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Issue 17

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The Changing Face of
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Greetings

- CAPE is moving beyond sustainability testing to changing its organizational mandate. **More in this issue**
- Our last Annual General Meeting was held on Saturday November 26, 2011. **The 2012 AGM is scheduled for November 14, 2012 - More in this issue!**
- Our focus in the coming months will continue to be on connecting employers with our members. Watch out for this initiative by visiting our website regularly.
- Our membership has now grown to nearly 4000 direct members and is *increasing every day*.
- If you have recently moved or any of your contact details have changed, please update your information online or by calling us at 416 955 0563 or send us an email at Info@capeinfo.ca
- If you have any questions, please don't hesitate to email us at info@capeinfo.ca.

Multi-Profession Roundtable On Employment And Policy (MPREP)

Based on resolutions passed at the AGM 2011, CAPE has expanded its mandate to extend its services to other regulated professions. On January 31, 2012 MPREP through CAPE has successfully conducted a multi-stakeholder consultative place in the offices of the Ontario Medical Association with major health care stakeholders including representatives from the Ministry of Health and Long Term Care, HealthForceOntario, Ontario Hospital Association amongst others.

All participants gave a positive assessment to the CAPE Talent Integration Process deriving from its on-line, real-time competency skills gap analyzing and labour market trends reporting cloud technology.



CAPE petition to the Government of Canada
1000 SIGNATURES NEEDED (768 so far)
Fair Play for Canada's Foreign Trained
Engineers in the Public Interest! Support the
Petition. Go to

<http://www.gopetition.com/petition/44432.html>

Employment News

ENGINEERING - FOCUS ON EMPLOYMENT

From September 2012 CAPE is re- focusing solely on connecting its members with employers.

If you joined CAPE before March 31, 2011 Please fill in/update your portfolio at the CAPE website. This becomes part of a database that the employer can search in real-time using our new competencies screener. If you are a new member please join CAPE (this is free) and purchase the suite of seven employment and career planning tools to create your portfolio. If your portfolio matches the job requirements of an employer you will be referred to the Hiring Manager/Employer who will contact you directly.

IMPORTANT: For us to get employers interested we must have more of your completed portfolios on the database!

Help us to help you

Fill in your CAPE portfolio now! Go to

<http://www.capeinfo.ca/employment.php>

Member News

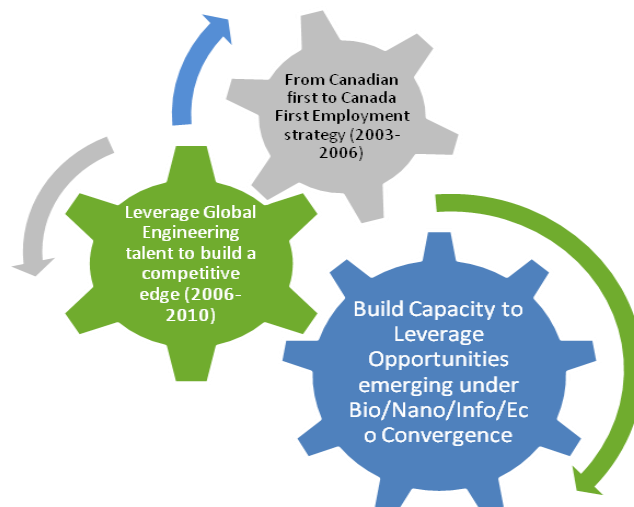
AGM 2011: CHANGING VISION OF CAPE

Upon incorporation in 2006, CAPE's aim was to help its members to reach their maximum potential by improving the quality of their lives by fully participating in the practice of engineering in Canada, contributing to their local communities, province and country as well as the world at large; maximizing the utilization of their engineering potential and to upgrade their knowledge and skills in keeping with evolving trends in engineering and sustainable human development.

Sadly, despite our valiant efforts over the past eight years **the plight of our members has not improved and many of us are still seeking meaningful employment.** This was the key point of discussion at our Fifth Annual General Meeting held on November 26, 2011 at the Ramada Hotel in Toronto and two key directions have emerged for CAPE's work as a consequence.

ADVOCACY

Advocacy has become an increasingly important component of CAPE's work and has now moved into the legal arena. To this end CAPE has consulted with Julia J. Martin, Barrister and Solicitor a lawyer with significant experience in the field of regulation of professions. Julia Martin made a presentation entitled "The Legal Implications of Current Regulatory Practices on Immigrant Engineers." Based on this Resolution number 4 was passed that stated: Julia Martin's presentation on The Legal Implications of Current Regulatory Practices on Immigrant Engineers should be posted on the CAPE website and the plan of action contained in it should be accepted and implemented by CAPE.



CONVERGENCE AND ADVANCEMENT OF ENGINEERING

Engineering is evolving and changing at a tremendous pace. The half-life of an engineer's knowledge is now estimated to be less than five years. These changes have resulted from the recent convergence of bio/nano/info/eco technologies that is opening new frontiers in engineering and driving human progress in powerful ways under globalization. Further under convergence of Nano/bio/information and cognitive science technologies (NBIC), previously separate scientific and engineering disciplines are merging (see knowledge article below). This phenomenon is creating new kinds of people who understand multiple fields in depth and can intelligently work to integrate them. CAPE has become the largest global engineering community in Canada, comprising nearly 4000 members (and growing) drawn from nearly 130 countries and across all engineering disciplines. It has also been encouraging members of other professions to join our community through the Multi-Profession Roundtable on Employment and Policy (MPREP). Unleashing this community's vibrant and collaborative potential is a major driver for the organization. As we have continued to build our institutional knowledge to keep up with the rapidly changing world of engineering under the NBIC convergence, a new vision is emerging that encapsulates the ideal world that CAPE members seek to lead and build.



THE WAY FORWARD

We are young but strong, resilient, forward-looking and sustainable organization. Now we must strengthen our advocacy to create awareness in the society at large that regulation of professions may not be the productive way to go forward and that professions must put public interest ahead of self-interests of professionals to generate innovation and create productivity for the advancement of Canada.

Our new vision requires CAPE to leverage the global skills of its members to enhance the global/international advancement and mobility of engineers and other professionals to make Canada a world leader in innovation.



With this in mind, At our AGM 2011, members resolved (Resolution 5) that under the extended mandate of CAPE to accommodate other professions under Convergence CAPE Council for Access to the Profession of Engineering should change its name to Council for Advancement of Professions (CAP).

NEW FACES AND CHANGES AT CAPE

CAPE management has undergone a major change in 2012 as shown below

			
<p>Gurmeet Bambrah PhD is now a consultant with CAPE will be moving on after serving CAPE for over 10 years</p>	<p>Sergy Kasyanov PhD, MPA has joined CAPE as the Chief of Stakeholder Relations, Outreach and Management</p>	<p>Razaq Ijaduola PhD has joined CAPE as Acting Chief of Operations and Information Technology</p>	<p>Shashi Vohora D.Phil has joined CAPE as the new Chief of Research</p>

OTHER PROFESSIONS- FOCUS ON STAKEHOLDER ENGAGEMENT

Under CAPE's latest community action research initiative focussing on Human Health Resources (HHR) in Ontario, a comprehensive literature review of the state of HHR planning in Canada, its jurisdictions and Ontario was carried out. This reviewed new developments in HHR practices and identified 117 HHR stakeholders. Of these stakeholders, 34 were federal and 83 were Ontario based. A framework categorizing these stakeholders as governmental, inter-provincial, regional, multi-professional, profession specific or other emerged from a multi-dimensional analysis. 40 stakeholders (4 from federal organizations) participated in the environmental scan as key informants and provided feedback on adapting the CAPE Talent Integration Process for health professions. 19 of them also participated in a Multi-Stakeholder Consultative Meeting held in Toronto on January 31, 2012 to validate the project hypothesis and develop a conceptual framework for a piloting the CAPE Talent Integration Process. This framework resulted in a pilot framework comprising a profession-specific pilot, a multi-profession pilot and a pilot gaps-driven bridge training program for health professions. A number of stakeholders including regulators, profession-specific and multi-profession associations and bridge training programs also expressed interest in joining the advisory committee and/or participating in the pilot project.

MEMBER INSURANCE PERKS

Being a CAPE member entitles you to access the preferred rates and discounts that have been negotiated by Rai Grant Insurance Brokers through the Waterloo Insurance Company. See how your combined insurance savings can off-set your CAPE membership cost, particularly when you combine your home and auto policies.

To obtain an automobile insurance quote, obtain home, condominium or tenants insurance or health insurance quotes please Contact Vikas Ramrakha by: Telephone: (905) 475-5800 ext. 270, Cell: (416) 558-3061 or E-mail: vramrakha@raigantinsurance.com

To obtain a business or professional liability quote, please contact Vikas directly.

In all cases tell Vikas you are a member of CAPE to take advantage of your preferred member benefits and to tailor your insurance policies to meet your unique coverage needs. For more information click on:

<http://www.raigrantinsurance.com/cape-members.htm>

ADVOCACY, CITIZENSHIP AND RIGHTS

CALL FOR ACTION

1000 SIGNATURES NEEDED (768 so far)

Support the CAPE petition to the Government of Canada requesting Fair Play for Canada's Foreign Trained Engineers in the Public Interest! If you have not done so already please sign this petition at the following Link

<http://www.gopetition.com/petition/44432.html>

We are looking to you to draw the attention of the public, your friends and potential politicians to this in the upcoming election using social media.

Technological Convergence and Implications for Engineers

By G. K. Bambrah PhD

Best-selling author, Thomas Friedman in his books entitled 'The world is flat' and "The world is flat 3.0" describes how unbridled technological and social changes have flattened the world. He argues that the influence of digital interconnectivity lets individuals reach around the world further, faster, deeper and cheaper. Individuals rather than corporations he argues now spearhead globalization inexorably integrating markets, nation-states, and technologies to a degree never witnessed before. The fall of the Berlin wall, evolution of Netscape, monumental investments in fiber optic cable, the dotcom boom, creation of common software platforms and open source code are enabling global collaboration and the rise of outsourcing, off-shoring, in-sourcing and supply chaining creating a flat world that is global, connected and web enabled geographically, spatially and temporally he says. This he argues has produced three huge economies – India, China and the former Soviet Union.

Now with manufacturing increasingly shifting to China, many services going to India, and agriculture increasingly moving to South America even more profound change is taking place. India and China are shifting focus to building new products. India has brought amazing innovation to the small car, mobile phone service, cataract surgery, and prosthetics areas. China has impressed the world with advances in electric car batteries, low cost solar energy panels, bullet trains, stealth aircraft, and space technology. Rapid evolution of high-quality engineering services with significantly lower labor costs in India, China, and Eastern Europe, raise serious questions about the global viability of the North American and Western European engineers, who must now produce several times the value-added to justify wage differentials. Recognizing this, President Obama issued a clarion call in 2011 to the American nation: "We need to out-innovate, out-educate, and out-build the rest of the world" he said setting off a trend followed by other G8 countries.

Furthermore the global economy is increasingly relentless in its pursuit of innovation through discovery. In 2005 Charles M. Vest, President Emeritus, Massachusetts Institute of Technology and National Academy of Engineering (NAE) member began to argue that relentless technological innovation and convergence were opening up two frontiers in engineering, each of which had to do with scale and each of which was associated with increasing complexity. These were the info-bio-nano frontier that had to do with smaller and smaller spatial scales and faster and faster time scales. The other was the systems frontier driving the world of energy, food manufacturing and communications. In January 2011, Dr A. P. J. Abdul Kalam, an eminent scientist and engineer, President of India from 2002 to 2007 and the chancellor of the Indian Institute of Space Science and Technology expanded on the above view adding that the convergence of technologies was giving rise to another frontier as globally the demand, was shifting towards sustainable systems that are technologically superior. This is the new dimension of the 21st century knowledge society he said, where science and environment go together. Thus he argued, the new age technological model would be a four way convergence - bio/nano/info/eco. Just as the digital convergence and mass digitization drove global change in the last two decades an industrial convergence of nanotechnology, biotechnology, information technology and new developments in cognitive science (NBIC) are now driving human progress. It is expected that this triad of technologies will provide unprecedented benefits and solutions to the future grand challenges facing humanity. This bioscience industry and technological convergence is becoming the blueprint for innovation and is expected to yield advances in critical areas ranging from sustainable health care and energy independence to food, water and climate.

As a consequence of the rapidity at which this convergence of technologies has taken place, the half-life of an engineer's knowledge is now estimated to be less than five years. This is why the National Academy of Engineering (NAE) in America is frantic about the urgency of engineering education reform. Over the past decade there has been a growing debate in the literature regarding the most appropriate strategies for the implementation of concurrent engineering – a way of bringing rapid updated engineering and technical solutions to product design and development process. The knowledge platform is a new approach that lends itself to concurrent engineering and is like an "intelligent library" that reports on, addresses and updates users on key elements of knowledge as these emerge. Creation of conditions for knowledge-based work is one of the biggest challenges of the 21st century according to Dr A. P. J. Abdul Kalam. In January 2011, Dr Kalam suggested that "With the capabilities developed in various parts of the world in the last several decades, we need to create innovative partnerships in world knowledge platforms to face the current challenges of economic turbulence and for the new vibrant and inclusive growth of the 21st century." CAPE has been a lead participant in testing one such knowledge platform. This is known as engineers360.net and can be accessed by all CAPE members

James J. Duderstadt President Emeritus, University of Michigan pulled together findings of various reports emerging since the 1990s concerning engineering, technology, innovation and the role of human capital in changing the nature of engineering practice and education. He noted that the implications of a technology-driven global economy for engineering practice are particularly profound. Both the info-bio-nano frontier and the mega systems frontier require highly interdisciplinary teams characterized by broad intellectual span rather than focused practice within the traditional disciplines. Engineers have to be capable of working with different cultures, be knowledgeable about global markets and build competitive enterprises as the distinction between competition and collaboration blurs. Engineering is being challenged to imbed societal environmental, cultural, and ethical issues he argues. More recently William Sims Bainbridge, co-director of Human-Centered Computing at the National Science Foundation (NSF) and co-editor with Mihail Roco of several NSF publications on NBIC has concluded that scientific education needs radical transformation from elementary school through post-graduate training. Convergence of previously separate scientific and engineering disciplines “cannot take place without the emergence of new kinds of people who understand multiple fields in depth and can intelligently work to integrate them,” states Bainbridge. It is this consideration that is driving CAPE to expand its mandate to work with other regulated professions.

CAPE INFO is published four times per year and is the newsletter of:

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