Company Executive Testimony

Dennis Garegnani,  
Lockheed Martin Space Systems

"The optimization model developed for our team has made substantial contributions to the long term effectiveness of our organization."

"Adding the prescriptive model to our investment strategy has undoubtedly benefited the department over the long term and in some immediate ways as well. Organization of past financial performance data to predict and control future financial performance has long been needed and the model has addressed this issue. Watching the correction and evolution of the model to match our needs has been extraordinarily constructive for the entire department."

"Simply put, the optimization model has been a huge success and directly affects our productivity and ability to deliver positive results. It has already been recognized as a best practice."

Contact Information

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**Mission**

Consulting Arm of Doermer School of Business

- Financial/Banking
- Technology
- Retail/Consumer
- Value and Supply Chain Analysis
- Demand Management
- Revenue Management

Analytical methods with business experience

Research Excellence

- Financial/Banking Analytics
  - Published in *International Journal Of Applied Decision Sciences*
  - **CONDITIONAL VALUE AT RISK CONSTRAINED OPTIMIZATION OF A POWER PORTFOLIO**

- Consumer/Retail Analytics
  - Published in *The Engineering Economist*
  - **DYNAMIC CASH MANAGEMENT OF WARRANTY RESERVES**

**Advances of Risk Analytics with Big Data**

With cloud computing, internet-of-things, wireless sensors, and social media, organizations and enterprises amass data that challenges existing computing resources. Current risk analysis methodology and applications are awaiting related advances and breakthroughs.

- Big data-driven system optimization
- Financial engineering and portfolio analytics
- Healthcare operations with big data
- Healthcare logistics: Multi-criteria methods in healthcare resource planning
- Financial incentives and contracting in healthcare delivery

**Health Care Analytics**

**Health Care Product Procurement In Dual-Supplied Systems - Presentation at ICOVACS Conference, Leuven, Belgium**

Recent years have witnessed a profound interest in healthcare waste given its impact on costs and the environment. We consider supplier selection and quantity allocation decisions for a health care organization that may purchase a number of unbundled and bundled products.

**Health Care Operations Management Presentation at POMS Conference, Denver**

To study the tradeoffs in patient satisfaction and system efficiency, a patient flow simulation model is developed for an Emergency Department of a major hospital with the incorporation of patient classification, blocking effects, and time dependent arrival patterns. The simulation model helps in capacity management decisions.

**Analytics’ Role in the Examination of Large Insurance Claim Data Sets**

Collaborative work with Humana

**Center Goals**

Education

- Through education events, seminars, non-credit short courses, the center expands awareness, explores possibilities, and deepens regional expertise in the use of analytical methods across a broad spectrum of business problems.

Investigation

- As organizations are able to collect massive amounts of data more readily than ever before, the center engages faculty and students to develop new methods and apply existing analytical techniques to apply this data in the solution of current and emerging organizational problems.

Integration

- The center serves as an integration hub for applied analytics efforts, bringing together the expertise and experience of Business and other colleges to bear on important, challenging industry problems.

Promotion

- The center inherently strengthens the analytics labor pool to meet industry needs for a diverse workforce, providing hands-on experiences that represent the foundations for analytics applications and research.