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Online mapping of labour market trends in Norfolk

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Abstract

Norfolk Learning and Skills Council, working within a partnership of organisations with an interest in LMI, is in the process of developing and implementing a GIS website to serve map-based Labour Market Information (LMI) to LMI users throughout the Norfolk area.

The main aim of the project was to utilise GIS as tool for integrating information collected from a range of sources, such as market surveys and to present it in a unified manner.

In the pilot phase of the project a number of data sources were identified and selected for inclusion in the GIS website. The most challenging of these was an employer survey undertaken in 1999 - a dataset detailing employer trends such as skills shortages and sector-specific issues that was collected by survey of c. 1500 organisations without any original intention to be used in a GIS. It was a major challenge but a worthwhile one resulting in a map-based user interface with the ability to enter in plain english queries based on the original survey questions.

Norfolk Learning and Skills Council chose to implement the site as a hosted service running as a secure extranet. The next phase of the project will see the site expanding its use to an even greater number of users with the addition of many more varied datasets. We will describe how the project was managed and how GIS is providing a cornerstone of IT policy within the user community.

Benefits

The traditional method of acquiring, storing, and analysing spatial referenced data has a long tradition and is of great importance for everyday work.

However, there are some significant disadvantages caused my manual data acquisition and update:

- a) Limited possibility of data evaluation and data combination
- b) Map deterioration in quality and accuracy due to age and frequent revisions
- c) Spatial data sets are frequently heterogeneous, originate often from different data sources having differing scales, co-ordinate systems, accuracy's, and coverage
- d) The dissemination and transformation of information is expensive

Enhanced productivity can be achieved during GIS implementation in different ways:

- a) Staff have accurate and up to date information available
- b) Interdepartmental co-operation for optimum planning, implementation, and operation of services becomes feasible

- c) Automatic data transfer of data acquisition allows easy data input
- d) Common set of information
- e) Levering more £ (European bids) with better access to information: technical scoring consequently improved
- f) Turn round enquiries more effectively
- g) Develops baselines
- h) Accelerated provision of information
- i) Generation of different thematic maps, flexible selection of area and scale
- j) Faster compilation of technical reports, statistical and logical evaluation based on data selection and combination of descriptive data, tabular data and spatial data
- k) Increased orientation to the customer's needs and improved public image through modern information management of public relations
- l) Enhancements to decision-making processes through reduction of uncertainty. Decisions can be made with more confidence and conviction based on more and better information.

Information requirements

Meetings with key partners in Norfolk have identified some of the information requirements from the system, which can be developed.

This list is by no means exhaustive and can be further developed as the project is taken forward.

A key requirement will be to provide data at a Local Authority level.

- a) Business directory for Norfolk
- b) Property file (as part of inward investment sub directory)
- c) Wage rates (Local Authority level)
- d) GDP (Local Authority level)
- e) Deprivation indices (Local Authority level)
- f) Section on developing bids, eg
 - ESF
 - Objective 4
 - Objective 5b
 - Skills Development Funds
- g) Year 11,12,13 destinations from Careers Service
- h) LMI for schools / Careers advisors
- i) Section on information, advice and guidance
- j) New Deal information database, eg
 - Childcare
 - Labour market information relevant to New Deal client base
- k) Directory of New Deal employers?
- l) Information from National On line Information System (NOMIS)
- m) Information requirements of single gateway for ES

- n) Shaping the Future directory, eg
 - Employer survey updates from 1997
 - Industrial trends analysis
 - Economic Audits for Norfolk and Waveney
- o) Lifelong learning, eg
 - Household survey updates from 1997
 - Census data
 - Social Cohesion agenda

Management

A Steering Group has been set up to develop action plan / objectives / priorities / time scales / responsibilities.

Organisations involved in preliminary consultations

- a) Breckland District Council
- b) South Norfolk Council
- c) Waveney District Employment Service
- d) Broadland District Council
- e) North Norfolk District Council
- f) Norfolk Careers Service Ltd
- g) East Norfolk 6th Form College
- h) Suffolk Careers Service Ltd. (Waveney)
- i) Norfolk County Council
- j) Norwich City Council
- k) Easton College
- l) Lowestoft College
- m) Borough Council of Kings Lynn and West Norfolk
- n) Great Yarmouth Borough Council
- o) The College of West Anglia
- p) Norfolk LEA
- q) Great Yarmouth College
- r) Paston College
- S) Norwich City College

Overview

Norfolk Shaping The Future Research Network have undertaken to develop the Norfolk Data Observatory website. This is an internet based project to provide key data sets and GIS tools to a wide audience via the web. The project builds on the pilot website developed for Norfolk and Waveney Training and Enterprise Council.

The objectives of the project are :

- Design and implement a secure Internet site to serve map-based business information based on the 1999 Employer's Survey.
- Host pilot site for 3 months
- Develop further the application as user requirements are further defined and pilot systems are thoroughly tested

Project Brief

The initial project consisted of the following stages:

1. Site design and system specification.
2. Data preparation and loading.
3. Prototype 1 development.
4. Project Review 1
5. Prototype 2 development.
6. Project Review 2
7. Testing and Acceptance.

A further project was initiated to develop the initial site, improving functionality and increasing the number of data sets available for use.

A new architecture will be developed to support the requirements of the project. This architecture will develop and reuse components of the Norfolk and Waveney site where applicable but will also support new functionality such as the pop-up mapping.

In order to allow the current data sets and future data sets to be included a generic data format will be defined.

The partnership will produce metadata for each data set. This will simply be a piece of text associated with each data set. The partnership can define the contents to suite their needs but it is recommended that the metadata contains:

- Named owner of the data set
- Currency information
- Column definitions for the data set and range/coverage of values

The aim of the project is to provide increased accessibility and use of a wide range of data giving socio-economic information throughout Norfolk, in particular for the analysis of learning and skill requirements in relationship to the demands of the Labour Market.

It will provide a repository for both national data sets and for those provided from within the Partnership, allowing sharing, analysis and comparison of a diverse range of information to better inform resource allocation, fund bidding, research strategies and focussed decision making throughout the Partnership.

Data Sets

BOUNDARY DATA

<input type="checkbox"/>	<i>County</i>		New
<input type="checkbox"/>	District		Current*
<input type="checkbox"/>	Ward		New
<input type="checkbox"/>	Postcode Area		Current
<input type="checkbox"/>	Postcode Sector		Current
<input type="checkbox"/>	Postcode District		Current

POPULATION DATA

<input type="checkbox"/>	<i>Pop99_pcare</i>	postcode area	New
<input type="checkbox"/>	<i>Pop99_pcdistrict</i>	postcode district	New
<input type="checkbox"/>	<i>Pop99_pcsector</i>	postcode sector	New
<input type="checkbox"/>	<i>Pop98 age structure</i>	Ward	

DETR INDICES OF DEPRIVATION 2000

<input type="checkbox"/>	<i>IMD_Multiple Index</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Income</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Employment</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Health</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Education</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Housing</i>	Ward	New
<input type="checkbox"/>	<i>IMD_Access</i>		New
<input type="checkbox"/>	<i>IMD_Child Poverty</i>		New

EDUCATION AND TRAINING

<input type="checkbox"/>	<i>2000 YR11 Dests</i>	Postcode sector	To update
<input type="checkbox"/>	2000 YR11 M Dests	Postcode sector	To update
<input type="checkbox"/>	2000 YR 11 F Dests	Postcode sector	To update
<input type="checkbox"/>	RCU_1998	Postcode sector	New

SURVEY DATA

	Employers Survey 1999		
<input type="checkbox"/>	ES1999_District	Local Authority District	Current**
<input type="checkbox"/>	ES1999_Skills1	postcode area/district/sector	Current
<input type="checkbox"/>	<i>ES1999_Skills1</i>	postcode area/district/sector	Current
<input type="checkbox"/>	<i>ES1999_Vacancies</i>	postcode area/district/sector	Current
<input type="checkbox"/>	<i>ES1999_Profile</i>	postcode area/district/sector	Current
	Household Survey 1999	(text to promise for future!)	Future

* Boundary data only, no attribute data

** Current district boundary file with Employer Survey summaries