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The Upstream Oil & Gas Industry (the industry), along with every other segment of the economy, is facing a demographic shift that is changing the way companies must do business. In fact, the human capital shortage we are just beginning to experience today is poised to last for the next five decades and possibly beyond.

As a nation, we are experiencing the beginning of a demographic shift that presents a particularly strong challenge for continued economic growth in much of the country. Human capital, more than any other resource, is proving to be the limiting factor restricting this growth. As we look to the future of the upstream oil & gas industry, the issues presented by a serious human capital shortage certainly pose crucial questions regarding continued industry growth and sustainability.

The term “human capital” is more descriptive of our current situation than terms such as “labour” or “skills” shortage, both of which imply we need to train more people. The reality is that there simply are not enough people – human capital – to train in order to get the job done.

Two trends are driving this demographic shift and creating the human capital shortage. The first is our aging population and the second is our declining population growth. Together these trends are creating a deep-seated situation that threatens to limit continued growth well into the middle of the 21st century.

There is no escaping the fact that the population in Canada, as well as the rest of the world, is aging. The baby boomer generation is just beginning to retire with the real impact being felt in the next decade and peaking in 2025. Couple this with declining population growth and we are faced with a human capital shortage poised to last for decades.

On a world-wide scale we are seeing countries such as Brazil, Iran, Turkey and China experience fertility rates dropping below replacement levels. In Canada the population growth is forecast to drop from an already low annual rate of 1.1% to only 0.7% in the next two decades, of which 82% is forecast to come from immigration. Moreover, by 2011 100% of our population growth is forecast to come from immigration if low fertility rates persist.

This fundamental shift in human capital supply is already creating serious implications for industries and businesses across the country and is essentially changing the way companies must do business in order to survive, let alone grow.

Consequently, this means that labour market activities and organizational practices designed for an era of human capital surplus must be reviewed and realigned with an era of human capital shortage.

The principal limiting factor businesses face today is their ability to attract, engage and retain quality people. What differentiates success from failure is not access to financial capital, equipment or physical assets, since all of this can be secured on the international market rather simply; it's the ability to use them effectively. If a company lost all of its assets but kept the skills and know-how of its workforce it could be back in business relatively quickly. On the other hand, a company that lost its workforce while keeping its equipment would probably never recover.

The challenge then is to look beyond competing on a company to company basis and to look for solutions that will ensure the industry as a whole thrives and achieves sustained

future growth. Those solutions are closer at hand than may be apparent at first glance. While the industry faces a serious human capital shortage, many of the pieces needed to build the industry's future are already in place.

Enform, the merger of the Petroleum Industry Training Service and the Canadian Petroleum Safety Council, is a prime example of the industry's ability to communicate and collaborate. Nurturing this abundance mentality, rather than embracing a scarcity mentality, will serve to launch the initiatives and build the programs that will give companies in the industry the ability to compete for talent on a regional, national and international scale.

The Petroleum Human Resources Council of Canada (PetroHRC) is one organization that has specifically conducted projects studying the connection between training programs and industry needs. The purpose of these projects was to define strategies for easing the effects of the human capital shortage on the industry.

The document "National Alignment Strategy and Recommended Actions" produced by the PetroHRC in June 2005, identified gaps in the alignment of training programs with industry needs. These were then grouped into four distinct areas of focus:

Image: The image perception of the upstream petroleum industry is a barrier to student enrolment and prospective employee recruitment,

Industry Communication: Communication mechanisms between industry and training providers regarding program development and delivery are infrequent and inconsistent,

Partnerships: Formal partnerships between industry and training providers are required to enhance training program development and delivery,

Forecasts: Training providers require statistical staffing and skills forecasts to direct educational program development and delivery.

Elements of a youth strategy could include:

- Opening a dialogue with relevant groups such as school districts and educators to better understand their situation, resources and capacity;
- Branding the industry by developing a clear message about the benefits of careers in the upstream oil & gas industry as a valued career choice and
- Continuously communicating the job opportunities available in the industry with the youth of Canada through a related website and job board.

Specifically the industry could:

- Develop a communication strategy tailored to secondary students; parents of secondary students; School Districts and schools (especially teachers and career counselors);
- Offer training and support materials to Continuing Education coordinators and school administrators so they can effectively communicate the options the industry offers to young people;
- Utilize existing courses from organizations such as Enform and resources from organizations such as CERI, the Centre for Energy and others, to get pertinent information and training materials in the hands of students;
- Develop an oil and gas orientation program for educators (for example, the "Oil and Gas 101" course in Nova Scotia that was created specifically for secondary teachers);
- Work with school districts and educators to offer basic safety training as an option in high school, which could include H2S Alive, WHMIS (or Petroleum Safety Training), First Aid (with Transportation Endorsement), GODI, TDG.

- Develop partnerships that increase interaction between industry and high schools, for instance, team-teaching, industry mentorship program, guest speakers, and guided field trips such as Seismic In Motion and Project Heavy Duty;
- Provide learning materials that increase the emphasis on science subjects across the school curriculum (including Grades K-5, 6-9 and 10-12);
- Develop new materials and create links into standard curriculum for sciences and trades showing how various aspects of industry lead to a career;
- Offer interactive opportunities for students to visit job sites, take practicum positions or experience working environments in oil & gas.

Enform, together with the Petroleum Human Resources Council of Canada, would form a nucleus which can effectively represent industry interests, while promoting careers and delivering world class training. No formal relationship currently exists between the two organizations, so a first step would be to define their roles and to design a stable funding model for the PetroHRC. Whether this would be best accomplished through a strategic partnership, a joint venture or a merger requires further research and consideration.

While the human capital shortage presents distinct and serious challenges, the prospects for the Upstream Oil & Gas Industry will remain positive if a unified and coordinated approach is taken in developing the necessary solutions.

From the Thursday Files:

The most aggravating thing about the younger generation is that I no longer belong to it.

John Dryden