Introduction

Over the period of the past five years, a group of regional networks has developed in the northern suburbs of Melbourne, Australia. Each network is a partnership with education, industry and community participation. Each network has a specific focus: one on industry training, one on technology transfer, another on enrichment of school education. However, although the objectives vary, each relies on the fundamental assumption that the objectives will be best achieved in partnership, by taking advantage of the full range of resources, human and physical, available in the region.

The Region

Diagram 1 shows the Melbourne metropolitan regional boundaries as defined by the Victorian Ministry for Planning and Environment. It needs to be noted, however, that people and groups are seldom as precise. The networks, and the members of the, exhibit varying perceptions and varying clarity of definition of “the northern region of Melbourne”, “the northern suburbs of Melbourne” or “Melbourne’s north”. In any case, a region is always an essentially open system. Both regions and their interactions vary in space and time.

There is great diversity across the region. It contains about forty per cent of Melbourne’s manufacturing industry base. The textile, clothing and footwear industry predominates. Other large companies include Kodak, Ericsson, Ford. Educational, training and research infrastructure is excellent with three university campuses, seven technical and further education (TAFE) campuses, the Division of Manufacturing Technology of the Commonwealth Scientific and Industrial Research Organisation, and the Australian Electronic Development Centre. There are two “growth corridors” in the region where population increases are among the highest in Victoria. Melbourne Airport is on the western fringe of the region.

The Networks

(i) Northern Interactive Education Coordinated Area Program (NIECAP)²,³

In response to increasing concern about the participation rates in science, mathematics and technology education, the State Government of Victoria established in 1987 a Working Group on Education for Science and Technology. The Report of the Working Group⁴ concluded that the most effective strategy for increasing student participation was to coordinate, on a regional basis, a series of intervention strategies. Funding was allocated for the establishment of four Coordinated Area Programs (CAPs). Each is sited at a tertiary institution in a different region area of Victoria.

¹ Note for the web edition: This diagram was not included in the original printed edition.
They are charged with linking schools, local industries, tertiary institutions, community members and others to develop strategies to improve the image held within the home, the school and the community concerning science, mathematics and technology and careers and employment in these areas, and strategies for improving transfer between and entrance to post secondary study. The CAPs concept has much in common with the local Alliances for Sciences in the US and the Science and Technology Region Organisations (SATROs) in the UK.

Evaluation report by consultants in 1989 have been published concluding that “there is now a firm basis or organisation and goodwill from which CAPs program can affect a large number of students in schools, to influence their subject choices and, ultimately, their participation in tertiary science/mathematics program”. Two additional CAPs were found in 1990.

Northern Interactive Education Coordinated Area Program (NIECAP), one of the original CAPs established in 1987, is sited at the Bundoora campus of Royal Melbourne Institute of Technology (RMIT) in the northern metropolitan region of Melbourne. A steering Committee for NIECAP was established in 1988 with members from industry, the Ministry of Education, school support centres, Phillip Institute of Technology (now RMIT), the Northern Metropolitan College of Technical and Further Education, and a local municipal council. Links with local industries were strengthened further through the involvement of NIECAP members with the Northern Industry Education and Training Link Group (NTETL), a regional group concerned with developing strategies to meet the education and training needs of industry (see [ii] below). In 1989 the Committee was strengthened by members from La Trobe University.

In the beginning the major emphasis was on projects which made use of Phillip Institute of Technology’s human and physical resources. These include:

- a Chemistry Enrichment Program in which each year more than 500 year 12 students from 30 local schools spent a day in the Institute performing experiments on a range of modern chemical instruments;

- Computer Camps for Girls in which year 10 and 11 girls take part in a week of wide-ranging computer based activities.

As increased links were developed, NIECAP’s activities have expanded and broadened to include projects as:

- School-Industry Links program in which NIECAP works with companies and schools in the region to enable teachers and students to access information;

- School Work Program in which year 11 students spend one day per week in the workplace for a period of thirteen weeks; credit is obtained for school studies;

- Teacher Release to Industry Program in which teachers are given time release to work in a company developing curriculum material; and

- Manufacturing Industry: Careers and Opportunities, a joint project with NIETL (see [ii] below) which aims to increase awareness and improve the perceptions of manufacturing industry by students, schools and the community.

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Northern Industry Education and Training Link (NIETL)\(^9\)

In October 1987 a Symposium was conducted at La Trobe University to consider opportunities for northern suburbs industries development and training emanating from strategies and policies of the current Victorian government. Subsequently the Northern Industry Education and Training Link (NTETL) was formed with representation from industry, education, and local and State government. NIETL aims to promote cooperation and coordination between and among industry and tertiary education institutions in the economic development of the northern suburbs, in order to:

- conduct seminars and conferences;
- assist the exchange of tertiary education teaching staff with industry based personnel;
- facilitate communications among industry and tertiary institutions employing various means including production of bi-monthly newsletters;
- construct education programs that will assist young people and people readjusting in employment to assess career prospects locally — especially in manufacturing areas;
- indicate to specific industries — especially in manufacturing — and specific tertiary institutions strengths and opportunities to be developed and exploited;
- assist local industry access to government assistance programs;
- provide comment, advice and support for economic development being undertaken by local government based groups.

**Specific activities have included:**

- breakfast seminars on topics such as “Structural Efficiency Through Teamwork”, “Implications of Government Policy for Technology, Education, Training and Business Organisations in the Northern Region”, “Tariffs and Protection”;
- industry visits aimed to provide an opportunity for participants to benchmark their organisations in terms of best practice;
- production, in cooperation with La Trobe Technology Precinct (see [iii] below) of an Industry Resources Directory.

NTETL has high credibility and profile amongst industry in the region. As such it has become a very important organisation for educational instructions.

La Trobe Technology Precinct

The Precinct core area consists of the La Trobe University, its on-campus Research and Development Park, a privately developed Research and Development Estate, Royal Melbourne Institute of Technology and four municipal councils. Its objectives include the facilitation of technology transfer, encouragement of joint research contacts and consultancies between universities and industries, and the development of technology based industry in the region.

Activities have included lunch forums on key industry topics, breakfast meetings to introduce industry managers to university researchers, consulting skills workshops for university staff, a northern area awareness campaign, and an employment strategy study.

Recently there has been an effort to redraft and redirect the strategy plan of the Precinct. A key objective has been to demonstrate that the Precinct is a partnership between the various organisations.

(iv) Credit Transfer

The Committee to Facilitate Credit Transfer in the Northern Region was established in 1988. It grew out of a history of cooperation between the TAFE and higher education sectors in the region and a desire to foster further cooperation, particularly given changing industry career structures and new industry awards. Members include the regional offices of the Department of Schools Education, Batman Automotive College, Broadmeadows College of TAFE, Melbourne College of Textiles, Northern Metropolitan College of TAFE, La Trobe University and Royal Melbourne Institute of Technology. The major activities of the Committee have been:

- development of effective, formal credit transfer arrangements between the institutions;
- dissemination of information to students regarding credit transfer opportunities in the region;
- promotion generally of the concept of credit transfer and pathways for students in the region.

The work is carried out by working parties which are established and disbanded as needed. Working Parties have been convened for a range of study fields: computing, social and community services, engineering, accounting, agriculture and science.

A statement from the 1991 Report of the Committee is informative:

“Although the formation of the Committee predated many of the government initiatives aimed at developing greater coordination between general and vocational education at all levels, the work of the Committee complements these national developments and policy directions and seeks ways of translating them into practical action. When the Committee was established in 1988, it agreed that its approach to credit transfer would be practical and focus on readily achievable outcomes. This approach was selected as opposed to alternatives that would have documented existing credit transfer agreements rather than promoting their development or identified issues affecting credit transfer in the northern region rather than promoting cooperation and forging relationships which would overcome resistance to credit agreements based on outdated attitudes or artificial structural barriers.”

The Report attributes the success of the Committee largely to its focus on practiced outcomes and the personal contact which take place through committee meetings and the working parties. These qualities have allowed educational providers to move “beyond documenting how much of one course is equal to another to exploring cooperation between institutions”. The Science Working Party, for example, has developed a data base of equipment holdings which is available for access by other institutions in the region. This Working Party is also exploring the combination or sharing of teaching of courses which have a small number of courses.

A Committee for the North

Informal links have developed between the networks. In some cases this has been because of complementary, and sometimes overlapping, activities; a number of joint projects have been implemented. Of more consequence, is that often the same institutions are members of these networks. In many cases the same persons represent the institutions and indeed have been instrumental in the genesis and success of the networks. It is possible to identify a number of key individuals who have been ‘champions’ for the concept of forming links or partnerships to achieve objectives.

Developing Pathways in Post Compulsory Education and Training: Continuing Initiatives among Schools, TAFE and Higher Education in the Northern Region of Melbourne, Report of the Committee to Facilitate Credit Transfer in the Northern Region, December, 1991.

There is a unifying theme between the networks of economics and social development of the region.

Recently there has been an effort to develop a “Committee for the North” to be an umbrella organisation to provide a formal strategic link between the networks, to play a coordinating role to avoid duplication of activity, to effectively advocate the region to government, and to undertake marketing and promotion of the region. The concept has received support from many of the key players and is advocated strongly by one of the municipal councils. Politicians have been supportive. However it has been slow and difficult to implement perhaps because of the large number of interested organisations and individuals involved and because of the difficulty of finding a clear focus. Inevitably some flexibility is lost each time there is a commitment to formal structure. Perhaps this is one step too far.

**Other Alliances**

The contacts and personal relationships developed through the networks have led to a range of cooperative activities. In the case of Royal Melbourne Institute of Technology for example, this includes joint teaching and laboratory and equipment sharing in manufacturing engineering and technology degrees with regional TAFE colleges, and a project to develop rational textiles education programs jointly with Melbourne College of Textiles.

**Conclusions**

It is recognised by industry that there are advantages to be gained through collaboration:

> “The dynamics unloosed by a truly global economy, coupled with ongoing market volatility, provide the motivation and rational for increased inter-firm collaboration. Successful regional economies have shown that it takes a subtle mix of technical sophistication, flexible production and market savvy, nurtured and facilitated by appropriate public-private partnerships, to be competitive in the international economy. We all must learn from these examples and adapt the general principles identified above to our specific regions and industries.”

The argument can be generalised to the achievement of sound, economic and educational objectives in a region. Experience in the north of Melbourne indicates that it is possible for organisations to achieve far more working in partnership than they can working alone. In any case it is an imperative that our nation can not afford to duplicate resources: we will have to learn to share, to act cooperatively, to pool our resources and knowledge in order to achieve our common goals.