

## **Design of a management tool for strategic business alliances in the Energetic sector**

### **Jorge Agustín Martínez Villafuerte**

Department of Engineering and Technologies, Dpt of Engineering Management  
Universidad de Monterrey  
San Pedro Garza García, NL 66238, México  
[jorge.martinezv@udem.edu](mailto:jorge.martinezv@udem.edu)

### **Verónica Garza Elizondo**

Department of Engineering and Technologies, Dpt of Engineering Management  
Universidad de Monterrey  
San Pedro Garza García, NL 66238, México  
[veronica.garzae@gmail.com](mailto:veronica.garzae@gmail.com)

### **Dr. Jesús Vázquez Hernández**

Department of Engineering and Technologies, Dpt of Engineering Management  
Universidad de Monterrey  
San Pedro Garza García, NL 66238, México  
[jesus.vazquez@udem.edu](mailto:jesus.vazquez@udem.edu)

### **Dr. Juan Acosta Aradillas**

Department of Engineering and Technologies, Dpt of Engineering Management  
Universidad de Monterrey  
San Pedro Garza García, NL 66238, México  
[juan.acosta@udem.edu](mailto:juan.acosta@udem.edu)

### **Abstract**

In recent times Mexico is having an energetic reform and is requiring the integration of the suppliers of the generation and maintenance of energy. There is found an absence of this kind of business integration between this type of suppliers. The present study presents an efficient and effective instrument with the aim of mitigating this situation where collaborations are pursued by endeavours. This instrument is supported by a guide divided in two phases which together sum ten steps, where each step is the link of a chain which strengthens the process as it goes forward. The objective of this instrument is to generate the integration of suppliers for the previous mentioned market, which would be satisfying the offer gap defined by the energetic reform in the country. After the instrument was designed, it was possible to generate a case study within a Company of the energetic sector, where it was tested and the outcome surpassed all expectations since it helped the Company to identify the potential partner for the strategic Alliance in order to integrate the supply chain of both endeavours, in order to increase both their market share and generate successful strategic alliances in the market.

### **Keywords**

Strategic, alliances, innovation, Energy Industry.

## **Biography**

**Jorge Agustin Martínez Villafuerte** is an Engineering Management graduate from the Universidad de Monterrey, he did a specialization in Internationalisation Strategies and Innovation at the Ruhr Universität Bochum, at that same year (2015) he gained international experience as a Junior Consultant with Volkswagen in Germany. 2 years ago he decided to take on the road of entrepreneurship and started his own business which has had a great performance and growth until today at the high performance coatings industry. He is a certified internal auditor for ISO 9001:2015. As a student he was member of the Institute of Industrial Engineers university chapter with the role of Chief of Staff at the board.

**Verónica Garza Elizondo** is an Engineering Management graduate from the Universidad de Monterrey, did a specialization in International Strategy at ESSCA Business School in Paris, certified as an internal auditor for ISO 9001:2015. And had the opportunity to gain experience at the huge retailer company The Home Depot as a Global Sourcing Intern. Actually she is a Project Coordinator at Termolita SAPI de RL de CV a medium sized company in the mining sector.

**Dr. Jesús Vázquez Hernández** is a Ph.D. Professor & Business Consultant Professional with more than 15-year experience in Operations and Supply Chain Management. Proven record of success leading Supply & Demand Chain strategy projects across multi-cultural teams, implementing business solutions and process improvement, with a TLS – TOC + Lean + Six Sigma mindset. Strong people management capabilities, team leadership and cross-team collaboration approach. Key strengths in analytical thinking, problem solving and people development skills. Certified as: Project Manager Professional (PMP), Jonah degree by the Goldratt Institute regarding the Theory of Constraints (TOC), and 2 Master degrees.

**Dr. Juan Acosta Aradillas** on 1973 he obtained the Electric Engineer Bachelor at the ESIME University, afterwards on 1981 got the Master of Science, finally on 1985 he finished his PhD UMIST University at the United Kingdom. Between 1986 and 1993 he performed as the Director of the Electric Machines Specialization at the Electrical Research Institute. Today he is performing as a technical Manager at the company Gerneradores Mexicanos SA de CV and is an active member of the National Research Institute. Complementing his activities he also is a member of the professors at ESIME and UDEM at the Bachelor and Master level.