

The human challenge in the oil and gas industry

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The current fast-growing energy demand is of pressing concern. The world's energy consumption will grow by 56 per cent between 2010 and 2040, according to the *International Energy Outlook 2013*, elaborated by the US Energy Information Administration. The pace of consumption is dictated mainly by the economic development of emerging countries and their rising living standards, the new high-tech way of living and the growth in urban population.

According to the 2012 revision of the United Nation's *World Population Prospects* there will be approximately 9 billion people in the world by 2040. This means that 2 billion more people will require energy to live, in addition to the 1.3 billion people who currently have no access to modern energy.

There is no doubt that this entails an extraordinary challenge to the world as a whole, given energy's all-importance. Everything we eat or use has energy in it. Energy is not only vital for shelter, nourishment, health and education, but it also allows humankind to take the path towards freedom, through mobility and communication. "Sustainable development is not possible without sustainable energy. Access to modern energy services is fundamental to human development and an investment in our collective future", according to the UN's Sustainable Energy for All (SE4All) Initiative.

No industry can afford to cut itself off from 50 per cent of the talent pool



Photo: Schlumberger

Fossil energy is still the planet's main driving force, a fact that has led to the expansion of exploration activities all over the world, aiming at incorporating reserves that will sustain the increasing demand for oil and gas. As there is no 'easy' oil left, the industry has advanced, thanks to cutting edge technology, towards frontiers unimaginable only two decades ago. Today the exploration of hydrocarbons is undertaken in the most severe environments: in the frozen regions of the Arctic, in the offshore depths of the pre-salt layers in Brazil and in heavy oil and unconventional reservoirs onshore.

The information technology era has bestowed the necessary new tools upon the industry. However, highly complex technology in its turn demands new professional skills and expertise.

Escalating global demand, dynamic geopolitics and environmental concerns keep oil and gas prices relatively high, requiring increasing investment in the industry. However, the industry is growing so fast that it cannot hire the appropriate people to fulfil a wide range of new skilled positions as well as to cover the shortages that result from demographic changes.

Schlumberger Business Consulting's annual oil and gas HR benchmark surveys have consistently warned about the demographic transition: the so called "big crew change" that is now taking place. Indeed, half the

entire oil and gas workforce could be retired by 2015, according to Derek Massie, former senior vice president for human resources for Seadrill.

Such a change will bring about mass retirements in an ageing workforce and could lead to a permanent loss of capabilities, causing major increase in operating costs and, most importantly, affecting safety in the global oil and gas industry.

Therefore the great challenge lies in capturing, training and retaining enough human capital in the required time. The oil and gas industry has to find talents among the new generations and the so far overlooked female workforce.

The Y and Z generations

One of the main tasks of the industry worldwide is to conquer the new generations known as Y or Millennial (those born in the



1980s) and Z (born in the late 1990s). They have values that are different from those of their predecessors (Generation X), and their high awareness of social and environmental responsibility often leads them to perceive the oil and gas industry as dirty, dangerous and out-dated.

Generation Y has witnessed great technological advances. Connected to the world through the Internet, they are very interactive with, and open to, social networks. Multi-taskers with a sense of purpose and meaning, they praise work-life balance, and are always in a quest for dynamic, creative environments and challenging projects. They are highly attracted by new high-tech products and services.

An even stronger challenge is that of addressing future professionals who will join the labour market during this decade: Generation Z. Sedentary digital natives who were born among PCs, mobile phones, MP3 players and Internet connections, they do not know life without technology.

For these challenges to turn into opportunities, the oil and gas industry should leverage the features and preferences of young people of those generations through recruitment processes and training courses that can rapidly provide them with the required skills.

In a market that is struggling for talent, why would the industry overlook such a promising workforce as that formed by women? With the current talent environment, no industry can afford to cut itself off from 50 per cent of the talent pool. Women have been under-represented in the oil and gas industry at all levels. Effort is required from this male-dominated industry to become more receptive to women workers.

In order to get better gender balance, companies need to implement a new corporate culture, with values, structure, processes and everyday practices aimed at developing an attitudinal change in the long run. Diversity brings a different perspective, broader debates and improves the decision making process.

What can be done?

First things first: if the aim is attracting new talent, the industry should start by enhancing its reputation among stakeholders. Potential recruits must get to know the industry as it is – the way it strives to operate in an economically sound, environmentally friendly and socially responsible, not to mention its commitment

towards innovative processes and advanced technologies designed to overcome the formidable challenge of feeding the world with energy.

Strategic as it has become to the success of the industry as a whole, the human resources issue is to be handled as top priority by CEOs. Moreover, the search for innovative, effective human resources management goes beyond corporate frontiers and requires the combined commitment of different society stakeholders.

World Petroleum Congress Youth Forum

At the Brazilian Petroleum, Gas and Biofuels Institute (IBP), an institution that represents the national oil and gas industry, we are seeking to build up a generation of human resources to face the huge challenges brought about by a fast growing industry.

Various actions are being undertaken in parallel with both government and oil company initiatives as a starting point towards a more structured programme. We focus on three different groups: high-school and university students and young professionals.

For an early start, targeting the Z generation high-school students, IBP is organising events to make them acquainted with the oil and gas industry and the STEM subjects. In 2002 IBP created the Professional of the Future Programme and has since then been uninterruptedly focussing on the development of university students through their attendance and actual participation in renowned conferences and exhibitions such as Rio Oil & Gas, OTC Brazil and Rio Pipeline. Thousands of students have thus had the opportunity of studying oil and gas related subjects before attending the mentioned events.

With the same aim, in 2007 IBP set up a Youth Committee composed of young professionals up to the age of 35, from all sectors of the oil chain. This committee has fostered a series of actions to attract future leaders and support the development of their careers in the oil, gas and biofuels sectors. Among others, it promotes the Brazilian Meeting of Young Oil Industry Leaders, in partnership with associated companies.

A major IBP objective is to bring to Brazil for the first time the 5th WPC Youth Forum, another worthy example of a collaborative initiative from the World Petroleum Council that gathers the views and perspectives of the young people towards the oil and gas industry worldwide. ■