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EQUIPO EDITORIAL / EDITORIAL TEAM / EQUIPA EDITORIAL

SUMARIO ● SUMMARY ● RESUMO

Formulation of a new electrical safety management system and assessment of its impact throught a case study in chilean large-scale mining

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Editorial

This issue of Project Design & Management consolidates in a multidisciplinary framework the academic and scientific research of our collaborators in the design, development, implementation and validation of tools and instruments applicable to business development, integrated projects and engineering. Innovation in scientific-technological development is a fundamental feature reflected in the main objectives of the journal as part of its lines of research and dissemination. This new edition presents nine articles selected for their content in technological innovation and methodology implemented by the authors for their publication. The main research corresponds to the discipline of management and business development integrating optimization methodologies in Project Management Offices (PMO) and the design proposal for projects under consolidated global practices that will allow an efficient operation that maintains an adequate social impact. Research reflecting versatile and innovative engineering techniques and methods highlights the challenges and obstacles that can arise in the technological transition from traditional cities to smart cities. Within the engineering, technological and multidisciplinary research, this new edition presents the integration of civil engineering construction issues with methods that conserve the environment and reduce negative impacts on ecosystems, through the development of construction elements with construction waste from various buildings. The effective use of BIM methodology is presented under a futuristic new trend scenario to develop intelligent infrastructure projects implemented in hospital infrastructure. In a transition of business disciplines, social policies and mining engineering, a comparative analysis of policies applied to the oil sector in Latin America and the proposal of an electrical safety system that will optimize mining production are presented.

The first article presents the creation and systematic validation of an agile and practical tool to identify knowledge, attitudes and practices (KAP) on competitive intelligence (CI). This tool was validated by experts and culminated with a pilot application to measure its reliability through Cronbach's Alpha index, resulting in a tool that favors management, scientific, commercial or governmental methodologies or actions that promote the competitive permanence of microenterprises and, therefore, the sustainable economic development of the regions.

The World Class Manufacturing (WCM) is an innovative system of integrated management of manufacturing operations that is presented in the second article applied in the automotive sector in Mexico by conducting 201 surveys to experienced professionals in WCM, where the results indicate that management commitment, comprehensive skills, type of leadership, involvement and organizational culture directly influence the benefits of organizations that implement the WCM in this way it is established that organizations can develop actions to mitigate risks and to strategically plan the results and resources needed in the short, medium and long term.

The third article analyzes the effectiveness of Project Management Offices (PMO) in the Dominican Republic, under an empirical approach, using information from 57 companies, evaluating the impact of the existence of a PMO on the fulfillment of key objectives, such as schedule, budget, scope, and client and team satisfaction. The results indicate that, although the presence of a PMO may be associated with greater formalization and structure in project management, it does not necessarily guarantee greater success in all the dimensions evaluated. The study concludes that the implementation of a PMO must be accompanied by a comprehensive approach that considers the specific cultural and organizational context of each company.

The research presented in the fourth article of this issue confirms that effective project management is a central pillar for organizational success, particularly under results-oriented methodologies such as Project Management for Results (PM4R). This study proposes an innovative maturity model for PM4R, based on a synthesis of the most recognized maturity models such as CMMI, OPM3, Kerzner Model, PRINCE2 Maturity Model and P3M3. The findings reveal that an integrated, results-oriented maturity model not only improves the efficiency and effectiveness of project management, but also facilitates a culture of continuous improvement and adaptability in diverse contexts.

The objective of the fifth article, reflects the important points that the main managers and decision makers must solve, such as digital infrastructure, citizen participation and sustainable urban planning, to make possible a smart city in Juazeiro do Norte, Brazil, detailing which are the most important challenges that must be faced by the municipal administration. The article concludes by emphasizing the need for collaborative strategies and investments to drive smart city transformation.

The sixth article integrates the relationship between construction technology and the environment, to be used in the construction of housing using the system of non-structural lightened walls. With this construction system, this new non-traditional construction technology is made known, since it integrates materials of regional origin and low ecological impact, in order to achieve environmental, economic and social constructive sustainability. The above reflects a replicable methodology for the proper management of construction waste in different geographical sectors at the local, national and international levels.

The seventh article, as a documentary research with a socio-critical approach, presents a comparative analysis of the actions and results shown by three Latin American oil companies (Ecopetrol, Pemex and Petrobras) in their annual corporate social responsibility reports. The research presents the most important data related to the three dimensions of sustainability: economic, environmental and social, based on the annual sustainability reports of the three companies. The article concludes that, although the three Latin American oil companies prepare their reports based on the three dimensions of sustainability, they have not yet reached the optimal levels of social and environmental investment required to achieve the sustainable development goals set out in the 2030 Agenda.

Finally, the eighth research presents the design of an electrical safety management system based on the requirements of ISO 45001 and technical standards such as NFPA 70E and IEEE 3007.2. The system was validated through diagnostic audits of companies from various economic activities that evaluated their electrical safety management. The results of these audits indicated that all the companies audited carried out specific actions, but electrical safety management was not performed. They also demonstrate the positive impact of the system on the benefits obtained by increasing compliance with legal regulations, such as reducing accidents to people, reducing costs due to damage to equipment and facilities and optimizing operational costs, seeking the safe and efficient use of electrical energy.

Before concluding this editorial, it is important for all of us who collaborate in this new project to thank the team of collaborators, IT and technical, as well as the Ibero-American University Foundation (FUNIBER) and the Universities that have provided all the material support so that this issue can be carried out, with the conviction that we are on the right path towards international recognition.

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