

TOOLBOX: Peer Learning and collaboration

The challenge

A key challenge for professional engineering institutions (PEIs) is the **limited interaction, exchange and coordination** between PEIs operating in the same country. This is because PEI staff are often composed of volunteers who are already overburdened with demands and do not have time to engage in these interactions. In some countries, an umbrella PEI favouring coordination and collaboration is lacking, meaning that PEIs focusing on different disciplines compete instead of collaborating with each other.

Initiatives

Several sub-Saharan African (SSA) PEIs operating in the same country are taking steps to increase coordination and collaboration with one another, with the aim of adding to the list of benefits they can offer to their members through increased opportunities for capacity building and the exchange of knowledge and best practices.

PEI toolkits

PEIs develop common guidelines for best practices on specific topics that interest all PEIs (e.g. ethics, financial management, leadership, governance)

Outcomes: improved standards and practices across PEIs; effective operating systems and standardised processes; improved communication around guideline implementation; better services for members

PEIs: Federation of African Engineering Organisations, Ghana Institution of Engineering

Coordination mechanisms

PEIs establish an umbrella, forums or training colleges for favouring ongoing or ad hoc coordination

Outcomes: exchange of knowledge and best practices between PEIs; collaborative research projects, training courses and events; improved offering for PEI members; stronger advocacy efforts

PEIs: Nigerian Society of Engineers, Nigerian Institution of Mechanical Engineers, South Africa Forum of Engineering



Case study: Nigerian Society of Engineers (NSE) and coordination of discipline-specific PEIs

NSE is a **non-governmental coordinating body of discipline-specific PEIs in Nigeria**. At the beginning of every year, Nigerian PEIs submit a yearly plan of activity to the NSE. At the end of the year, the NSE Assessment Committee assesses the submission according to what PEIs have achieved that year, and rewards the best three performing PEIs with monetary prizes. NSE also organises an annual retreat for all PEIs, in order to present the NSE Action Plan and discuss what PEIs can do together, as well as expectations of them for the year. Examples of what the NSE plans to achieve through its coordination efforts include a collaborative paper on analysis of sectoral problems that affect the Nigerian economy, as well as potential engineering solutions for those problems, and an analysis of the gap between industry and academia across disciplines, which results in low employability for young graduates. In both cases, the NSE has provided PEIs with a template to support data collection and analysis in their specific discipline. Analysis has yet to be conducted, as COVID-19 has delayed implementation of this activity. During the COVID-19 pandemic, NSE called its members to action, at divisional and branch level, in industry and academia, in a **coordinated effort** to assist the government and society as a whole in the fight against the pandemic. Encouraged by the call, universities and individual professionals have organised donations and advocacy campaigns; set up food stalls and distributed of medical supplies; produced hand sanitiser and face masks; developed different models of automatic handwashing stations to be distributed for community use; and designed or repaired ventilators for hospitals, demonstrating the potential of local engineers to solve the country's challenges.

Success factors and achievements

For each category of interventions, the table below identifies the implementation challenges and the success factors for these interventions. The table also highlights some of the strongest achievements.

Interventions	Challenges	Success factors	Examples and achievements
<p>PEI toolkits</p> 	<ul style="list-style-type: none"> → Finding staff with the necessary skills and expertise to work on the development of toolkits and guidelines → Lack of funding 	<ul style="list-style-type: none"> → Holding lectures (online and offline), to be shared on the PEI's website, on theory and practice on the topic and how to implement related solutions → Commitment from the leadership to put the topic at the forefront of discussions (e.g. including progress around the topic in the PEI Strategic Plan) → Advocacy efforts to raise awareness about the importance of the issue → Support and encouragement from the Federation of African Engineering Organisations to advocacy efforts, for other PEIs to focus on the specific issue → Human resources (e.g. employees, consultants) with the knowledge and skills to put together the documents, guidelines and templates needed to sustain the process in the long-term and make it easier to replicate the same process elsewhere → Coaching and training sessions for PEI staff on specific issues (e.g. financial management, professional fundraising and marketing skills, human resources, transparency, inclusiveness and diversity, global policies) to ensure understanding and operationalisation of practices 	<ul style="list-style-type: none"> → Ghana – Ghana Institution of Engineering (GhIE): Committee on Professional Practice and Ethics GhIE is developing a Committee on Professional Practice and Ethics, as well as a code of conduct and related guidelines, for the engineering profession. This includes an ethics lecture series delivered online and shared on the GhIE website, alongside data on perceptions among engineers in relation to areas such as ethics, training status and knowledge of GhIE's activities and code of ethics. → Supranational – Federation of African Engineering Organisations (FAEO): GCRF Africa Catalyst Grant in partnership with RedR The GCRF Africa Catalyst scheme supported a project implemented by RedR and aimed at strengthening the FAEO so that it can effectively promote the profession, share best practices, and increase local engineering capacity. The aim of the project, which began in March 2018, is to create a more streamlined and effective organisation for better leadership, financial management, visibility, and member recruitment. RedR has been working with FAEO to enhance its sustainable business model and financial management systems, including through work with external auditors. RedR has helped FAEO to boost its social media presence and update its website for greater outreach and visibility. They have mapped donors who could be approached for fundraising, and developed and consolidated networks with African and international bodies. FAEO and RedR have also started working on toolkits for strengthening organisational capacity, including on human resources, financial procedures and marketing strategies. Finally, to increase diversity of FAEO staff, FAEO has now recruited a new member, representing engineers from the Democratic Republic of Congo, and is making efforts to target Francophone countries in Africa.

Interventions	Challenges	Success factors	Examples and achievements
<p>PEI toolkits</p> 			<p>→ South Africa –South African Institution of Civil Engineering (SAICE): GCRF Africa Catalyst Grant for capacity building</p> <p>SAICE worked on the development of an easily customisable web tool to allow professional bodies to develop their own websites, build their own databases, advertise and manage events, and enhance the services they currently offer. This will increase PEIs' visibility, planning and management capacities, as well as capacity to satisfy members' needs, which could grow the membership base as a result. Existing platforms are now being further developed to include dispute resolution, framework agreement preparation and local professional development events.</p>
<p>Coordination mechanisms</p> 	<p>→ Overcoming competition between PEIs</p> <p>→ Lack of funding to establish an umbrella organisation, forum or joint training college</p>	<p>→ Finding common ground between PEIs and potential for mutual benefits from collaboration, e.g. to strengthen the training offer across disciplines</p> <p>→ An umbrella organisation that is mandated to carry out specified tasks, such as coordination between PEIs, mentoring and broad-based training</p> <p>→ Political will of PEIs to find common ground</p> <p>→ Online platforms and tools favouring collaboration and exchange between PEIs (even branches located abroad) around common issues</p>	<p>→ South Africa – South African Institution of Civil Engineering (SAICE): Attempts to establish the South Africa Forum of Engineering (SAFE)</p> <p>Under SAICE leadership, PEIs in South Africa have established SAFE in order to promote collaboration between PEIs. This focuses on how to address common challenges related to issues such as accreditation of continuing professional development courses and procedures to achieve professional registration. SAFE is not a permanent body and does not have a Constitution, and is only recently becoming more widely known. It has a Memorandum of Understanding signed by participant PEIs, which group together and combine resources on an ad hoc basis when an issue interests them. The ultimate goal of the initiative is to bring PEIs together in order to develop a stronger voice with which to engage with the Engineering Council of South Africa and the government.</p> <p>→ Nigeria – Nigerian Society of Engineers: Coordination of local discipline-specific professional engineering institutions</p> <p>See case study on page 1</p>