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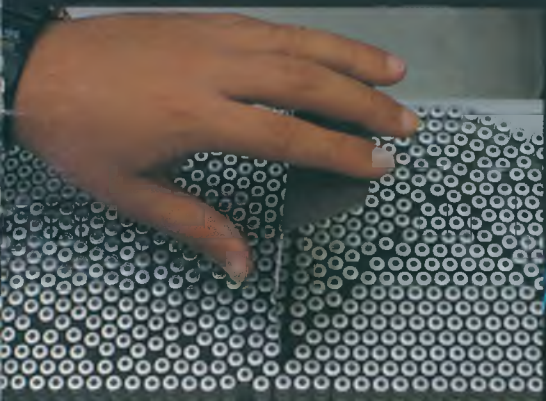
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Illawarra Technology Corporation Annual Report 1993



LLAWARRA TECHNOLOGY CORPORATION LIMITED



1993 ANNUAL REPORT





Production Des Walsh & Associates
Photography Neil Duncan
Film Separations Colouright
Typesetting Graphic Type



Main picture: Anti-bloat capsules for cattle come off a prototype assembly line produced by ITC's Advanced Technologies Division for Eli Lilly Australia



CHAIRMAN'S REPORT

1 993 was for the Illawarra Technology Corporation a year of further streamlining and rigorous re-examination of priorities, in preparation for the anticipated recovery from the recession. The Corporation continued to support significant investment in projects such as the ENVIRONMENT process in the expectation that these will generate returns in future years.

ITC's intention is that such investment in promising projects should be maintained as far as economic circumstances permit. In line with this, the involvement of the Corporation in the development of new technologies is to be subject in 1994 to a continuing process of evaluation and review. At the same time, ITC will be marketing the potential of its R&D capacity to potential partners able to provide the venture capital necessary to take technological invention from the idea stage through to commercialisation.

On 30 April 1993, ownership of the Illawarra Technology Centre building was formally transferred to the University of Wollongong, in fulfilment of a resolution of the University Council the previous year, to make the ITC building an asset of the University.

Two new directors were welcomed onto the Board during 1993: Mr Paul Jeans, Group General Manager of BHP Steel Slab and Plate Products Division, and Mrs Odette Gourley, Partner in the law firm Minter Ellison Morris Fletcher. I take this opportunity to acknowledge the contribution of Mr Grahame Parker of BHP, who relinquished his position as a Director during the year.

SPECIAL THANKS

ITC's executive and staff deserve special thanks for their loyalty and dedication during a very difficult year. Our thanks are extended also to the staff of the University of Wollongong and other organisations who have rendered services to the Corporation during the year.

Operating loss after abnormal items was \$1,202,611 (six months 1992: loss of \$151,614).

Despite the losses incurred during 1993 the Directors believe that, through restructuring and refocusing on core business activities, ITC can be brought into profitable operation in the year ahead. There are good signs, especially in the strong take-up of services offered through the Corporation's International Division. The

The net result of the ordinary trading operations of the Corporation for the year ended 31 December 1993, before abnormal items, was a loss of \$1,166,911 (compared with a loss of \$101,614 for the six months ended 31 December 1992).

Operating loss after



Atrium of the Technology Centre, home of the Illawarra Technology Corporation

ENVIRONMENT process is at an advanced stage of development and at the date of this report was undergoing evaluation to determine its viability for commercialisation.

I wish to place on record the Corporation's appreciation of the active support which the Council of the University of Wollongong has continued to give to ITC. The special relationship between the Corporation and its shareholder, the University, is reflected also in the fact that during 1993 the combined contribution made to the University by ITC, in scholarships, consulting fees and payments to Faculties and Departments, exceeded \$1.8 million.



G.F. Maltby
Chairman

MANAGING DIRECTOR'S OVERVIEW

Collaboration and teamwork are necessary in the development of technological solutions. They are also necessary if Australia is to benefit fully from the commercialisation of intellectual property developed by public institutions such as universities.

The Illawarra Technology Corporation is committed to being a profitable university company, seeking to add value to the business of its clients for the mutual benefit of our customers and our shareholder, the University of Wollongong.

Such commitment will often involve an element of risk and will certainly require patience. Some ideas take a long time to develop to a point where they are technically realisable and have a clear market value.

While some Australian universities have sought to achieve commercial objectives through their normal administrative structures, for example by establishing a business development office, the University of Wollongong determined at an early stage that effective operation in a commercial and industrial environment required the establishment of a truly commercial entity.



James W. Langridge
Managing Director

of ITC are subject to a range of financial accountability provisions. We come under the scrutiny of Australian Corporations Law and the Public Finance and Audit Act, and the accounts are audited annually by the NSW Auditor-General.

The company structure also means that management and staff have the daily experience of operating within a commercial corporate culture, making them more attuned to the concerns and needs of the companies they do business with.

In short, when we invite industry to collaborate with us in research and development we are doing so as a company which genuinely shares the risk - just as we expect to share the benefits.

This operation has taken us some time to build. There has been trial and error and not a little pain, especially in the past few years of recession. In recent months ITC has undertaken a thoroughgoing review of its structure and activities, subjecting every area of its operation to scrutiny in terms of the mission statement and market demands.

We are now determined to refocus our structure and operations so that we will work from demand, not from supply. We will be seeking to link markets and the University's capabilities more effectively, in order to establish a business operation which is sustainable through fluctuations of the business cycle. This will be achieved by becoming market driven. By understanding better our clients' business we will provide services which increase value for them, thus achieving better value for money.

Key target areas for ITC's services are pharmaceuticals manufacturers, food processing companies, electronics manufacturers, metals refiners, human services and health organisations, equipment suppliers and manufacturers in the information technology industries, financial institutions, telecommunications carriers and a range of public sector organisations, especially those with responsibilities for providing and maintaining infrastructure services.

In line with the University of Wollongong's objectives ITC will continue to seek and develop partnerships in its own region and internationally.



Beef patty stacking machine developed for F.J. Walker Foods, who supply McDonald's restaurants in Australia, Japan and Hong Kong

The Illawarra Technology Corporation Limited was thus established as the research and development, consulting and training company of the University of Wollongong, working to commercialise the intellectual capacity of the University through links with industry and the public sector. The organisation is proactive, driving the development of new technologies through focusing on outcomes and market need.

The company structure provides a strong basis for management and financial accountability. The operations



MISSION STATEMENT

The mission of the Illawarra Technology Corporation is:

- to become the leading Australian, university-based, self-supporting research and development company by December 1995
- to develop and coordinate value-added commercial activities in support of the research, teaching and student community of the University of Wollongong
- to contribute through these activities to the long-term development of the University and its services, both nationally and internationally.

The mission will be achieved through excellence in three strategic areas.

Research and Development

Planning, coordination and management of innovative research and development in the areas of technological application which will benefit the regional economy and enhance Australia's international competitiveness.

Consulting Services

Provision of expert, adaptable and internationally competitive consulting services in all fields connected with economic, social and technological development.

Training and Education

Development and commercialisation of relevant training and educational services which are responsive to changing market requirements and conditions.

Another ITC innovation: high-speed machine vision inspection system for dental anaesthetic cartridges at Astra Pharmaceuticals

THE DIRECTORS

Mr George Maltby

ITC Chairman. Also Chairman, Australian Telecommunications Users Group; Director, Thomson-CSF Pacific Holdings, NETCOMM and COMSYS International; member of Telecommunications Industry Development Authority. Managing Director of OTC 1985-88. Until retirement was Australia's top telecommunications management executive, playing key roles in INTELSAT and INMARSAT satellite organisations. Board member of several leading R&D companies and adviser on telecommunications strategy to Australian and multinational corporations.

Mr Jim Langridge

Managing Director. Also Vice-Principal (International), University of Wollongong, and Chairman of the Committee of Directors of International Programs for NSW/ACT Vice-Chancellors' Conference. Appointed by NSW Government to Illawarra Regional Development Board in 1993. Member of the Council on International Educational Exchange, Association of International Education Administrators, European Association for International Education, and National Association of Foreign Student Affairs.

Professor Ken McKinnon

Vice-Chancellor, University of Wollongong, since 1981. President, Australian Vice-Chancellors' Committee 1991-92. Has held high appointments in the fields of education, science, technology and culture over three decades. Including: Chairman, Nuclear Research Reactor Review (1993), Marine Science and Technology Review (1989); Convenor, Australia-USA Education Policy Project (1974-93). A former Deputy Chairman of the Australia Council and Deputy Chairman of Sydney Dance Company since 1981.

Dr Chris Beare

Hambros Australia Director who heads the merchant bank's telecommunications advisory practice for Australia and East Asia. A former head of strategic planning for Telecom. Adviser to several companies including Telstra and PMT. Before joining Hambros he spent four years in the venture capital industry as Executive Director of Advent Management Group in Melbourne. Holds degrees in Science and Electrical Engineering, PhD and MBA from Harvard Business School.



THIS PAGE

Top left: George Maltby
Top right: Jim Langridge
Bottom: Ken McKinnon

OPPOSITE PAGE

Top left: Chris Beare
Top right: Brian Gillett
Centre left: Odette Gourley
Centre right: Brian Hickman
Bottom left: Paul Jeans
Bottom right: Bob Williams

Dr Brian Gillett

Deputy Chancellor, University of Wollongong, since 1988. NSW Deputy Director-General of Education 1988-90, former member of NSW Board of Secondary School Studies. Recently developed Public Sector Management Course for public servants in Commonwealth, State and Territory administrations. Other project management experience includes TAFE/Secondary Schools Joint Program and Schools Professional Development Program. Consultant to the University since retirement in 1990.

Mrs Odette Gourley

Partner of Minter Ellison Morris Fletcher, one of Australia's largest law firms, since 1987, after joining in 1982. Specialises in intellectual property, trade practices and related fields. Holds degrees in Arts and Law from the University of Sydney. Appointed to ITC Board in 1993.

Mr Brian Hickman

Company director and management consultant. Deputy Chairman, Fisheries Research and Development Corporation, since 1992. Member of National Board of Employment, Education and Training, and Australian Research Council. A former Executive Director of the Australian Lead and Zinc Development Associations. Fellow of Australian Academy of Technological Sciences and Engineering, Australian Institute of Mining and Metallurgy.

Mr Paul Jeans

Group General Manager, BHP Steel Slab & Plate Products Division, and Director of BHP Steel (AIS). Previously managed BHP divisions including Engineering, Aerospace & Electronics, Rod & Bar Products. Deputy Chairman, Illawarra Regional Development Board. Member, Committee on Technology, International Iron & Steel Institute. South Coast Councillor, Chamber of Manufactures (NSW). Honorary Governor, Warren Centre for Advanced Engineering, University of Sydney.

Mr Bob Williams

Trade Union Training Authority (TUTA) Training Officer for the Construction Forestry Mining and Energy Union. Formerly State Organiser with AMWU for 15 years. Over the past decade has been Chairman and Director of South Coast Employment Development Project, Director of Illawarra Ports Authority, and member of Illawarra Economic Development Council. Has also served on tripartite committees and councils involved in industry development.



ADVANCED TECHNOLOGIES DIVISION

Over the past 12 months the Advanced Technologies Division has undergone major structural changes, mapping a new direction with a strategic focus on consolidating existing business and developing new prospects.

The division's future will be marked by a sharper commercial edge, increased efficiency and profitability, maintenance of a core team, and expansion through the use of external specialist contractors. Strong links to the University of Wollongong will provide an ongoing primary source of future commercial technologies.

Advanced Technologies has been particularly successful in securing long-term contracts with large manufacturers, reinforcing the division's ability to deliver solutions in an increasingly competitive and expanding manufacturing sector.

The division now operates five distinct business units:

- Automation & Engineering Applications Centre (AEAC)
- Bulk Materials Handling (BMH)
- Microwave Applications Research Centre (MARC)
- Consulting and Intellectual Property Unit (CIPU)
- Biological and Chemical Analytical Services (BACAS)

Through these five units the division provides customised industrial solutions for clients by integrating a wide range of technologies. These include:

- Specific purpose manufacturing equipment
- Automated vision inspection systems
- Pyrometallurgical applications for processing and refining of minerals, metals and associated products
- Microwave applications
- Bulk materials handling
- Robotic handling and assembly systems
- Automated product handling and packaging
- Computer-aided manufacturing

Automated Inspection and Packing System

In conjunction with F.J. Walker Foods and the Meat Research Corporation, Advanced Technologies has developed an automated inspection and packing system for hamburger patties.

F.J. Walker produces up to two million patties a day for the McDonald's chain in Australia, Japan and Hong Kong. The new system will help to continually improve their high international standards for pattie production.

The inspection system is already fully operational while the prototype machine for the packing stage, currently being commissioned, will be completed shortly.

ITC has also been awarded a contract by F.J. Walker to supply and install a robot system for palletising packed meat pattie cartons.

BHP Paint Warmers

Using leading edge microwave technology, the division has designed, built and installed two paint-warming machines for BHP at Port Kembla. These reduce the viscosity of paint used in the sheet and coil-coating process. Microwave technology is an environmentally friendly and cost-effective alternative to the solvents traditionally used in this process.

International Airline Catering System

An in-flight meal tray setting system, or pre-set line, was commissioned at Singapore Airport Catering Centre late in 1993. This automated system was originally developed and installed as a world-first prototype for Qantas Flight Catering at Sydney Airport.



Qantas Flight Catering uses the world's first automated system for presetting meal trays, developed by ITC. Inset:

John Weidemer, Advanced Technologies General Manager

Heat and Control Pty Ltd, a Brisbane-based manufacturer of food processing and handling equipment, has licensed the system for Singapore. Marketing of this technology in Asia is a milestone which will open up opportunities for product commercialisation and expand ITC's international networks.

CURRENT CLIENTS

Advanced Technologies' current clients include Caroma, BHP, Southern Copper, Tubemakers, Samuel Taylor, Qantas Flight Catering, Tetra Pak, Pacific Power, Water Board (NSW), Boral, CRA, Telecom, Keystone Pacific, Merck Sharp and Dohme, AMRAD, Glaxo Australia, NSW Public Works Department and State Forests of NSW.

The ENVIRONMENT Process

The ENVIRONMENT Process, a cornerstone of technological development for ITC, continues to gain acceptance and international recognition.

In this basic but revolutionary waste treatment and disposal process, sewage sludge and steelworks dusts are combined in an electric arc furnace to produce valuable, iron-based byproducts. All components, particularly the toxic, are broken down and reprocessed into by-products, completely removing any environmental hazards.

The proof-of-concept stage is now complete and ITC's Coniston laboratory is testing various sludges from industry. Expressions of interest for an Australian licence have been called to progress towards commercialisation of the process. A full-scale demonstration plant is expected to be operational by early 1995.

Another project has been a novel arc furnace commissioned on behalf of an American company in 1993. For this, Professor Howard Worner, whose research has driven development of the ENVIRONMENT Process, designed a countercurrent refining furnace unique in the field of pyrometallurgy.

After successful trials at Coniston, the American client contracted Advanced Technologies to continue research and development on this exciting project.



Consulting

ITC's consulting services link the needs of industry and the community with the skills and resources at the University of Wollongong.

CIPU, the Consulting and Intellectual Property Unit, enables clients to capitalise fully on the resources and expertise available in all Faculties, especially Engineering, Science, Informatics and Commerce.

During the past year CIPU has been involved in many commercial consultancies using University staff on an

increasing number of projects which are environmentally focused. These include:

- A survey of the attitudes of Illawarra residents about local water quality.
- Cardiovascular testing carried out on behalf of Merck Sharp and Dohme pharmaceuticals for Wollongong City Council outdoors and indoors staff.
- The Biofly Brick Process, which uses waste products including sewage sludge, clay shale and fly ash to make lighter, stronger household bricks.

In addition, CIPU continues to undertake smaller engineering and scientific projects for Illawarra-based companies. This provides a service to the local community and a window for engineering and scientific consulting opportunities.

BACAS

BACAS provides biological and chemical testing services to local industries. Major clients include BHP Collieries and Southern Copper. BACAS has gained registration from the National Analytical and Testing Authority (NATA) for chemical and microbiological analysis. With these quality registrations BACAS will become a more competitive, customer-based service.

Bulk Materials Handling

Three major projects were completed in 1993 by ITC's Bulk Materials Handling unit (BMH).

Korean Chemical Plant

Test and design work for a "dense-phase" pneumatic conveying system to improve product quality at a new polystyrene plant for Hannam Chemical Corporation in Korea. The plant has now been commissioned, with the BMH systems operating to specifications.

BHP Blast Furnace

BMH has played a vital role in planning and developing stock feed bin and burden feed systems at BHP Port Kembla's new \$600 million blast furnace. The project, using the latest available world research, will produce considerable benefits for Illawarra steel production into the 21st century.

Paul Wurth

Advances by the leading international manufacturer Paul Wurth have helped to reduce coke consumption in blast furnaces by up to 50 per cent since the 1960s. BMH investigated the effects of special equipment on discharge segregation characteristics.



Students relax between lectures. Inset: Bill McGaw, International Division Manager

INTERNATIONAL DIVISION

For ITC's International Division, 1993 was marked by growth and expansion, curriculum development, more diverse course offerings, better qualified students and an improved financial performance.

International operated three centres, two at Wollongong and a new one in the United Arab Emirates.

They are:

- Wollongong English Language Centre (WELC)
- Wollongong Foundation Studies Program (WFSP)
- Institute for Australian Studies (IAS).

The appointment of new agents in Europe, matched with the renewed vigour of key agents in South-East Asia, has significantly increased enrolments in WELC and Foundation Studies.

With average monthly enrolments increasing from 164 to 225, WELC has become the fourth largest university language centre in Australia. New markets opening up for the International Division promise further consolidation.

Centre for Transport Policy Analysis

The Centre for Transport Policy Analysis is Australia's leading provider of independent research and analysis for industry and government on operational and policy issues in all modes of transport.

A major current project involves research into changes in global shipping, the development of hub and feeder services, the impact on Australia's rural industries, and efficiency gains in wool transport logistics.

CTPA's expansion plans include the 1994 opening of the Centre for Maritime Policy, a joint venture of the University and ITC. The new centre will provide a focal point for policy-oriented research, teaching and consultancy on maritime issues with special emphasis on Australia, Asia and the Pacific.

In 1993, 12 more divisional staff gained a Diploma in TESOL (Teaching English to Speakers of Other Languages) and eight of them were appointed to permanent full-time or part-time positions. WELC now has one of the best qualified and most stable staffs of any ELICOS centre (English Language Intensive Courses for Overseas Students) in Australia.

With an annual enrolment of 105, a 90 per cent boost on 1992 figures (55), the Wollongong Foundation Studies Program has become the fifth largest of its type in Australia. Foundation Studies offers preparatory courses for international students wishing to enrol in university.

Hong Kong, Malaysia and Singapore are proving excellent sources for students and WFSP now offers six course strands, adding two during the year. Extra course offerings allow students to do electives as well as core subjects in each strand.

Courses have been made more relevant through integration with first-year university studies. To enhance recognition of our program for university entrance, all Australian universities have been notified of these changes.

Establishment of the Institute for Australian Studies (IAS) in Dubai has proved an exciting and successful venture for the division. Following a slow start, enrolments rose to 161 by mid-October, three months after opening, and continue to increase pleasingly.

In addition, new English language training contracts with corporate clients are opening up, with three successfully negotiated and five more being processed.

IAS has quickly established itself as a high quality tertiary and English language institution. It is attracting highly qualified staff and good students, forging strong links with secondary schools and tertiary institutions in Dubai and Sharjah, and servicing government and corporate training markets.

At the end of 1993, ITC Training and Education was restructured into the division's area of responsibility.

TRAINING AND EDUCATION

ITC Training and Education markets a wide range of products. These include the shopfloor-focused Certificate in Manufacturing, supervisory courses, middle management seminars and accredited postgraduate training programs.

During 1993, ITC Training and Education developed a strong product portfolio by working with key clients in the manufacturing and public sectors. This helped to reinforce the division's strong links with the University of Wollongong.

The division continued to develop strategic partnerships to gain access to new markets and provide more flexibility for product delivery.

New alliances include:

- Licensing arrangements with Macquarie Community College and the Catholic Education Office for the Certificate in Manufacturing
- Joint marketing initiatives with Food Industry Training Ltd and the University's Faculty of Engineering
- Closer ties with associations such as the Institution of Engineers and the Chamber of Manufactures (NSW).

Marketing of courses has centred on developing relationships with key clients. Such partnerships led to innovative training and education initiatives between ITC, the University's Faculty of Commerce and the NSW Police Service; the Department of Mechanical Engineering, ITC and City Rail; and the continued success of the Frameworks program for teachers of literacy in the United States.

ITC's training facility at the University Centre in Sydney reinforced the Corporation's presence in the central business district. Computer training programs are offered there and training partnerships with new corporate clients are being pursued.

While ITC is evaluating its options in the highly competitive computer training market the Sydney centre remains busy with postgraduate fee-for-service courses.



ABOVE:
English language
training class at the
Institute for Australian
Studies in Dubai



LEFT:
Kathy Jones, Executive
Manager ITC Sales
and Marketing

Total quality management (TQM) and maintenance management programs developed by the Corporation are especially popular.

During 1993, the division coordinated several seminars and conferences for University faculty staff, providing administration and financial management support.

Training and Education also helped to set up a new postgraduate diploma for the Cooperative Research Centre in Materials Welding and Joining and participated in the development and marketing of the University's Graduate Certificate in Management presented by TAFE Colleges in NSW and the ACT.

Postgraduate level partnership programs will continue to grow in 1994 as ITC seeks to replace its public course schedules. Training projects are a key element of ITC's client service. In 1994 ITC will continue to provide professional services for the University's commercial education programs, including financial management, marketing and administrative support.

INFORMATION TECHNOLOGY DIVISION

ITC's leading role in research and development for Australia's telecommunications industry continued in 1993.

Professor Hugh Bradlow became General Manager of the Information Technology Division, and Director of both the Centre for Information Technology Research (CITR) and the new Telecommunications Research Institute established at ITC by the University of Wollongong.

CITR has been pivotal in a program to develop a nucleus of major telecommunications research at the University of Wollongong. This long-range initiative involves more than 100 researchers and professionals, in addition to about 45 academics and researchers whom CITR employs directly on industry-funded projects which it also manages.

CITR's activities encompass four broad areas:

- Telecommunications switching systems
- Telecommunications software systems
- Wireless communication systems
- Computer-based training systems

In addition, the University offers complementary skills in a range of allied fields from human interface design to artificial intelligence, security systems and digital signal processing.

CITR's capabilities will be enhanced further through the University's decision to concentrate R&D through a cluster of specialist research units, such as the Telecommunications Research Institute which will enable ITC and the University to achieve more effective, campus-wide coordination of research and development in this field.

Two of the world's largest telecommunications operators have established R&D facilities at ITC: NorTel, the Australian subsidiary of Canada's Northern Telecom, and Telecom Australia. Professor Bradlow was Director of the NorTel Technology Centre and General Manager of NorTel's research and development program from 1989 to 1993.

In addition to running its own laboratory, Telecom funds the Switched Networks Research Centre. This centre of expertise, co-funded by Ericsson Australia, AWA and DSTO, is internationally recognised for its work on Broadband, ISDN and intelligent networks.

CITR also receives additional funding from Telecom Australia for the Telecommunications Software Research



ITC's Information Technology Division is headed by Hugh Bradlow, a world expert in advanced personal telecommunications

Centre which focuses on software technologies applied to telecommunications. Ongoing wireless research at CITR is funded by Canon and Nokia.

Strategic planning for the Information Technology Division will see a strengthening of ITC's core capabilities: harnessing information technology expertise within the University of Wollongong to provide solutions for industry, from research and development, education and training to development of multimedia information systems. CITR will continue providing professional services to the information technology industries, to maintain:

- the centre's key role in helping both government and industry to achieve effective industry development strategies
- expertise in helping industry to gain maximum benefit from such programs as Partnerships for Development.

The Commonwealth Government acknowledged CITR's capability in this arena by inviting the centre to take part in a government and industry trade mission to South-East Asia in 1993, led by the former Minister for Communications, Mr David Beddall.

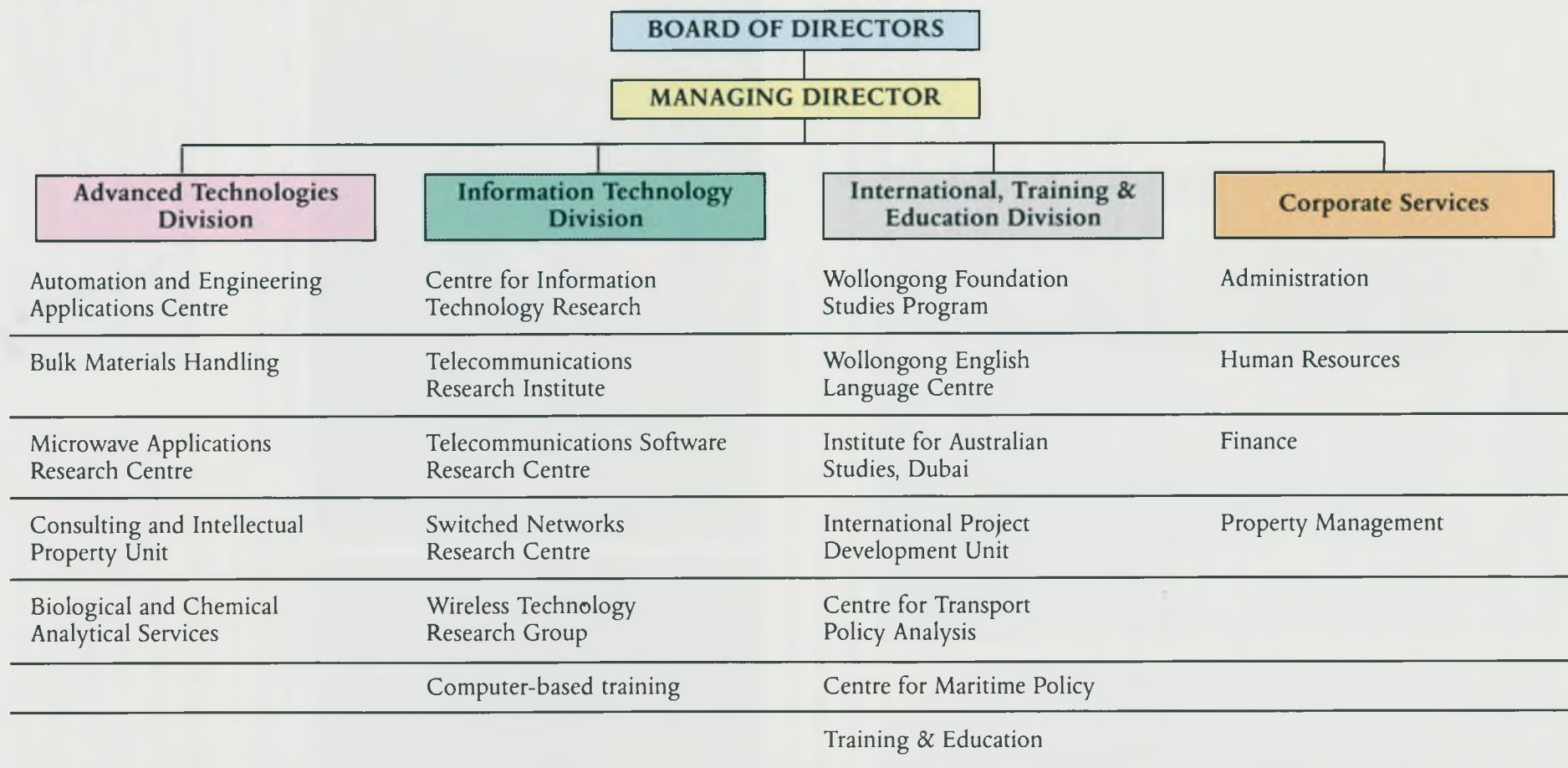
CITR takes a multidisciplinary approach to telecommunications R&D and training, with particular emphasis on telecommunication networks and services. This also puts it in an excellent position to capitalise on new business opportunities as they open up in the rapidly expanding telecommunications industry.

CITR is well placed to play an even more effective role in the field of information technology. In particular, the centre has strong capabilities in the technological implementation of the information superhighway concept, and the growing convergence between computers and communication.



ILLAWARRA TECHNOLOGY CORPORATION LIMITED

CORPORATE STRUCTURE



Illawarra Technology Corporation Limited is a company limited by guarantee and shares, with 100 per cent of the shares held by the Council of the University of Wollongong

1993 HIGHLIGHTS THE YEAR IN WORDS AND PICTURES

Howard Worner Symposium

ITC's elder statesman, Professor Howard Worner, turns 80, honoured with a symposium attended by 150 of his peers. They include BHP Chairman (and his former student) Mr Brian Loton, CRA's Mr John Innes and Professor David Craig, President of the Australian Academy of Sciences. Professor Keith Brimacombe, President of the International Minerals, Metals and Materials Society, flies out from Canada especially for it. To mark the occasion, The Bulletin magazine and ABC-TV's The 7.30 Report profile the indefatigable scientist and inventor who calls himself "the recycled professor".

Water Board Visit

The EnvIRONMENT Process – which transforms sewage and hazardous metallic wastes into clean, valuable byproducts – takes a major step towards commercial development with a special demonstration for the Water Board. Those attending the event at ITC's newly commissioned \$500,000 pilot furnace at Coniston



Special brochure to market the IAS campus in Dubai

Dubai Institute Opens

University of Wollongong, through ITC International, becomes the first university in the world to set up a campus in the oil-rich United Arab Emirates with the Institute for Australian Studies in Dubai. IAS offers degree and training courses for local and expatriate students and prepares them for further studies in Australia. Over 70 students enrol in the first intake in July. The UAE Government, local businesses and residents welcome IAS as it brings a new era of affordable higher education to the region.



ITC arranges asset management training sessions led by esteemed professor Benjamin Blanchard, of Virginia Polytechnic



'Recycled professor' Howard Worner, ITC's revered elder statesman, receives praise from his peers and the media for a lifetime dedication to science

include Water Board Chief Executive, Mr Paul Broad, Wollongong Lord Mayor, Mr David Campbell, and representatives of Pacific Power and BHP. Says Water Board Chairman, Mr John McMurtrie: "We are proud to be associated with this innovative technology". The versatile EnvIRONMENT Process, a priority of ITC's Advanced Technologies Division, has the potential to clean up industrial wastes around the world.

International Network Expands

ITC continues to expand its worldwide academic network, forming ties with the Universities of Glasgow and St Andrews. More than 25 major public universities in the United States, United Kingdom and Australia now give formal accreditation to students completing ITC's University Entrance Certificate course offered in the United Arab Emirates.

Minister Praises Training Venture

Adult education specialist Macquarie Community College begins offering ITC's Certificate in Manufacturing course to small and medium-sized companies in north-western Sydney. The new alliance shows how adult and community education can take advantage of university-based resources to gear training to the needs of modern workplaces. NSW Minister for Industrial Relations, Mrs Kerry Chikarovski, praises the joint venture for its ability to raise skill levels and make businesses more successful.

Training Coup

ITC arranges for world renowned Professor Benjamin S. Blanchard to lead an intensive training program on systems engineering for asset managers in Australia's private and public sectors. Prof Blanchard, of Virginia Polytechnic, is famous for his definitive work on life cycle management, risk management and associated studies aimed at prolonging the lifespan of multimillion dollar assets around the world.

Green Light for Maritime Centre

Development is finalised for the new Centre for Maritime Policy, another joint venture between ITC and the University, with support from the Royal Australian Navy. CMP's mission: to develop a more coordinated and comprehensive approach to maritime affairs and oceans management in Australia, while lifting the profile of our expertise in this field overseas. It also plans to offer postgraduate studies in maritime policy. Commodore Sam Bateman, whose RAN career spanned 39 years, is named Director of the Centre.

Landmark Enterprise Agreement

ITC becomes the first of 36 university-based companies in Australia to negotiate an enterprise agreement with its workforce. The landmark agreement involves the giant Automotive Metals and Engineering Union, Independent Teachers' Association, Federated Clerks Union and non-unionised personnel. It covers fulltime engineering, scientific, research, management, teaching, clerical and support staff.



The new Centre for Maritime Policy will raise Australia's international profile in this field, under the guidance of former RAN officer Sam Bateman (left) and Ross Robinson, who heads ITC's Centre for Transport Policy Analysis

Port Plan Wins Award

PORTINFO, a computerised management information system for port managers and operators, wins the coveted SML Award at the 13th Environmental Systems Research Institute User Conference in California. PORTINFO, a combined database, planning tool and aid for business development, has been developed by the Centre for Transport Policy Analysis in conjunction with the MSB Illawarra Ports Authority.

Foundation Class Graduates

The first group of students to do ITC's Foundation Studies Program graduated from the University of Wollongong after enrolling in 1990. Meanwhile 95 new students from 14 countries set out to emulate them, starting university courses in arts, commerce, science and engineering, mathematics and computer science.

Frameworks Success

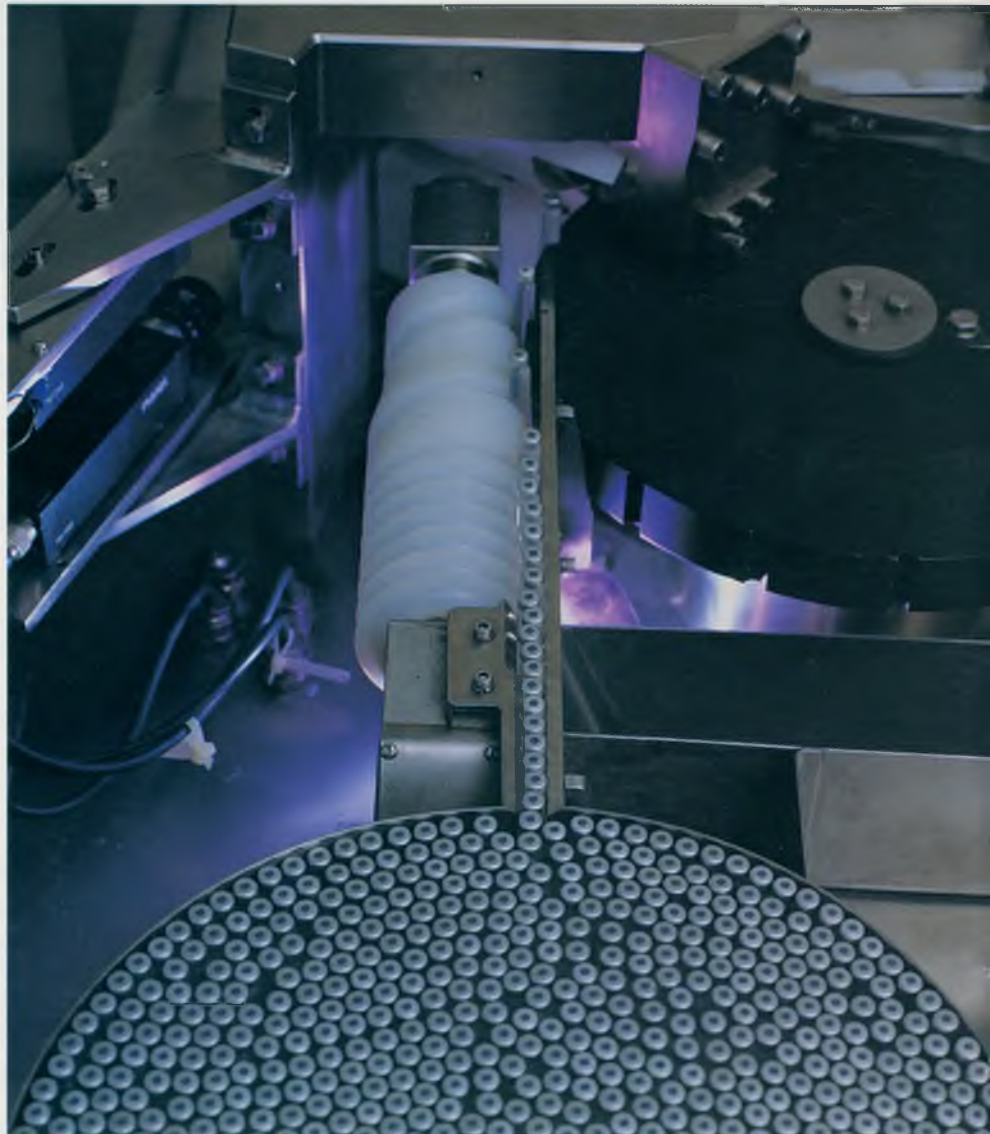
The Frameworks program for training teachers of literacy, developed by the University's Faculty of Education and marketed by ITC, takes off in Australia after enjoying great success in North America. Some 200 Australian facilitators are accredited to deliver the program, training over 550 teachers to deliver Frameworks in 1993.



The Illawarra Technology Centre, ITC headquarters

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Dental cartridges pass through the Astra Pharmaceuticals high-speed inspection machine



ILLAWARRA TECHNOLOGY CORPORATION LIMITED

ACN 002 882 064

The Research and Development Company of the University of Wollongong