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Great Britain. Office of Science and Technology.

Publication/Creation

London : Office of Science and Technology, [1995]

Persistent URL

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TECHNOLOGY Foresight TEC PROGRESS THROUGH PARTNERSHIP 1111 LEISURE AND LEARNING 14 12 11 10 8 7 6 5 INFORMATION SERVICE 3 17 JUL 1995 2 Wellcome Centre for Medical Science

Office of Science and Technology

THE SECTOR

Leisure is everywhere. It is therefore easy to underestimate the economic significance of the sector as a whole. It provides out-of-door entertainment entailing travel and access to historic sites or entertainment venues. It includes the UK's heritage in museums and galleries. It absorbs a range of skills in fashion design, software development in computer games, and creative performance. It is critical to the mass media. Above all, it employs 1,400,000 people in the UK, involves 19 per cent of companies, and has a turnover of £80 billions.

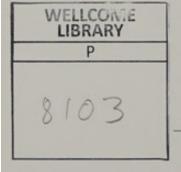
The UK's learning sector includes not only education at all levels, but commercial training provision and domestic learning. It is clearly a massive sector but is particularly important to the leisure industry in that:

- it provides essential skills to the newly developing parts of the leisure sector; and
- it has a close relationship to leisure through new technologies such as CD-Rom.

THE FUTURE

There are no great technology surprises in these sectors; indeed, the technological future can be seen some way ahead. It is far more difficult to discern **the markets** for potential technological changes, **their social impact**, and the **overall framework** which the UK needs to make the new developments a success in this country. The report concentrates on these areas. In particular it notes that:

- The current regulatory structure might be poorly adapted to rapid development in the mass media and should concentrate on desired outcomes rather than rapidly obsolescent technologies;
- There is an overemphasis on technological developments at the expense of understanding UK software needs, especially the added value it is able to generate through copyright material in music, broadcasting, information, and computer software;
- Industrial change will put considerable pressure on the UK's ability to provide hybrid skills which combine ability in technology, creativity and commercial know-how;
- Through new technologies education and training will move to greater selflearning at the expense of traditional teaching methods. Some current teaching effort will therefore be focused on getting the right software development and standardised learning modules in place before the teaching effort begins. The latter will be a growth area; and
- There will be much greater convergence of leisure and learning activities, partly through new technology and partly as a result of changes on the supply side.



TECHNOLOGY Foresight



FORWARD WITH FORESIGHT

The key recommendations of the panel are set out here in summary form:

- The government must keep under review the regulatory structure in the field of the mass information media. The goal should be a structure which combines all possible technological developments within one framework (ie telecommunications, broadcasting and, where necessary data-processing). The growing convergence of these sectors makes their continued separation unhelpful.
- At the same time, all content and software regulation should be governed within a separate framework informed by criteria on taste, privacy and commercial potential.
- A detailed audit is needed of UK copyright potential and of the likely impact on this of technological and legal changes over the next 20 years in order to safeguard this vital UK income stream.
- The government should become more aware of the importance of UK branding in both the leisure and learning sectors. The UK should be 'sold' as a modern country, not only as a heritage centre with islands of excellence in confectionery, preserves and whisky.
- New undergraduate courses are needed to produce hybrid technical and creative skills. In addition, it must not be assumed that producing more technical skills alone is the key to economic growth. Design and performance across a range of areas such as fashion, music, TV, video games and film are essential to the economy and can be either greatly enhanced or damaged by the advent of new technologies.
- Liaison should be encouraged between public providers and commercial producers of learning and information materials to take full advantage of the new technologies and transfer control of learning to the consumer, lower the cost of learning, and enhance UK exports in this area.
- Research is needed into the impact of these developments on UK households as sources of demand for new products and services and as suppliers of skills and labour - and on equality of access to new learning and leisure resources. These latter developments might increase social polarisation unless they are directly remedied.

In general, there is an urgent need to respond to competition in the UK's traditional education software markets by providing new software suited to the new technologies: if this is not addressed urgently many of our most lucrative markets will be at great risk.

TECHNOLOGY FORESIGHT PROGRAMME

The purpose of the Technology Foresight Programme is to help business people, engineers and scientists become better informed about each other's efforts. It is bringing these communities together in networks - looking forward in partnership - which will help to identify emerging opportunities in markets and technologies. The Programme will also help to ensure that resources are used to best effect in support of wealth creation and improving the quality of life. The results of Foresight will inform decisions on spending by Government and industry. Foresight findings are available to small and medium sized enterprises which may not have the resources to undertake Foresight work on their own account.

The Technology Foresight Programme is co-ordinated by the Office of Science and Technology (part of the Cabinet Office). Foresight panels have been working in each of the following 15 sectors:

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Agriculture, Natural Resource
& Environment
Chemicals
Communications
Construction
Defence & Aerospace
Energy
Financial Services
Food & Drink

Health & Life Sciences IT & Electronics Leisure & Learning Manufacturing, Production & Business Processes Materials Retail & Distribution Transport

Summary leaflets (like this one) are available for each sector. Copies of these documents are available from the Office of Science and Technology, Albany House, 84-86 Petty France, London, SW1H 9ST (Fax: 0171-271-2015). Full reports for each sector are available from Her Majesty's Stationery Office.

April 1995

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