

ROB BUCKLEY

EDITOR

robertbuckley@geoconnexion.com



Editorial:

Rob Buckley, Editor - GeoInternational
robertbuckley@geoconnexion.com

Peter FitzGibbon, Editor - GeoUK
peterfitzgibbon@geoconnexion.com
+44 (0) 1992 788249

Alan Plumley News Editor
+44 (0) 1438 715124
news@geoconnexion.com

Columnists:

GeoInternational

Louise Friis-Hansen, FIG
Roger Longhorn, GSDI
Alistair Maclean, Quarry One Eleven
Geoff Sawyer, EARSC

GeoUK

Andy Beckerson, Modern Surveying
Terri Freemantle & Steve Spittle, Observations
Diane Sandeman, AGI News

Publisher:

Mai Ward
+44 (0) 1223 279151
maiward@geoconnexion.com

Advertising:

Micki Knight, Sales & Marketing Director
+44 (0) 7801 907666
mickiknight@geoconnexion.com

Mailing Address & Subscription Enquires:

GeoConnexion Limited,
PO Box 594, Cambridge,
CB1 0FY, United Kingdom
+44 (0) 1223 279151
info@geoconnexion.com
subscription@geoconnexion.com
www.geoconnexion.com

Design:

AT Graphics Ltd
www.atgraphicsuk.com

GeoConnexion International

ISSN: 1476-8941 is published by GeoConnexion Limited ten times a year (with combined November/December and July/August issues) and is fully protected by copyright. Nothing in it may be reprinted or reproduced wholly or in any part without the written permission of the editor.

THE RIGHT FOUNDATION

INDUSTRIES AROUND THE WORLD, INCLUDING OIL AND GAS AND HEALTHCARE, ARE FACING CHALLENGES THAT THE GEOSPATIAL INDUSTRY CAN HELP THEM TO OVERCOME

With the threat of global warming looming over everyone's head, it's almost certain that if the world could stop using oil, gas and other fossil fuels tomorrow, it would. However, of the world's energy, roughly 30 per cent comes from oil, 30 per cent from coal and 20 per cent from natural gas – in other words, more than three-quarters of the world's energy comes from fossil fuels.

As a result, while the move to switch to renewable energy sources is gathering momentum, it's going to be decades before fossil fuels become even minor contributors to world energy, let alone stop being used at all. Until then, they're going to continue to be vital to the world's economy.

Like any industry, oil and gas face many challenges, and in this issue, one of our main themes is the contributions the geospatial industry can make to help oil and gas companies deal with theirs. On page 27, our columnist Alistair Maclean talks to the director of Esri's energy team, Danny Spillmann, to discuss these challenges and how the GIS industry is responding. In particular, with the price of a barrel of oil the same as it was during the 2008 global economic crisis, is the time ripe for radical change?

Spillmann reveals that Esri is working behind the scenes with many companies to see how geospatial technology can help to transform their operations, hoping to come out of the current downturn stronger than ever before. It's all part of the company's move away from being a 'mere software vendor' to becoming "a trusted advisor and consultant" with long-lasting relationships with customers.

Software, of course, is nothing without data and earth observation imagery continues to provide the oil and gas industry with useful intelligence with which it can make correct decisions. On page 30, Chloé Leclerc looks at how companies are using different kinds of satellite imagery at different resolutions to inform their business processes. In particular, she looks at two projects – the construction of the South Caspian pipeline and oil exploration around the Adriatic coast of Croatia – to see how combinations of imagery have been used to improve routes and discover new fields. She also reports on a pilot test off the coast of Angola to identify daily offshore activity using

a combination of radar and optical imagery to overcome weather conditions.

Of course, oil and gas aren't the only industries that can benefit from earth observation imagery – provided they know how to use it and understand it. On page 32, Stefan Bellm looks at how new web and 3D visualisation technologies can provide new ways of looking at EO data, not just in a dedicated, powerful desktop GIS but in a common or garden web browser, all without the help of those ubiquitous plug-ins that used to dominate the industry a decade ago.

New visualisation techniques for spatial data are also important to other industries, as well as to the Smart Cities of the future. Health care, for example, has many challenges of its own to deal with. Populations around the world are ageing and increasingly acquiring the diseases of old age, such as dementia. Providing care for those diseases will be particularly difficult, with younger healthcare professionals preferring to live in urban areas, older people preferring to live in more rural areas, so bringing those two groups together will be of pressing concern.

On page 34, Hamish Robertson and Nick Nicholas put the case for the 'spatial dashboard' for healthcare, not just for managing dementia but for other healthcare problems. The sustainability of health and social support systems will increasingly rely on nuanced responses to local conditions, not highly generalised and sweeping policies. But with few in the healthcare industry with sufficient geospatial training to understand the increasing amounts of data they have, a spatial dashboard provides GIS companies with a golden opportunity to put analysis capabilities in the hands of those that need them.

But as with the oil and gas industry, accurate base mapping data will be all important in making decisions. Smart Cities, which will provide vast amounts of data upon which to act, will need automation not just in analysis but in the creation and updating of base mapping. On page 38, Mary Lou von Wyl and Ajay Mathur explain how a group of innovative German authorities are already automating their mapping processes.

I hope you enjoy the issue.