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Scottish Enterprise implements Autodesk MapGuide®



Autodesk MapGuide is a vital part of the Scottish Enterprise infrastructure, helping develop and deliver K-map content quickly and easily. "One of the key advantages of Autodesk MapGuide is its fast development cycles – you really can get results in a matter of days."

John Maslen, GeoWise

Enterprise in Scotland. Rated among the world's top economic development agencies, Scottish Enterprise is the main such agency for Scotland, covering 93% of the population from Grampian to the Scottish Borders.

The **Scottish Enterprise** Network consists of Scottish Enterprise and 12 Local Enterprise Companies. Working in partnership with the private and public sectors, Scottish Enterprise aims to secure the long term future of the Scottish economy by making its industries more competitive. Scottish Enterprise helps business start-ups and existing companies to grow; it promotes and encourages exporting; it attracts inward investment and develops skills. Priorities include commercialisation of academic ideas into good business opportunities, e-business, globalisation, and economic inclusion. Because of its activities during 1999-2000, it has helped add £900 million a year to the output of the Scottish economy over the next three years, creating or securing around 25,000 jobs. Funded by the Scottish Executive, Scottish Enterprise is headquartered in Glasgow. Around 80% of the information it uses is geographically related, which is why it has implemented a Geographical Information System (GIS). What follows is the story of that system.

Heading in the right direction

The heavily industrialised area along the Edinburgh – Glasgow corridor has undergone a remarkable transformation in the last 20 years. As traditional industries declined, a significant amount of land became available for redevelopment. However, since much of this land had been in use for mineral extraction and heavy engineering, considerable work was needed to make it suitable for light industry and office use. It was to support this redevelopment of vacant and derelict land that Scottish Enterprise first made serious use of Geographical Information Systems (GIS). There were a number of ESRI ArcView licences distributed across the Local Enterprise Companies as well as at the headquarters. Initially desktop GIS was used for ad-hoc mapping projects but it was soon recognised that site-based information could be managed effectively using these tools to bring together a wide range of CAD based plans, photographs, and textual reports. Business benefits through more centralised data management were immediately apparent, with improvements in the data integrity and higher quality outputs.

Scottish Enterprise practices what it preaches

Building on this initial experience, Scottish Enterprise embarked upon a formal approach to GIS to increase the return on the initial investment in base mapping and to evaluate the benefits across the

organisation. Scottish Enterprise is an economic development agency with a very wide remit. It is involved in generating inward investment, skills creation and the development of property to support the enterprise culture. It channels its remit through key sectors: tourism, forest industries, finance, and high technology. As an evangelist for this latter sector, Scottish Enterprise was determined to practice what it preached. This approach to GIS, alongside the organisation's determination to be e-enabled, has helped establish Scottish Enterprise as an exemplary public sector body. After engaging GIS consultants Know Edge to formulate a GIS implementation strategy, an implementation project was initiated under the direction of John Rowland. John reports, "There were many potential applications for GIS beyond the initial site-based land management work. All the time we had to bear in mind that staff had neither the experience nor the culture of using geographic information tools for their operational work. To be useful, any system would have to be truly fast to learn and easy to use."

The web is the answer

One of the key recommendations of the review was to implement GIS as a centralised managed service. This form of implementation would align with the anticipated business transformation within Scottish Enterprise. It would help to overcome potential staff retention and turnover issues. By using the right model of a



managed service, the provider would be highly focussed on achieving project objectives. Since the system had to be of value to up to 1,500 staff in 13 different locations with a minimum of installation, set-up and support, there was in effect only one solution: a web-based one. This would be built around a framework of contracted service suppliers together with a dedicated in-house support team. It would also utilise the existing high-speed network infrastructure. The recommendations were adopted by Scottish Enterprise taking the opportunity to implement the GIS strategy alongside an all embracing business transformation initiative.

Autodesk MapGuide powers K-map

The result of the review was Knowledge Map or 'K-map', a platform co-funded by the Competitive Place Directorate and the organisation's business transformation project. The objective was to establish and provide products and services to enable efficient and effective sharing of information that has a geographic context. As the name suggests, the initiative is based on the use of maps as a means of both depicting and retrieving information from diverse sources. The project started with the issue of two separate invitations to tender. The first invitation to tender covered the actual provision of a service to establish a web mapping project whilst the second was a framework contract for approved suppliers of possible applications to run on K-map. Scottish Enterprise moved quickly. Following an April 2000 tender call, suppliers and systems were selected by July 2000. In fact, Autodesk MapGuide, supplied by GeoWise was chosen as the basis of K-map. GeoWise had significant experience with Autodesk MapGuide and knew that with it, they could meet the project's short development timescales. John Maslen of GeoWise notes, "One of the key advantages of Autodesk MapGuide is its fast development cycles – you really can get results in a matter of days. That is why we were confident we could implement K-map within the timescales." GeoWise is an independent GIS solution provider and systems integrator and as such supports best-of-breed products. The company has significant experience in the application of socio-economic information to key public sector agendas such as neighbourhood statistics, demographics, health and economic development.

K-map roll-out complete.

GeoWise is the K-map lead contractor, working with Forth Valley GIS, the local authority service provider covering Stirling, Clackmannan and Falkirk councils. GeoWise is responsible for overall K-map delivery and support. Forth Valley GIS has responsibility for the management of a large spatial data warehouse including all core Ordnance Survey data Scotland-wide. K-map is designed to allow rapid and dynamic retrieval of both Scottish Enterprise managed information and other third party managed information. Users of this facility, the K-map Portal, can select areas of interest, for example a particular drive time from a specified location or a social inclusion partnership area, then rapidly retrieve a range of information pertaining to the selected area. Roll-out across all 12 Local Enterprise Companies and Headquarters was completed in September 2001. The system is also available, with suitable and proven security, to other involved public agencies in Scotland with appropriate service level agreements with data providers. It is therefore practically demonstrating the concept of true joined-up Government information exchange.

A comprehensive solution

The K-map Portal is technically an extranet. With suitable security, the whole of the site is available to the Scottish public sector allowing all parties to access the same data, encouraging agency partnership and enabling accurate and consistent decisions. Scottish Enterprise believes that this solution is unique. Autodesk MapGuide provides a very fast interface to a wide range of spatially related data. The K-map user interface has the look and feel of a simplified browser. It is essentially intuitive, comprising large press buttons with self-evident icons for all functions. Most selections are made via drop down menus minimising the number of keystrokes and mouse clicks needed to navigate the system. The system is delivering economic development information to Scottish Enterprise's workforce of approximately 1,500 staff.

Regional Selective Assistance.

The use of GIS is already proving its worth with the revised Regional Selective Assistance scheme. The previous relatively simple blanket scheme has been replaced by a more targeted and selective scheme. Eligibility criteria are much more complex, but with K-map, the enquirer inputs a postcode, switches on the Assisted Area layer and can immediately see if a location qualifies for assistance and at what level, too. Use has been extended beyond Scottish Enterprise to the Scottish Executive Industry Department. Users report that it saves them time and reduces errors and uncertainties. In addition, the system is expected to ensure that because developers are better informed about Assisted Areas, the resulting developments will be more appropriate to the needs of an area.

Autodesk MapGuide, the future of web-based GIS

K-map is in many ways similar to the Internet itself. It is an infrastructure, and its value depends on the content. Autodesk MapGuide is a vital part of this infrastructure, helping develop and deliver K-map content quickly and easily. Twelve months into the project and demand for more data sets is developing as SE staff see the power of the system. In the future, K-map is likely to extend its delivery beyond the Scottish Enterprise Network, central government, agencies, local authorities, community organisations, and training institutions. It will start to address its customers directly such as companies looking to expand into areas with easy access to the necessary skills, premises and transport infrastructure. It will help education establishments supply the trained staff that incoming organisations need. Additional business agendas that will benefit from K-map include strategic expenditure, social inclusion, tourism, transport, communication, labour markets, training and lifelong learning. K-map is helping to put the enterprise into Scottish Enterprise.

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