# LEARNING TECHNOLOGIES

Strategic Planning for Training and Enterprise Councils

GRAPHICAL DISPLAY OF LABOUR MARKET AND TRAINING INFORMATION

Access to detailed information about specific regions is an essential requirement of any Training and Enterprise Council (TEC) seeking to understand fully the various features of its local enterprise community. By applying a number of techniques of geographical analysis and 'market modelling', a University of Leeds company has developed a strategic planning system to provide TECs with a detailed analysis of local labour markets and levels of training provision. GMAP Limited already has a lot of clients including major retailing and distributive companies, together with various public sector organisations. Funded by the Employment Department, they developed a pilot strategic planning system for the Leeds TEC.
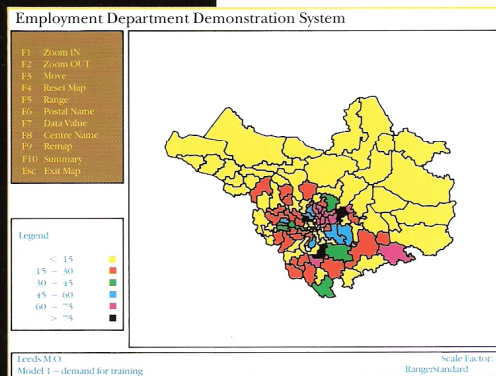
A Powerful and Sophisticated System

The pilot scheme has resulted in a computer based information system specifically researched for the Leeds Metropolitan Area. The system has been designed to ensure each TEC's understanding of the current provision of skills training within its region, and of any specific skills requirements. The system can also be used to demonstrate various employment and population patterns, including the nature of any groups that could be targeted for future training provision. Equally important is a feature that will provide projections of future training and employment patterns.

As the project is fully interactive, users are given access to whatever feature of the system will best meet their specific requirements. Detailed statistics include the state of the local labour market and current levels of training provision. Interpretation is possible at geographical scales varying from the whole region to local districts.

Employment Department Demonstration System

F1	Zoom IN
F2	Zoom OUT
F3	Move
F4	Reset Map
F5	Range
F6	Postal Name
F7	Data Value
F8	Centre Name
F9	Remap
F10	Summary
Esc	Exit Map

Legend

< 15	
15 – 30	
30 – 45	
45 – 60	
60 – 75	
> 75	

Leeds M.O
Model 1 – demand for training

Scale Factor 1
Range:Standard

The distribution of young unemployed persons in Leeds.

LEARNING METHODS CASE STUDY

Users can identify:

- specific training providers;

- levels of training participation;

- gaps in training provision;

- business types and locations;

- general population patterns;

- and examples of industrial growth.

Varied Data Sources

The current population census, carried out in 1991, provides the system with an important source of population and household data. Known probabilities, such as births, deaths and migrations, can be used to enhance the original census data and provide a series of population predictions.
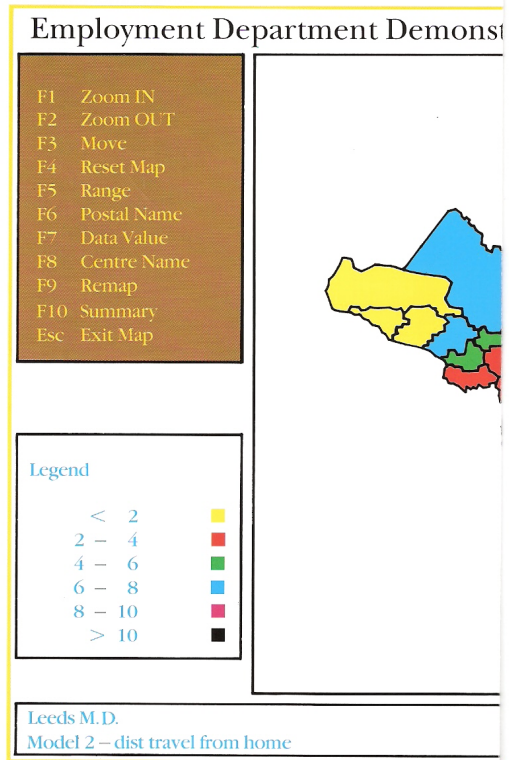
Regular Employment Surveys are used to highlight important changes in employment patterns such as expansion within elements of the service sector. The system also includes detailed information about training provision,

both within the region and on a national scale, plus information about the location of all training users grouped according to their industrial sector. The location of target groups for future training provision can be pinpointed to individual postcode sectors.

Using 'Market Modelling'

The market modelling approach of the project involves the application of supply and demand principles to the field of labour markets and training provision. Demand is interpreted as

Accessibility to training opportunities for the young unemployed: distance from home to course location.

Employment Department Demonst

F1	Zoom IN
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F5	Range
F6	Postal Name
F7	Data Value
F8	Centre Name
F9	Remap
F10	Summary
Esc	Exit Map

Legend

< 2	
2 – 4	
4 – 6	
6 – 8	
8 – 10	
> 10	

Leeds M.D.
Model 2 – dist travel from home

CACTUS: The Policing of Public Disorder

This program uses computer-based simulations of large crowd events, such as marches and demonstrations, to improve trainees' planning and decision-making skills. The programs can be adapted to suit particular training requirements.

The simulation uses Ordnance Survey digitised maps showing roads and buildings, representing the static world, On to this, dynamic objects known as agents - demonstrator group and police units - can be programmed with a repertoire of behaviour that changes according to the actions and reactions·encountered en route. This 'world' model operates in real time with potential behaviour changes taking place at approximately 20-second intervals. A referee module provides any necessary arbitration.

The trainee can use these facilities to pre-plan the placing of resources for effective policing. While managing the event, he/she will see the map displayed with police unit locations, but will only be informed of events arising in the 'world' model through incident reports shown in a communication window. Information can be requested from the units and strategic or tactical instructions given in response. The computer system can also provide memory aids to locations, status and events. A complete communication record is maintained and all the data is stored for filtering and organising in various ways. This enables the debriefing discussions to focus on events and decision-making right across the map or at particular locations.

The knowledge base of the simulation and its functional design are the result of extensive collaboration with the Metropolitan Police Office, which provided demonstration reports, pre-event briefings and control room attendance facilities during the management of large events.

The work of the Project has been presented at seminars in the University of Leeds and at a seminar of Simulation Techniques for Learning organised by the Institute of Electrical Engineers in London. However, the most important and comprehensive meeting took place at a National Workshop in November 1991, where the Department of Employment presented a video showing the three related Command and Control projects undertaken with their support. Hands-on demonstrations allowed close discussion of the techniques and their value to training.

As well as acting as a training aid, CACTUS can also be adapted to assist the planning and management of actual incidents.

The system uses Garnet/Common Lisp on a SUN Workstation with XII/Motif and incorporates text-to-speech equipment produced by APTECH.