Engineering training essential to growth of engineers

Davis and Shirtliff was established in 1946 by partners Eddie Davis and Dick Shirtliff. It was based at Westlands and grew rapidly focusing on boreholes, water supplies and the coffee industry. Notable early projects included the water supply for Karen Estates, the entire water supply infrastructure until the mid-70's being installed and maintained by D&S. Other estates supplies including Gigiri, Kitisuru, Kibagare, Rosslyn and later Runda were also D&S projects.

D&S grew with the country and in the mid-1950's, the offices moved to new larger premises at the present location in the Industrial Area. Growth continued through the 1960's notably the distribution of Grundfos and Davey pumps being introduced then and in 1970 Dick Shirtliff retired selling his shareholding to a long-serving employee, Devji Shingadia. The present Chairman, Alec Davis joined the company in the mid-1970's and inherited his father's shareholding when he passed away in 1982. 1993 was a significant year for both Kenya and D&S as economic liberalization occurred and this was the catalyst for the company's rapid growth to the significant organization it has become today. It was also the year that Pedrollo products were introduced, now the Group's largest supplier. These two developments enabled a distribution strategy to be developed and also establishment of the branch network, which is now so important for the Group. Initially Kenya branches in Westlands, Eldoret and Kisumu were opened and between 1995 and 2000 subsidiaries in Uganda, Tanzania and Rwanda were established. Also the pump business grew hugely with Pedrollo and new solar and power generation activities were introduced.

Davis and Shirtliff today is the regional market leader in its field specialising in activities in the energy and water sectors including water pumps, borehole equipment, water treatment, swimming pools, solar equipment and power generation. It operates through 50 branches in seven regional countries – Kenya, Uganda, Tanzania, Rwanda, Zambia, Ethiopia, S Sudan.

Brief of Alec Davis

Alec Davis was born in Kenya in 1950 initially attending St. Mary's School before completing his secondary education in the UK. He gained an engineering degree from Loughborough University followed by an MBA at Manchester Business School and then returned to Kenya to join Davis and Shirtliff in 1976. After inheriting his father's shareholding in 1982 he became a director and then assumed majority ownership in 1990 on the retirement of his partner. Alec has been the CEO since then though is now passing the baton to long-serving Deputy CEO David Gatende and will move to the position of Chairman.

Q. As a company that has been established for so long, what do you think is the greatest impediment to attaining universal water supply to Kenyans.

A. The country faces a number of issues notably limited engineering capacity and funding. In the urban centers water supply is reasonably organized though in the rural areas there are particular challenges due to the large number of dispersed communities and a lack of easily accessible water. It is a fact that Kenya has a low availability of water per head of population making water accessibility very expensive and to address this considerable infrastructure investment is required.

Q. What are some of the major changes you have witnessed in water supply over the years

A. There has certainly been great improvements in water accessibility as national policy has focused on water availability. The driver has been the population growth and urban center investment has grown hugely. In the rural areas there has been considerable NGO focus and also cheaper technologies and a greater number of trained engineers have made a big impact. Devolution has also helped as the County governments focus on providing water to marginalized communities.

Q. What are the projects you are proud of as D&S, why are you proud of them?

A. There are many as D&S has always been an industry leader. For example we were the designers and installers of the basic water infrastructure for Karen estates in the 1940's. Also in the 1970's, we installed all the water treatment plants on the KenGen Tana River hydro power stations as well as at the many new lodges that were constructed then.

An added activity was swimming pools, both residential and commercial, and many were built that are still in use today including Limuru Girls School, Loreto Convent, YMCA, Braeburn and Pangani Girls, though we ceased building pools some years ago.

One of the product developments I am particularly proud of is development of reverse osmosis technology which is now widely used in hotels and other institutions across the country. Other technologies we have pioneered include variable speed booster pumps, ultra-filtration, salt chlorinated swimming pools and solar pumping, which is making a big impact in the rural and arid areas. This is a technology that we introduced in partnership with our overseas suppliers and we have carried out many installations in the region.

Q. What new technologies has the company embraced in energy and water management?

A. Solar is the future as world manufacturing costs of the key component, the PV power modules, has dropped by about 85 per cent in the last five years. It has made solar powered projects much more affordable which combined with improved technology has led to a widely accepted change to the technology. The other area where great progress has been made is in remote monitoring and control, a technology that we have invested a great deal of effort in. We now have a system that can monitor equipment performance at a distance, for example in Wajir from Nairobi, and action problems when they occur. We call this iDayliff that allows users to control their water and energy systems through a phone app.

Q. How is the Water Bill 2014 going to affect the consumers and your customers?

A. The Bill will certainly impact consumers as it will raise costs and make them use water more efficiently and reduce environmental contamination. It will also make a big impact on the efficiency of water management processes in the country. Proper water regulation and management is essential in this country to ensure maximum efficiency in the use of the limited water resources we have available.

Q. How will the Water Bill 2014 and other legislations affect your business?

A. I certainly feel it will affect our business but positively. There will be a greater demand for efficient water supplies and more efficient solutions will be required to deliver it.

Q. How much does your company depend on engineering and engineers?

A. Davis and Shirtliff is an engineering company and depends hugely on qualified and experienced engineers. About 50 per cent of our staff are graduate engineers while the technicians are trained with tertiary education. We are committed to recruiting graduates of high calibre and certainly they make a big contribution to the company. We have engineers of all types including project engineers, software engineers, sales engineers and installation engineers and the operational side of this business depends mostly on engineers.

Q. Since you take up many engineering graduates please comment on the quality of engineering graduates our universities are producing?

A. Generally the quality of graduates that we recruit are well qualified and the local universities do a good job. Kenyan engineers are highly competent and we have no problems in finding the skills level that we need, especially at the graduate level. However, specialised engineers with particular skills are more difficult to find as the engineering traditions and culture do not exist here like they do in developed countries.

Q. What opportunities do you provide for your technical employees for professional development?

A. We have various formal training and development programmes for all our engineers that together with on the job experience creates rounded professionals. We have a well-equipped Training school that organizes regular courses for both internal and external participants and the particular focus is on product knowledge. Training and product management is essential to the development of our business.

To become an engineer a good formal academic education is an essential foundation with a good post graduate degree being an added advantage. However, there is no substitute for practical experience and good engineers only evolve with experience and time.

Q. How can we build capacity and increase technical output in engineering firms like yours as we pursue vision 2030?

A. The key is a formalized development path that exposes engineers to different technologies and challenges that encourage innovative and creative solutions. It is important that they are given responsibility in a wide range of projects as it is the only way to learn. Working in an innovative and progressive environment is important and providing the engineer has an open and enquiring mind he or she, and we employ an increasing number of lady engineers, will develop the skills to make significant contributions to the development of the nation.