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**ADDRESS TO THE INTERNATIONAL ENGINEERING CONFERENCE**

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## Introductions and Common Engineering Education

Thank you and good afternoon everyone.

Thank you very much for the invitation to speak to you today.

It is wonderful to be surrounded by so many engineers. I feel particularly connected to this group for many reasons.

As President and Vice-Chancellor of York University, I am normally with students, faculty and staff...65,000 to be exact, so this is a welcome change.

And I must say, I am completely in my element today...with engineers...as I am also an engineer.

I came to this country 40 years ago to do a master's degree and a PhD in engineering, having done my undergraduate degree in Cairo, Egypt, my place of birth.

I remember when I came to Canada. Everything was completely new to me.

I am sure many of you must have had similar feelings.

Early on, I recognized that if I was going to succeed, I couldn't just focus on studies and my engineering knowledge...it was also important for me to engage in society.

I knew nothing about hockey or baseball...in Egypt, we play soccer.

I learned to be comfortable in the country.

I learned everything there was to know about Canada, its history and its continuing evolution.

I wanted to make an impact, I wanted to make a difference...and I was determined to do everything possible to make that happen.

Now, having done my undergraduate degree in Egypt, I know only too well about what all of you bring to the field of engineering in Canada.

Based on my own experiences, I would argue that engineering education and the training to become an engineer, no matter where you are from, be it Canada, Europe or Africa...or anywhere else for that matter, is the same.

Engineering courses and applied science courses and curricula are similar, and the knowledge is equivalent in most engineering schools throughout the world.

What I mean by that is that these are things that can't be changed or interpreted differently because of geography or ethnicity.

It is this consistency and common training that have helped engineers to function and succeed in today's increasingly interconnected world.

There is no doubt that you are all qualified...and you should all be proud of that education.

Of course as a profession that involves public safety and other societal and environmental concerns, it is expected that members of the profession be knowledgeable of local national practices and codes to be able to operate safely in a given jurisdiction....a role undertaken by PEO in the province of Ontario.

### **Demand for Engineers**

All evidences indicate that the demand for engineers is increasing.

In the new knowledge based economy, we need people who can not only produce new knowledge, but also transform new knowledge into products and services to benefit society.

We need people who can use their knowledge to design new products and processes that can help people.  
Think about it. Innovation and productivity are key drivers in today's economy.

Who can do that better than the engineers.

Look at the incredible advances in technology, services, communications, health services, etc.

Engineers are the leading innovators and problem solvers in society.

For Ontario and Canada to remain prosperous and competitive, we need to better leverage the talents to increase our ability to innovate and be more productive.

For that I believe we need more engineers and we need to increase the percentage of our university graduates who study applied sciences and engineering; a conclusion that was reached by many panels and think tanks in Canada.

A recent report by TARA showed that there is a significant undersupply of engineers in the GTA particularly Mechanical and Electrical engineers.

I also see signs of growing interest in engineering by young Canadians.

In the last 5 years, the number of high school graduates' applications to engineering has increased by more than 30% signaling the growing recognition of engineering careers by our young people.

Another indicator is the rise of engineers to more leadership positions in society, as their ability as problem solvers is receiving more recognition.

Based on the above, I can honestly say that your talent and knowledge are needed in Ontario and Canada.

The fact that you come from many areas of the world is an advantage for Canada.

Your knowledge and training is an asset and your diversity is an added asset.

Diverse perspectives are a benefit – they strengthen and enhance ideas.

At York University, Canada's third largest University, and one that is incredibly diverse...our population can trace their roots to 155 countries worldwide, our responsibility is to educate our students so that they can become global citizens.

We are growing in all areas, particularly in sciences and applied sciences, and in fact, we are expanding our engineering school.

The reason being...York region, our geographic location, is, according to Census Canada, one of the fastest growing regions in Canada.

So it is essential that we grow to meet this demand.

Last summer, the provincial government announced a \$50 million capital investment for a new engineering building at our Keele campus.

In October, we received a \$25 million dollar transformative donation from Pierre Lassonde, chairman of the Franco-Nevada Corporation.

Pierre's gift and vision will support a whole new way of thinking about engineering education.

It's about graduating a new generation of entrepreneurial engineers with a social conscience.

At the same time, we also recognize that it is our responsibility to help internationally educated professionals.

As internationally trained engineers, you bring a great skillset to the table.

But you have to be mindful of the fact that while the education is comparable, licensing is what sets everything apart.

It is important to note that in different countries, there are different systems and applications.

If you are to really succeed, it is important to understand these systems.

And let's face it...everyone deserves a chance to succeed.

### **Bridging Programs**

And that's why bridging programs are so important.

At York University we have Bridging Programs for Internationally Educated Professionals, working with:

- small and large local businesses,
- not-for-profits,
- professional associations and accreditation bodies...

to help the professionals transition into a position that matches their education, credentials and experience.

York was a pioneer by having the first bridging program for internationally trained nurses that was subsequently extended to IT and business professionals.

Our university attracts candidates from over 40 countries and creates an individual, customized action plan for each professional that is tailored to their professional goals and career path.

The program is government funded and our number one goal is to help professionals transition with confidence into a job in their field.

Faculty champions are experts in each program area and work one-on-one with professional candidates to create a low-cost or virtually no-cost plan.

The program itself provides access to training to address gaps in Foundations skills, including English language and professionally relevant English language support, and Professional Writing...to name a few.

Professionals also have access to at least one core course that includes specialized training in professionally relevant computing skills, a professionally relevant Experiential Education course or an internship opportunity that will allow participants direct experience working in the GTA for profit or not-for-profit organizations.

Professionals in the program are given on-going social support and the development of local professional networks through peer mentoring and later, alumni and professional mentoring in partnership with the relevant professional bodies.

York already has successful Business and IT programs, as well as new programs for internationally-qualified Human Resources professionals...

But given the success of the bridging program at York and with our engineering expansion, we are also in the process of developing a program for internationally trained engineers to be announced soon.

### **Other companies**

Before I conclude, I just wanted to mention that when I talk about all of us having a responsibility, it's not just governments, universities and all of you...but I am also talking about businesses and large corporations.

As contributors to Ontario's economy, you have as much responsibility to embrace diversity in the workforce and build an inclusive environment...to recruit and train internationally trained workers.

Inclusion offers a way to leverage an employee's contribution, which will maximize the business performance of the employee...and help your company.

And to the companies that are here today, like Telus, SNC Lavalin and Hydro One to name a few...you are here because you do that well, and I commend you for that.

### **Conclusion**

In closing, I would like to remind all of you to not underestimate yourselves and your contribution to Ontario...and by extension...Canada.

It's tough, especially given our current fiscal constraints, but it will get better.

Don't lose confidence, don't give up hope. Educate yourself, immerse yourself in the culture...and everything else will come naturally.

Thank you.