

Industrial Engineering: creating a network!

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Abstract: This paper presents a brief history of the Industrial Engineering Conference (CIO), and specially reinforces the role of the CIOs as a forum for building a network and creating long-term relationships.

Key words: Industrial Engineering, Industrial Engineering Conference, Network.

After 30 years, no less, a group of Industrial Engineering teachers from different Spanish universities met at La Rábida (Huelva, Spain) for the 1th Industrial Organisation Conference, an event organised by the Department of Business Organisation at the Seville School of Industrial Engineers.

They were all concerned about reaching a consensus on the presence and activity of teachers in the Business Organisation areas in Engineering Schools and on defining the Industrial Engineering profile.

Later in 1995 the 2nd Industrial Organisation Conference was held in Valencia and the 3th Industrial Organisation Conference was held in Barcelona, which saw the start of ADINGOR (the Association for Industrial Engineering Development).

ADINGOR's first and fundamental objective was to reinforce and consolidate its own Industrial Engineering approach based on Business Organisation and Engineering.

Moreover, attempts were made to set a meeting place, a forum, where people could exchange opinions, and share knowledge, best practices, as well as academic and research experiences, without forgetting the chance for personal contact among group members, building a network and creating long-term relationships.

The meeting place has been the annual ADINGOR conferences, known as CIOs. Since 1999, CIOs have

been held non-stop until this year's 20th edition in the city of San Sebastián.

Many things have changed since then.

The environment is increasingly turbulent, and the market is ever-demanding and more globalised. Competitive pressure is enormous, new technologies constantly appear, as do environmental and legal pressures, and so on.

The education field is not much more promising. Government cuts affect all aspects, there are no research grants, the pressure to publish is brutal, publications are the only scale to be acknowledged by, uncertainties about future syllabi, etc.

All this makes our activity and day-to-day duties extraordinarily complicated. However, if we examine CIOs, I believe that we can see that their evolution and value have been positive for both teaching and research.

In the teaching domain, I wish to stress what CIOs have contributed. Teaching problems have always been addressed in all the CIOs. By way of example, in this year's CIO in San Sebastián, two tracks appear: Industrial Engineering & Operations Management Education and Innovation in Education and Professional Skills.

I would like to point out the particular contribution made by the 2003 CIO held in the city of Valladolid, which coincided with university degrees being adapted to the European Higher Education Area.

During the 2003 CIO, the ADINGOR General Assembly passed the proposal of the Industrial Engineering degree title. This document was the basis on which all the titles of the different Spanish Schools and Universities have been determined.

As Industrial Engineers, an applied nature features in our DNA. Promoting relations with industry has always been present. Indeed the motto of this year's 20th edition of CIO is "Building bridges between researchers and practitioners". Moreover, directors of important national and international companies have always attended the plenary sessions of CIOs.

It is a fact that CIOs and ADINGOR have always known that in a global world, we could not be restricted to a national conference. After consolidating the presence of teachers and researchers at CIOs from all Spanish universities, our internationalisation evidently became a pending matter. In 2007, the 11th CIO Madrid conference was also the 1st International Conference on Industrial Engineering and Industrial Management, for which English and Spanish were the official languages.

Contacts were also made with the *Associação Brasileira de Engenharia de Produção*, ABEPRO, the equivalent to our Industrial Engineering Association. This contact was subsequently reinforced and it finally shaped the joint organisation of CIOs with ICIEOM. And so it was that Valladolid witnessed the first Joint Conference in 2013.

Such international emphasis continued to grow as the Institute of Industrial Engineers of the USA (now the Institute of Industrial & Systems Engineers) attended the 2014 CIO in the city of Málaga, the first conference to be jointly organised by three associations with English as the official language. In 2015 the conference was organised in Aveiro (Portugal), to which Portuguese industrial engineers attended, and the European Academy of Industrial Management will attend this year's CIO in San Sebastián.

This has meant that more than 20 countries have attended recent CIOs.

In particular, CIOs are a meeting place and a networking opportunity for all industrial engineers from Spain and other countries. I believe that this aspect is fundamental. CIOs are a unique opportunity to meet with colleagues from other national and international universities.

It is not just a matter of attending the conference, presenting a paper and receiving feedback from other researchers.

Nor is it only for knowledge sharing and setting trends by means of talks given by researchers and plenary sessions. For example, in this year's CIO we will talk about new trends in manufacturing with a track in Industry 4.0.

It is not only to offer the chance to welcome editors from prestigious international journals, and to hear their points of view and recommendations to be able to publish in their journals and other journals.

Nor just to select the best papers for prestigious international journals or to be published in the Springer Lecture Notes in Management and Industrial Engineering.

It is true that CIOs very much reinforce our role as trainers of a given profession, which has in recent years been extended and its image has improved, and it has been acknowledged in economic-professional and academic domains.

CIOs are also a way of transmitting the existence of Industrial Engineering and its international acknowledgement to academic and professional domains. The hundreds of thousands of downloads of the Conference proceedings from our website clearly evidence this.

Apart from all these aspects, any of which alone would justify the existence of CIOs, the role of "meeting point" and networking is essential.

The fact that publications are seen as the only acknowledgement scale and us focusing most of our efforts there may lead us to isolation, to us being enclosed in our bubble and our shell. So above all, we need to relate with others because there is no doubt that "making friends" is vital in all walks of life, and also in what is academic. Sharing with other colleagues, knowing what is happening in other universities and in the world, knowing how to do things together which cannot be done individually are what CIOs offer us. Moreover, our CIOs dedicate a large part of the Conference to social aspects to reinforce this interpersonal knowledge and these links.

We face many challenges and CIOs are one of the best responses to face them.