK telecom market declines, OFTEL will be faced with increasing pressure to adjust the terms of the USO to spread the cost and enhance the effectiveness of the industry’s overall contribution to addressing the Digital Divide.

On balance, then, BT has taken significant steps in addressing the issue of connectivity. Whilst all three drivers have played a role in this, regulation of the company and its USO has probably played the most important role in securing BT’s contribution in raising the likelihood of achieving the third scenario in terms of connectivity at least in the UK. Outside of the UK, BT has not surprisingly played a far less significant role in addressing this dimension of the Digital Divide. Critically, its decision to withdraw from most developing country markets means that it is also unlikely to make meaningful contributions to addressing the international dimensions of the Digital Divide in the future.

Summary of BT’s Connectivity Contribution



Content

BT is not a major producer of content, besides what is on the BT website itself. More significant has been its role in enabling content, essentially making content more accessible. BT has pursued this role in the following areas:

- (a) Content Host: The company hosts a whole range of Internet Service Providers, in particular many addressing the Digital Divide, most notably OneWorld that provides information on development and humanitarian issues throughout the developing world.
- (b) Facilitator/Adviser: It assists others in setting up websites that are accessible and user friendly. BT has placed emphasis on the promotion of digital forms of government services. This is especially important as people on low incomes have to contact the government on average ten times more often than the more affluent.²⁴ Therefore any e-government strategy must be certain of making services universally available and not harder to access for the most vulnerable. BT argues that this area offers enormous benefits to the public exchequer. The company’s own research suggests that the UK public sector could save some £5 billion just by transferring 20% of callers from physical visits to offices and postal dealings, to telephones and Internet. In total, BT estimates that the UK government could make efficiency savings of £13.5 billion per annum through:

- (a) improvements in ways of relating to people contacting government (£5 billion)
- (b) electronic procurement (£1 billion)
- (c) better use of internal communications (£7.5 billion)

BT’s StepChange programme advises and provides services to local and national government on using new technologies to make government services more efficient and effective. BT has also developed a number of programmes for supporting the development of community-based digital services through its Community Connections:

This document is part of BT’s Social And Environmental Report and has been downloaded from the Better World website www.groupbt.com/betterworld.
 Numerical data in this document has been verified by Lloyd’s Register Quality Assurance Limited.

BT Community Connections aims to connect local community projects to the Internet:

Local Co-op

A community co-op set up their own web page to promote their community's local produce and provide on line sales, information and advice.

Disability Support Network

A group providing support to members of their local community with various disabilities established a system for collectively placing orders for goods and other essential services on line that can be delivered directly to people's homes.

Medical Support Group

A self-funded medical support group utilised the PC to allow community members to seek and share support about specific needs.

Local Kick-start/Drop in Centre

The centre provided access to job seekers to post their CV on relevant Internet sites and also search for available work on line.

Local Parents' Group

A parents' group opened the door to parents re-entering the work force enhancing their skills via access to the internet and also search for services available via the web, such as groceries on line and locations of crèches that would assist them while working.

BT has also provided enabling content to support the increased use of digital technology for the delivery of educational services. This is being done through Language and Information literacy ('an issue of comprehension'). The ICT@School project for example provides content in the form of an ICT toolbox that helps teachers to deliver the curriculum for ICT 'in exciting and innovative ways'. It includes lesson notes and guides to assist pupils in the use of emails, presentation skills and other computer-based tasks.

This area of BT's efforts particularly highlights the blurring of the lines between the three C's. BT's role has been to demonstrate how to more effectively use information, which is essentially an aspect of capability. Its content production has been limited to such initiatives as an online museum on the history of telecommunications.

One might look to BT being more proactive in promoting content focused on ways to address the Digital Divide or other aspects of corporate citizenship. For example, BT could usefully support the emergence of ethical portals such as that developed by Instituto Ethos in Brazil that create instruments by which the consumer may conduct a self-assessment of his or her social responsibility during the purchasing process²⁵. However, the company is constrained in this respect because of the lack of quality control about recommended sites and legality as to whether they are able to do so (e.g. they wouldn't be able to recommend the Labour Party's website).

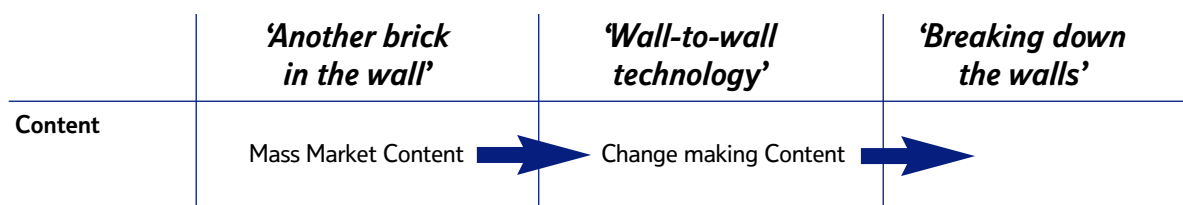
Again, the key question is the ability to create value out of content. BT could play a more proactive role in this area.

Summary of BT’s Content Initiatives

Mass Market Content	General Public	Services to government. (e.g.: City of Edinburgh Council Partnership)
Mass Market Content	General Public	Yell.com BT education
Change Making Content	ISPs	Hosting sites that address the Digital Divide, such as OneWorld (www.oneworld.net)

In conclusion, BT’s strategy on content is relatively limited, and where they have been active it has been in the field of enabling rather than producing basic content. This is not, however, a shortfall, since it is in the main not BT’s comparative advantage or perhaps even place to increase its involvement in basic content, even where it concerns the Digital Divide. There may, however, be more opportunities for BT to target support to enhancing its provision of enabling content to digital initiatives specifically aiming to address dimensions of the Digital Divide.

Summary of BTs Content Contribution



Capability

BT takes the view that the technical and economic barriers to universal access to the Internet and ICTs is, at least in the UK, a short to medium term problem which will be overcome through a combination of new technologies (such as internet-enabled games consoles and mobile handsets) and price competition. They believe that the real challenge will be in overcoming more complex barriers rooted in capability shortfalls, both for individuals and groups, and those of a more institutional nature. As one BT executive concluded:

“It is not just about access...it’s more to do with skills, attitude and enlightenment, not just poverty...what tends to get overlooked are the underlying needs for skills and education and attitudes. Fundamentals of human skills have not evolved for many, many years, our ability to build relationships for example. The digital age increases our need to evolve these skills. Education systems are really not adapted to this need, so BT’s efforts are very focused on how to develop these human skills. A lot of our fundamental work is about getting ICT skills into the education system effectively.”

Education is fundamental to overcoming the Digital Divide. It is both an enabler of greater uptake and consequent economic growth and development, and also a positive outcome of the application of new technologies. Lifelong learning in particular is crucial, given the speed of change of the New Economy. In fact the ICT revolution has brought education into the 21st century and for the first time in perhaps a hundred years we are witnessing a sea-change in this field.

BT’s belief that education will play a crucial part in getting over the Digital Divide is well placed and is reflected in the number and variety of projects and initiatives it has developed (see below) to exploit the educational potential of new technologies and to build the skills needed to use them. The strategy towards capability at present is focused largely on schools, universities and

further education colleges. As a result, BT’s initiatives tend to exclude older generations and those outside of formal education processes. These other groups are assisted through some of BT’s programmes, but more in terms of connectivity rather than capability. Areas where they are looking at capability and content are at smaller a scale, working with community groups (see BT’s Community Connections).

Examples of BT education projects addressing the Digital Divide:

Awards, such as BT’s Education Programme will, over two years, provide £600,000 to support innovative curriculum projects with a communications theme.

Roadshows delivering skills-based training in communication skills. Presently working in over 3,000 schools with the aim of expanding this later in 2001; this is through a new programme run in collaboration with LEAs to run events to show what BT Education is all about.

Email: BT talk21e, a free secure email service for schools, providing a free and flexible service giving schools control over pupils’ email usage. Schools can easily adapt the security, safeguarding pupils from inappropriate incoming mail. Some 2,500 schools.

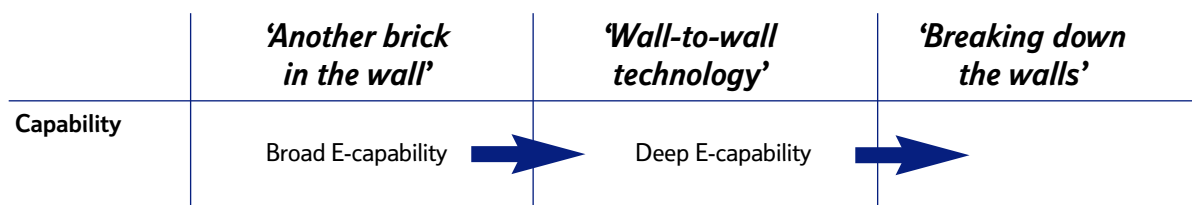
Networks: The BT Global Schools Network aims to help schools around the world benefit from communication technology by exchanging information and ideas, and to collaborate as groups online to learn about each other’s cultures and life.

KITES: The first community investment project that BT is supporting outside the UK. BT is working with Katha, a Delhi-based charity, to establish the Katha Information Technology and E-commerce School (KITES) in one of the city’s main slum clusters. The school will be attended by young people who are no longer in formal education.

Further information on the above and the full range of BT Education Projects, see: www.bt.com/futuretalk/education

In conclusion, BT has highlighted its commitment to making a major contribution in the area of capability, and certainly seeks to move the UK towards the third scenario in this critical and most difficult area. This commitment is to be applauded, although its current focus on formal educational establishments will restrict the company’s ability to build the capabilities of today’s most excluded, especially older people that will make up an increasing segment of the workforce in the future, and specific groups, such as people with disabilities, whose ability to participate will depend critically on enhancing their capabilities once greater access has been achieved.

Summary of BTs Contribution to Capability



Summary of BT strategies and actions addressing the Digital Divide

Pathway	Groups Affected	Strategies
Mass Market Access	General Public	Unbundling local loop
Mass Market Access	General Public	Market Pricing Packages including In Contact Plus: low cost line rental of £9.25 with pre-pay phonecard
Mass Market Access	General public	E-wallet, online pre-payment for access to e-commerce without need for credit card.
Universal Access	Children /Teachers	School Internet Calls
Universal Access	General Public	LearningStream. Reduced connection charge to Schools, libraries, Citizens Advice Bureaux to share online education programmes.
Universal Access	Disadvantaged Communities	'Wired Up Community' projects (DFEE funded)
Universal Access	Community Groups	Community Connections Project
Mass Market Content	General Public	Services to government. (e.g.: City of Edinburgh Council Partnership)
Mass Market Content	General Public	Yell.com
Change Making Content	ISPs	Hosting sites that address the Digital Divide, such as OneWorld (www.oneworld.net)
Broad capability	Teachers	Awards for innovative learning techniques in ICT
Broad capability	Schools	BT FutureTalk in Education Schools Awards, project funding
Broad capability	Schools	BT Education talk21e promotion; provision of free secure email
Broad capability	Adult learners	BT Lifelong Learning Awards, cash support (£0.5k). Talkworks adult education.
Broad capability	Teachers	ICT@school Website providing 'ICT toolbox' on ICT teaching
Broad capability	Global Schools	BT Global Schools Network (BT GSN); disadvantaged children in schools across six countries learning together
Broad & deep capability	Young people	Reach for Success. Training scheme for unemployed young people including communication training. (With the Prince's Trust)
Broad & deep capability	Young people (India)	Katha Information Technology and E-commerce school. School for young people not in formal education focusing on IT, communication and computing skills to prepare them for employment.

Section 3: Conclusions and Recommendations

The Digital Divide in its broadest sense has become a critical public policy issue, both reflecting social and economic objectives, and their increasingly inter-twinned relationship. A complex web of factors drives BT’s stance towards the Digital Divide. In the UK, the key factors are its sheer scale, its dominant position in the ICT sector, and the regulatory environment in which it operates. More generally, its stance is set by its technological competence, and its leadership role as a responsible corporate citizen. Overall, its commitment to contributing to addressing the Digital Divide is, and must be, framed by its underlying business objectives and strategy.

The crucial issues for the Digital Divide are highlighted in red in the diagram below. These are the transformative issues that are in general not yet adequately addressed. There is a role for companies in each of these three pathways, and BT might consider a fuller role to play. However the more advanced and complex issues that will lead to value creation can often be best served by industry-wide initiatives and multi-sector partnerships.

Where Companies Are And Where they Could Be

	<i>‘Another brick in the wall’</i>	<i>‘Wall-to-wall technology’</i>	<i>‘Breaking down the walls’</i>
Connectivity	Mass mkt access →	Universal access →	
Content	Mass mkt content →	change making content →	
Capability	Broad E-capability →	Deep E-capability →	

What Should Be Expected of Companies?

Companies have been the leading innovators in the development of ICTs. Their emphasis, however, has been on enabling technologies. While these are crucially important for addressing universal access and even to some extent change-making content, they don’t tend to have the potential for Deep E-capability, the critical gateway for addressing the long-term challenges underpinning the Digital Divide.

Companies have an enormous potential, through the weight of their financial resources, but also in the case of ICTs through products and expertise, to facilitate deep e-capability through learning processes. Cisco’s Networking Academy is a good example in that, although it focuses on formal education institutions, is big in scale and emphasises networking in learning and public/private partnerships. Another good example is HP’s World e-inclusion for its scale and comprehensiveness – at least in its aim to broaden access in five areas that have the potential to create value.

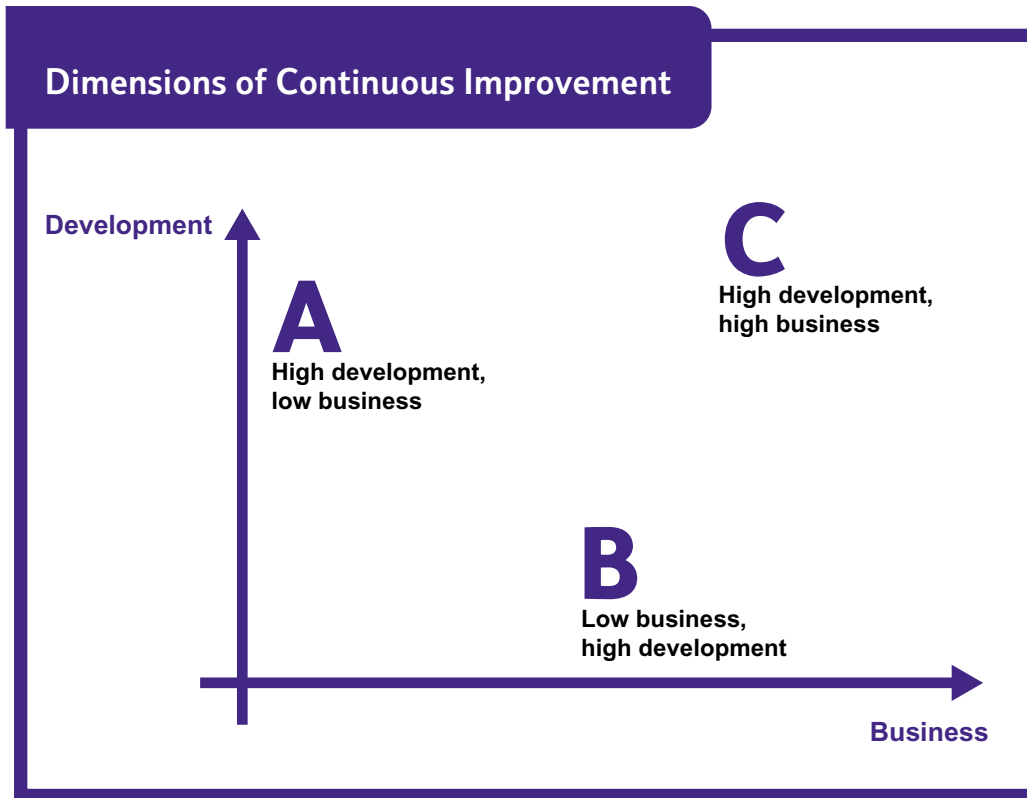
Partnerships are really able to create multiplier effects because of the coming together of different parties and their relevant expertise. The Global Knowledge Partnership has great potential to create value through the sharing of information that can promote the effective use of knowledge for equitable development.

Dimensions of Continuous Improvement

Finally and most importantly, companies must transparently commit themselves to addressing

the Digital Divide within their core business strategies as well as through community investment. Best practice will come when there is a blurring of the lines between the two, thereby creating the win-win scenario of CSR. Commitment comes in many forms, one notable one however is from the top – that CEOs make stands on the issue and influence relevant parties to do likewise, both externally and internally. Another is the transparent and accountable setting of targets for continuous improvement (similar to the International Development Targets) both for business and social development.

Dimensions of Continuous Improvement²⁶



BT and the Digital Divide

BT’s response to the Digital Divide has been with policies, pricing, projects and philanthropy that focus on the first four pathways across the three scenarios. The final two pathways, the ones that will create transformative change are also within BT’s sights, but as yet not to a level where really significant impact can be expected.

	<i>‘Another brick in the wall’</i>	<i>‘Wall-to-wall technology’</i>	<i>‘Breaking down the walls’</i>
Connectivity	Mass mkt access →	Universal access →	
Content	Mass mkt content →	change making content →	
Capability	Broad E-capability →	Deep E-capability →	

BT compares very well with other global ICT companies, particularly the more traditional ex-state-owned monopolies. Its products and services, not only driven by its USO but also its commitment to positive change processes and strategic gain, show it coming up with the goods literally – a notable example includes voice portal technology development, that assist drivers in using mobiles to access information about financial services or directions²⁷. The key here however is realising the potential for such technological development to create value.

Recommendation 1: Increased linkages across BT's departments that produce new technologies and provide services with the company's Social Policy Unit, to look at ways in which such devices can better address the Digital Divide.

At another level, hosting ISPs is a service that BT provides very well and is quite clearly a leader. However, its approach to such hosting is unclear and could be more proactive in addressing the Digital Divide through greater emphasis on hosting organizations and programmes that directly address key dimensions of the Divide, particularly in the sphere of deep e-capabilities.

Recommendation 2: Review hosting policy to consider hosting sites that more directly look to create value at the end of deep e-capability and change making content.

BT has rightly identified the importance of capability issues and focused much of its energies on education strategies. Its strategy goes beyond simply trying to place material in the curriculum; BT seeks to influence more broadly the curriculum and learning processes. BT is right to place importance on influencing existing formal structures of education. However, this does exclude those outside of the formal education processes, or those who have come through the 'old' system already. There are examples where other approaches are being taken as demonstrated by BT Community Connections and the KITES project in India. However, these are small-scale in terms of resource input, or as in the case of KITES, part of a market from which BT is withdrawing.

Recommendation 3: Look to reviewing education process towards balancing between formal and informal education institutions as well as those at the more innovative end of learning.

BT is involved in a number of partnerships both with government and the voluntary sector that compares well with other strategies, particularly in the UK. A notable example is the work with UK Online. However, if the concentration is going to be in Europe, then multiplier effects could be drawn from working with representative bodies. In the case of employment, for example, working with the CBI, TUC, or Institute for Personnel Development on the potential of ICTs (not only in the workplace), could enable BT to target a wider group of stakeholders.

Recommendation 4: Search out partners that will create multiplier effect, demonstrate the extent to which partnerships have made an impact, how they are managed, and how results feed back into company policy and strategy. Internationally, make clear how BT will influence multilateral initiatives such as Dotforce.

BT's commitment to addressing the Digital Divide is clear in the variety of initiatives it has, and ironically, its attention to utilising the USO to social gain beyond compliance – e.g. through In Contact Plus. However, it is unclear to what extent this issue, as opposed to citizenship more generally where there is tangible commitment, filters up to the Board level. Secondly, management processes that link the Digital Divide explicitly with different departments is only just beginning to take shape.

Recommendation 5: A clearer, high level commitment from BT to address Digital Divide issues in a way that demonstrates a more connected approach between operational, public affairs and social policy departments. This should include detailed coverage of progress and objectives in future social reports.

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