

## EDITORIAL PREFACE

# Special Issue on Risk Reduction Approaches in Construction, Research, and Oil Drilling

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## INTRODUCTION

In this issue of the *International Journal of Risk and Contingency Management (IJRCM)* we offer several case study manuscripts focused on learning from risk assessments in the research, construction and oil drilling industries. We close with an interesting teaching case study featuring how to explain risk to a variety of audiences, from continuing education students to senior economics majors at James Madison University located at Harrisonburg, Virginia USA. The next subsection contains a short review of each manuscript.

## LITERATURE REVIEW

### **Scope Reductions as Tool for Cost Control in Construction Projects: An Ex Post Analysis of Scope Reduction Options**

Olsson explains a number a project management best-practice technique called reduction listing that is used to reduce scope-creep in Norwegian government sector construction projects. One of the risk mitigation strategies underlying these techniques was to identify potential cost-overruns, and then reduce the scope without a change request to maintain the budget and schedule. Since his approach was a risk mitigation approach, the scope reduction was carefully preplanned and preapproved instead of decreasing the scope or increasing budget and time. Olsson collected retrospective data from several government special building construction projects as input to his case study. He then discussed how successful each of these methodologies was when they were applied to several large Norwegian government projects in 2000. His research provides a good literature review and a framework to encourage additional studies of risk mitigation methodologies.

## **Risk and Models of Innovation Hubs: MIT and Fraunhofer Society**

Baydoun narrates a multiple comparative case study of how two American organizations transferred risk by outsourcing but he takes care to analyze the advantages and disadvantages of both scenarios. His two case study organizations - the Massachusetts Institute of Technology (MIT) and the Fraunhofer Society for the Advancement of Applied Research (Fraunhofer). Both case study organizations are well-known for their research production, and therefore, they may serve as a model for this type of risk mitigation with complex knowledge management practices. Baydoun pointed out that despite the volume of literature on outsourcing best-practices, very little was known about the experiences learned by research-intensive organizations like universities and consulting institutions. One of the best-practices he revealed was that a centralized operations model was effective in leveraging and synchronizing the different research competencies available from the multidisciplinary resource base which is common in such institutions. On the other hand, one of the case study organizations successfully applied a decentralized operations model which enabled them to be more innovative in a short timeframe. His multiple study shows our readers another interesting angle to examine risk management practices from the organizational level of analysis as compared to the individual or project term standpoint that are commonly taken in research.

## **Risk Planning and Mitigation in Oil Well Fields: Preventing Disasters**

Gaurina-Međimurec, Pašić, and Mijić present a unique case study of risk mitigation in the oil drilling industry. They review the literature concerning best-practices for militating against problems of circulation reduction due to a loss of mud into the formations and preventing an influx of reservoir hydrocarbon fluids into the wellbore that could lead to blowout like the Macondo catastrophe experienced by the Deepwater Horizon in the Gulf of Mexico. They found the risk mitigation literature could be categorized in three engineering approaches to address the loss of oil pressure in well fields: Drilling process techniques, drilling fluid selection and wellbore strengthening materials. This type of study is important to oil industry practitioners and stakeholders because there have been several tragic disasters due to mishandling of pressure changes in oil wells. One of their key recommendations was to manage the equivalent circulating density by reinforcing the wellbore casing. This sounds easy but according to the researchers it is difficult to achieve. Another interesting insight they mentioned was to classify regions of the oil field by risk zone level so that efforts may be prioritized and concentrated in high risk areas (especially those more likely to fracture or explode). For non-practitioners, their study was fascinating to read about the unique terminology including terms such as thief zones and gunk squeezes.

## **Teaching Systemic Risk: An In-Class Simulation for Diverse Audiences**

Given the above articles that cover the application of risk management across three different global industries, it makes sense to offer some material for teaching the underlying topic of estimating risk to international students (our future practitioners). Wood comes to the rescue by sharing a teaching case study featuring how to explain risk to international students in an undergraduate statistics course at the James Madison University located at Harrisonburg, Virginia USA. An interesting approach that he shared was how to design and apply an in-class simulation teach the complex risk-related statistical theory of independent event joint failure probability. Additionally, he demonstrated how to teach the more complex theory of common-mode systemic failures applied to the banking industry.

## CONCLUSION

It is tradition in *IJRCM* that we thank our Editorial Review Board (ERB) members including the Associate Editors and International Advisors: Thank you everyone. In particular we want to recognize the outstanding volunteer services of the following *IJRCM* board members for contributing to or helping write this editorial preface: Mark Ciampa (Gordon Ford College of Business, Western Kentucky University) and William C. Wood (School of Economics, James Madison University). We also thank the corresponding authors in this issue because they certainly worked overtime helping us get the package completed and back on schedule. Thank you Nils O. E. Olsson (Norwegian University of Science and Technology), Mohammad Baydoun (Lebanon), Nediljka Gaurina-Međimurec (Zagreb University, Croatia), Farzad Firouzi Jahantigh (Iran), and William C. Wood (James Madison University, USA).

On the other hand, unfortunately, we have had to downsize our ERB due to the lack of performance by some members (this lack of performance caused delays in meeting our publishing mandate for our clients). Therefore, we are actively seeking new ERB members. Anyone interested in joining *IJRCM* ERB could review our journal style through the online content and then contact the Editor-in-Chief.

In closing, we encourage risk management practitioners to contribute to the risk and contingency management body of knowledge through *IJRCM*. We would like to see more research risk, uncertainty, and contingency management studies across the disciplines and using multiple methods. We also advise researchers to triangulate their data and method to increase the reliability of the results as well as to gain a more robust interpretation of the findings. Using multiple methods on the same data, collecting additional data, and replicating studies to new samples, are all recommended approaches to improve the reliability of studies. In closing, we wish everyone a happy new year and continuing success with their research (<http://ijrcm.multinations.org/>).

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