Dear Colleagues

This publication is dedicated to reporting on the Inaugural Engineering Summit that took place on 22 September 2011 at the Hilton Hotel, Sandton. The focus areas of the Summit, which spanned three critical challenges facing the Engineering Profession, included the engineering skills pipeline with a focus on “Improving throughput in the Engineering Bachelor’s Degree”, challenges related to candidate phase experience, and South Africa’s national infrastructure provision.

In this in-house publication we will provide the engineering community exclusive feedback from the custodians of the three strategic initiatives as well as from other stakeholders who participated in the Engineering Summit 2011.

The custodians or break-out session facilitators – namely Dr. Allyson Lawless (Managing Director: SAICE Professional Developments and Projects and ECSA Council Member), Glen Fisher (Glen Fisher Consulting) and Sam Amod (ECSA Council Member) – are among those who give us their personal and other views as to what came out at the Summit and most importantly, what has happened since. The focus also shifts to what can still be expected to emerge from the great ideas and conversations which took place at the Summit.

The Engineering Summit 2011 commanded the attention of key stakeholders and signalled the commitment and intent of the Engineering Council of South Africa (ECSA) to extend its functions beyond the narrow mandate as specified in the Engineering Professions Act.

The Summit created the platform for ECSA to engage a broad spectrum of stakeholders whose contributions could help in formulating a comprehensive strategy to address the three national challenges.

Since the Summit, ECSA has released the research report titled “Improving throughput in the Engineering Bachelor’s Degree” to key government stakeholders. The research report can be downloaded from the ECSA website at www.ecsa.co.za.
Furthermore, I am pleased to advise that ECSA is discussing with the Department of Higher Education and Training (DHE&T), the need to convene a national engineering skills summit sometime early in 2012.

We are hopeful that in close partnership with the DHE&T and key stakeholders [such as the University Sector (Vice Chancellors, Deputy Vice Chancellors, Engineering Deans and Heads of Departments), Higher Education South Africa (HESA) and industry], a comprehensive strategy will emerge to substantially increase the output of Engineering graduates from our universities.

Furthermore, we are committed to engaging the Department of Public Works to make available to it the work related to the provision of national infrastructure which we believe has significant utility for the Presidential Infrastructure Co-ordinating Commission.

ECSA is committed to contributing to the solution of national challenges in partnership with the appropriate state entities and to building a thriving, representative and relevant Engineering Profession.

I wish you and your family an enjoyable and restful holiday season.

Regards,
Dr. Oswald Franks  Pr Eng
Chief Executive Officer

“Your commitment to assist young professionals to me is a very big plus. It’s a very big plus to say let us open the space. Let’s make sure that even after they graduate, they can speedily be members of the Council. To me that’s a very, very big plus.”

~ Honourable Gwendoline Lindiwe Mahlangu-Nkabinde
Former Minister of Public Works (speaking at the Summit)

“As a young professional myself, I found the Summit extremely thoughtful towards the development and retention of newly graduated engineers. The new registration category of student engineers will also assist in following young careers from the start.”

~ Dr. Willem Sprong
Director: Electrical Engineering at GIBB
The message is clear: we just don’t have enough Engineers. There’s one engineering professional for just over 3 000 citizens in South Africa. What is disturbing is that post the hosting of the 2010 Soccer World Cup, there were instances where companies opted to retrench Engineering resources and limited the hiring of graduates due to limited numbers of projects being available in the public and private sectors. Many companies opted to pursuing possible opportunities elsewhere in Africa to fill the near “vacuum” that existed post World Cup and continued in the main for most of 2011.

“This should not be the case, especially when one considers that the innovative use of Engineering and Technology is key in meeting the Millennium Development Goals (MDGs). Infrastructure development using our Engineering expertise is key to growing our economy and in creating jobs and reducing poverty. At a micro level, infrastructure development programmes can be used to promote gender equality, create greater focus on environmental sustainability and so much more,” says Christopher Campbell, ECSA President.

“It is clear that we are in dire need of more Engineering practitioners.”

~ Christopher Campbell, Pr Eng
ECSA President

All things considered, the future of the Engineering profession in South Africa is secured and set to grow substantially. This is true for most African countries as the continent is developing at a rapid rate. Infrastructure development required ranges from roads and rail to coal fired power stations, geothermal power generation and lately nuclear energy generation. Most countries are still grappling with the challenge of meeting the needs for piped fresh water supply and water borne-sanitation, not to mention that of providing affordable housing and functional integrated public transport systems.

“Engineering professionals are ideally positioned and skilled to drive this process. African countries are planning to grow even more and when one considers the numbers of local professionals available, in conjunction with service delivery challenges, it is clear that we are in dire need of more Engineering practitioners,” continues Campbell.

It is against this backdrop that the Engineering Summit came into being as a positive intervention to not only draw attention to a much needed discussion,
but to create a platform for dialogue. It is the first of its kind and by no means the last. It is part of a new journey that ECSA has embarked on to create visibility and profile ECSA in another dimension. The Summit also provided the appropriate platform to dispel myths about what happens at ECSA and reposition the organisation as not only being statutory and regulatory but also as being approachable and facilitative.

“The Summit provided a platform for such dialogue and by sharing these initiatives we managed to build even more enthusiasm and momentum. It is indeed true that ECSA has taken a more proactive stance on addressing the shortage of engineering professionals in South Africa. Instead of simply sitting back and accepting or rejecting applications for professional registration, as has been the practice in the past, we are working on projects to influence the pipeline of engineering skills development.

“We believe that our sphere of influence should start at schools, continue at tertiary level and extend to the mentoring of graduates during employment so that we do indeed increase the number of professionally registered engineering practitioners and in so doing meet transformation issues that go deeper than race and gender. It is my wish that the Summit grows into something of great significance in the calendar of all engineering professionals, concludes Campbell.

“In my opinion the Summit has repositioned ECSA and has moved it to [a] different space with its topics, the way proceedings were designed and the interest shown by the audience. For the first time I felt proud of being an ECSA Council Member and strongly recommend that these kinds of seminars become a traditional forum in the future.”

~ Jelena Janjic
GM: Mining & Minerals
SABS

“Regarding the Summit, I think it is a good idea and that we should build on it with the aim to develop new initiatives for the future.”

~ J J de Koker
Head of Department of Civil Engineering Technology,
Doornfontein Campus, University of Johannesburg
ECSA Working Group highlights the need to support the development of young graduates

The problems facing candidates in preparing for professional registration are much broader than the lack of mentorship and include under-preparedness and often a lack of opportunity to gain the required experience.

It is worth mentioning that Dr. Allyson Lawless has continued with her pursuit of identifying the challenges and possible solutions for enhancing graduate development since the Summit. To date, there have been discussions, questionnaires and a revealing analysis of data which indicates that urgent and widespread interventions are required.

“We cannot afford to continue using many of our graduates for repetitive routine work, as they simply lose interest and leave the industry.”

~ Dr Allyson Lawless  
Managing Director: SAICE Professional Developments and Projects

“There have been negotiations post the Summit. We collaborated with our partners in Higher Education and obtained source data with respect to enrolments and graduations. Studying this data in conjunction with registration and company training trends has highlighted the gaps and suggests the need for comprehensive training guidelines for all disciplines. Part of what we want to do now is to promote good training practice,” says Dr. Lawless.

According to Dr. Lawless, who leads an ECSA working group, there have been extensive interactions with various stakeholders to ensure national recognition of, and support for the graduate workplace training phase, known as the candidacy phase. Structured training, coaching, mentorship, rotations and secondments are all elements which need to become part and parcel of planning workplace experiences for young graduates.

“We cannot afford to continue using many of our graduates for repetitive routine work, as they simply lose interest and leave the industry. They must be given a variety of work and increasing responsibility. ECSA should encourage industry to go all out to develop the next cadre of engineering professionals. They must also promote the value of developing and appointing registered personnel and must encourage young people to work towards registration,” adds Dr. Lawless.

Dr Lawless referred to a speech by the Honourable Minister Trevor Manuel in which he suggested that unethical corporate behaviour was not limited to corruption, but extended to exploitation of skills and the environment. “ECSA must do all it can to encourage industry to develop engineering skills, thereby protecting the sector and ensuring the development of its future leaders,” concludes Dr Lawless.
ECSA takes a proactive step for the prioritisation of our future Industry leaders

Now that the Summit is a has been and the lights have somewhat dimmed – it is now, more than ever before that ECSA should be lifting the banner and blowing the trumpet for change; to better the industry, our nation and our children – the future leaders of tomorrow.

A lot has been said about the research of Glen Fisher which is aimed at improving throughput in the Engineering Bachelor’s degree. According to Fisher, this research is of significance because when all things are said and done, as things stand there is a huge cost that is being incurred and resources are being wasted.

“Now that the Summit is over, ECSA has the opportunity to embark on a rigorous process of internal reflection and proactive outreach.”

~ Glen Fisher
Glen Fisher Consulting

“We cannot afford to be losing such numbers. If you look at the throughput rate and figures, you realise that there is a lot of wastage. There are huge social and economic costs involved. For starters, there are few scholars who qualify to study Engineering based on their Matric (Grade 12) results.

“This research points to a range of interventions that could be taken to ensure that we don’t fail our students again. The costs involved in improving throughputs in the engineering bachelors degree will be more than offset by the reduced wastage and loss of talent and skills,” says Fisher.

According to Fisher, it is encouraging to see the issue of the skills pipeline being given a hearing. It has generated a lot of interest and it is his desire that ECSA will build on this momentum. The Summit may have passed, but the insight generated there should spur positive change.

“Now that the Summit is over, ECSA has the opportunity to embark on a rigorous process of internal reflection and proactive outreach. The research will afford ECSA the opportunity of reviewing its communication, customer support and training. ECSA has already taken the first step in calling upon stakeholders and listening to them. This proactive approach and effort in going beyond their mandate is something that should not stop, but grow,” concludes Fisher.
Summit calls for integrated solutions

The Engineering Council of South Africa (ECSA) is a statutory body established in terms of the Engineering Profession Act, Act 46 of 2000. That part is undisputed. What is often ignored, according to Sam Amod, is that processes and solutions are no longer located in one profession and/or discipline.

“There is a dire need for us to look into other professions, combine disciplines and resources in a bid to find integrated and sustainable solutions. When one looks at momentous technological strides, one soon realises that there is an overarching shift away from disciplines operating in isolation,” says Amod, a Civil Engineer by training, professional project manager and arbitrator.

Amod also led a breakaway session at the Summit that looked at the provision of infrastructure, essential to allow sustainable economic and social intercourse. The delegates grappled with the challenges faced by engineering professionals in this regard.

“The future of engineering is secured, particularly within the blossoming African content. However, there is a global call for more integrated solutions. In order to facilitate the ideas and solutions we came up with at the Summit – we need to look across the various divides that we put in place and create new coalitions. In order to reach our envisioned future, we need to step out of our comfort zones and think creatively. We need to consult other disciplines and extend our parameters a little wider,” affirms Amod.

According to Amod, ECSA did very well by starting a much needed conversation. ECSA has shown once again that it is on the side of advocacy as opposed to just serving an administrative function.

“The Summit was of great value to me and the profession at large. It was refreshing to see that ECSA has transcended from exercising authority as a stipulation of an Act, but that it was moving towards moral advocacy.”

~ Sam Amod
ECSA Consultant

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“The Summit was of great value to me and the profession at large. It was refreshing to see that ECSA has transcended from exercising authority as a stipulation of an Act, but that it was moving towards moral advocacy. I would like to see the Summit become a prominent event in the calendar of engineers, architects and our colleague in other disciplines. All in all, I salute ECSA for initiating this Summit,” concludes Amod.
“Today the Engineering Council of South Africa is initiating what we consider to be an important and inclusive dialogue in our country. ECSA is seeking today to highlight the important contribution that the engineering profession in South Africa can make to socioeconomic growth and to provide a platform for all stakeholders to discuss and address activities and programs that are geared towards a globally competitive and sustainable engineering industry in our country.”

The words above were spoken at the Summit in an opening statement by Ian McKechnie – the Summit’s Master of Ceremonies, ECSA Council Member and past President of the South African Institute of Electrical Engineers (SAIEE).

From the onset, one can ascertain that a dialogue was indeed initiated. This dialogue incorporated various stakeholders from the former Minister of Public Works, Honourable Gwendolene Lindiwe Mahlangu-Nkabinde, industry and peers. Fervent panel discussions with renowned facilitators and panellists who spanned from Engineers to politicians were held. Educational bodies, government, communities, media, labour and professional bodies as well as Voluntary Associations were afforded the priceless opportunity of adding to this “important and inclusive dialogue in our country”.

“The purpose of the Summit was to bring together key stakeholders in the Engineering Profession in order to initiate a dialogue to inform the strategy that the Engineering Council of South Africa should adopt in order to respond to challenges facing the Engineering Profession,” adds McKechnie.

Through the Summit, the hope was to develop a consensus view on what our national response to addressing key challenges facing the Engineering profession in South Africa today should be. The challenges were addressed through parallel and focused panel discussion sessions.

McKechnie clarified that ECSA played a facilitator role and should not stop taking the proactive step. He continued to encourage active participation and called for solutions to come from panel groups, networking opportunities and most importantly, subsequent to the Summit, through for example voluntary associations, businesses and other forums (including further opportunities facilitated by ECSA).
We would love to hear from you!

For more information on the Special eBulletin and/or to give us your feedback, please contact:

Phindiwe Nkosi
Manager: Marketing and Communication
Tel: +27 (0)11 607 9585 | Fax: +27 (0)86 246 7480
phindiwe@ecsa.co.za | www.ecsa.co.za