

**THE ASSOCIATION FOR INFORMATION MANAGEMENT****INFORUM 96****L'Universite Libre de Bruxelles****21 March 1996*****Reflections and Expectations of Professional Information Users*****By Roger Bowes****Chief Executive, Aslib, The Association for Information Management
Secretary General, The European Council of Information Associations
Honorary Treasurer, FID**

The marriage of the computer with telecommunications means that more information will move at electronic speeds and reach vast audiences. One effect will be to decentralize power as it decentralizes knowledge; another, to create an uncertain balance between the technical and the social, between the inexorable and the immovable. On the one side, there are the forces driving, and driven by, technological change; on the other, there is an aversion to undue risk, an aversion deeply-rooted in human values. From this friction comes a divergent business structure.

There is a danger of the business community dividing into business managers whose life is dominated by technology, and those whose life is dominated by human values. In the extreme, this could lead to a business community of 'haves' and 'have-nots'; or, more precisely, a community split between those with plenty of resources and no time, as opposed to those with plenty of time and no resources!

As technology develops, business can easily become data-rich and information-poor - engulfed by megabytes of disconnected facts, findings and statistics. We must avoid that data overload.

In an economy where the only certainty is uncertainty, the one sure source of lasting influence is knowledge. When markets shift and technologies proliferate, when activities multiply and become obsolete almost overnight, successful institutions are those that consistently create new knowledge and effectively communicate it. These functions define a business as a 'knowledge-creating' agency, whose mission is continuous innovation.

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Our intellectual capital

Advances in technology are changing the way people work, and indeed the nature of the work they do; changing how individuals and groups live, work and interact with others; changing the basis for differentiation and competition. Around the world, many businesses now find that they can use the knowledge they possess to secure a differential advantage. These organizations are becoming players in the global market for information, which has moved from rhetoric to reality almost before we knew it.

To an extent, competitive differentiation will revolve around an intensification of analysis. The astute will shift their attention from systems to information; and they will address two related questions. In a competitive world, where groups can have access to the same data, who will excel at turning data into information? Who will then analyse that information quickly and intelligently enough to generate superior knowledge?

These questions will no doubt be addressed over the course of the day. As answers to these questions emerge, the pace of change will quicken. Before this decade ends, the nature of information, how it is traded and produced, the scope, shape and protocols of information markets, and the other attributes of an information economy, will impact policy, set limits on influence and redefine power.

The knowledge we can deploy will come from the products of analysis; from research, learning, technology, old-fashioned experience, and increasingly, from information on record. Altogether, this knowledge represents intellectual capital. Pope John Paul II identified it in his last-but-one encyclical, where he defined a new, important form of ownership and wealth: 'the possession of know-how, technology and talent.'

Brainpower

Over the last few decades, we can see that the information revolution has begun to change the very source of wealth. It is no longer material, it is knowledge applied to work to create value. The pursuit of wealth is now largely the pursuit of information, and the application of information in business and to our collective affairs.

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Today, everyone is conscious of the growing economic and social significance of these intellectual assets, but there are no audited appraisals of their value. To clarify the point, just suppose all the software that runs large computers suddenly vanished. All the lights would go out; all the airlines would stop flying; all the financial institutions, and many factories, offices and laboratories, would come to a standstill. Yet these crucial intellectual assets do not appear in any substantial way on the balance sheets of the world. Those balance sheets are still full of what the industrial age called 'tangible assets': buildings and machinery, and stocks of goods and materials; things that accountants can see and touch.

The new information economy changes the very definition of an asset, transforms the nature of wealth, cuts a new path to prosperity. It changes everything, from how we make a living to how and by whom the world is run. The competition for the best information is vastly different from the competition for the best farm land or the best coal fields. Information resources are not bound to a particular geography, nor easily controlled. An information economy diminishes the rewards for control of territory and reduces the value of the resources that can be extracted through such control, take Singapore for example.

Businesses and institutions and nations that capitalize on information will be vastly different from those that once vied mainly for material resources. As a source of wealth, information comes in various forms, from streams of electronic data briefly valuable, to years of accumulated research, stored in libraries, embedded in computer memories, or carried as intellectual capital in the collective minds of specialists.

These developments raise difficult questions. How will we measure capital formation, when much new capital is intellectual? How will we measure the productivity of knowledge workers whose product cannot be counted on our fingers? If we cannot do that, how will we track growth in productivity?

Capitalizing on our intellectual assets

In many organizations, collective knowledge can be hard to identify, and harder still to plot effectively; the management of intellectual capital is still largely uncharted territory, and few are expert at navigating it. Managing know-how is not like managing cash or buildings, yet intellectual investments need to be treated with at least as much painstaking care.

Genuine knowledge is seldom structured in fixed fields or by dependable rules. It is social - that is, it is distributed as shared understanding among people who may have little respect for artificial organizational boundaries.

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Too many organizations are drowning in a sea of high technology without insight or content. Creating knowledge is not simply a matter of processing objective information; it depends on tapping the tacit and often highly subjective insights, intuitions and ideas of individuals and groups. The strategic purpose is to capture, capitalize and leverage this free-floating brainpower.

These challenges, indeed opportunities, are being played out on a global, political and economic tableau. We cannot achieve our goals or influence the rules by which the game is played at a purely national level.

One of our principal concerns has been the government's predilection towards the belief that technology is the key to a successful information infrastructure in that they have sought the advice of the major computer and telecommunications players, and although, in Europe for example, the government are concentrating on such things as telecommunications deregulation in order to encourage the growth of the technological infrastructure, too little emphasis has been placed on the content of that structure.

It could be said that the United States government has a more balanced perspective when one looks at their national information infrastructure objectives, but again those objectives could still be interpreted singularly as technological, ie wiring up of the schools, etc. However, their government could well argue that content is being taken into account by the composition of the NII task force.

However, in the United Kingdom and the EU we cannot even claim that amount of perspicacity. The proposed programmes of Bangemann and Delors mirror the top-down initiatives of the US government and those papers are laudable in the way they address the social and economic implications and the need for content. However, what one might describe as the implementors, the national governments, are both technologically driven and vertically structured whereas the US NII task force traverses all sectors of the community and government.

In the UK, for example, the three key groups addressing our information infrastructure report to three different government departments and are, to all intents and purposes, not connected. The Department of National Heritage has the Library and Information Commission, the Cabinet Office for Science and Technology has the Technology Foresight Programme, and the Department of Trade and Industry has the Information Society Programme, and never shall they meet.

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As regards the EU, the committee or structure traversing the 23 Directorate Generals of the European Commission on the matter of information infrastructure policy is poor.

Aslib has, in its own right, counselled, lobbied, indeed nagged, the relevant, or perhaps I should say irrelevant, bodies in the UK on the matter of an information infrastructure policy which the United Kingdom government sadly lacks.

Aslib has, both in its role as a European Commission National Awareness Partner for England and Wales and independently of this, assailed DGXIII with its views on policy, content, standardization, regulation and communication policies with businesses and the general public. I must say that after a slow start the Directorate General has shifted its emphasis on technological solutions to a more balanced set of objectives and in its Information 2000 prospectus has announced its intention of emphasising the importance of content.

For example, they state:

"The content industry is a crucial sector for the European economy and society in terms of employment, competitiveness and preservation of Europe's cultural identity. Europe is lagging behind other parts of the world in the use of advanced information content such as multimedia. A strong and healthy European content industry is vital if Europe is to exploit to the full the potential which the information society offers."

and goes on to say

"The European information industry is, however, also faced with a number of barriers to growth that prevent it from quickly realising the critical mass necessary to compete on equal terms at global level in the newly developing multimedia markets. Actions are needed at both national and European level if Europe is to exploit its richness in content and confront the growing global competition. At stake is whether the European content industry - employing more than two million people and with a turnover of ECU 150 billion in 1994 - will be a powerful presence in its own domestic market. Or will mainly non-European players capture the lion's share of the growing demand for multimedia products?"

This is excellent news. We would now like to see action through a set of specific objectives, as we have seen in the US NII, an understanding of how businesses are managed, their priorities. How we might communicate the importance of content to them would be a good start and one in which user communities around the world through their associations like us might help.

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For example, 95%+ of businesses are SMEs and you might find it astonishing to know that all of them have 20 employees or fewer. You will appreciate that the managers of these enterprises are going to have their concentration on managing the tangible elements of their business - the overdraft, the customers, product, the van fleet breaking down - rather than the intangibles of information. We need to know how we can break into that mind-set before we can convince them of the supreme value of information as a resource.

However, progress is being made. In the UK we have rattled enough cages to have been invited to submit evidence to the House of Lords' Select Committee on Science and Technology for their Information Superhighway enquiry and have now been invited to provide an expert to support this Committee up to and including its final report.

However, I am concerned that our progress is at a far slower a rate than the evolution of the information infrastructure, nationally or globally, and it is abundantly clear to us that we need to encourage and participate in alliances and partnerships to gain more clout.

We have chosen to do this at various levels.

At a national level we are part of the National Awareness Programme of DGXIII spreading the message of the importance of electronic information to SMEs with 28 other National Awareness Partners throughout Europe. We hope shortly to be chosen to participate in INFO 2000, the successor to the NAP IMPACT Programme, which has similar objectives but with the addition of the citizen as a target which is very exciting.

Indeed, one of the reasons we initiated our regular weekly column in *The European* newspaper was in order to improve our linkages with the citizen and I think that action was unique in the information management world.

At the international level, at the EU, at G7 and the various subsidiary organizations of the UN, we recognise the impotency of individual associations and work with fellow associations in the European Union through the European Council of Information Associations, for which Aslib provides the Secretariat. At the global level we have joined FID, of which I am Honorary Treasurer, in order to get our views across and to support other members' views with the impact of a combined approach. For me one of the most exciting prospects at FID is the knowledge forum. FID has, of course, always been a knowledge forum, a mixing of minds from many nations. But in this electronic age we will be able, I believe, to aggregate the power of our opinions around the world on an electronic knowledge forum such that we will have, not only the facility to exchange wisdom, but also to truly influence governments' actions, or lack of them if appropriate.

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We are proud to participate in an organization which has a unique presence and global opportunity and one in which there are so many intelligent and dedicated people contributing. It will be hugely valuable to be able to capture that knowledge and it will be hugely rewarding for those dedicated people and organisations to derive greater value from their commitment.

In Europe, the ECIA has for many years been a very valuable forum for the interchange of views. Some people have referred to it derogatively as "a talking shop". I have no problem with a talking shop where the talk is concise and represents the experience of leaders of associations representing over 11,000 members. Now we have a newsletter, *ECIA Views*, which, as its title suggests, includes issues of interest to our members which we wish to examine ourselves, such as Certification and Vocational Qualifications and Training, and issues which we may wish to raise with the European Union, such as Copyright, which will, incidentally, be discussed at our next meeting in four days time.

It is always difficult to measure the results and although it may be argued that a redirection of our individual efforts might result in more direct revenue, there are valuable tangible, if often unquantifiable, results which have emerged.

Nationally, our efforts led the Sub-Committee of the House of Lords to ask for evidence from Aslib. A decade ago they did not.

At the European level, exchange of knowledge on two issues, the Certification initiative by the French and the National Vocational Qualification scheme by the British have been invaluable.

At FID I am anticipating real value from the FID knowledge forum when it is up and running. That is why we encourage experts like Professor Charles Oppenheim, who will represent Aslib as a permanent adviser to the UK House of Lords Sub-Committee, to participate as Chair of the FID Intellectual Property Issues SIG.

Through the ECIA seminar on Tuesday of next week I hope to be learning about the particular concerns and problems that Belgium through ABD, for example, has with regard to the way Copyright law is implemented in their country and so on, and I am looking forward to knowing the same from around the world via FID.

Every business's second business is information. Our governments have not necessarily appreciated that, or if they have they invariably have no policy or strategy to cope with it.

A single association cannot do much, a group of associations can. In the EU every association's second association should be the ECIA. Globally every association's's second association should be FID.