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Editorial

The current and future demand for engineers is a prevalent theme for industry, government, higher education and secondary school education. This was the subject of a recent IEEE meeting in Munich. The demand for new engineers is by no means evenly distributed amongst the world's countries. A particular hot spot is central Europe, especially Germany, which has a huge appetite for new engineering manpower in almost all branches. This cannot be fulfilled due to the sparse influx of graduating students. Germany is particularly vulnerable due to the peculiar phenomenon that recruiting students eager to study engineering is in phase with industry demand. This means that if the demand is low, there are fewer new engineering students. Industry demand has about the same cycle, so that when demand is up, there are too few engineering students graduating. However when the demand is up there is a bigger intake of engineering students who may then experience a downturn in demand by the time they graduate. The situation is, as said not evenly distributed world wide and is strongly dependent on local economic conditions. On a recent visit to Canada a downturn in the demand for engineers in the industrialized Ontario region was noticeable. This was compounded by the rise in the value of the Canadian dollar as against the US dollar creating a dip in demand for Canadian engineering products from across the border. A new feature is a phenomenon of a historically reversed 'brain drain'. Especially India and China are experiencing a huge increase in demand for engineers. They are now recruiting in Europe and offering competitive salaries. Whatsmore, engineering education practice is in need of extensive reform. It is not easy to keep pace with developments. One of the predictions that I would like to venture is—the demand for highly qualified engineers outside the traditionally developed countries is going to soar. In addition, China for example is fast remodelling its engineering education system after the quality American institutions. I wonder whether China, after learning its lessons from the US will embark on entirely new and venturesome engineering education paths, and overtake the developed countries in both quality and quantity (they have already done this) within 20 years. No one has as yet had an experience with a capitalist-communist system and what it may achieve. Just consider what China is doing in Africa, engineering related developments that Western countries have not been able to bring forward in centuries. We are in for changes—in particular the strain and stress between the different education cycles, secondary, tertiary and industry need a measure of relaxation.

Michael Wald