



Thank you to the CESA and the greater engineering community for the tremendous opportunity to be part of this auspicious gathering.

The title of my talk this morning is "Engineering and Politics".

Throughout history engineers have been the unsung and often silent heroes of the advancement of civilization. Your contribution in advancing quality living for mankind is next to none.

We don't know the names of the engineers who designed the pyramids at Giza, the Apian Way, or the first arch. But we know that millions go about their lives in a safer, more efficient, and more productive manner because of your work. We will forever be grateful for the work you do.

On face value, this noble profession seems not be relevant with the body of politics. This profession concern itself with the application of a very highly sophisticated non-human machinery and a peculiar level of intellectualism.

If the essence of politics is the mediation of choice, then it would seem to be far removed almost by definition from engineering since the phenomena with which engineering deals are incapable of exercising choice.

But the reality is that it is practically impossible to divorce the two phenomenon. The co-exist, in a master-servant relationship.

In fact, the origin of the engineering profession can be traced to a time and place, 19th century France, in which engineers were closely associated with government and politics. That history lives on today in the special role that professional engineers claim for themselves in service to the public.



This French engineering legacy includes the expectation that engineers carry a special duty to serve the public. This has always been part of the indoctrination of young engineers, and it continues today in the engineering code of ethics adopted as the basis for a career as a professional engineer in the US and other countries.

Many engineers choose to this noble profession because of the fundamental impact the profession has on people's daily lives. However, most do not realize that their chosen profession demands not only an obligation to public service, but also a responsibility to their community and to their local government.

We cannot afford to overlook the crucial interdependence that exists between engineering and government and the society at large. Both politics and science are expected to operate in the service of mankind. On that common ground politicians and scientists should work together in wholehearted cooperation. It is the legal and moral obligation of engineers to ensure that the safety and welfare of the public are maintained. In order to better fulfil this task, professional engineers must undertake more substantial and visible roles in their local government.

In a democratic dispensation, which include free society, politics and government are inseparable. Politics shapes the character of government -- and government affects all of us at the local, provincial, and national level. The engineering profession is directly affected by the course which government pursues regarding preservation of the free enterprise system and is particularly sensitive to actions of government which affect the professional climate in this country.



The importance of the relationship between the engineer and politics is exemplified by the remedy being sought for creating conducive environment for the people.

- The professional engineer must bring to the legislative process the practical, economic, legal and ethical viewpoint that the engineer is known to possess.
- Professionals and businessmen who neglect politics cannot lament unsound legislation. The engineer must participate in politics in order to bring about the necessary influence to advance the cause of this profession, which is serving the people.

Generally speaking, most engineers are not interested in even discussing politics, much less becoming involved with them. To most engineers, the political arena appears to be a bureaucratic hodgepodge held together by a maze of red tape; this contrast directly with the step-by-step logic that impels a engineer through his daily work. The political process has many twists, turns, and loopholes that seem too convoluted to an engineer who cannot tolerate rash or illogical thought. Political decisions are often viewed as irrational or ambiguous and are influenced by a variety of variables. Government progress is difficult to observe and measure, unlike a engineer's project, which has defined deadlines and prescribed results that can be calculated frequently.

Since negative stereotypes surround both the political and engineering professions, preconceived notions often hinder the meeting of the minds.



Civil engineers are commonly stereotyped as having poor communication and people skills. Most have demonstrated a wealth of technical knowledge, but often have trouble communicating effectively with a business-minded politician, due in part to the large difference in the specialized jargon. The thought of dealing with elected officials that seem larger than life and are often perceived as inaccessible frequently deters engineers from approaching politicians and the political process

Also, politicians are regularly generalized in the popular media as unethical, greedy bureaucrats out for personal gain, which sharply contrasts with an engineer's strict code of ethics.

However, it is the responsibility of engineers to protect and promote public health and safety, whether through safe roads, stable bridges, or sturdy buildings. In order for engineers to perform these tasks successfully, the support of government is vital. Through the legislative and executive processes, government can help publicly define the engineering field as a people-serving profession. The political process of making lasting changes to improve public safety has often required reviewing recent trends, modifying current regulations, or formulating new laws. These laws address the real-world application of an engineer's technical work, and therefore are vital to the effectiveness of the engineering profession.

Government is responsible for making decisions that affect issues such as licensing regulations for engineers, funding for each facet of infrastructure, and statutes and laws that regulate lawsuits against engineers. Government is vital in upholding the standards of the profession and improving the integrity of the



field. Since a substantial portion of an engineer’s work is for the public sector, government funding is critical to the wellbeing of the profession. Government has the power and influence to take important projects from the drawing board to reality. Many public projects would never come to fruition if it were not for government funding and the necessary engineering technical skill.

Furthermore, it is the primary goal of government to serve the needs of the public. Unfortunately, the average legislator does not have the educational background or experience to always make informed decisions on complex scientific, engineering, or technical issues. It is necessary for local government to have support from this profession in order to improve the welfare of all our people everywhere.

The engineering and public administration duties are so interrelated that it is nearly impossible to separate them. It is precisely this combination and collaboration of responsibilities that makes our cities to prosper

Engineering is a tangible process wherein engineers use their skills to design, construct, and operate entities that have a direct bearing on the public’s quality of life. It is crucial that engineers are involved in government and political process; the public depends on it.

The success of our infrastructure requires that engineers and politicians work together to best serve the public.

I want to conclude with a quote from Jose Abreu, who said: “I see engineering as a noble profession. We were the first civil servants—probably going back to



Roman times. We were civil servants first and engineers second. I am just a public servant doing the best I can for the people I serve”

I thank you

Executive Mayor Bongani Baloyi, Midvaal Local Municipality

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