



Marco Orellana - Keynote Speaker

Codelco, Chile

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Title of the talk: "Digital CODELCO": Towards Future Mining

Abstract: The mining industry is currently in the midst of a transformational process that is posing increasingly complex challenges that are ever more difficult to address. In this scenario, the old paradigms and strategies to deal with such challenges have become increasingly less effective.

The root causes of this process are not only related to the need to exploit deposits under ever-more complex mineralogical and geological conditions, but also to the sustainability of the business itself, due in part to environmental regulations, the relationship with communities living close to the mines, and the demand for safer and more challenging jobs, to name but a few.

Moreover, mining today is facing a long period of very low copper prices. Thus, most mining companies are facing this present by dramatically adjusting their costs. However, the future of mining can only be assured through innovation and transformation towards Smart Mining.

Within this maelstrom of transformation, Information, Telecommunication, Automation and Robotics Technologies (TICAR), emerges as a source of innovation for enabling new practices and new processes. Thereby moving the industry from management based on historic information towards a management based on real time and predictive information.

Over the next ten years, radical transformations will take place in mining industry. Thanks to the enabling power of TICAR, the habitat of mining operations is going to be completely modified, transforming the quality of life of its workers, and of the an entire culture.

Biography: Marco Antonio Orellana Silva was born in 1958. He lives in Rancagua, Chile, 80 km south from Santiago. He received the Information Processing Engineering degree from the University of Chile, later obtaining a diploma in Information Management from the University of Santiago. He is married and has 3 children. Currently, he is the "CIO" of Codelco-Chile, the world's largest copper producer, where he leads the corporate efforts on Information Technology, Telecommunications and Automation, reporting directly to Vice President of Administration and Finance.

He began his career at Codelco-Chile in 1980, as Head of Information Technology in FUSAT, the corporate Health Hospital located in Rancagua. In 1986 he joined the Chuquicamata Division, where he later became the Head of the Information Technology Department. In 1996, he moved to the corporate headquarters in Santiago, leading the technology implementation of the ERP SAP.

In 2003 he was promoted to the Corporate Executive Manager of Information and Communication Technology (ICT&A), where he is responsible to create maximum value to Codelco-Chile, through use of ICT&A. In this responsibility, his main accomplishment has been to create and implement a

new ICT&A-based vision of the mining industry, with high levels of automation, a strategy known as DIGITAL CODELCO.

He is an active member of several users groups, such as SAP, the associations of CIOs of large organizations in Chile and of CIOs of mining companies based in Chile and Peru. At the same time, he is in close contact with ICT industry leaders worldwide, sharing and discussing frontier topics related to DIGITAL CODELCO. For this role, in 2007 he was awarded the recognition of “Manager of the Year” in Chile by CETIUC. In 2010 the Chilean technology community recognized the DIGITAL CODELCO strategy, honoring Codelco-Chile with the prize of “CIO of the Year” and in 2011 he wins the MIT CIO Award, in 2012 is incorporated in Computerworld Global 100 Award, in 2013, 2014 and 2015 in incorporated in HITEC 50 ranking for Hispanic IT Community in USA.

CODELCO DIGITAL strategy is elevated in paper: Codelco Copper Mines, developed by Harvard University in 2007 and for the books: “Leading Digital Transformation” for George Westerman of MIT and “Only Humans need apply – Winners and losers in the age of smart machines” for Tom Davenport 2016.