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CDIO IN AFRICA

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OVERVIEW OF THE ROUNDTABLE

The CDIO Initiative is well known and has many collaborators in Europe, North America, Latin America, and Australasia. The same has not been true for the African continent, although the need to improve engineering education in Africa is likely no less than everywhere else in the world.

The aim of this round table is to explore the interest within the CDIO community for collaboration with African universities, and to discuss the various forms of collaboration that could be productive. What are the particular challenges for engineering education in various African countries? What can the CDIO community do?

The activities in which the conveners of this round table are involved are offered as some starting points for exploring potential CDIO developments in Africa.

KEYWORDS

Africa, CDIO Initiative, Standards: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

ACTIVITIES

We start by making a round of introductions. Three note-takers are appointed: One to record existing activities and contacts on a map of the African continent. One to note relevant considerations to take into account. One to note ideas for activities and collaborations.

TARGET AUDIENCE

We welcome to the table all delegates with background, experience or connections in African institutions, as well as those who would be interested in joining activities and collaborations.

FOLLOW-UPS

An email list will be created for continuing information and networking.

BIOGRAPHICAL INFORMATION

Samuel Azasu is an Associate Professor of Real Estate at the University of the Witwatersrand (Wits). He took his PhD at KTH Royal Institute of Technology, Sweden. He has many years of experience organizing and managing curriculum redesign, quality control for regular degrees and executive courses in real estate in Sweden, the UAE and South Africa. Samuel was responsible for turning around three struggling real estate programs at Wits, applying the CDIO approach (see Asazu & Gibler, 2016).

Margareta Bergman is Director of Studies and administrative coordinator for faculty development in teaching and learning at KTH Royal Institute of Technology. She also organizes the Enhancing Higher Education program at KTH, for groups of incoming international faculty.

Lamjed Bettaieb has degrees in Computer Engineering, Telecommunications, and Business Administration. He has been the Director of academic affairs of ESPRIT, Tunisia, since 2003. He is the co-founder of the Pedagogical Innovation Center of ESPRIT and was the leader of the active pedagogy reform (2011-2014). Lamjed has published several papers regarding Engineering Education.

Mikael Cronhjort is lecturer, researcher and educational developer at KTH Royal Institute of Technology, Stockholm, Sweden. His background is in theoretical physics and mathematics, and he has many years of experience from teaching physics, mathematics and educational science. His field of research is Engineering Education, with a special interest for Mathematics Education and Teacher Education.

Kristina Edström is Associate Professor in Engineering Education Development at the Department of Learning in Engineering Sciences, KTH Royal Institute of Technology, one of the founding members of the CDIO Initiative. Her research takes a critical approach to the “why”, “what” and “how” of engineering education reform, and she has written numerous publications with relation to CDIO.

Tamer Elnady is the Vice Dean for Education at the Faculty of Engineering, Ain Shams University, Egypt. He has graduated from KTH Royal Institute, Sweden, has formed a long cooperation with KTH in several educational projects.

Lars Geschwind is Professor in Engineering Education Policy and Management and coordinator of the research group HEOS (Higher Education Organization Studies). His main research interests are higher education policy, institutional governance, academic leadership and management and academic work. He is currently involved in a number of projects focusing on change processes in higher education institutions, including e.g. governance and steering, quality assurance, academic careers and partnership with industry. Most studies include a comparative component and a historical perspective.

Anna-Karin Högfeldt is a Lecturer and Director of Faculty Training at the Royal Institute of Technology. She is involved in Nordic and International/cross-continental education evaluation, development and research projects. She is a co-author of the book Guide to Challenge Driven Education, which originates from a collaboration project with partners in East Africa. At KTH, she has worked ten years strategically to support management, schools,

education program directors and individual teachers to strengthen education and system level approaches.

Charnaldo Ndaipa has a Master's degree focused on Educational Leadership, Management and Development from Africa University. He has been a Head of Department at the Universidade Pedagógica in Mozambique since 2010, and is currently pursuing a PhD in Technology and Learning at the Department for Learning in Engineering Sciences at KTH Royal Institute of Technology.

Anders Rosén is Associate Professor at the KTH Royal Institute of Technology working as teacher and researcher at the Centre for Naval Architecture, as educational developer at the Department of Learning in Engineering Sciences, and as Deputy Director of Global Development Hub. Currently focusing on promoting integration of sustainable development in higher education and development and implementation of challenge driven education.

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