Innovative Operations Management Applications in Not-for-Profit, Public and Government Services

Rohit Verma*

Associate Professor of Service Operations Management, School of Hotel Administration, Cornell University, Ithaca, NY 14853, USA E-mail address: rohit.verma@business.utah.edu

William Youngdahl

Thunderbird, The American Graduate School of International Management, 15249 N. 59th Avenue, Glendale, AZ 85306-6000, USA E-mail address: youngdb@t-bird.edu

Curtis McLaughlin

Kenan-Flagler Business School, University of North Carolina, Chapel Hill, North Carolina, Chapel Hill, NC 27599-3490, USA E-mail address: unikorn@bellsouth.net

Robert Johnston

Warwick Business School, University of Warwick, Coventry CV4 7AL, UK E-mail address: bob.johnston@wbs.ac.uk

After Journal of Operations Management Editor-In-Chief Robert Handfield approved our request to develop a special issue on not-for-profit, government and public services, we wondered if there will be enough submissions. As we mentioned in the introduction to the previous issue (JOM Vol. 23, No. 2) we received an overwhelmingly large number of high quality submissions which led us to compile a second volume of the papers on “Operations Management in Not-For-Profit, Government and Public Services.” The sub-title of the current issue is “Innovative Applications and Case Studies” which reflects the diversity of methodological approaches, range of applications, and geographical breadth of studies reported in the seven papers accepted for this issue. We hope that the JOM readers will find the collection of articles stimulating and thought-provoking.

The first paper titled “Understanding Service Experience in Non-Profit Performing Arts: Implications for Operations and Service Management” applies analytical operations management techniques to performing arts settings. This paper takes a two study idiographic approach. Implementing a modified version of service transaction analysis (STA), the first study describes a performing arts service from provider and customer perspectives, identifies service gaps and develops an elaborated service description incorporating both perspectives. In the second study, building on the elaborated service description and extant research, the author(s) conducted in-depth interviews to gather predictors of satisfaction, value and service quality as

they relate to repurchase intention. Finally, the authors discuss implications for operational strategy, service design and service management theory for performing arts services.

The second paper titled “Analysis and Improvement of Delivery Operations at the San Francisco Public Library” addresses logistical problems associated with movement of books in the large public library system. In recent years, the introduction of internet-based online library catalog systems has allowed users to search the library’s catalog, select and reserve a book or a video, and have it delivered to the branch of their choice. Consequently, the demand for delivery services is increasing at rapid rate in large urban public libraries systems. Using operations management concepts such as pre-sorting of material to avoid double handling, cross docking to reduce cycle time of delivery, and workload balancing among delivery routes to effectively increase delivery capacity, the authors propose alternatives for restructuring library logistics. The redesigned delivery operations is expected to reduce the cycle time and the cost of delivery by almost half. Furthermore, through balanced utilization of existing truck capacities, the delivery operations will be able to handle significantly larger delivery volume and thereby accommodate future delivery service growth without additional investments. The operations management concepts and techniques illustrated in this paper through the example should prove to be useful to other urban, multi-branch library systems as they deal with their delivery challenges.

The third paper titled “Integrating Service Design Principles and Information Technology to Improve Delivery and Productivity in Public Sector Operations: The Case of the South Carolina DMV” focuses on the issue of operational efficiency and effectiveness in public sector or government operations. In this paper, the authors demonstrate that information technology applied in conjunction with a unified set of service operations concepts permits or enables simultaneous success in public sector operations. They employ an adaptation of the service planning design framework, taking issue with some interpretative aspects of their strategic model. The modified planning framework was applied to an initiative in South Carolina state government to improve operations and technology deployment at the Department of Motor Vehicles (DMV). The detailed and ongoing case study illustrates the utility of a broad service-based, IT enabled approach to designing a government service, while simultaneously demonstrating that operational service alignment is the key to avoiding results that have long been labeled a dilemma in the public sector.

The fourth paper titled “Optimization of Volunteer Labor Assignments” demonstrates how the volunteer labor assignment (VLA) problem is markedly different from traditional labor assignment (TLA) problems such as labor scheduling. One core difference pertains to the cost structure of labor, where TLA problems seek to minimize labor costs, yet labor costs for volunteers are usually trivial. Another difference is the assumed size of the labor pool: TLA typically assumes sufficient labor to cover task requirements, whereas the VLA labor pool is limited by the number of volunteers that can be recruited. These and other distinctions coming from the volunteerism literature are described and confirmed with empirical data. One

important finding is that volunteers who were not utilized had a reduced propensity to volunteer in the future. These VLA distinctions are incorporated into an integer goal program. The author has used empirical data to demonstrate how VLA assumptions produce solutions that are significantly different from solutions coming from TLA assumptions.

The fifth paper titled “The Decision to Fail: An Exploratory Study of Terminated Technology Projects” examines how government personnel and their contractors reach decisions to terminate technical projects. The authors study two decision-making roles: executives, those with the authority to cancel a project, and project managers, those who direct the day-to-day operations of the project. The implications for the management of government safety projects are that care must be taken to understand the differing viewpoints of the two types of decision-makers and that the initial presentation of information concerning a project may influence the risk of a project’s termination. While there are several implications for operations management research, the most critical is that care must be given when surveying “managers” concerning subjective measures of ‘success’ or ‘failure’ as there can be radical perceptual differences by role, even if these roles are all within one organization.

The sixth paper titled “Reducing Lead Times: Using Operations Management Tools to Reach Global Targets for Tuberculosis Control” a project undertaken by the World Health Organization (WHO). It is commonly agreed by experts that tuberculosis (TB) control and eventual elimination have shifted from being a technical to a managerial and political challenge. The tragedy of TB is that 2,000,000 people die annually of a disease that can usually be cured with \$10 worth of anti-tuberculosis drugs (ATD). The World Health Organization has set global TB control targets to be reached by early in the 21st century. These efforts have been hindered, however, by shortages of ATDs. In this paper, the authors report on an action research project in which was used as basic process analysis supported by queuing theory based mathematical modeling to develop a plan – currently being implemented – to reduce application processing lead times from about 180 to less than 60 days. Another contribution of the project was to make basic operations management theory accessible to WHO staff, facilitating future lead time reduction projects. The paper demonstrates that basic operations management theory can be applicable – and extremely useful – in a not-for-profit organization.

The final paper titled “Using market-Utility based Approach to Designing Government and Public Services: Case Illustration from United States Forest Service” builds on the premise that Government services have to not only enforce the requirements of the regulatory policies, but also have to satisfy the needs of preferences of their clients and customers. In this paper the authors summarize the results of a multiyear case study conducted to assess the choices of campground users at the Shawnee National Forest (Illinois) which is managed by United States Forest Service. The results show how users’ tradeoff between location, capacity-related and pricing attributes when choosing a campground. The case study provides guidance for design and development of new services and more effective management of effective resources within the national forest.

The papers included in the current and previous issue (Vol. 23, No. 2) show the rich array of scholarly operations management research being conducted in not-for-profit, government, and public services. It has been our privilege to be involved in this project and we would like to extend our special thanks to all contributors and to all reviewers for providing several rounds of comments and feedback.

*Corresponding author. Tel.: +1 607 255 8702