

2013 POMS Applied Research Challenge

Process

Description: As a way to encourage our Production and Operations Management Society (POMS) members (faculty and student members) to conduct rigorous applied research that is relevant to practice and innovative, POMS is launching a new initiative: the POMS Applied Research Challenge (ARC). POMS has formed a Practitioner Judge Panel which established a set of research topics for this competition. All panel members are also former POMS Martin K. Starr Excellence in POM Practice Award Winners: **Corey Billington (founding partner, e3 Associates); Edwin Keh (former COO, Walmart); Dino Petrarolo (Vice President, CCI Inc.); and Gang Yu (CEO, Yihaodian).**

- A. Process for submitting applied research topics:** In addition to the topics established by the Practitioner Judge Panel, we also encourage POMS members to propose other research topics by **February 28, 2013**. The proposed topics should be submitted to Professor Felipe Caro (felipe.caro@anderson.ucla.edu), who will coordinate with the Practitioner Judge Panel for final approval. The approved topics will be added to the established list by **March 17, 2013**.
- B. Process for entering the “Applied Research Challenge:** Please submit your article related to the research topics to POMS.ARC@gmail.com by **December 1, 2013**. (For quick/informal feedback, you are encouraged to submit your “extended abstract” by July 1, 2013.) The winners will be selected after two review cycles.

* **First review cycle**. The first review cycle will be conducted by an academic panel chaired by Felipe Caro (UCLA) and other members comprising Feryal Erhun (Stanford), Srinagesh Gavirneni (Cornell), and ManMohan Sodhi (City University London & ISB). This academic panel will select the finalists by **February 1, 2014**. All finalists will be invited to present at the 2014 POMS Annual Meeting and an extended abstract will be published in our flagship journal: *Production and Operations Management (POM)*. (Note that the extended abstract does not prevent the author(s) from publishing a full article in *POM* or elsewhere.)

* **Second review cycle**. The Practitioner Judge Panel will review the articles of the finalists and select the winners. All finalists will be invited to present their papers and the winners will be announced at the 2014 POMS Annual Meeting. The first prize is accompanied by a medallion/plaque and \$2,000 for the authors, and each honorable mention will receive a medallion/plaque.

- C. Criteria:** Innovative Ideas, Rigorous Analysis (empirical, analytical, or behavioral), Managerial Insights, Implementable Ideas, and Impact on Practice/Research.

2013 POMS Applied Research Challenge: Approved Research Topics

1) Strategy focused

- a) **Open innovation and social networks.** The relevance/implications/value of open innovations or social networks on Production and Operations. Methods to turn open innovations or social networks into revenue generating business models in the context of Production and Operations. How to leverage the network economy (open innovation, social network, m-commerce) to reduce cost and generate revenue for a global supply chain?
- b) **Alliance processes for NGOs and corporations.** What is an effective approach (or process) for establishing alliances between NGOs and Corporations to ensure incentive alignment?
- c) **Local versus global improvement.** What are the business improvement trends in different industries? An “outside-in” approach that focuses on supply chain improvement first? An “inside-out” approach that focuses on building capability within each operation first? Top down or bottom up? Both?

2) Operations focused

- a) **Operations excellence in mining (metals, minerals, gem stones, rare earth, etc.) and oil & gas.** These sectors deal with exploration, extraction, transportation, and downstream operations. What can these sectors learn from other industries? What can other industries learn from these sectors?
- b) **Supply chain management in B2C e-commerce:** Due to the intrinsic nature of B2C e-commerce, its supply chain management is very different from that of traditional retail. Suggested B2C e-commerce research topics include:
 - (1) Logistics network structure (e.g., Hub-spoke or parallel? Cross docking? Mix fast moving and long tail or not? Mix categories or not?) .
 - (2) Warehouse related issues: Relationships among warehouses (inter warehouse transfer, transshipment, etc.), warehouse layout design and automation (e.g., fast moving zones, sortable and non-sortable, pickable and reserves, etc.), warehouse process optimization (e.g., pick density optimization, picking wave and route optimization, packing optimization).
 - (3) Inventory issues: allocation to the warehouses, overstock disposition and markdown models, inventory transfer/Transshipment optimization.
 - (4) First mile logistics modeling / Last mile delivery routing and scheduling.

3) Other topics approved by the Practitioner Judge Panel (added March 25, 2013)

- a) **Biases in Strategic and Operational Processes.** A number of strategic and operational processes (forecasting, planning, resource allocation, etc.) are influenced by politics, functional preferences, inadequate incentives, short-term perspective etc. Frequently, such biased processes may lead to low organizational performance. How can such biases be detected and what mechanism can be used to improve process effectiveness?
- b) **Operationalizing Sustainability.** Sustainability is gaining relevance in almost all industries. How to ease the pressure of environment protection and resource savings? What is the impact of considering carbon emission in production scheduling and system optimization? What are best practices in operationalizing sustainability and what insights can be broadly generalized?
- c) **Managing Risk:**
 - (1) Supply chain risk in global markets: Firms are exposed to a variety of risks which may disrupt their global operations and supply chains. These risks are often difficult to quantify and therefore managers may deploy countermeasures suboptimally, leaving their firms dangerously exposed to some risks while squandering resources to mitigate other risks that do not pose a significant threat. Hence, there is a practical need for tools that rigorously examine and quantify the impact of a disruption originating anywhere in the firm's supply chain.
 - (2) Project management under uncertainty: PERT suggested that activities exhibit randomness in their duration, and then proceeded to analyze the behavior of the activity network on that basis. However, uncertainty in the conduct of projects manifests itself also in resources and financial management, as well as many other aspects of executing a project. Hence, how do managers cope with uncertainty in real life? What are effective ways of mitigating risk, e.g., in IT projects?