



## “KNOWLEDGE IS KEY TO SUCCESS”

### Professor Dr. Ludwig Martin: International Management in Engineering

>> Three key words and one preposition. All key words are “huge”. Thinking of the word international one thinks of international politics, trade, cultural differences, languages, Europe and the world. Well, thinking of Management as a field of study is also huge. Organizational studies, Human Resource Management, Strategic Management, and the likes, are combined here in one word. The wealth of Management is underpinned by the wealth of journals dealing with the various aspects of Management. And lastly there is Engineering. Huge in scope: mechanical, electrical, mechatronics, water, civil – just to name a few sub-disciplines in Engineering. So does this job description imply that the combination of three wide fields have to be even larger? Does it all have to be taught?

Perhaps a simplification and an example of a case might make more sense than trying to elaborate on what International Management in Engineering may imply. Firstly, International implies that more than two national states are involved in the story. Secondly, Management implies the act and processes of people within organizations, such as companies, to make the organization work towards achieving its objectives and aims. And lastly, Engi-

neering implies a highly technical content in which people, who might have to be managed, create solutions to problems.

Looking at this simplification and the combination thereof, may well be a reason why I ended up at this University. Let’s use this case study to elaborate what International Management in Engineering might be: Born and bred in Germany I had the opportunity to study in Karlsruhe (Germany) and Cape Town (South Africa) towards my first degree in Civil Engineering, specializing in Construction Management. Through life’s little wonders, and pulled back to South Africa because it’s my wife’s country of origin, one of my first jobs was to head up two offices of a South African Engineering and Project Management consulting firm. Here I was – a German national, managing multiple projects ranging from simple engineering schemes (like gravel roads) to complex water treatment plants, with various role-players in South Africa. It was a difficult time as a young German graduate working in the African bush. It was fun too! But is this International Management in Engineering? Well, perhaps the reader should refer to the generic definition of International Management in Engineering presented at the start of this essay and compare.

As the career developed, the opportunity arose to work in Switzerland at the prestigious ETH Zürich. Here the focus of my work was on management aspects of construction and construction engineering. Trained to think engineering project management, my mind underwent a transformation from engineering solution focus to understanding management in engineering and its projects. Then, having lived in Switzerland for three years, the decision was made to move back to South Africa. But what can a (still) young engineer do there? It was uncertain terrain. Various engineering assignments in and around Cape Town became the norm, working initially as a freelance engineer and later starting up an own firm. During this time, a relationship with the Cape Peninsula University of Technology (CPUT) developed, which would become my base for 6 years – teaching Construction Management and Research Methodology. This steady base allowed me to deepen my key interest: knowledge transfers. In my work life I had witnessed many small African contractors working alongside established large contractors, but it appeared as if the former was unable to grow into sustainable businesses. With the phrase “knowledge is key to success” in mind, the opportunity arose to write a PhD on this topic focusing on inter-organizational knowledge transfers. These part-time PhD studies I completed at the University of Cape Town. As this research field was essentially covered for now, other fields opened up. In this time at CPUT I had the opportunity to develop a new programme (Facility Management) in collaboration with a German University, but also had appointments as a visiting academic at various international institutions – the University of Bath (International Construction Management), Polytechnic of Namibia (Project Management), and University of the Witwatersrand (Research and postgrad supervision). An opening within a provincial government department in Cape Town came along and halted my academic career. Suddenly I was inter alia responsible for the planning of a new university hospital, which implied understanding the customer’s needs (doctors and nurses), matching this with technological options and possibilities, and all this under severe time and cost pressures. Complex strategic management of health services and special projects – particularly in infrastructure and technical management – became the daily tasks. This was partially supported

by teams of mix-national consultants. But is all this International Management in Engineering? Well, possibly not. It certainly was Management in Engineering. But then again if international implies more than one nation, then certainly yes.

The School of Engineering at the Pforzheim University has a good reputation. The university is well staffed and equipped, and this job opening came along. So why not taking this on? Teaching students and conducting research is something that always appealed to me. One has to take a view on things, and has to decide what view one wants to present to the students. Others may have a different opinion on certain subject matters, based on their own knowledge and frameworks of reference. The challenge is not to convince others of one’s opinion, the challenge is to create a common base from which each one can launch their own ideas. Creating social responsible, critical thinkers, and not ‘followers’ is the aim. As for research the opportunity to create more knowledge needs to be exploited; it is a good base for students to shape their understanding of the (business) world too. The niche of knowledge transfers to and from emerging countries seems the obvious continuation of the work started many years ago.

Using the above case – my life story in a nutshell – my endeavour at this university is to make students think of what International Management in Engineering can be all about. There are many facets to this field, and certain emphasis will have to be made. Teaching my understanding of International Management in Engineering, and uncovering new aspects thereof through research will be the focus of my work here. And well, having lived abroad for almost 16 years, it was perhaps time to come “home” and show the family what living in Germany is all about... ■