

THE COUNCIL FOR ACCESS TO THE
PROFESSION OF ENGINEERING

ENGINEERING ACCESS PROJECT

FROM 'CANADIAN FIRST' TO 'CANADA FIRST'
**A MULTI-STAKEHOLDER EMPLOYMENT STRATEGY
FOR IMMIGRANTS WITH ENGINEERING
BACKGROUNDS**

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The Council of Agencies Serving South Asians (CASSA) as Trustee of The Council for Access to the Profession of Engineering (CAPE) provided the management oversight for the 'Engineering Access' Project. While the process for the production of this employment strategy is owned by CAPE, the Strategy is a joint effort of the multi-stakeholders who were represented in the meetings from which the strategy evolved.

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FORWARD

Our survey of over 1000 immigrants with engineering backgrounds (IEBs) reveals that only 15% are in engineering related employment, while most of us are severely unemployed. This survey also shows that we have higher levels of educational attainment and that we bring extensive experience and knowledge of engineering from around the world to Canada.

Although CAPE was first established in 1993 it is only now that we have of age. As we enter the final stages of becoming an independent membership organization for immigrants with engineering backgrounds we thank all those who have supported us to get here. In particular two agencies stand out. Skills for Change (SFC), where we were housed for many years in our initial development and The Council of Agencies serving South Asians (CASSA) who are our trustees for the 'Engineering Access' Project. We also acknowledge the funding support from Human Resources Skills Development (now part of Human Resources and Social Development) and Canadian Heritage.

As we go forward our vision is to help our members to improve their quality of life by reaching their highest potential through contribution to the Canadian economy. We are confident that our members are able to offer more benefit to their communities, provinces, Canada and the world through their engineering experience, knowledge and engineering. We will do this by ensuring we utilize our skills and training as well by upgrading our knowledge in keeping with emerging trends in engineering and sustainable human development.

Since June 2003 when 'Engineering Access' was initiated, we have engaged in dialogue and built partnerships with a multitude of stakeholders including various levels of government, employers, professional associations, regulatory bodies, credential recognition services, education providers, community-based engineering associations, service providers and trade unions amongst others. . We extend our gratitude to all these partners for being a part of our multi-stakeholder consultation process and for jointly developing the employment strategy we are launching today.

We also invite our partners to join us as we continue strengthen these partnerships even as we build new ones to achieve our vision to promote the full employment of our members into skills commensurate occupations and maximize our contributions to building this nation.

Finally we are most grateful to Honourable Chris Bentley, Minister for Training Colleges and Universities for agreeing to launch our forward looking multi-stakeholder driven employment strategy for immigrants with engineering backgrounds as our nation moves towards building a cohesive, inclusive and globally competitive engineering workforce.



Saeed Ziaee P.Eng
First Interim President
Council for Access to the Profession of Engineering (CAPE)
15 May 2006

BACKGROUND

Changes in immigration policy

In 1986, the Canadian immigration points system was adjusted to attract skilled workers and the formerly instituted system of pre-arranged employment ceased to be a condition for immigration to Canada. This resulted in a demographic shift from traditional to non-traditional source countries, such that the numbers as well as diversity of skilled immigrants to Canada increased significantly.

Between 1986 and 1997 there was a ten fold increase in the number of immigrants with engineering backgrounds coming to Canada.ⁱ Over 12,000 skilled worker principal applicants in 2000 were engineers according to statistics released by Citizenship and Immigration Canada (CIC). Thus, 72% of the skilled worker principal applicants in 2000 belonged to the engineering occupation.

The Canadian Council of Professional Engineers (CCPE) reports that the annual number of engineering degrees (graduate and undergraduate) granted by Canadian universities was around 10,000 during the second half of 1990s. Thus, the annual supply of immigrant engineers in 2000 exceeded the domestic supply by a significant amount.

In terms of provincial dispersion, Ontario has tended to attract the majority of these skilled immigrants, as it is seen as Canada's economic engine. Immigrants with engineering backgrounds in the 1990s-2000s have arrived mostly from Asia (39% from China during 2000) with smaller but significant numbers arriving from Eastern Europe.

The Engineering Access Project

As expressed earlier, during the period 1996-2000, engineers stand out as the largest occupational group in terms of number of landings. During this period, anecdotal evidence also began to emerge indicating that immigrants with engineering backgrounds (IEBs) were not being able to access their profession and were facing high rates of under and unemployment. Between May 2004 and January 2006, under the "Engineering Access" project, the Council for Access to the Profession of Engineering (CAPE)ⁱⁱ under the trusteeship of the Council of Agencies Serving South Asians (CASSA) surveyed over 1000 immigrants with engineering backgrounds across Ontario.

The Engineering Access Project Survey of over 1000 immigrants with engineering backgrounds (IEBs) revealed that only 15% were in engineering related employment, while the majority were severely unemployed.

This survey confirmed anecdotal evidence that although immigrants with engineering backgrounds (IEBs) had higher levels of educational attainment and an average of over twelve years of working experience, only about 15% were in engineering related employment while the majority were severely unemployed. Engineering employers, recruiters, community associations and service providers were also engaged under this initiative. The survey findings were published in January 2000 and are available online at www.capeinfo.caⁱⁱⁱ.

In the year 2000:

- 72% of skilled worker principle applicants self-identified as engineers
- 39% of them arrived from China
- Ontario attracts the majority of immigrants, up to 60% of all immigrants, annually

Concurrently with this survey, a *systematic, integrated and strategic approach (SISA)*^{iv} particularly suited to community action research was adopted to investigate how this situation came to transpire. Findings of this research are reported in the CERIS Working Paper No. 41 published in November 2005.^v These reveal that barriers facing IEBs in accessing their profession in Ontario are multi-factorial and require a concerted and coordinated effort involving different stakeholders to address them.

Consequently a constructive engagement approach was adopted to establish multi-stakeholder roundtable consultations in Ontario through the launch of the Council for Access to the Profession of Engineering (CAPE) as a membership-based organization on October 16, 2004. This employment strategy is the outcome of a series of multi-stakeholder roundtable consultations held between October 2004 and March 2006.

Table 1: Engineer Access Project Survey results

Educational Attainment of Immigrants with Engineering Backgrounds	No. of respondents	Percentage of Total
Ph.D.	42	4.26%
Masters	276	28.02%
Bachelor	796	80.8%
Diploma	103	10.46%
Others	21	2.13%

Years of Engineering Experience of Immigrants with Engineering Backgrounds	No. of respondents	Percentage of Total
0 to 10	491	48.95%
11 to 20	405	40.38%
21 to 30	97	9.67%
> 30	10	1.00%
Average years:	12.11	100%

Income range of employed Immigrants with Engineering Backgrounds in CAD	Percentage in range
Less than 10000	12%
10000 to 20000	18%
20000 to 30000	18%
30000 to 40000	16%
40000 to 50000	14%
50000 to 75000	18%
75000 to 100000	4%
Over 100000	0%

CONSTRUCTIVE ENGAGEMENT AND THE MULTI-STAKEHOLDER CONSULTATIVE APPROACH

Since June 2003 when this project was initiated, CAPE has engaged in dialogue and built partnerships with a multitude of stakeholders including various levels of government, immigrants with engineering backgrounds, employers, professional associations, regulatory bodies, credential recognition services, educational providers, community-based engineering associations, service providers and trade unions amongst others. These are our partners in developing the employment strategy presented in this report.

The multi-stakeholder roundtable consultation process adopted under the *systematic, integrated and strategic approach (SISA)*^{vi} involved:

- Consultative and strategic planning meetings to define the direction and vision for CAPE and the ‘Engineering Access’ project
- Focus groups for employer and immigrant outreach and needs assessments
- Leadership development to build a collective and effective voice, and a community coalition to represent immigrants with engineering backgrounds
- Multi-stakeholder roundtables to consult and develop action strategies to integrate immigrants with engineering backgrounds into the Ontario workplace and economy
- Multi-stakeholder forums to disseminate information about the purpose, approach and findings of this project to all stakeholders and the public.

Through the first multi-stakeholder forum held on October 16, 2004 CAPE initiated constructive engagement by inviting a number of important stakeholders to present their perspectives on issues relating to the integration of immigrants with engineering backgrounds into the Ontario engineering workplace and in meaningful occupations. Proceedings of this event are available online at www.capeinfo.ca. These stakeholders were then invited to form a roundtable to develop a unified employment strategy for immigrants with engineering backgrounds settling in Ontario.

A series of six multi-stakeholder roundtable meetings have been organized between October 2004 and May 2006, as detailed in Table 2, with the objective of developing and launching a forward looking multi-stakeholder driven employment strategy for immigrants with engineering backgrounds coming to Ontario. Baseline issues identified at the first multi-stakeholder forum formed the agenda for the first roundtable on April 6, 2005.

Table 2- Multi-stakeholder Roundtables

RT	Date	Title	Focus
1	Apr 6, 2005	The Inevitability of Change	Extensive matrix of employment strategies favoured by various stakeholders
2	Jun 30, 2005	Integrating Stakeholder Employment Strategies and consensus building	Building consensus to derive a matrix of selected employment strategies or solutions that all stakeholders collectively felt could help integrate IEBs into meaningful engineering occupations in Ontario
3 4	Oct 20, 2005 Feb 10, 2006	Defining stakeholder roles and responsibilities	Developing activities/actions and partnerships to implement the strategies in the matrix
5	Mar 31, 2006	Determining outcome and performance measures	Defining expected outcomes and performance measures
6	May 18, 2006	From ‘Canadian First’ to ‘Canada First’	Public Launch of the Employment Strategy

CREATING A COHESIVE, INCLUSIVE AND GLOBALLY COMPETITIVE ENGINEERING WORKFORCE IN ONTARIO

Global competition in manufacturing industries

The Governor of the Bank of Canada^{vii} has stated that the most obvious adjustment for Ontario under the globalization framework is the transformation of manufacturing processes around the world, as low-cost, highly efficient capacity is built in Asia creating tremendous competitive pressure on industries that have traditionally been mainstays of the Ontario economy. These include automobiles and parts, other transportation equipment, light manufacturing and increasing pressure on industries such as steel and heavy manufacturing.

Higher energy costs in the years ahead is a major global issue calling for adjustment from Canada and Ontario, which are energy-intensive by world standards. The blackout of August 2003 was a spectacular example of the need to have adequate and failsafe electricity supplies. Further adjustments will be fuelled by greater demand from the booming economies of Asia for non-energy commodities such as nickel and iron ore and the significant global efforts to find new sources for improved processes to extract these.

Service industries

The Governor of the Bank of Canada^{viii} has also remarked that services which were once thought to be non-tradable are becoming open to worldwide competition largely as a result of changes in technology bringing Ontario's service industries face to face with increased competition from new suppliers, such as India's burgeoning information technology and business services industries.

Ontario needs to improve labour market efficiency and quality of its human resources through appropriate investment by individuals, employers and governments.

Ontario's service sector's greatest challenge will be from the continued consolidation within financial services industries around the world, which is creating competitive pressure within an industry that is of vital importance to the Greater Toronto Area.

Financial services companies are concentrated around Toronto and the finance, insurance, and leasing sector represents almost 15 per cent of the provincial GDP. Increasing Ontario's industrial productivity and market efficiency will be the key to retaining our competitive position in the world. On a more positive note, changes in the global economy are creating income and wealth in China and India, increasing the demand for goods and services from abroad making these attractive emerging markets.

Ontario's challenge

In order to position Ontario to meet the global challenges facing us over the medium term, the first area of focus should be to plan for the inevitable economic adjustment that will be needed to improve the efficiency of labour markets and the quality of Ontario's human resources through appropriate investment by individuals, employers, and governments.

Ontario continues to under invest in processes to integrate immigrants into the economy, despite a well established correlation between human capital and productivity.

The second area of focus should be to have policies in place that help to smooth the adjustment. The choices Ontarians make in the years ahead will determine our ability to meet the challenges thrown at us by this changing world economy, and to seize the opportunities that the growth in world

markets will bring. Our province has tremendous human and natural advantages which need to be harnessed in the coming years^{vii}

It is well recognized amongst economists that the level of education attained across the workforce is an important determinant of the “quality” of an economy’s human capital and analyses reinforce the positive correlation between productivity and wages.^{viii} Yet Ontario continues to under invest in processes to integrate immigrants with high levels of education into our economy, even though immigration gives Canada a competitive edge through its highly educated immigrants such as those with engineering backgrounds.^{ix}

FORWARD LOOKING STRATEGIES: FROM “CANADIAN FIRST” TO “CANADA FIRST”

In 2000, Gordon H. Maynard^x while making a presentation on “The New Economy - Strategies for Importing Workers and Executives” first articulated the fact that “Canada is in the midst of a transition of focus from “Canadian First” to “Canada First”. This aptly captures the paradoxes surrounding globalization and the emergence of the General Agreement on Trade and Services (GATS) and the North American Free Trade Area (NAFTA). These agreements open doors to foreign skilled workers in specific occupations to meet demands for borderless access to both the global market place and the global labour pool, of which process immigrants with engineering backgrounds are an integral part.

Historically, the protection of the domestic labour force has been a key concern of governments. Through the 19th and 20th centuries, the industrial revolution led to widespread worker dissatisfaction such that labour movements were strengthened. The industrial revolution also coincided with the growth of national economies resulting in national laws and regulations that immensely improved working conditions so that the standard work day was reduced from 12 (or even 16) hours to 8 hours; health and other benefits were extended to workers, and at the same time the prices of consumer goods continued to fall. Traditionally therefore, governments have tended to protect their domestic labour force from external competition.

There is enormous pressure to facilitate borderless access to both the global marketplace and labour pool, of which IEBs are an integral part.

Canada is in the midst of a transition of focus from “Canadian First” to “Canada First, Maynard, 2000

In today’s free marketplace however, technology-driven increases in productivity lead to new kinds of products and lower priced goods rather than shorter work weeks or higher wages. Today’s technology-based revolution is accompanied by the growth of the global economy so that yesterdays’ national laws are not suited to today’s labour market.^{xi} Borderless access to the global marketplace and labour pool demands that governments move beyond protection of the domestic labour pool to embrace competition from foreign workers.

In order to achieve this change in focus, Ontario and Canada, need to make a transition to from the traditional ‘Canadian First’ approach to a “Canada First” model to create a cohesive, inclusive and globally competitive workforce¹. The forward looking multi-stakeholder employment strategy for immigrants with engineering backgrounds settling in Ontario emerges from a broad public consultation process that offers the potential to enable this transition from “Canadian First” to “Canada First” for the engineering profession in Ontario.

PROPOSED STRATEGY TO PRODUCTIVELY EMPLOY IMMIGRANTS WITH ENGINEERING BACKGROUNDS (IEBS) INTO THE ONTARIO ECONOMY

The multi-stakeholder strategy derived from these consultations comprises three components as summarized in the table below. Key strategies are outlined in this document and can be read in conjunction with the detailed proceedings of roundtable outputs that accompany this strategy and that are available online at www.capeinfo.ca.

To kick off the development of a comprehensive multi-stakeholder driven employment strategy for IEBS, the rest of this report elaborates on the action plan derived from the roundtable consultations. The action plan breaks down strategies into the three major components of Systemic Change, Labour Market Strategies and Support Strategies.

Table 3 - Action Plan Outline

<i>I</i>	<i>Systemic Change</i>	Outline strategies related to process changes, licensing, mobility and accreditation , standards and regulations and redefining the role of government
<i>II</i>	<i>Labour Market Strategies</i>	Informed decision making through the dissemination of accurate, reliable and up to date labour market information and to tackle employer risk adversity
<i>III</i>	<i>Support Strategies</i>	Outlining the roles of communities and networks, education, training and empowerment, employers and new economic realities

Within each of these sections, there are sub-sections, and specific strategies within these sub-sections. The table below captures this for easy perusal.

Table 4 - Action Plan Breakdown

<i>Major Sections</i>	<i>Sub-Sections</i>	<i>No. of Strategies</i>
<i>Systemic Change (I)</i>	a) Process Change	3
	b) Broader Public Consultation	2
	c) Licensing, Mobility and Accreditation	3
	d) Bridging Knowledge Gaps	7
	e) Standards and Regulation	2
<i>Labour Market Strategies (II)</i>	a) Labour Market Information	1
	b) Labour Market Participation	7
<i>Support Strategies(III)</i>	a) Community Network and Support	2
	b) Community Based Education and Training	1
	c) Employers, Empowerment and Economic Realities	2

I. STRATEGIES FOR SYSTEMIC CHANGE

a) Process Change

The creation of a process from pre-immigration selection and information, to settlement into relatively suitable employment for immigrants with engineering backgrounds (IEBs) has been under extensive discussion. This process must include employment support for IEBs and it should not overlook the need to define equivalency criteria for foreign credential recognition and experience evaluation.

i) Creation of a seamless process from pre-immigration to settlement into skills commensurate employment for IEBs

- *Recommendation:* CAPE having proved to be an effective, legitimate and collective voice for IEBs in Ontario should work closely with Professional Engineers Ontario (PEO), Ontario Society of Professional Engineers (OSPE) and the Canadian Council of Professional Engineers (CCPE) in developing the frame of reference for this seamless process.
- *Key movers and partners:* Development of this frame of reference for a seamless process should be led by CAPE (which is recognized as the legitimate voice for immigrants with engineering backgrounds) and PEO, CCPE and OSPE as well as organizations such as the Human Resources Professionals Association of Ontario.
- *Outcome and performance measures:* Baselines established for IEB access to engineering in Ontario, a legitimate voice and resource centre established for IEBs and a screened pool of IEBs identified that can be integrated into the Ontario Engineering workforce. The number of IEBs who find engineering employment and the rates at which they are retained in these positions will be the measure of performance of labour market participation.

ii) Engage all stakeholders to have a shared vision and to work to build a unified constructive strategy to achieve coherence and success

- *Recommendation:* Public consultation processes must be broadened to engage all stakeholders, including employers, regulators, education, training and immigration services sectors, and immigrants with professional backgrounds.
- *Key movers and partners:* CAPE should continue to sustain the multi-stakeholder roundtable but focus on building credibility and the capacity of the roundtable to address specific issues.
- *Outcome and performance measures:* Data collection and information build-up, sustainability of the roundtable and its credibility measured through participation and interest in the roundtable.

iii) Influencing immigration policy so that it takes into account the challenges faced by IEBs

- *Recommendation:* The points system must be revised by CIC to reflect the realities of economic trade/demand.
- *Key movers and partners:* Citizenship and Immigration Canada (CIC)
- *Outcome and performance measures:* Demand/supply balance in number of immigrants intending to work as engineers in Ontario.

b) Broader Public Consultations

Policy changes must occur to address systemic issues and take into account changing labour market realities and environmental, economic and social sustainability in addition to the demographic needs of Canada; these should be the driving force for change. Stakeholders need to carve out new roles in response to the needs of IEBs, employers and others. Changes must begin from within relevant institutions. Coordination and clarification of organizational roles needs to be strengthened through broader public consultation so that both newcomers and policy makers are clear as to which role each organization fulfills.

i) A shared vision formulated by engaging all stakeholders including all levels of government, should be the driving force for systemic change. Responsibility should be taken for supporting the IEB through the full settlement process until he or she is in a skills commensurate employment position. (Decision-making processes)

- *Recommendation:* CAPE should strengthen and sustain the multi-stakeholder Roundtable consultation process to sustain a shared vision.
- *Key movers and partners:* Multi-stakeholder Roundtable
- *Outcome and performance measures:* Number of participants and interest in the roundtable and sustenance of this number and interest.

ii) Governments must take the lead on recognizing that policy at all levels aligns itself to labour market realities and practices; and aim to forge transparent and accountable relationships with other stakeholders to build a better and more inclusive Canada where underutilization of IEB skills is addressed appropriately. (Implementing decisions)

- *Recommendation:* All decisions to invest in engineering services, outputs or manpower should be through sustainability based selection.
- *Key movers and partners:* The Sector Councils should take a lead in defining the sustainability criteria for investments and PEO should lead in translating this into the selection criteria for engineering services in consultation with CCPE, OSPE, CEO (Consulting Engineers of Ontario) and CAPE.
- *Outcome and performance measures:* Definition of sustainability-based selection criteria for engineering services and the number of Sector Councils engaged.

c) Licensing, Accreditation and Mobility

Issues facing immigrants with engineering backgrounds trying to navigate through the licensing and certification processes include systemic barriers such as ‘reserved titles’ and ‘Canadian Experience’ as well as mobility. Accreditation services, employment support or bridging programs need to be reviewed to address these.

i) Since the majority of Engineers do not require a P.Eng license to enter the engineering workplace, focus should be on skills commensurate employment.

- *Recommendation:* Initiate research to identify the range of occupations that will utilize the education, experience and skills of IEBs without necessarily pulling them into the licensing process.
- *Key movers and partners:* CAPE should undertake this on an action research basis.
- *Outcome and performance measures:* Survey of employers and preparation of database of skills commensurate opportunities and production of the research report.

ii) The reservation of the title ‘Professional Engineer’ is essential to protect the public. However reserving the title ‘Engineer’ strips immigrants with engineering backgrounds of the credentials that formed the basis of their admission to Canada and locks them out of the profession. This is a systemic issue that needs to be addressed.

- *Recommendation:* This must be addressed as a systemic issue.
- *Key movers and partners:* PEO, Ministry of Attorney General and CAPE
- *Outcome and performance measures:* Regulatory review

iii) Inter-provincial and international mobility through cross-jurisdictional agreements on accreditation to benefit both professional engineers and immigrants with engineering backgrounds need to be developed at the national level in coordination with the provinces.

- *Recommendation:* There is merit to influencing provincial regulators to recognize existing Mutual Recognition Agreements (MRA) established by CCPE and extending these to other countries with priority given to countries from which the majority of IEBs have been originating in recent years.
- *Key movers and partners:* PEO and CCPE
- *Outcome and performance measures:* Increased mobility of professional engineers and immigrants with engineering backgrounds.

d) Bridging Knowledge Gaps

Increasing the understanding of licensed engineers and engineering employers in Ontario of international engineering practices, credentials and professional development programs is critical. Global competency based models of practice could be explored in Ontario in order to achieve this. Bridging and mentoring are viewed as positive mechanisms to address the knowledge gaps for both IEBs and engineering employers.

However currently the bridging and training discourse centres on an assumption of ‘deficiency’ of IEB credentials and experience when compared to engineers trained in Ontario. This assumption is the foundation of the bridging, education and training programs for IEBs, which do not specifically take into account the skills and experience of IEBs and are not tailored to improving or upgrading their skill sets.

Core competencies for engineers should be defined clearly so that an objective comparison of these with international experience based competencies can create better understanding of the unique features that Canadian Experience may provide. These will also help identify what the experience of IEBs can contribute to their new country of adoption. Further bridging programs must have a ‘buy in’ from employers and the regulators as well as IEBs to ensure that the requirements for ‘Canadian experience’ are being met through these programs. Unless employers are actively engaged in identifying the core competencies, bridging and accreditation processes, they will continue to be risk averse with regards to hiring immigrants with engineering backgrounds.

Employer specificities and needs must also be investigated, so that skill deficiencies can be confirmed, and knowledge gaps that need to be bridged can be defined adequately. A proper evaluative mentoring program will allow employers to screen for risk as well as provide IEBs with the networks required to increase their productivity.

i) Investigate the gap between employer needs and IEB skills and experience

- *Recommendation:* Clear skills gap analysis needs to be conducted between Ontario engineering employer skill sets or needs and IEB skill sets. Gaps found can be addressed upon establishment.
- *Key movers and partners:* CAPE in partnership with PEO, OACETT (Ontario Association of Certified Engineering Technicians and Technologists), CCPE
- *Outcome and performance measures:* Defined competencies to evaluate experience of those applying for an engineering license or position in Ontario.

ii) Create an objective tool for assessing IEB skills and experience

- *Recommendation:* Information relating to the skill sets of engineers in Ontario needs to be collected for comparison to the skill sets of IEBs so that an appropriate skills gap analysis, can be performed and used to modify the content of training if necessary.
- *Key movers and partners:* PEO, OACETT in partnership with CAPE
- *Outcome and performance measures:* Competency-based experience assessment tool is developed. Equivalency can be established on the basis of clearly defined engineering competencies.

iii) Increase awareness amongst engineers and engineering employers of the global credentials and experience of IEBs, and provide employers with the criteria that are used to grade IEBs for licensing related experience requirements.

- *Recommendation:* Introduction of education for licensed engineers on globalization, international credentials and practices in engineering in comparison to Canadian engineering practices, to identify the constituent elements of the one year Canadian experience to be acquired by IEBs under their supervision. CAPE can support this through knowledge sharing with relevant stakeholders.
- *Key movers and partners:* Ontario Society of Professional Engineers
- *Outcome and performance measures:* Licensed Engineers became less averse to foreign training and experience, Number of licensed engineers taking up the education.

iv) Work with strategic partners to develop bridging and mentoring programs geared to bridging identified gaps between employer needs and IEB credentials and experience towards skills commensurate employment.

- *Recommendation:* Focus of bridging programs and mentoring should be on employment rather than licensing. Guidelines need to be developed for multi-stakeholder inputs into the content definition of these programs.
- *Key movers and partners:* CAPE multi-stakeholder roundtable
- *Outcome and performance measures:* Production of guidelines

v) Set up proper mentoring and bridging programs for IEBs

- *Recommendation:* Bridge training should be transformed into subsidized learning, based on defined core competencies and knowledge to be acquired by IEBs. CAPE should help define coaching of IEBs tailored to their profession in Canada. Further, a limited core competency comparison between Canada, India and China (primary source countries for IEBs) should be attempted as a pilot project.
- *PEO, recruiters and employers preferred to put this strategy on hold.*

vi) Engage employers actively in defining mechanisms such as the accreditation process

- *Recommendation:* Employers should be engaged in providing probationary employment to help IEBs to attain the core competencies they lack and the government should support the employer by meeting the liability insurance for the IEB for this probationary period.
- *PEO, recruiters and employers preferred to put this strategy on hold.*

vii) Government should budget for bridging and mentoring programs on the basis of investment returns evaluated on the basis of employment outcomes for the participants in these programs.

- *Recommendation:* Government approaches to funding IEB targeted initiatives should evolve to those of return on investment based on employment outcomes and resource decisions should incorporate multi-stakeholder consultation.
- *Key movers and partners:* Federal, Provincial and Local Governments
- *Outcome and performance measures:* Cost effective job placement programs for immigrants with engineering backgrounds, Cost per job placement.

e) Standards and Regulation

Subsidized work placements were not viewed as a promising practice unless these were specifically recognised by the regulators and employers to be part of the formal accreditation process or by employers for the purposes of bridging specific skills gap such as understanding local codes of practice and regulation. Since the training of most engineers gears them to pick up knowledge on codes and practices in different locations rapidly through self-learning, if they have access to the Ontario codes of practice and regulations they should be able to learn these quickly on the job. Funding of work placements should be subject to employment outcome assessments.

PEO stated that it operates under public statute which does not lend itself to the recognition of internships as the legitimate one year experience under a licensed engineer required of IEBs. It was pointed out that favour also must be found for internships amongst employers if these are to be recognized as part of the licensing requirements. PEO also made a presentation on proposals that are emerging regarding this issue.

Lack of knowledge on the workplace health and occupational safety regulations in Ontario among IEBs should be addressed.

i) Negotiate the viability of internships equating with the PEO licensing requirements

- *Recommendation:* The participants recommended that this issue is a systemic one and should be addressed as such.
- *Key movers and partners:* PEO, Employers
- *Outcome and performance measures:* Internship programme instituted, Number of interns.

ii) Provide mandatory health and occupational safety training

- *Recommendation:* Introduction of a compulsory and discipline specific health and occupational safety training module for different engineering disciplines.
- *Key movers and partners:* WSIB and CAPE
- *Outcome and performance measures:* Number of IEBs trained

II LABOUR MARKET STRATEGIES

a) Labour Market Information

A constructive and comprehensive information system is needed that catalogues current information resources and includes information on employment options, realities and skills commensurate employment opportunities for IEBs. We need to redesign the way information resources are shared and coordinated between IEBs, CAPE and key stakeholders including governments, regulatory bodies, professional associations, employers, sector councils, Chambers of Commerce, service providers, educational institutions amongst others.

i) An agency must be vested with the responsibility of providing coordinated, accurate and reliable settlement and employment information to the immigrants with engineering backgrounds from pre-immigration to settlement into a skills commensurate job.

- *Recommendation:* A system is needed to clarify information and increase effective coordination between different information sources and key stakeholders. Further, this portal should coordinate between stakeholders so as to give the most relevant information without duplication. This information system should include an engineering and skills commensurate opportunities portal.
- *Key movers and partners:* CAPE in partnership with other stakeholders.
- *Outcome and performance measures:* Different information portals should converge into a single point of information contact for IEBs.

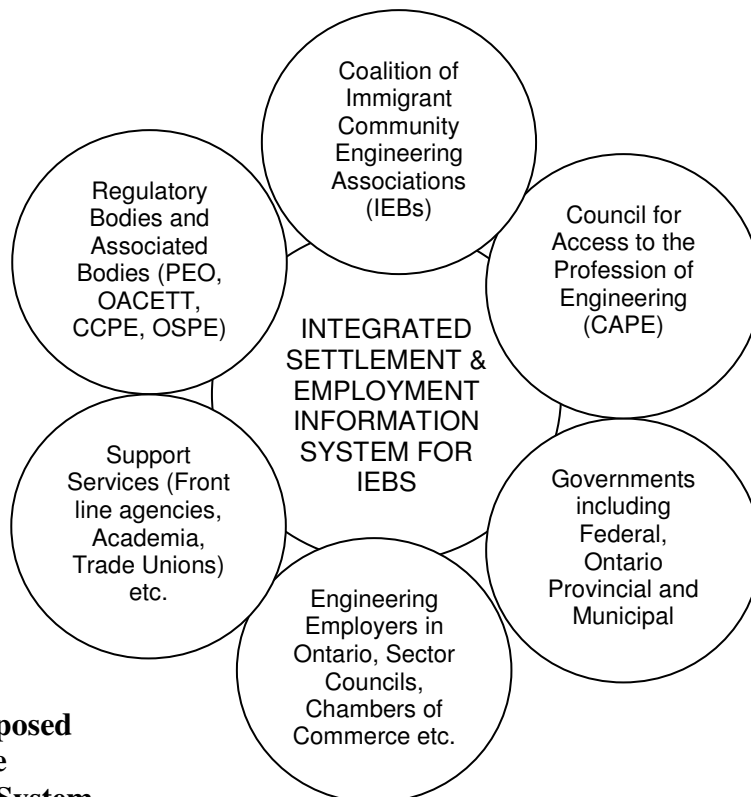


Chart 1: Proposed Players in the Information System

b) Labour Market Participation

Employer specificities and needs must also be investigated, so that skill deficiencies can be confirmed, and gap analysis can take place. This will help to provide better information to immigrants, as well as better tailoring of existing skills to match employer needs.

More discussion needs to happen around linking immigration to effective utilization of the skills and experience of immigrants with engineering backgrounds. The possibility of a labour market driven immigrant recruitment mechanism such as the H1B style Visa that occurs in the US should be studied.

Immigrants with engineering backgrounds should be utilizing their knowledge and experience in skills commensurate jobs while increasing their employability. Small and Medium Enterprises (SMEs) are key employers in the economy but are particularly risk averse as they do not have much information about engineering skills in other countries.

More public awareness and real commitment from different levels of management in companies is needed to understanding IEB skills and experience. Executives and human resource practitioners need to be engaged to lead with a vision of globalization and global competitiveness through merit-based hiring rather than 'Canadian First' hiring.

i) Investigate the possibility of having a US style H1B system of Visas for professionals based on the needs of employers

- *Recommendation:* The participants recommended that there is some merit to this suggestion and it should be investigated further.
- *Key movers and partners:* Citizenship and immigration Canada
- *Outcome and performance measures:* Standing Committee deliberations

ii) Encourage creative ways to increase employability of IEBs

- *Recommendation:* IEBs must identify and target multi-national companies as well as SME's to create targeted and engineering job specific resumes. CAPE's resume builder that was launched in December 2005 might be the kind of tool necessary and that can be refined to meet the needs of IEBs as well as employers.
- *Key movers and partners:* Service providers in partnership with CAPE
- *Outcome and performance measures:* IEBs are employed in multi-national companies providing engineering services in their countries of origin. Number of IEBs employed in these multi-national companies.

iii) Engage executive officers to create a system where they are more involved in promoting utilization of IEBs skills.

- *Recommendation:* Spaces need to be opened to bring together sector councils, Chambers of Commerce, employer associations and employers, at which IEBs can make presentations to make SMEs aware of the potential to use IEB skills and experience. A longitudinal survey of SMEs must be carried out first.
- *Key movers and partners:* Employment services providers such as ACCES, Consortium of Agencies Serving Internationally Trained Persons (CASIP) etc
- *Outcome and performance measures:* Number of Agencies engaged, Number of IEBs hired by SMEs, Longitudinal Survey of SMEs

iv) Manage and reduce risk adversity of employers

- *Recommendation:* Professional engineers in Ontario need to learn about engineering practices and education in other countries to benefit from globalization.
- *PEO, recruiters and employers preferred to put this strategy on hold.*

v) Address lack of knowledge of Ontario codes of practice and regulations among IEBs

- *Recommendation:* Effort should be made to centralize information on codes of practice and regulatory knowledge and make this available to IEBs.
- *PEO, recruiters and employers preferred to put this strategy on hold.*

vi) Define and market the IEB education and experience advantage to change mind-sets.

- *Recommendation:* A balance exists between tackling employer risk adversity and lack of information, and empowering IEBs to create jobs for themselves in areas of emerging engineering disciplines, and this balance needs further research.
- *Key movers and partners:* CAPE in partnership with Universities
- *Outcome and performance measures:* Research report and community action plan.

vii) Train human resources, job developers and small business operators to understand global realities and related merit-based hiring practices.

- *Recommendation:* Research needs to be carried out to identify the barriers facing recruiting personnel.
- *Key movers and partners:* CAPE
- *Outcome and performance measures:* Research report and IEB geared human resources strategy.

III SUPPORT STRATEGIES

a) Communities and Network Support Strategies

The predetermination of what constitutes a community is dangerous and difficult since the definition is very specific to each individual community. While they may be created around cultural practices or in terms of employment, it may be useful to organize around professions.

Communities are legitimate sources of support and networking. However, they shouldn't have to be responsible for the education, training and employment of people from the "same" ethnic background. Amongst the various roles that communities can play are providing networks and advocacy. Accurate information flow to IEBs through families and friends was seen as key to their integration into Ontario. In particular, discipline specific (engineering specific) information and job portals should bring together employers, communities and IEBs together.

Networks are important- whether religious, cultural, ethnic, professional or other – but there should not be an assumption of the existence of networks simply by narrow definition of ethnicity or any other definition. All networks are networks of interest.

i) Build stronger partnerships and networks between employers, government, IEBs, other communities and other stakeholders

- *Recommendation:* A pilot partnership to be set up between the Thorncliffe and Flemington neighbourhoods that house many IEBs and employers.
- *Key movers and partners:* The Don Valley employment Coalition in partnership with CAPE, employers, Economic Development unit of City of York and the strong neighbourhoods' initiative.
- *Outcome and performance measures:* A pilot healthy vibrant community, Number of employers engaged, Number of IEBs employed and length of time in which IEBs are placed in employment.

ii) Provide information on 'Best Practices'

- *Recommendation:* Community associations should be drawn into mentoring and other such formal and informal services that create ways to link the host community in Canada to IEBs to improve an understanding amongst both of 'best Practices'.
- *Key movers and partners:* CAPE in partnership with its community coalition.
- *Outcome and performance measures:* IEBs find direct links to the engineering fraternity in Ontario. Number of IEBs who find mentors and number of mentors participating in this initiative.

b) Community-based Education and Training

Language issues were brought up at this roundtable as being significant for some communities. However, IEBs hailing from countries that are part of the Commonwealth have significantly fewer language and communication issues. Consequently while ESL training can be useful for some IEBs, for those who are more proficient there is a need for communications' training at advanced levels that incorporate sector/profession-specific terminology, codes of practice and regulations.

i) Profession specific advanced English language training recognized by employers.

- *Recommendation:* CAPE should provide direct inputs and work with service providers and educational institutions to develop language coaching of IEBs tailored to their profession in Canada.
- *Key movers and partners:* Educational institutions and settlement service providers
- *Outcome and performance measures:* Profession specific advanced English language training recognized by employers

c) Employers, Economic Realities and Empowerment

Employers should be encouraged to adopt corporate social responsibility to ensure merit-based hiring practices that lend themselves to global competitiveness. Rather than the 'business case' and 'diversity champions', employers should focus on global realities of survival in the 21st century.

As part of the information portal, information relating to entrepreneurship, available funding, ways of doing business in Canada and other related knowledge should be included so that all immigrants regardless of designation can access this. As the financial services industry is particularly conservative, it needs to be involved in multi-stakeholder discussions.

i) Focus on corporate social responsibility and utilization of immigrant skills and knowledge

- *Recommendation:* CAPE should identify the 'best practices' to get IEBs to sell their ideas and expertise.
- *Key movers and partners:* CAPE
- *Outcome and performance measures:* Success stories and champion profiles published on website.

ii) Facilitate access to capital for entrepreneurial ventures

- *Recommendation:* CAPE / IEBs should discuss funding options and reduction of risk with the 5 big banks and key financial institutions.
- *Key movers and partners:* CAPE
- *Outcome and performance measures:* Number of IEBs who become entrepreneurs

LIST OF PARTICIPANTS

No.	Participant Name	Organization
1	Randy Sinukoff	Jacques Whitford Limited
2	John Farrow	Lea Consulting Engineers
3	Carolyn McAnulty	Ontario Power Generation
4	Kim Taylor	Ontario Power Generation
5	Milan Prishtupa	Toronto Transit Commission
6	Dr. Bobby Siu	Infoworth Consulting Inc.
7	David Katz	Save Energy Corporation
8	Steve Hope	Bruno-Multec Canada
9	Bhuvan Prasad	Gamma Engineering
10	Howard Mcfadden	International Brotherhood of Electrical Workers
11	Satabdo Deb Nath	Self Employed
12	Kim Allen	Registrar, Professional Engineers Ontario (PEO)
13	Michael Price	Professional Engineers Ontario (PEO)
14	Doris Yee	Canadian Council of Professional Engineers (CCPE)
15	Pat Haugh	Ontario association of Certified Engineering Technicians and Technologists (OACETT)
16	Laurie Mcvittie	Ontario association of Certified Engineering Technicians and Technologists (OACETT)
17	Pasha Mohammed	Ontario association of Certified Engineering Technicians and Technologists (OACETT)
18	Paul Martin	Ontario Society of Professional Engineers (OSPE)
19	Yonas Haile-Michael	Canadian Heritage
20	Michel Doiron	Human Resources and Social Development
21	Susan Brown	City of Toronto
22	Sara Farrell	City of Toronto
23	Elaine Ebach	City of Toronto
24	Patti Redmond	Ministry of Citizenship and Immigration (MCI)
25	Greg MacNeil	Ministry of Citizenship and Immigration (MCI)
26	Dan Leinwanel	Ministry of Citizenship and Immigration (MCI)
27	Carol Collings	Council of Ontario Universities
28	Uzma Shakir	South Asian Legal Clinic of Ontario (SALCO)
29	Soni Dasmohapatra	Council of Agencies Serving South Asians (CASSA)
30	Sangeeta Subramaniam	Toronto Region Immigrant Employment Council (TRIEC)
31	Darryl Gershater	Flemington Health Centre
32	Roland Rhooms	Skills for Change (SfC)
33	Allison Pond	ACCES
34	Manjeet Dhiman	ACCES
35	Carolyn Cohen	Centre for Language Training and Assessment
36	David Lovelock	Centre for Language Training and Assessment
37	Catherine Messop	SAGE Mentors
38	Jason Yi	Chinese Professional Association of Canada (CPAC)
39	Bill Chang	Chinese Professional Association of Canada (CPAC)
40	Saeed Ziaee	MOHANDÉS – Canadian Society of Architects and Engineers
41	Jyoti Sengupta	Bengal Engineering College Alumni Association Of Canada (BECAAC)
42	Ila Roy	Jadavpur University Alumni Organization

No.	Participant Name	Organization
43	Professor Raghu Nayak	IIT Association Canada
44	Jack Zlahoda	Association of Polish Engineers, Toronto
45	Tahira Qamar	Association for Access to the Professions of Planning and Architecture (AAPPA)
46	Jessica Walters	Joint Centre of Excellence for Research on Immigration and Settlement (CERIS)
47	David Alcock	Humber College
48	Dale Sproule	Canadian Newcomer Magazine
49	Nikhath Rasheed	Policy Roundtable Mobilizing Professions and Trades(PROMPT)
50	Harkrishan Jashnani	Immigrant with Engineering Background
51	Pervez Bergis	Immigrant with Engineering Background
52	Probir Chakraverti	Immigrant with Engineering Background
53	Ramadoss Srinivasa	Immigrant with Engineering Background
54	Phillip Ju	Immigrant with Engineering Background
55	Gurmeet Bambrah	Coordinator, Engineering Access Project and CAPE
56	Darshak Vaishnav	CAPE/ Skills for Change
57	Muralidhar Maheshwara	CAPE
58	Kushmeet Gill	CAPE

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