



PRIME MINISTER

SPEECH BY THE PRIME MINISTER, TO AUSTRALIAN COMPUTER CONFERENCE

26 SEPTEMBER 1983

THE AUSTRALIAN COMPUTER CONFERENCE IS NOW AN ESTABLISHED EVENT. THIS IS THE 10TH AND IT HAS BECOME AN ANNUAL SHOWCASE FOR THE BURGEONING COMPUTER INDUSTRY IN AUSTRALIA. IT BRINGS TOGETHER THE BEST THAT THE INDUSTRY HAS TO OFFER AND IN ITS 150 WORLD CLASS EXHIBITS REPRESENTS THE LATEST IN INFORMATION TECHNOLOGY.

THE GROWTH OF THE AUSTRALIAN COMPUTER INDUSTRY IN THE LAST 10 YEARS HAS BEEN EXTRAORDINARY. FOR SEVERAL YEARS NOW SALES OF BOTH COMPUTER HARDWARE AND SOFTWARE HAVE GROWN AT ANNUAL RATES OF BETWEEN 30 AND 40 PER CENT. AUSTRALIA IS NOW RECOGNISED AS A VALUABLE TEST MARKET. IT IS ALSO AN AGGRESSIVE MARKET WITH MOST CONTEMPORARY TECHNOLOGIES REPRESENTED.

THE DISPLAYS, SEMINARS AND OTHER EDUCATIONAL ACTIVITIES ASSOCIATED WITH THIS CONFERENCE PROVIDE A VALUABLE OPPORTUNITY FOR PARTICIPANTS, AND THROUGH THEM THE COMMUNITY, TO ASSESS THE MOST RECENT DEVELOPMENTS IN THIS MOST CONTEMPORARY OF INDUSTRIES.

THE ISSUES TO BE ADDRESSED BY THE CONFERENCE ARE COMPLEX, BUT CRUCIAL TO THE DIRECTION IN WHICH AUSTRALIAN INDUSTRY MUST MOVE. THE EXTENT AND PERVASIVENESS OF COMPUTER TECHNOLOGIES IS STRIKING. THERE ARE APPLICATIONS IN MANY ASPECTS OF GOVERNMENT, COMMERCE, SMALL BUSINESS, INDUSTRIAL RELATIONS, THE ARTS AND OTHER AREAS. THE SIZE OF THE INFORMATION SECTOR, REVEALED PARTICULARLY THROUGH THE COMMUNICATIONS AND MEDIA NETWORKS, IS STAGGERING.

AS A RESULT OF THE RAPID GROWTH OF THE COMPUTER INDUSTRY, MANY SECTORS OF THE ECONOMY ARE ACHIEVING INCREASED EFFICIENCY AND GREATER COMPETITIVENESS.

MOST OF THE COMPUTER EQUIPMENT SOLD IN AUSTRALIA IS MANUFACTURED OVERSEAS. THIS IS NOT SURPRISING GIVEN THE SIZE OF THE INVESTMENT IN COMPUTER INDUSTRY IN THE UNITED STATES, JAPAN AND EUROPE.

THE SMALLER SIZE OF THE AUSTRALIAN ECONOMY MEANS THAT WE WILL ALWAYS HAVE TO IMPORT A SIGNIFICANT PORTION OF OUR NEW TECHNOLOGY AND MUCH OF THE HIGH TECHNOLOGY EQUIPMENT THAT WE USE. IN CIRCUMSTANCES WHERE AUSTRALIAN BUSINESS AND INDUSTRY ARE BECOMING EVER MORE DEPENDENT ON COMPUTERS FOR THE EFFICIENT CONDUCT OF ALL TYPES OF ACTIVITIES, WE MUST ENSURE THAT COMPUTER USERS CONTINUE TO HAVE READY ACCESS TO THE BEST AND LATEST EQUIPMENT AT REASONABLE PRICES.

THERE IS, HOWEVER, ANOTHER SIDE TO THE PICTURE. AS AN ADVANCED INDUSTRIAL NATION THERE IS A GOOD CASE FOR AUSTRALIA DEVELOPING BOTH INDIGENOUS HARDWARE AND SOFTWARE IN THOSE AREAS WHERE TO DO SO WOULD REPRESENT AN EFFICIENT USE OF AUSTRALIAN RESOURCES OF SKILL AND EXPERTISE.

THERE HAVE BEEN PROBLEMS IN DEVELOPING SUCH A CAPACITY. THESE HAVE INCLUDED THE NON-AVAILABILITY OF FINANCE FOR ENTERPRISES PROMOTING HIGH TECHNOLOGY AND AN APPARENT LACK OF MANAGERIAL EXPERTISE AMONG THOSE INTERESTED IN ESTABLISHING HIGH TECHNOLOGY ENTERPRISES. THE RECENT MOVES BY THE GOVERNMENT TO STIMULATE THE ESTABLISHMENT OF A VENTURE-CAPITAL MARKET IN AUSTRALIA ARE AIMED AT ADDRESSING THESE PROBLEMS.

THE MEASURES WE HAVE ANNOUNCED SHOULD LEAD TO SOME \$40 MILLION BEING AVAILABLE TO HIGH RISK INDUSTRY VENTURES. LACK OF CAPITAL SHOULD NO LONGER BE A SIGNIFICANT IMPEDIMENT TO THE ESTABLISHMENT OF SUCH ENTERPRISES. THE GOVERNMENT'S MOVES SHOULD ALSO SEE THE FORMATION IN AUSTRALIA OF MANAGEMENT AND INVESTMENT COMPANIES. SUCH COMPANIES - AFTER ASSESSING EACH VENTURE IN TERMS OF TECHNICAL AND MARKET PROSPECTS FOR ITS PRODUCTS - SHOULD BE ABLE TO PROVIDE NOT ONLY CAPITAL BUT ALSO OFTEN BADLY NEEDED MANAGEMENT SKILLS.

THE GOVERNMENT IS CONCERNED TO ENSURE THAT THE AUSTRALIAN COMPUTER INDUSTRY ACHIEVES ITS MAXIMUM CONTRIBUTION TO THE ECONOMY. THE OVERALL BENEFITS WILL BE GREATEST IF THE COMPUTER INDUSTRY STRIVES TO INCREASE THE COMPETITIVENESS OF ITS PRODUCTS AND TO MARKET THEM WITH VIGOUR BOTH IN AUSTRALIA AND OVERSEAS.

LET ME MAKE A POINT IN PASSING ABOUT SOME OF THE APPROACHES GOVERNMENT RECEIVES FROM PROMOTERS OF THE NEW HIGH TECHNOLOGY INDUSTRIES. WHILE WE ARE VERY MUCH SYMPATHETIC TO THE PARTICULAR AND LEGITIMATE NEEDS OF YOUR INDUSTRY IT IS SELF-DEFEATING IF THE GOVERNMENT IS BEING ASKED TO COMMIT ITSELF TO THE MAINTENANCE OF THE COMMERCIAL UTILISATION OF CERTAIN "KEY TECHNOLOGIES". IT IS NEITHER IN THE COMMUNITY'S NOR THE INDUSTRY'S INTEREST TO MOVE DOWN A TRACK WHICH LOCKS THE GOVERNMENT INTO CONTINUING ROUNDS OF ASSISTANCE AIMED AT ENSURING THE CONTINUED UTILISATION OF TECHNOLOGIES IN CIRCUMSTANCES WHERE ADJUSTMENT TO CHANGING TECHNOLOGIES SHOULD BE ENCOURAGED.

THE BALANCE IS NOT AN EASY ONE TO STRIKE, BUT IT IS IMPORTANT TO THE LONG TERM MAINTENANCE OF EFFICIENT INDUSTRY STRUCTURES IN AUSTRALIA THAT THE COSTS ASSOCIATED WITH SOME FORMS OF ASSISTANCE BE FULLY RECOGNISED.

AUSTRALIA CANNOT HOPE TO SPECIALISE IN ALL AREAS OF APPLIED MICRO-ELECTRONICS. THE GOVERNMENT RECENTLY INITIATED A MAJOR STUDY TO IDENTIFY THE MAIN AREAS OF AUSTRALIAN COMPETENCE IN MICRO-ELECTRONICS. THIS STUDY WILL LOOK AT THE WORLD POTENTIAL FOR GROWTH IN THIS FIELD, AND IDENTIFY AREAS OF MAXIMUM OPPORTUNITY FOR AUSTRALIAN INDUSTRY. IT SHOULD PROVIDE IMPORTANT INTELLIGENCE FOR AUSTRALIAN COMPANIES, AND HELP TO ENSURE THAT THE GOVERNMENT'S POLICIES IN THIS AREA ARE FOCUSSED AND CO-ORDINATED FOR MAXIMUM IMPACT. THE IAC'S FORTHCOMING REPORT ON THE COMPUTER INDUSTRY SHOULD ALSO BE OF CONSIDERABLE ASSISTANCE IN EXPANDING THE DATA BASE.

AUSTRALIA'S LONG-TERM FUTURE LIES IN DEVELOPING AND MAINTAINING A DYNAMIC COMPETITIVE ECONOMY. SINCE BEING ELECTED TO OFFICE THE AUSTRALIAN LABOR GOVERNMENT'S OVERRIDING CONCERN HAS BEEN THE RESTORATION OF A BASIS FOR SUSTAINED ECONOMIC GROWTH.

INDUSTRIAL INNOVATION HAS AN IMPORTANT PART TO PLAY IF AUSTRALIA IS TO MAXIMISE ITS GROWTH POTENTIAL SO THAT WE AS A PEOPLE CAN BE MORE CONFIDENT OF OUR OWN FUTURE WELL-BEING.

IN THIS REGARD AUSTRALIA MUST MOVE TO BUILD MORE DYNAMIC INDUSTRIAL STRUCTURES ACROSS THE BOARD. THE DYNAMIC PROCESSES OF ADOPTING NEW TECHNOLOGY IS INTEGRAL TO IMPROVING THE EFFICIENCY OF INDUSTRY, ITS COMPETITIVE PERFORMANCE AND ITS CAPACITY TO GROW.

THERE IS SIMPLY NO ESCAPING THE FACT THAT INDUSTRIAL INNOVATION BY BOTH NEW AND EXISTING INDUSTRIES IS ESSENTIAL TO AUSTRALIA'S FUTURE ECONOMIC WELL-BEING. NEW TECHNOLOGY IS ONE OF THE DRIVING FORCES BEHIND THE PROCESSES OF ECONOMIC CHANGE WITH IMPORTANT CONSEQUENCES FOR THE COMPETITIVENESS OF INDUSTRIES. THROUGH IT WE CAN ANTICIPATE NOT ONLY THE BENEFITS TO ECONOMIC GROWTH ASSOCIATED WITH THE EMERGENCE OF NEW INDUSTRY STRUCTURES, BUT ALSO THE GAINS LIKELY TO BE ACHIEVED THROUGH THE REVITALISATION OF EXISTING INDUSTRIES.

OTHER COUNTRIES, PARTICULARLY IN THE PACIFIC REGION, ARE UNDERTAKING NEW LONG TERM INVESTMENTS, ADOPTING NEW BUSINESS STRATEGIES AND DEVELOPING NEW TECHNOLOGY OPPORTUNITIES. IF WE ARE TO BENEFIT FULLY FROM BEING PART OF THIS DYNAMIC GROWTH REGION - IF WE ARE TO COMPETE EFFECTIVELY - OUR INDUSTRIES MUST DEVELOP AND ADOPT NEW TECHNOLOGIES - NEW PRODUCTS AND PROCESSES.

OBVIOUSLY THERE ARE PROBLEMS WITH MOVING DOWN THIS TRACK. INNOVATION OFTEN LEADS TO DIRECT DISPLACEMENT OF LABOUR AT THE POINT WHERE TECHNOLOGY IS INTRODUCED. INDISPUTABLY TECHNOLOGICAL CHANGE IS GOING NOT ONLY TO CHANGE THE NATURE OF JOBS, IT IS ALSO GOING TO HAVE SIGNIFICANT IMPLICATIONS FOR PATTERNS OF WORK. AT THE SAME TIME CERTAIN INDIRECT EMPLOYMENT

EFFECTS ARE SOMETIMES ASSOCIATED WITH NEW PROCESSES. NEW INVESTMENT CAN BOTH INCREASE REAL INCOMES ASSOCIATED WITH THE TECHNOLOGICAL INNOVATION AND THE OVERALL DEMAND FOR LABOUR. REAL PRICE REDUCTIONS CAN ALSO BE ACHIEVED WITH A CONSEQUENT INCREASE IN THE REAL DEMAND FOR PRODUCTS.

WHAT IS NEEDED IS A SENSITIVE, CAREFULLY BALANCED RESPONSE WHICH RECOGNISES THE ROLE OF TECHNOLOGICAL INNOVATION AS A KEY REQUIREMENT IN IMPROVING THE PRODUCTIVITY OF EXISTING INDUSTRIES, AND IN DEVELOPING NEW ONES, WHILE ACKNOWLEDGING AND ADDRESSING EFFECTIVELY THE SOCIAL COSTS ASSOCIATED WITH NEW PATTERNS OF DEVELOPMENT. A COMPREHENSIVE, INTEGRATED POLICY APPROACH IS REQUIRED OF THE GOVERNMENT. SUCH AN APPROACH, THE FRAMEWORK OF AN INDUSTRIAL POLICY, NECESSARILY INCLUDES THE MAINTENANCE OF SOUND MACRO-ECONOMIC AND TRADE POLICIES, IMPROVEMENTS IN THE EDUCATION SYSTEM AND TRAINING PROGRAMS, AND THE ENCOURAGEMENT OF EFFECTIVE CONSULTATION REGARDING THE ISSUES ASSOCIATED WITH THE INTRODUCTION OF NEW TECHNOLOGIES.

YET IT MUST BE EMPHASISED THAT THE GOVERNMENT'S ROLE IS PRIMARILY TO PROVIDE A CLIMATE CONDUCIVE TO VIGOROUS INNOVATION IN THE PRIVATE SECTOR, SO ENCOURAGING NEW INDUSTRIES AND ADDITIONAL EMPLOYMENT OPPORTUNITIES.

IN AUSTRALIA SMALL FIRMS HAVE A PARTICULARLY IMPORTANT ROLE TO PLAY. THEY HAVE DEMONSTRATED REMARKABLE ABILITY AS

PURVEYORS OF INNOVATION, PARTICULARLY IN INDUSTRIES CHARACTERISED BY HIGH GROWTH RATES AND TECHNOLOGICAL CHANGE. IT WILL BE THE YOUNG, SMALL, PRODUCTIVE, INNOVATIVE FIRMS WHICH ARE MOST LIKELY TO BE FAST GROWING. THEIR CONTRIBUTION TO THE FUTURE DEVELOPMENT OF THE AUSTRALIAN ECONOMY, TO PRODUCTIVITY GROWTH, WILL QUITE LIKELY BE CONSIDERABLE. I SHOULD EXPECT MANY FIRMS REPRESENTED HERE TODAY TO BE AT THE FOREFRONT OF THIS ACTIVITY.

INNOVATIVE, FORWARD-LOOKING INDUSTRIAL SYSTEMS, CARRY WITHIN THEMSELVES PRE-CONDITIONS OF ENHANCED DOMESTIC PROSPERITY. THE MORE TRADITIONAL INDUSTRIES MUST BE ENCOURAGED TO SEIZE THE OPPORTUNITIES PRESENTED, AND THE FULL POTENTIAL OF THE NEW TECHNOLOGY-BASED INDUSTRIES SHOULD BE FULLY EXPLOITED. THERE WILL UNDOUBTEDLY BE PROBLEMS ADJUSTING TO THE CHANGES ASSOCIATED WITH NEW AND HIGH TECHNOLOGY, AND WE MUST BE CAREFUL IN OUR APPROACH, BUT THE LONG-TERM INTEREST OF ALL AUSTRALIANS DICTATES THAT WE FOLLOW THIS COURSE. THE FACT IS THAT THE MORE RAPID DIFFUSION OF NEW TECHNOLOGIES THE BETTER OFF AUSTRALIA IS LIKELY TO BE. FAILURE TO EXPLOIT THE ADVANTAGES MORE THAN LIKELY WILL RESULT IN LOWER REAL INCOMES. POSITIVE FORWARD LOOKING POLICIES, RATHER THAN NEGATIVE, RE-ACTIVE ONES ARE THOSE THAT WE SHOULD PURSUE. FOR ITS PART THE GOVERNMENT IS COMMITTED TO SUCH AN APPROACH.

THE AUSTRALIAN COMMUNITY, NEVERTHELESS, WILL ONLY GAIN THE FULL BENEFITS OF TECHNOLOGICAL INNOVATION IF THE COSTS ASSOCIATED WITH IT ARE ACCEPTABLE TO THE COMMUNITY AT LARGE.

IN PART THIS MEANS ADDRESSING DELIBERATELY THE MANNER IN WHICH NEW TECHNOLOGIES ARE INTRODUCED, AND ENSURING THAT THOSE AFFECTED ARE ADEQUATELY PREPARED FOR A CHANGING WORK ENVIRONMENT.

A COMMON THREAD RUNNING THROUGH THE EXPERIENCE OF THOSE COUNTRIES MOST SUCCESSFUL IN HANDLING THE INTRODUCTION OF MODERN TECHNOLOGIES HAS BEEN THE WILLINGNESS OF THE SOCIAL PARTNERS - OF GOVERNMENT, UNIONS AND EMPLOYERS - TO CONSULT WITH EACH OTHER AT THE NATIONAL INDUSTRY AND ENTERPRISE LEVEL AND TO ANTICIPATE AND RESOLVE PROBLEMS INVOLVED;

IN AUSTRALIA, PARTICIPATION BY OTHER GROUPS WITH MANAGEMENT IN THE PROCESSES OF APPLYING TECHNOLOGY THROUGH MEANS SUCH AS CONSULTATION, SYSTEMS DESIGN AND IMPLEMENTATION, TRAINING AND RE-TRAINING IS NOT A WELL ESTABLISHED PRACTICE. THERE ARE, I ACKNOWLEDGE, PROBLEMS IN MORE OPEN CONSULTATIVE APPROACHES. THERE IS FOR EXAMPLE, THE ISSUE OF CONFIDENTIALITY OF INFORMATION RELEVANT TO SUCH CONSULTATIONS. SOME WOULD ARGUE, FOR EXAMPLE, THAT IF PROPOSALS FOR THE INTRODUCTION OF NEW TECHNOLOGIES ARE DIVULGED AT TOO EARLY A STAGE, THE EFFECT MIGHT BE TO DISCLOSE BROADER MARKET STRATEGIES, THEREBY COMPROMISING COMPANIES' COMPETITIVE POSITIONS.

BUT THERE IS OVERWHELMING BENEFIT IN A PROCESS OF CONSULTATION THAT SMOOTHS THE TRANSITIONAL ARRANGEMENTS IMPLICIT IN THE CHANGES ASSOCIATED WITH NEW PRODUCTS AND PROCESSES.

THE POINT I AM MAKING IS NOT ESPECIALLY NEW. RECOGNITION OF THE NEED FOR MORE EFFECTIVE COMMUNICATION TO FACILITATE INITIATION TO TECHNOLOGICAL CHANGE DATES BACK TO THE LATE

CONCEPTS SUCH AS WORKER PARTICIPATION AND JOINT DECISION-MAKING MIGHT SEEM LESS THREATENING IF ALL PARTIES WERE COMMITTED TO THE OPTIMAL ADAPTATION OF NEW TECHNOLOGIES TO THE NEEDS AND SKILLS OF THE WORKFORCE, AND TO THE EFFECTIVE INTEGRATION OF THE NEW TECHNOLOGIES WITH THE INDUSTRIAL PROCESSES OF THE ENTERPRISE CONCERNED.

AT THE HEART OF AUSTRALIA'S ABILITY TO MAINTAIN COMPETITIVE INDUSTRIAL STRUCTURES AND, THROUGH THEM AN ACCEPTABLY HIGH STANDARD OF LIVING, IS THE NEED TO HAVE A SUITABLY FLEXIBLE AUSTRALIAN WORKFORCE. NEW TECHNOLOGIES DEMAND AN UNPRECEDENTED DEGREE OF ADAPTABILITY IN THE WORKFORCE. TRAINING THE WORKFORCE TO MAXIMISE THE BENEFITS OF MORE SOPHISTICATED CAPITAL PROCESSES IS OF FUNDAMENTAL IMPORTANCE. WE MUST GIVE URGENT ATTENTION TO THE CREATION OF A BASE OF SKILLS ACROSS THE WHOLE WORKFORCE THROUGH EDUCATION AND TRAINING OF YOUNG PEOPLE, AT THE SAME TIME AS ENSURING AN ADEQUATE RE-TRAINING OF THE EXISTING WORKFORCE TO HANDLE NEW TECHNOLOGIES MORE CAPABLY. HEAVY INVESTMENT IN EDUCATION AND TRAINING IS AN INVESTMENT IN OUR FUTURE.

I AM ABSOLUTELY CONVINCED THAT A MORE SKILLED WORKFORCE IS ESSENTIAL IF AUSTRALIA IS TO COMPETE IN THE NEW TECHNOLOGY ERA. BROADLY BASED TRAINING WHICH EQUIPS OUR PEOPLE WITH THE NECESSARY BASIC SKILLS IS IMPERATIVE. BASIC NUMERACY AND LITERACY ARE NEEDED - AS IS FLEXIBILITY - IF THE AUSTRALIAN WORKER IS GOING TO BE ABLE TO ADAPT READILY TO NEW TECHNOLOGIES. TO TAKE MAXIMUM ADVANTAGE OF

1960'S AND IS REFLECTED IN BOTH CONCILIATION AND ARBITRATION COMMISSION AND NATIONAL LABOR ADVISORY COUNCIL GUIDELINES. MORE RECENTLY, IN 1981, THE VICTORIAN GOVERNMENT INTRODUCED GUIDELINES WHICH RECOMMENDED THAT PRIOR TO ANY DECISION BEING TAKEN IN THE BUSINESS SECTOR TO INTRODUCE NEW TECHNOLOGY, THE EMPLOYER SHOULD BE PREPARED TO NOTIFY EMPLOYEES OR THEIR REPRESENTATIVES TO PROVIDE A STATEMENT FOR DISCUSSION WHICH WOULD SET OUT REASONS FOR THE PROPOSED CHANGES AND THE NATURE OF THOSE CHANGES, AND THEIR CONSEQUENCE FOR THE WORKFORCE.

DESPITE THE EXISTENCE OF SUCH GUIDELINES, THERE ARE STILL FEW EXAMPLES OF EFFECTIVE CONSULTATIVE ARRANGEMENTS. SURVEYS OF INDUSTRY PRACTICE REVEAL THAT IN AUSTRALIA CONSULTATION IS AN INFREQUENT OCCURRENCE, AND THE ESTABLISHMENT OF FORMAL JOINT CONSULTATIVE BODIES IS RARE. THE SAME SURVEYS REVEAL THAT THE ISSUES NORMALLY CONSIDERED APPROPRIATE TO JOINT DECISION-MAKING ARE FEW AND AT A LOW LEVEL, WITH EMPHASIS ON SOME ASPECTS OF WORKPLACE DESIGN AND CHOICE OF PARTICULAR TYPES OF EQUIPMENT. CHANGED WORK PATTERNS ASSOCIATED WITH THE INTRODUCTION OF NEW TECHNOLOGY ARE RARELY CONSIDERED.

A MORE COMPREHENSIVE APPROACH TO CONSULTATION ON NEW TECHNOLOGIES SHOULD BE ENCOURAGED. DECISIONS AIMED AT INCREASING THE ADAPTABILITY OF THE INDIVIDUAL BOTH WITHIN FIRMS AND BEYOND COULD BE A USEFUL FINAL STEP. SUCH ADAPTABILITY MIGHT BE SOUGHT NOT ONLY FROM THE WORKER CONFRONTED WITH THE IMMEDIATE DEMANDS OF NEW PROCESSES, BUT ALSO FROM MANAGEMENT.

TECHNOLOGICAL CHANGE, IT IS ESSENTIAL THAT WE INVEST NOT JUST IN EQUIPMENT BUT ALSO IN HUMAN SKILLS.

WE MUST TAKE A LONG, HARD LOOK AT WHAT IS HAPPENING IN OUR EDUCATION SYSTEM. IT IS PROFOUNDLY DISTURBING THAT LESS THAN 40% OF OUR YOUNG PEOPLE AGED 17 YEARS ARE ENROLLED FULL-TIME IN SECONDARY SCHOOL WHEN MORE THAN 85% OF THEIR COUNTERPARTS IN THE UNITED STATES AND JAPAN ARE, FOR WHATEVER REASONS, STILL IN SCHOOL. THIS IS TO TIE ONE HAND BEHIND OUR BACK BEFORE WE START. UNLESS UNDERPINNED BY BASIC LEVELS OF EDUCATIONAL ACHIEVEMENT, OUR WORKFORCE WILL SIMPLY LACK THE CAPACITY EITHER TO WORK EFFECTIVELY WITH NEW TECHNOLOGIES, OR TO ADAPT SUFFICIENTLY RAPIDLY TO THEIR DEMANDS.

GOVERNMENT POLICY AIMS TO PROMOTE INCREASED PARTICIPATION BY OUR YOUNG PEOPLE IN THE EDUCATION SYSTEM. THE PACE AND DISSEMINATION OF TECHNOLOGICAL CHANGE REQUIRES MORE RATHER THAN LESS POST-SCHOOL EDUCATION. ACCORDINGLY, WE HAVE ALLOCATED \$71.5 MILLION FOR THE PARTICIPATION AND EQUITY PROGRAM IN 1984. THIS PROGRAM AIMS DIRECTLY TO PROMOTE INCREASED PARTICIPATION OF YOUNG PEOPLE IN POST-COMPULSORY EDUCATION PARTICULARLY IN SCHOOLS WITH LOW RETENTION RATES. THE GOVERNMENT HAS ALSO PROVIDED A FURTHER \$10 MILLION TO UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION FOR AN ADDITIONAL 3,000 STUDENT MEMBERS IN 1984.

AS A NATION WE MUST BE PREPARED TO INVEST HEAVILY IN HUMAN SKILLS. ONLY IF WE EQUIP OUR PEOPLE WITH SKILLS AND

ATTITUDES ENABLING THEM TO COMPETE EFFECTIVELY TO FACE THE UNCERTAINTIES OF THE FUTURE, FLEXIBLY AND WITH CONFIDENCE, CAN WE MAKE THE MOST OF FUTURE OPPORTUNITIES,

IN PRESENT CIRCUMSTANCES IT IS ESPECIALLY IMPORTANT THAT INDIVIDUALS DEVELOP FLEXIBILITY THROUGH BROADLY BASED TRAINING. IN TIMES WHEN THE BASE OF STRUCTURAL AND TECHNOLOGICAL CHANGE IS MORE THAN LIKELY TO FORCE MANY PEOPLE TO CHANGE OCCUPATIONS DURING THEIR WORKING LIVES, THE EDUCATION SYSTEM MUST BE GEARED SO AS TO FIT STUDENTS FOR AS WIDE A RANGE OF OCCUPATIONS AS POSSIBLE.

A MORE PLANNED APPROACH TO RELATING THE EDUCATIONAL SYSTEM MORE CLOSELY TO TECHNOLOGICAL CHANGE IS NEEDED. THE FUTURE CANNOT BE LEFT TO CHANCE. WE MUST ENSURE THAT THROUGH OUR EDUCATION SYSTEM AN ADEQUATE UNDERSTANDING IS ACHIEVED OF THE USES AND IMPACTS OF NEW TECHNOLOGIES, OF THE WAY THEY AFFECT THE TYPE OF WORK AVAILABLE, AND WAY IT IS ORGANISED.

THE PLACE TO START DEVELOPING THIS UNDERSTANDING IS IN OUR SCHOOLS, AND SCHOOL CURRICULA WILL NEED TO EXPAND TO TAKE UP THE CHALLENGE OF THIS NEW FACET OF LEARNING.

AS AUSTRALIAN COMPUTER INDUSTRY REPRESENTATIVES, I AM SURE YOU ALL APPRECIATE THE POINT I AM MAKING. I KNOW YOU WOULD ALL AGREE THAT COMPUTER LITERACY IS A BASIC SKILL OF THE 1980'S AND BEYOND. AND YET SOME 90 PER CENT OF STUDENTS WHO FINISHED THEIR SECONDARY SCHOOLING IN 1982 HAVE NO UNDERSTANDING

OF MICROCOMPUTERS. SOMETHING SHOULD HAVE BEEN DONE ABOUT THIS LONG AGO. THE GOVERNMENT IS NOW GIVING PRIORITY TO REMEDYING THIS BASIC DEFICIENCY.

AS A MAJOR INITIATIVE AIMED AT STIMULATING ACTION IN THIS CRUCIAL AREA, WE WILL PROVIDE \$18 MILLION OVER THE NEXT THREE YEARS TO INTRODUCE A COMPUTER EDUCATION PROGRAM FOR SECONDARY SCHOOLS. IN 1984 \$4.8 MILLION WILL BE ALLOCATED TO GOVERNMENT SCHOOLS, AND \$1.2 MILLION TO NON-GOVERNMENT SCHOOLS. A NATIONAL ADVISORY COMMITTEE ON COMPUTERS IN SCHOOLS WILL REPORT TO THE GOVERNMENT BY 30 SEPTEMBER ON THE MOST APPROPRIATE WAY OF IMPLEMENTING THE PROGRAM. IT HAS BEEN EXAMINING NEEDS IN AREAS SUCH AS SOCIAL DEVELOPMENT, SOFTWARE, HARDWARE AND EVALUATION AND SUPPORT SERVICES. THE COMMITTEE WILL MAKE RECOMMENDATIONS TO THE COMMONWEALTH SCHOOLS COMMISSION ON THE STRUCTURE AND SCOPE OF THIS PROGRAM. WHILE THE PROGRAM WILL CONCENTRATE ON SECONDARY SCHOOLS, THE COMMISSION HAS BEEN ASKED TO EXAMINE THE POSSIBILITY OF FUTURE DEVELOPMENTS, INCLUDING THEIR EXTENSION INTO PRIMARY SCHOOLS.

THE GOVERNMENT ALSO BELIEVES THAT IT IS IMPORTANT TO ENSURE THAT THE DISADVANTAGED RECEIVE ACCESS TO THE PROGRAM, AND THAT THIS SHOULD PROMOTE SHARING OF RESOURCES WHERE THIS IS APPROPRIATE. NOT ONLY THE COMMONWEALTH BUT ALSO THE RELEVANT STATE AUTHORITIES AND YOUR OWN INDUSTRY SHARE AN INTEREST IN THE SUCCESS OF THIS PROGRAM. IT IS HISTORIC IN ITS ORIGINALITY AND CRITICAL TO OUR FUTURE COMPETENCE AS A PEOPLE.

LOOKING TO THE LONGER TERM, WE HAVE ALSO DEEMED IT DESIRABLE TO RE-ESTABLISH THE CURRICULA DEVELOPMENT CENTRE AS AN ADVISORY BODY TO THE SCHOOLS COMMISSION. WE SHOULD EXPECT THIS CENTRE, RATHER THAN PROMOTING THE SO-CALLED "SOFT OPTIONS",

TO LOOK VERY CAREFULLY INSTEAD TO ENSURING THE RELEVANCE TO CONTEMPORARY AND FUTURE NEEDS OF EXISTING SCHOOL CURRICULA. THERE ARE GAPS TO BE PLUGGED - ESPECIALLY IN RESPECT OF ISSUES POSED BY THE EMERGENCE OF NEW TECHNOLOGIES - AND THE CENTRE WOULD BE FALLING DOWN IN ITS TASK WERE IT NOT TO GIVE PRIORITY TO ADDRESSING SUCH DEFICIENCIES.

AT THE TERTIARY LEVEL IT IS ALSO IMPORTANT THAT UNIVERSITY PROGRAMS BE MORE FULLY GEARED TO MEETING THE DEMAND FOR COURSES THAT ARE RELEVANT TO NEW EMPLOYMENT OPPORTUNITIES. THERE HAS OFTEN BEEN TOO LITTLE FLEXIBILITY IN UNIVERSITY RESPONSES TO SUCH NEEDS IN THE PAST. FOR EXAMPLE, BY COMPARISON WITH INDUSTRY NEEDS, THE UNIVERSITIES HAVE BEEN PRODUCING TOO FEW COMPUTER PROFESSIONALS IN RECENT YEARS. TERTIARY INSTITUTIONS SHOULD BE PREPARED TO SHIFT RESOURCES PROMPTLY TO MEET CHANGES IN DEMAND FOR THE TRAINING THAT THEY OFFER.

ULTIMATELY, I REMAIN CONFIDENT THAT OUR EDUCATION SYSTEM CAN COPE WITH THE DEMANDS LIKELY TO BE MADE UPON IT. BUT THE TRAINING AND RE-TRAINING REQUIREMENTS OF THE CURRENT WORKFORCE PRESENT MORE DIFFICULT PROBLEMS. THE LOWER RATE OF ENTRY TO THE LABOUR FORCE BY YOUNG PEOPLE, THE REDUCED IMMIGRATION RATE, AND THE INCREASING PARTICIPATION BY WOMEN OF ALL AGE GROUPS IS LIKELY TO INCREASE THE AVERAGE AGE IN THE LABOUR FORCE, POSSIBLY REDUCING ITS ABILITY TO ADJUST TO CHANGING PATTERNS OF LABOUR DEMAND AND INCREASING THE NEED FOR RE-TRAINING.

RE-TRAINING IS NOW BECOMING A LIFELONG REQUIREMENT, BUT IT IS NOT EASY TO RE-TRAIN. RE-TRAINING DOES OCCUR WITHIN SOME INDUSTRIES, AND IS AN IMPORTANT AVENUE OF ADJUSTMENT TO TECHNOLOGICAL CHANGE FOR THOSE WHO HAVE STABLE JOBS OR HOPE OF REDEPLOYMENT WITHIN FIRMS OFFERING SUCH OPPORTUNITIES. THOSE NEEDING TO RE-TRAIN FOR VERY DIFFERENT FORMS OF EMPLOYMENT ARE SOMETIMES LESS FORTUNATE. IN LARGE PART, HOWEVER, THE RESPONSIBILITY FOR RE-TRAINING RESTS WITH THE INDIVIDUAL. THERE ARE MANY FACILITIES THROUGHOUT THE COMMUNITY PROVIDING OPPORTUNITIES FOR RE-TRAINING, AND ENTERPRISING INDIVIDUALS WILL TAKE ADVANTAGE OF SUCH OPPORTUNITIES. BUT I READILY ACKNOWLEDGE THAT THE EXPERIENCE OF AUSTRALIA AND IN OTHER COUNTRIES SUGGESTS THAT THE GOVERNMENT WILL BE REQUIRED TO PLAY AN ACTIVE ROLE IN RE-TRAINING EITHER DIRECTLY OR THROUGH THE PROVISION OF INCENTIVES TO THE PRIVATE SECTOR.

IN THE FINAL ANALYSIS THE SUCCESS WITH WHICH AUSTRALIAN INDUSTRY UTILISES NEW TECHNOLOGY TO HEIGHTEN COMPETITIVENESS WILL DEPEND ON THE ABILITY OF THE WORKFORCE TO WORK EFFECTIVELY WITH THE TECHNOLOGIES BEING INTRODUCED. WE MUST PLAN FOR THE CREATION OF A BASE OF SKILLS ACROSS THE WHOLE WORK FORCE THROUGH THE GENERAL EDUCATION SYSTEM, AND AT THE SAME TIME ENSURE THE ADEQUATE RE-TRAINING OF THE EXISTING WORKFORCE TO HANDLE NEW TECHNOLOGIES MORE CAPABLY. WE MUST ENSURE THAT INDUSTRY'S DEMANDS FOR PARTICULAR TYPES OF LABOUR ARE MATCHED BY SKILLS BEING DEVELOPED BY TRAINING INSTITUTIONS. THE FUTURE MUST NOT BE JEOPARDISED BY THE SLUGGISH RESPONSE OF THE LABOUR MARKET TO CHANGE. THERE MUST BE A CAREFUL MATCHING UP OF TRAINING AND RE-TRAINING PROGRAMS TO ENSURE THAT

BASIC AND TRANSFERABLE SKILLS ARE DEVELOPED AND THE REQUIREMENTS OF INDUSTRY MET.

MATCHING UP THE COMMUNITY'S HUMAN RESOURCE BASE WITH THE DEMANDS IMPOSED BY THE PACE OF TECHNOLOGICAL INNOVATION DEMANDS A WELL-INFORMED APPRECIATION OF THE REQUIREMENTS OF OUR CHANGING INDUSTRIAL SYSTEMS. IT ALSO PRESUMES THE EXISTENCE OF A COMMUNITY CONSENSUS AROUND HOW WE MIGHT BEST MOVE TO MEET THE RAPIDLY CHANGING DEMANDS OF A HIGHLY COMPETITIVE ENVIRONMENT.

THE SUCCESS WITH WHICH AUSTRALIAN INDUSTRY UTILISES TECHNOLOGY TO HEIGHTEN COMPETITIVENESS WILL GREATLY DEPEND ON THE WILLINGNESS AND ADAPTABILITY OF THE WORKFORCE TO ADAPT TO, AND WORK EFFECTIVELY WITH, THE NEW TECHNOLOGIES BEING INTRODUCED.

WHAT IS NEEDED IS A COHERENT, COMPREHENSIVE AND GENERALLY ACCEPTED APPROACH. THIS WILL ONLY FLOW FROM EXTENSIVE AND WELL-INFORMED PUBLIC DEBATE. THE SUCCESSFUL MANAGEMENT OF TECHNOLOGICAL CHANGE REQUIRES THAT ITS BENEFITS BE FULLY REALISED AND ITS NEGATIVE EFFECTS MINIMISED. THE OPPORTUNITIES ARE IMMENSE, BUT IF THE TRANSITION IS TO BE SUCCESSFUL, ACTION IS REQUIRED NOT ONLY FROM GOVERNMENT BUT ALSO FROM THE BUSINESS COMMUNITY, FROM EDUCATIONAL INSTITUTIONS, AND FROM THE COMMUNITY AT LARGE. GROUPS SUCH AS YOUR OWN, WHO ARE WELL EQUIPPED WITH AN APPRECIATION OF THE POTENTIAL ASSOCIATED WITH CONTEMPORARY FORMS OF TECHNOLOGICAL CHANGE, HAVE AN IMPORTANT ROLE TO PLAY.

YOU ARE WELL PLACED TO:

- . ENSURE INFORMATION ON THE NEWEST TECHNOLOGY IS AVAILABLE;
- . ASSESS, IN CO-OPERATION WITH OPINION LEADERS IN THE COMMUNITY, THE LIKELY IMPACT OF NEW TECHNOLOGIES;
- . STIMULATE COMMUNITY CONSIDERATION OF THESE ISSUES SO THAT ALL GROUPS ARE WELL-PLACED TO MAKE THE BEST CHOICE AND DECISIONS FOR AUSTRALIA AS A WHOLE ON THE USE OF THE NEW TECHNOLOGIES.

I ASK YOU TODAY TO USE YOUR RESOURCES TO MOVE THINGS FORWARD BOTH IN YOUR OWN INDUSTRY, AND TO HELP PROVIDE THE BASIS FOR SUSTAINED, LONG-TERM ECONOMIC GROWTH FOR AUSTRALIA AND A CONTINUED IMPROVEMENT IN THE WELL-BEING OF ALL AUSTRALIANS.

WE CANNOT TURN OUR BACK ON TECHNOLOGICAL CHANGE. THE CHALLENGE BEFORE US IS TO UNDERSTAND IT, DEBATE IT AND MOULD IT TO OUR OWN PURPOSES. A MORE PROSPEROUS, THRIVING AUSTRALIA WILL BE THE MEASURE OF OUR SUCCESS.

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