## HOW UNDERSTANDING ORIGINS AND ASSUMPTIONS JNDERLYING EXPERIENCE AND CREDENTIAL RECOGNITION AN INFLUENCE POLICY ON INTEGRATING IMMIGRANTS WITH

#### ENGINEERING BACKGROUNDS

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vnal Metropolis Conference

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#### THE COUNCIL FOR ACCESS TO THE PROFESSION OF ENGINEERING (CAPE)

Evolving membership based organisation for the following categories of immigrants with engineering backgrounds living in Ontario

Over 1000 Members from across the province

coalition of some 15 existing and evolving community engineering associations (with an estimated 10 to 12 thousand members)

Potential new entrants (estimated at over 10,000 per year)

### 'ENGINEERING ACCESS' COMMUNITY ACTION PROJECT

Participatory Action Research
 intervention, development and change within communities

Systematic Integrated and Strategic Approach (SISA)

a situation analysis;

multi-stakeholder engagement

Strategic Action Planning – Employment Strategy for immigrants with engineering backgrounds

## **WHY IS CHANGE NEEDED?**

- By Region
- <u>Range of qualifications</u>
- Range of disciplines
- Length of stay
- Years of experience
- Employment status

## SITUATION ANALYSIS CANADIAN 'EXPERIMENTS' IN DIVERSITY

# of immigrants				
(x 1000)	Cluster 1	Cluster 2	Cluster 3	Cluster 4
400				
	2^*			
350	A			
300				
250		$\wedge$	$\int_{a}^{b} \int_{a}^{b} \int_{a$	Visible
200		4	$\int $	(1984 onward
150		/		
100		V		
50	/			
0				
	1897-1937	1938-1967	1968-1983	1984 and after

Ethnicity

## **CLUSTER 4: 1986 AND AFTER**

- Global from non-traditional source countries
   Social and ethnic disconnect
- Points geared to higher education and experience
   Tenfold increase in IEBs (Competition)
  - No pre-arranged employment
- More educated and experienced than host population
- Regulation
  - Protection of life, health, property and public welfare introduced into licensing in 1984 by PEO
  - Experience accreditation and 'Canadian Experience' introduced into licensing by PEO in 1990 (gate-keeping)
- Employment support for non-skilled workers and refugees adapted extended to IEBs to bridge assumed 'deficit' ?
  - Translated into ESL, LINC
  - Bridge training, employment preparation courses

## **KEY FINDINGS**

- Skilled immigrants leading edge of labour migration under globalization.
- Global marketplace access function of trade agreements and reduction of protectionist tariffs
- Global labour pool access Vs government's historical role of protecting its population from competition for domestic employment positions
- In Ontario an <u>assumption of deficiency of foreign credentials</u> fuels protection of its population from competition through:
  - Employers who averse to foreign credentials and experience
  - non-merit based hiring practices and systemic regulatory, employment and institutional barriers to the labour market integration
- Immigrants with engineering backgrounds locked out of the profession are first victims of this failure
- Canada through its falling productivity is the second victim of this failure
- The Case for a transition of focus from 'Canadians first' to 'Canada first.' is strong.

### **CURRENT MODEL:CANADIANS FIRST**

8

2

8

8

8

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#### EMPLOYER ISSUES

- Lack knowledge- foreign credentials
- Lack knowledge of other country experience
- are risk adverse
- Depend on human resources firms/departments

#### **HIRING PRACTICES**

- Placement commission related to perceived employer risk
- Hiring 'Canadians first' as justifiable 'exact fit' – scanning out for:
  - Canadian Experience
  - Accreditation without criteria
  - Language and work place culture compatibility under the cover of soft skills

#### **OUTCOMES**

Defective immigration information Poor access to labour market Deskilling of IEBs and Delegitimization of their credentials Poor social, ethnic or cultural links

#### SYSTEMIC BARRIERS

'Reserved Title' – gate-keeping
Multiple credential recognition systems which are not harmonized
Experience Assessment by representatives having inadequate or outdated other country knowledge?
Piecemeal workplace integration support – ESL, resume writing, cold calling, networking and sector terminology

## **KEY RECOMMENDATIONS**

- Fair, transparent, non-discriminatory and no more burdensome than necessary regulation
- Moving beyond risk adversity to embrace change
- Serious commitment to principles of equity and equality of employment outcomes
- Broader stakeholder consultation for an integrated, coordinated and seamless settlement process

### BROADER MULTI-STAKEHOLDER CONSULTATION

The Approach - Constructive engagement
 Bring together people with different views
 Create meaningful and timely discussion

Initiating Constructive Engagement
 Multi-stakeholder forum
 Launch of Roundtables

Multi-stakeholder consultation to develop a unified approach to solving the issues – 6 Roundtables

Arriving at jointly owned output by all stakeholders – Employment Strategy for IEBs

## CAPE'S MULTI-STAKEHOLDER ROUNDTABLE CONSULTATION PROCESS

- Four roundtables have been held to date to develop a multistakeholder employment strategy for immigrants with engineering backgrounds: The structure of the roundtables is as follows:
  - Roundtable 1 Inevitability of Change
  - Roundtable 2 Integrating Stakeholder Employment Strategies and Approaches
  - Roundtables 3 and 4 'Understanding Roles And Responsibilities'
  - Roundtable 5 will identify expected outcomes and performance measures
  - Roundtable 6 will be the launch of the multi-stakeholder employment strategy

#### **ROUNDTABLE PARTICIPANTS**

- The roundtable participants include:
  - Federal, Provincial and local government representatives
  - PEO, OACETT, OSPE and CCPE
  - 14 employers (Large, medium and small)
    - Recruiters, newcomer service providers, universities and community colleges
  - Community engineering associations and immigrants with engineering backgrounds
  - The media
  - Trade Unions and others

### **EMPLOYMENT STRATEGY**

#### SYSTEMIC CHANGE

- Process change
- Governance
  - Labor market information

#### LABOUR MARKET

- Informed Decisions
- Education and training

#### SUPPORT SERVICES

- Licensing, Mobility and Accreditation
- Employer Risk adversity and training by professional engineers
- Standards and regulation

#### SUPPORT SERVICES

- Communities and Networks
  - Economic Realities and Empowerment

## **PROPOSED MODEL – CANADA FIRST**

#### **EMPLOYERS**

#### EXPECTED OUTCOMES

Embrace change	Relevant employment supports		
Move to tap into global marketplace	Shared global work culture		
Utilize global knowledge and skills	Strong information sharing		
pool within their easy reach	Socially cohesive world class workforce		
Aim to increase productivity	Equitable skills-commensurate		
Aim to become globally competitive	employment outcomes		
HIRING PRACTICES	SYSTEMIC BARRIERS		
	Acknowledge global Range of 'Titles'		
Merit and global competency based	Harmonize foreign credential		
	<b>J</b>		
irameworks and scanning processes	recognition systems		
<ul> <li>Licensing upon the basis of</li> </ul>	recognition systems Professional Development focusing on		
<ul> <li>Licensing upon the basis of NAFTA, GATS and other emerging</li> </ul>	recognition systems Professional Development focusing on Cross cultural experience and emerging		
<ul> <li>Licensing upon the basis of NAFTA, GATS and other emerging free trade agreement requirements</li> </ul>	recognition systems Professional Development focusing on Cross cultural experience and emerging paradigms		
<ul> <li>Licensing upon the basis of NAFTA, GATS and other emerging free trade agreement requirements</li> <li>Communication rather generic</li> </ul>	<ul> <li>recognition systems</li> <li>Professional Development focusing on Cross cultural experience and emerging paradigms</li> <li>Broaden public consultation processes</li> </ul>		

#### **OTHER SURVEYS**

Specific surveys relating to economic performance of those in employment showed:

- Range of qualifications
- Years of experience
- Length of stay
- Employment
- <u>Salaries</u>

#### **OTHER SURVEYS**

A Specific surveys relating outcomes of employment preparation and bridging program shows that :

Length of program

Employment outcome

#### CLUSTER 1: 1897-1937

- Preferred source countries white commonwealth
  - Britain, United States, Newfoundland, South Africa, Irish Free State, New Zealand, Australia
- Wave 1: Miners, engineers and scientists
  - set up Canadian Society of Civil Engineers (CSCE) to control supply of engineers
- Wave 2: WW1Refugees and Returning Military engineers led to competition
  - CSCE devolved to provinces leading to formation of Professional Engineers of Ontario in 1922
  - Licensing made mandatory 1937
- Wave 3: Unskilled workers and refugees
  - Voluntary settlement organizations setup in response to language disconnect

#### **CANADIANS FIRST**

"There is certainly no objection to men from other countries coming to Canada and taking up their abode here. ... On the other hand, it will be found that there is strong objection to foreign consulting engineers doing work in this country which can be done equally well by our own engineers" (Editorial, CE, 1912: 269).

#### CLUSTER 2: 1938-1967

- 'Non-preferred' source countries
  - Eastern and Southern Europe
- Wave 4: Refugees WWII, unskilled workers (trades and technicians) and few professionals
  - Reserved title for Engineers introduced by PEO to set apart Engineers and technicians (gate-keeping)
  - Academic accreditation
- Certification of technicians initiated by PEO
  - OACETT set up in 1961
- Underutilization of skilled tradespersons
  - Voluntary ethno-cultural community settlement organizations e.g COSTI (1961) set up to provide training and retraining or language training and bridging education (Polish engineers)

#### **TECHNICIANS NOT PROFESSIONALS**

"A terrific number of applications are being received from non-graduates; many of whom should not apply for professional standing but in all probability would make excellent engineering technicians" (Executive Director to PEO Council, October, 1956 raising the possibility of an engineering technicians association)



#### CLUSTER 3: 1968-1983

- Non-preferred and non-traditional source Countries – Mostly European; and
  - a few from countries
- Bill of Rights (1960) and Charter of rights (1982)
- Wave 6 Skilled workers based on point system
  - Prearranged Employment for skilled workers
- Education or language disconnect irrelevant
  - Settlement services formally handed over to voluntary and ethno-cultural community organizations
    - mandate extended to include employment support for non-skilled workers and refugees.



#### CANADA'S PRODUCTIVITY GR

### CANADA TODAY

- 4.0 -Canada's labour productivity is declining
- 3.5 Weak productivity is ultimately one of the biggest <sup>3.0</sup> roadblocks to improving Canada's standard of living
- Innovation and Research in Canada is falling behind other OECD or G7 countries 2.0
- Educational attainment is intrinsically linked to productivity but Canada has shown no change in the number of years 10 a Canadian is schooled since 1960
- Canada is a signatory to GATS and NAFTA which call for liberalization of professional services including 0.0

## engineering

Per cent growth

-0.5 Industry Canada http://strategis.ic.gc.ca/pics/pr/livstand.pdf 1997199819992004

#### **CANADIANS FIRST?**

"OSPE will continue to advocate for the interests of the 66,000 licensed professional engineers in Ontario, as well as those seeking licensure. We're committed to supporting and encouraging the interests of engineers and engineering students, wherever they received their education. We view the potential over-supply, underemployment and under-utilization of professional engineers as some of the most serious issues facing our membership....." (Open letter to the Prime Minister, March 18, 2004 by the Ontario Society of Professional Engineers (OSPE))



#### CANADA AND THE WORLD

"In all likelihood, the Canadian federal government will be pressured into making PEO an offer that it cannot refuse. Either PEO agree to harmonize its admissions standards with the rest of the world, or the engineering profession will be partially or entirely deregulated. After all, if the rest of the world doesn't need the protection afforded by a strict regulation of engineering, why does Canada?"

Norbert Becker ([1]) (President, The Becker Engineering Group, A PEO Councilor-At-Large and the Chair of the PEO Globalization Strategic Planning Task Group)
 [1] Norbert Becker, P.Eng (1998). It's time to change the federal government's tendency to enact trade agreements on services without consulting the engineering profession. Engineering Dimensions March/April 1998

#### CHALLENGES AHEAD

- Protection of domestic employment opportunities has been an historical need
- Globalization and increased competition from emerging economies such as China and India
- Great pressure to facilitate borderless access to markets and labour pools
  - We are midst a transition from 'Canadians First' to 'Canada First'
- Immigrants are key drivers of this transition

# IEB Survey- Range of disciplines

Engineering Discipline	Number
Civil Engineering	177
Electrical and Electronics Engineering	162
Mechanical Engineering	154
Engineering Managers	82
Industrial and Manufacturing Engineering	72
Chemical Engineering	56
Software Engineering	32
Electrical and Electronics Engineering Technologists and Technicians	30
Geological Engineering	6
Railway and Yard Locomotive Engineering	6
Civil Engineering Technologists and Technicians	25
Computer Engineering (Except Software Engineering)	29



## **IEB Survey-** Range of disciplines (Continued)

Engineering Discipline	Number
Metallurgical and Materials Engineering	21
Engineering Inspectors and Regulatory Officers	16
Industrial Engineering and Manufacturing Technologists and Technicians	15
Petroleum Engineering	14
Aerospace Engineering	13
Mechanical Engineering Technologists and Technicians	13
Mining Engineering	9
Engineering Officers, Water Transport	8
Stationary Engineering and Auxiliary Equipment Operators	7
Geological Engineering	6
Railway and Yard Locomotive Engineering	6
Other Professional Engineering, n.e.c.	35 📟
Κ	<u>chart</u>

# IEB survey- Number of members from different regions





# Members from Asian countries





## Members from European countries



# Members from Latin American and the Caribbean countries





# Members from Middle Eastern countries





# IEB Survey- Range of qualification





# IEB Survey- Length of stay in Canada





# IEB Survey- Employment Status



Not working Working in Professional field Working, but in another field



# IEB survey- By years of engineering experience





# IEB Survey-Employment Status



■ Not working ■ Working in Professional field ■ Working, but in another field



# Employed IEB Survey-Range of qualifications





## Employed IEB Survey-Length of stay



■ 0-2 Years ■ 2-5 Years ■ 5-10 Years ■ 10-20 Years ■ >20 Years



## IEB Survey-Range of disciplines



- Civil Engineering Technologists and Technicians
   Engineering Inspectors and Regulatory Officers
- Petroleum Engineering
- Mechanical Engineering Technologists and Technicians
   Engineering Officers, Water Transport
- Geological Engineering

- Industrial Engineering and Manufacturing Technologists and Technicians
- Aerospace Engineering
- □ Mining Engineering
- Stationary Engineering and Auxiliary Equipment Operators
- Railway and Yard Locomotive Engineering



## Employed IEB Survey-By years of engineering experience



□ 0-2 Years □ 2-5 Years □ 5-10 Years □ 10-20 Years ■ >20 Years



## Employed IEB Survey- By Employment



Employed in a field related to engineering Not employed in a field related to engineering



## Employed IEB Survey- Salary





# Employment Support Survey-Length of program



■ Less then one week ■ One-Three Weeks ■ Four-Six weeks ■ More



## Employment Support Survey-Outcome



Found engineering job after attending this program

Did not find engineering job after attending this program

