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President

In my last President's Message, I provided a chart that divided the engineering workforce into four categories:

- A. PEO members who are practising engineering in areas in which they have an exclusive right to practise (traditional disciplines, such as structural and civil engineering);
- B. PEO members in traditional disciplines, who are no longer practising engineering because they have either retired or moved into non-engineering fields;
- C. PEO members and non-members who are not currently practising engineering, but were originally in a discipline that does not have a well-defined right to practise (high-tech and other non-traditional fields); and
- D. PEO members and non-members who are currently practising engineering in areas in which they don't have an exclusive right to practise.

This exercise focuses attention on the relevance of the PEO licence—a subject that Council is now addressing through its strategic planning effort (see In Council on p. 28, for more information).

Making the P.Eng. licence relevant to today's profession

The chart below provides estimates of the number of engineering graduates (both licensed and unlicensed, Canadian and foreign-trained) in each of the four categories. Categories C and D are currently not easily separated, because PEO does not have complete information on disciplines or industries in which members are practising.

Expanding the reach of the P.Eng. licence

The burning question is not: Is the engineering licence relevant? It is: How do we make the engineering licence relevant in all established and emerging areas of practice? In short, how do we move the practitioners in category D (who are practising engineering, with no exclusive right to practise), to category A (licensed professional engineers with an exclusive right to practice)?

Recognizing an issue is a good part of dealing with it. The Canadian Engineering Resources Board's national studies on engineering work have helped considerably in quantifying factors like the capture rate of engineering grads into the profession. Currently, only about 60 per cent of engineering graduates become licensed professional engineers—which shows clearly the need for action. Such statistics form the basis for setting strategies with clear, measurable objectives.

The numbers shown in the chart on this page are soft numbers that are "order of magnitude" correct, but they certainly tell Council where we need to pay some attention. More accurate numbers can be used as a benchmark to rate the effectiveness of

our corrective actions over time.

To make the P.Eng. licence more relevant to today's engineers and increase the capture rate of new grads, PEO will need to establish additional scopes of practice for the profession in emerging and non-traditional areas of practice. This will be an ongoing task for PEO: As new engineering disciplines are created in conjunction with new technologies, their scopes of practice will need to be defined and established.

Managing emerging technologies

The need to define scopes of practice seems to have been forgotten by the profession; some have even confused this activity with "protecting turf," which is not the underlying goal. Rather, it is to respond to the ever-accelerating growth of emerging technologies, which change the very nature of engineering practice and impact on public health, safety and welfare. It is PEO's responsibility to establish proper scopes of practice for these new areas in order that the public interest may be better served and protected.

As a self-regulating profession in which peer review is an integral process, it's essential that we take the actions needed to manage emerging technologies. We are the technical experts, who are responsible for protecting the public and are held accountable for our work.

In some cases, such as the Walkerton crisis, the impact of technology on public safety and welfare is obvious. But although the impact is often more subtle, it still needs to be assessed and addressed. Examples of such subtle impacts might include: credit card fraud (Canada has the highest rate), cell phone transmissions (which might pose a cancer risk) and genetically modified foods (one of the public's top of mind concerns). To manage the threats posed by new technologies while harnessing their benefits to society, engineers must provide the expertise and leadership that is inherent in our profession's know-how.

We want your input

Over the next few months, Council will be wrestling with these kinds of issues in our strategic planning process. There will be opportunities for you to add your views and provide input to our deliberations. Give it some thought, and tell us what you think. ♦

The four categories of licensure

	Have exclusive right to practise (PEO members/licensees)	Do not have exclusive right to practise (mix of PEO members and non-members)
Practising engineering	A = 21,000 (approx.)	D (C + D = 102,000-122,000)
Not practising engineering	B = 5000-10,000	C
Estimates of C and D together come from these three sources:		
♦ PEO members, who don't have an exclusive right to practice =	42,000 (approx.)	
♦ Canadian engineering grads, who have not joined PEO =	20,000-30,000	
♦ Foreign-trained engineers, who have immigrated to Ontario and not joined PEO =	40,000-50,000	
Total of C and D =		102,000-122,000