CAPE
Building Canada's Competitive Edge

Innovative Solutions: Foreign Credential Recognition (FCR)

CAPE 4th Annual Engineering Knowledge Event

CAPE Annual General Meeting 2010 & Volunteer Appreciation

PROGRAM

09:00-10:00	Registration
10:00-11:00	TIP-Innovative FCR Presentation
11:00-11:30	Volunteer Appreciation
11:30-12:30	Annual General Meeting
12:30-13:30	Lunch
13:30-14:30	NAC-CAPE Workshop/Networking

Web-based communications

Workplace skills

Team-work and tacit knowledge driven engineering practices

Workplace training

Labour Market business engines

Real-time needs-driven skills

On-line learning communities

Information Technology

Life-long self-directed and experiential learning

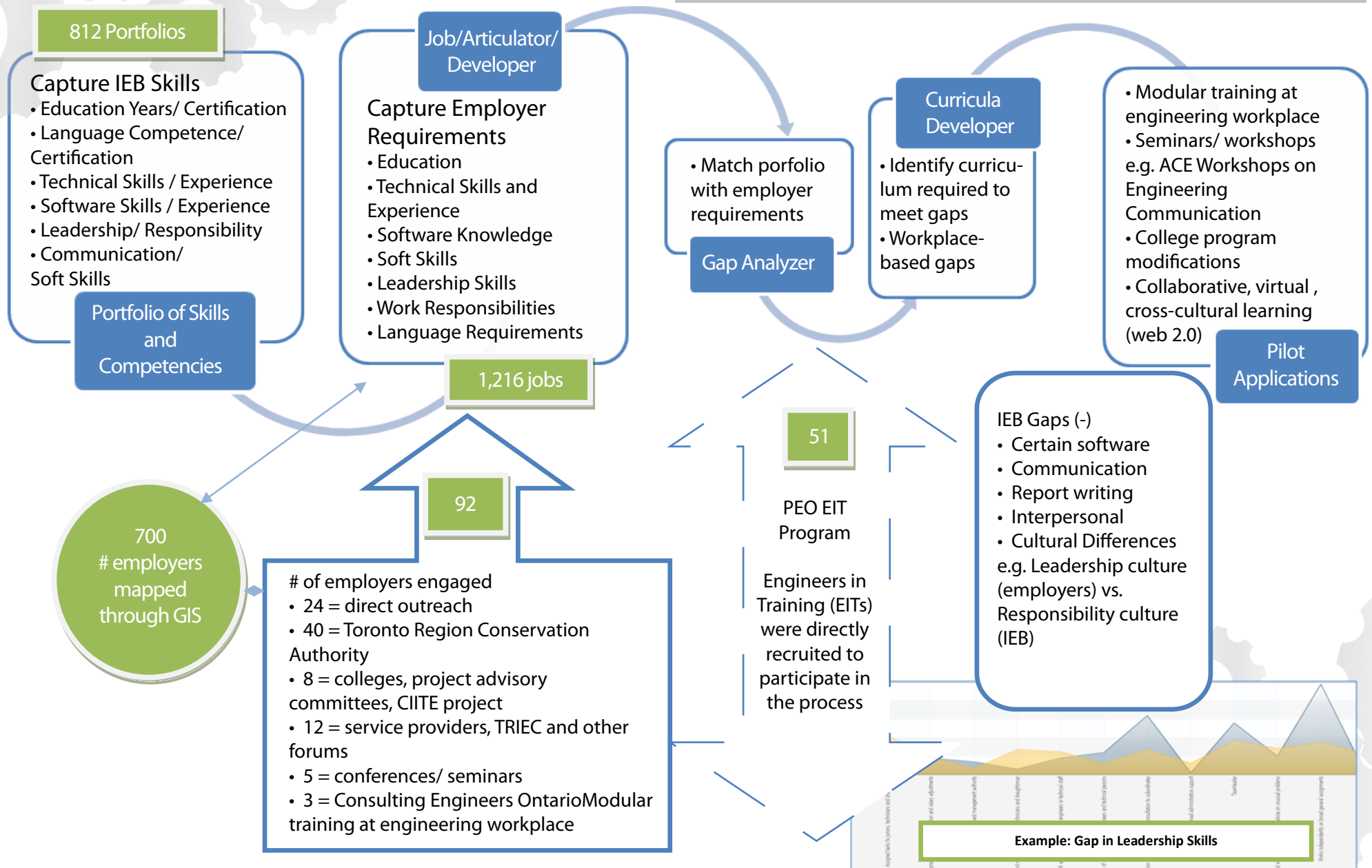**Funder:** Ontario Ministry of Training, Colleges and Universities

Objective: To improve the quality of employment preparation and skills development programs for immigrants with engineering backgrounds and link these programs directly to employer needs.

Process: Using special competence-based tools to match immigrant skills with job requirements and real-time employer needs; identifying the gaps and surpluses in skills; developing and piloting

Findings: The project enhanced stakeholder knowledge of the changing nature of the engineering profession and its relation to global engineering skills. In particular:

- Sound academic grounding remains important for employment, and as a group, immigrants with engineering backgrounds are exceeding expectations. There is limited need for them to attend university to upgrade their technical knowledge.

- Immigrants with engineering backgrounds do need to demonstrate high computer proficiency and enhance their software skills in specific areas. It is recommended that immigrants with engineering backgrounds take a proficiency test for Microsoft Suite and AutoCAD prior to entry into the workforce.upgrade their technical knowledge.

- Strong communications are becoming central to engineering practice everywhere, and with most engineering businesses being small to medium sized enterprises, client-facing attributes are highly sought. Although specific skill gaps were identified within different sub-disciplines, communications, report writing, interpersonal skills, knowledge of legislation and document handling were identified as universally important.

- Canadian employers tend to prefer a leadership oriented culture with strong supervisory and independent working skills, whereas immigrants with engineering backgrounds tend to prefer a culture of responsibility and teamwork. A professional development plan focused on leadership skills is highly recommended. In addition, training for creativity and innovation would set immigrants with engineering backgrounds apart from their peers.

- With engineering becoming an increasingly global and out-sourced service, there is a crucial need for competence in cross-cultural communications and virtual learning and designing environments. Developing these competencies would be beneficial for all engineers regardless of whether they are immigrants or not. Given time constraints and the flexibility of modular delivery, independent self-study plat-forms and modular training will be the way forward.

## Linking Programming with Real-Time Employer Needs

812 Portfolios

Capture IEB Skills
• Education Years/ Certification
• Language Competence/ Certification
• Technical Skills / Experience
• Software Skills / Experience
• Leadership/ Responsibility
• Communication/ Soft Skills

Portfolio of Skills and Competencies

Job/Articulator/ Developer

Capture Employer Requirements
• Education
• Technical Skills and Experience
• Software Knowledge
• Soft Skills
• Leadership Skills
• Work Responsibilities
• Language Requirements

1,216 jobs

• Match porfolio with employer requirements

Gap Analyzer

Curricula Developer

• Identify curriculum required to meet gaps
• Workplace-based gaps

• Modular training at engineering workplace
• Seminars/ workshops e.g. ACE Workshops on Engineering Communication
• College program modifications
• Collaborative, virtual, cross-cultural learning (web 2.0)

Pilot Applications

700 # employers mapped through GIS

92

51

PEO EIT Program

Engineers in Training (EITs) were directly recruited to participate in the process

IEB Gaps (-)
• Certain software
• Communication
• Report writing
• Interpersonal
• Cultural Differences e.g. Leadership culture (employers) vs. Responsibility culture (IEB)

of employers engaged
• 24 = direct outreach
• 40 = Toronto Region Conservation Authority
• 8 = colleges, project advisory committees, CIITE project
• 12 = service providers, TRIEC and other forums
• 5 = conferences/ seminars
• 3 = Consulting Engineers OntarioModular training at engineering workplace

Example: Gap in Leadership Skills

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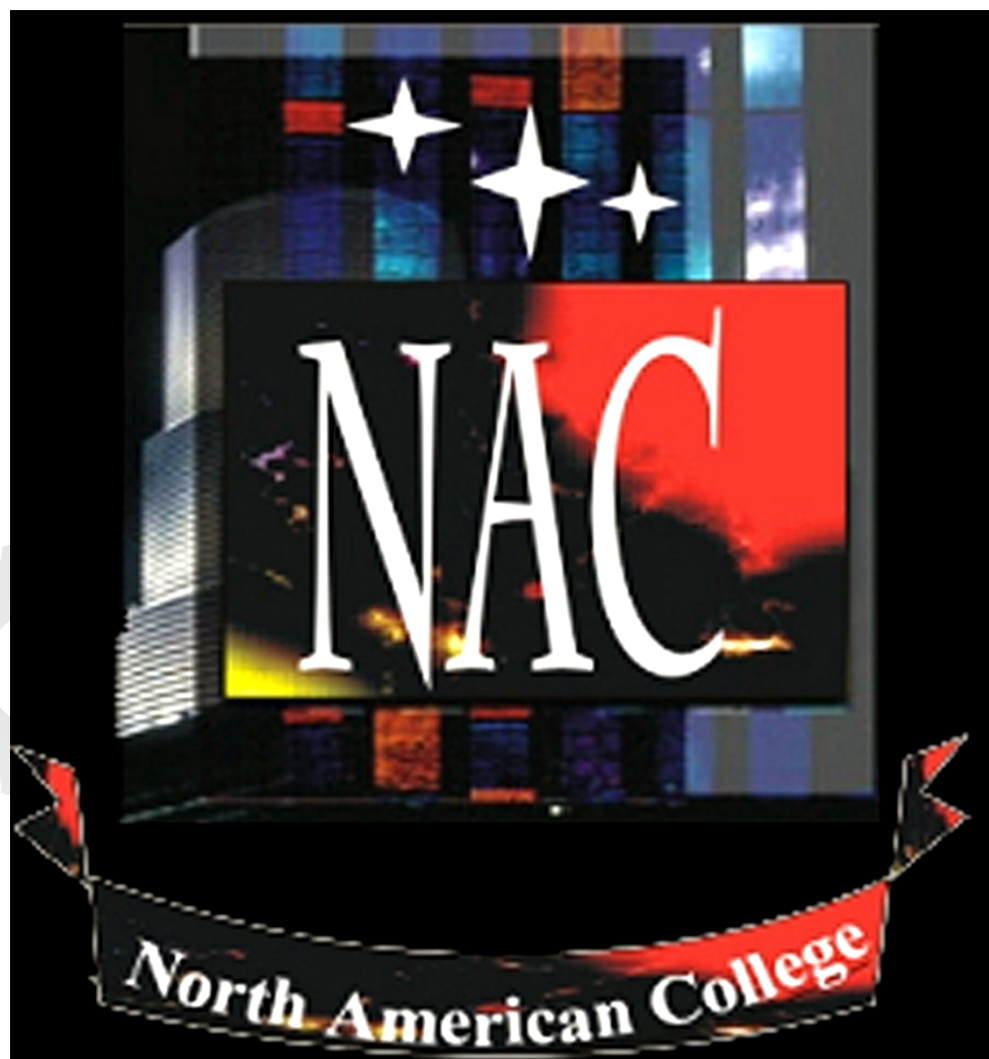
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