On the Radar: Esri UK

Geographic information reveals the determinants of better health

SUMMARY

Catalyst

The adoption of electronic health records (EHR) has expanded the pool of digitally available information on patients. It calls for the use of business intelligence and analytics to drive more insights into patient data, enabling a better understanding of the causes of diseases, and helping to determine more efficient treatment pathways (as well as preventative measures). However, demographic, socioeconomic, and environmental factors that affect individuals' wellbeing, including air and water quality and housing, are typically not included in the data sets captured by EHRs. It is important that these aspects are taken into account in order to obtain a comprehensive understanding of the determinants of health; they must be factored in to health management at the individual and community levels.

Esri has been developing geographic information systems (GIS) to assist with analyzing and visualizing data in the context of location and community. It aims to reveal relationships between data sets that have often seemed unrelated to health outcomes. In May 2013 Esri UK became the first player in the UK to make GIS tool sets in combination with non-medical, but health-relevant, data available via the cloud. Its GIS offering is smarter, cheaper, and ultimately more competitive than those of other vendors.

Key messages

- Geographical data is an important tool for driving efficiency in the commissioning of health services because it allows local health authorities to identify where different types of health services are most needed, and where there are gaps or oversupplies in service provisioning.
- Esri's GIS solution analyzes data from various sources by overlaying it onto maps to create a single, centralized view, making previously undetected relationships between parameters apparent.
- The launch of Esri's healthcare bundle in the UK is a timely response to the recent changes to the UK's healthcare system, which aim to support more decentralized decision-making.
- As a location-based analytical platform, GIS supports the monitoring of healthcare outcomes, as well as the management of estates, assets, and operations.

Ovum view

Esri UK's recently launched Health and Welfare analysis bundle addresses the growing need to drive efficiency in population health management. It is a timely response to the most recent changes to the UK's healthcare system, which call for greater use of localized information in the development of care strategies and treatment pathways. By bundling selected software and service elements of its GIS portfolio, and being the first to wrap them into a software-as-a-service (SaaS) model, Esri's offering is very attractive to cash-strapped public sector agencies. These agencies can now adopt a pay-as-you-go approach and save on capital expenditure.

RECOMMENDATIONS FOR ENTERPRISES

Why put Esri on your radar?

The UK's Health and Social Care Act 2012 resulted in a reorganization of the National Health Service (NHS) and the establishment of clinical commissioning groups (CCG) and Public Health England (PHE) as of April 1, 2013. CCGs are now in charge of primary care health service commissioning, and because they work with patients, caregivers, local communities, and authorities, they must not only aggregate clinical data, but also analyze it from a geographic perspective. As part of the health reform, local government has assumed a legal duty to improve health. In order to fulfill this mission, local authorities are taking a broader view than CCGs on which factors affect wellbeing, and are incorporating education; transportation; housing; and other demographic, socioeconomic, and environmental elements into the evaluation. It is to a large degree the role of PHE to provide this information to public health teams within both local authorities and the NHS as part of its mission to "protect and improve the nation's health and wellbeing."

Esri UK launched the Health and Welfare analysis bundle in the UK in May 2013. It addresses CCGs and local government agencies' growing need to make better-informed commissioning decisions by empowering them to identify the parameters that influence individuals' wellbeing. This will enable them to make better-informed decisions when designing and commissioning current and future health services to ensure the cost-efficient use of resources.

HIGHLIGHTS

Background

Esri Inc. is a privately held company established in 1969 as Environmental Systems Research Institute by Laura and Jack Dangermond, who still own the company. It is headquartered in Redlands, CA, and has over 200,000 customers worldwide. With approximately 3,000 staff globally, the company generates revenues in access of $1bn across 11 business sectors: aid and development, business, defense and intelligence, education, government, health and human services, mapping and charting, natural resources, public safety, transportation, and utilities and communications. The vendor distributes and

supports its software via 10 US offices, 80 international distributors, and more than 3,000 associates worldwide. Esri UK is one of Esri's top three international distributors, with 300 staff based in seven offices.

Esri's offerings in healthcare support a more efficient allocation of resources by:

- Optimizing the commissioning of health services. GIS enables the ongoing assessment of various parameters affecting a community's specific healthcare service needs. These include prevalence and patterns in clinical conditions, local health risk factors and infrastructure, health assets, access to services, and the availability and impact of local services such as housing and social care.
- Offering more accurate risk profiling. Clinicians can develop more accurate forecasts of patients facing particular risks, which allows for earlier interventions and preventative treatment.
- Comparing the quality of healthcare providers. Anonymous data on patient experiences, clinical outcomes, and patient safety can be plotted on a map to make comparisons across institutions.
- Optimizing the management of estates and assets (so-called geodesign). GIO helps decision-makers to assess whether the design of a care facility best reflects the current methods of medical care to avoid waste of resources, for example by misusing caregivers' time in travelling between different places.

Current position

Esri's health and human services global business has more than 5,000-licensed users throughout national health ministries, community-focused health departments, and hospitals. In the UK healthcare market it works with a number of local NHS organizations, including the NHS Counter Fraud Service, the West Midlands Cancer Intelligence Unit, the Health Protection Agency (now part of PHE), and Public Health Observatories across the UK (with those located in England being part of PHE). In the case of the West Midlands Cancer Intelligence Unit, for example, Esri's GIS solution helps to aggregate and analyze various data sets on cancer among the local population in order to generate insights into how cancer is related to environmental and socioeconomic factors. It visualizes causalities in order to develop better preventative and remedial care.

Esri is an established player in the UK's public sector market, and its existing relationship with local government agencies across England should facilitate cross-selling into their healthcare teams. GIS products are nothing new within healthcare, but the points that are compelling and different about this new package are its delivery via a SaaS model and its plug-in module for Excel, which extends its location analysis capability into the Office world. The bundle combines new online facilities for analysis, collaboration, and publication with traditional desktop analytical tools and a training module that simplifies mapping. The bundle costs approximately 40% less per user than the individual components.

The Public Sector Mapping Agreement, a centrally funded licensing agreement between the UK government and Ordnance Survey, makes geographic and address data freely available at the point of

use. This plays into the hands of Esri; alongside Pitney Bowes' MapInfo Suite, it is the key player in the market. However, Esri's new bundle offers tools that use those maps faster and at a higher resolution than those of its competitor, which give it an advantage.

Ovum expects that Esri will add more skills such as business analysis and additional data sets (e.g. further demographic and environmental information) to its SaaS offering in the UK.

DATA SHEET

Key facts

Table 1: Data sheet			
Product name	Health and Welfare analysis bundle	Product classification	SaaS-based platform for location-based analytics to render resource allocation for healthcare population management more efficient
Version number	Bundle version 1.0 based on Arc GIS 10.1	Release date	May 1, 2013
Industries covered	Healthcare only	Geographies covered	UK
Relevant company sizes	Small to large	Licensing options	SaaS and desktop
URL	www.esriuk.com/health	Route(s) to market	Direct and OEM
Company headquarters	Aylesbury, Bucks, for Esri UK; Redlands, CA, for Esri Inc.	Number of employees	300 in the UK; 3,000 worldwide

Source: Ovum

APPENDIX

"On the Radar"

"On the Radar" is part of Ovum's series of research notes that highlights up-and-coming vendors that bring innovative ideas, products, or business models to their markets. Although "On the Radar" vendors are not always ready for prime time, they bear watching for their impact on markets and could be suitable for certain enterprise and public sector IT organizations.

Further reading

2013 Trends to Watch: Government Technology, IT007-000661 (October 2012)

2013 Trends to Watch: Healthcare Technology, IT011-000302 (October 2012)

Liberating the NHS? The Implications of the UK Health and Social Care Bill for Healthcare IT, IT011-000291 (July 2011)

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