



GLOBAL SUPPLY CHAIN
MANAGEMENT INITIATIVE

2016-2017 | Annual Report



BRIDGING INDUSTRY, STUDENTS, AND FACULTY.

REACHING GLOBALLY

From the Global Supply Chain Management Initiative (GSCMI) at the Krannert School of management, greetings. GSCMI focuses on the global supply chain of suppliers, service providers and assemblers that are the heart of the modern global marketplace. This initiative started back in 2005 and takes a multi-functional view of the GSCM challenge. The last year has seen continued engagement on many fronts, from global health conferences in Tanzania to the TVS student trip to India to projects with companies that include their global supply chains to the Spring conference focused on “Global Supply Chain Resiliency” in February 2017. We invite you to peruse this annual report to get more detail, engage in a photo-journey with us and join us in thanking the many industry and government representatives, students, staff and faculty who helped us generate the vitality needed to keep the center growing. Our Spring GSCM case competition showed significant student team participation and we plan to continue that tradition.

As you learn about the current activities at the center, we invite you to share ideas, comments and opportunities with us. All it takes is a phone call to Steve Dunlop or an email to gsemi@purdue.edu to start the collaboration. We will work with you to create solutions for your question using our team of graduate students and faculty. The upside for all is that great ideas are the core to student

learning, business competitiveness and faculty research. We understand that problems and their solutions do not fall into neat functional area boundaries, so our Krannert faculty engagement across disciplines will ensure that we address problems with the breadth that is appropriate. We look forward to another year of successful collaboration. Thank you to all for your contributions to the center.

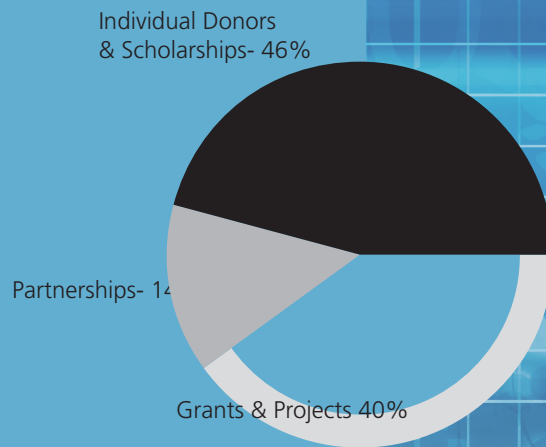


Ananth V Iyer
Susan Bulkeley Butler Chair in Operations Management
Director, DCMME and GSCMI
Department Head, Management

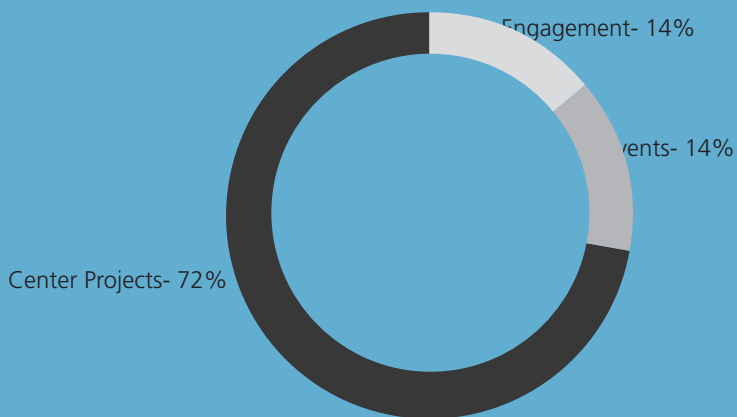


CENTER FINANCIALS

INCOME SUMMARY




EXPENSE SUMMARY



Dedicated industry partnerships are at the heart of success for the Center. We thank our many distinguished industry partners for their significant and ongoing involvement and support. Our mission and the many important objectives set for the Center could not be accomplished without you.

Thank you.



SMART LEAN CENTER FOR ENGAGEMENT



Engagement Center opens with multiple objectives: education, demonstration & application

During 2016 we created the Smart Lean Ecosystem Engagement Center with its official opening scheduled during our 2017 spring Supply Chain conference. “The Engagement Center has multiple objectives: education, demonstration and application,” says Steve Dunlop, managing director GSCMI. *Designed to provide a facility where students, faculty, staff and friends can experience technology that is currently being used or anticipated within manufacturing and supply chain environments.* Below are the primary system areas which will be updated on a routine basis as new technology is developed. There are also a variety of supporting videos displayed to enhance the explanations of the different areas.

- 1) Manufacturing - Small hands-on manufacturing area where participants can build circuit boards with lights and sounds. This area is set up to allow students to experience normal operations as well as interruptions with the parts or materials availability, increased orders, and system break down.
- 2) Drones – This area has small drones that participants can fly within the room and experience both the details needed to achieve steady flight as well as the video capture

capability and transfer of data.

- 3) 3D Printing – the demonstration area shows actual 3d printing capability and the degree of accuracy that is available even from a small printer. In the future we hope to have examples of metal 3d printing that is currently used in a manufacturing plant.
- 4) Video Analytics – based on cameras mounted on the center ceiling, software is being written to capture the different activities happening in the center.
- 5) Application / testing area for techniques and technology that are being evaluated for our current projects before we suggest possible recommendations to our project sponsors.
- 6) Space has also been allocated to allow for other types of technology and possible uses. Various types of virtual / augmented reality technologies have been used in the center to highlight these emerging areas.
- 7) Google glasses and similar types of technology are presented to allow for hands on use and discussion of potential applications.
- 8) Robotic arms and small programmable robots



EMAIL US AT GSCMI@PURDUE.EDU TO SCHEDULE YOUR TOUR.

2017 GSCMI SUPPLY CHAIN CONFERENCE

GLOBAL SUPPLY CHAIN RESILIENCY

The 2017 GSCMI Conference brought together industry, students and faculty for a focused conference discussion on "Global Supply Chain Resiliency."

MEET OUR SPEAKERS

COLONEL RANDALL E. WARRING -
Vice Director of the 448th Supply Chain Management Wing, Air Force Sustainment Center, Tinker Air Force Base, Oklahoma

JAN-ANDERS MANSON, PH.D.
Distinguished Professor of Materials & Chemical Engineering Purdue University

SCOTT R. LAKE - Global Manager; Supplier Development and Risk, Agriculture and Turf Division at Deere & Company

JIM CHURCHMAN- Vice-President Supply Chain Site Operations and Logistics at Advocate Health Care

DUSTIN SMITH - Senior Vice President & General Manager, Commercial Trailer Products at Wabash National

ALEXANDRA SOKOL - Supply Chain Analyst, Corporate Planning Allocations at Arcelor Mittal

S. GREG MAGNUSEN - Sr. Director, Global Supply Chain at Eli Lilly and Company



COLONEL RANDALL E. WARRING



S. GREG MAGNUSEN - SR. DIRECTOR, GLOBAL SUPPLY CHAIN AT ELI LILLY AND COMPANY DURING PANEL Q&A SESSION WITH THE AUDIENCE.

INTERCOLLEGE CASE COMPETITION



The GSCMI Center at Krannert School of Management, Purdue University hosted the 2017 Purdue GSCMI International Graduate Intercollege Case Competition. The competition consists of two phases: Phase 1 serves as a virtual qualifying/elimination round, and Phase 2 (involving the top 6 qualifying schools from Phase 1) occurs in conjunction with the GSCMI Spring Conference. These 6 teams had the opportunity to showcase their skills and knowledge to industry judges.

PHASE 1 SCHOOL PARTICIPANTS:

Indian Institute of Management, Udaipur; Indian Institute of Management Tiruchirapalli; IIM Shillong; University of Wisconsin-Madison; University of Illinois at Urbana-Champaign; Richard Ivey School of Business Western University; Washington University in St. Louis-Olin Business School; Georgia Institute of Technology-Scheller College of Business; West Virginia University; The University of Arizona- Eller College of Management; Penn State University- Smeal College of Business; Owen Graduate School of Management,

Vanderbilt University; Krannert School of Management, Purdue University; University of Iowa; University of Miami; University of Southern California Marshall School of Business

PHASE 2

QUALIFIERS:

Indian Institute of Management Tiruchirapalli; IIM Shillong; Richard Ivey School of Business Western University; Georgia Institute of Technology- Scheller College of Business; Owen Graduate School of Management, Vanderbilt University; University of Southern California Marshall School of Business



CONGRATULATIONS TO OUR WINNERS:

1st place: Owen Graduate School of Management
Vanderbilt University

2nd place: Indian Institute of Management
Tiruchirapalli

3rd place: IIM Shillong





**“AT TVS,
CLASS-LEARNED
OPERATIONS
CONCEPTS COME
TO LIFE.”**

-DENNIS HERNANDEZ, MBA 2017



In March, as powder color soars through the air for the celebration of the Indian Holi Festival of Color, a group of Krannert students looks forward to globalizing their resumes in India just a few weeks later.



TVS INDIA INTERNSHIP

The TVS India Internship organized by the DCMME Center in conjunction with the TVS Motor Company was developed in 2006. Providing a unique study abroad internship opportunity in Bangalore, India, this trip assists students in developing a global business perspective while enhancing their resume profiles. TVS is a Deming Prize winning two-wheeler manufacturing company producing motorcycles, scooters, and mopeds. TVS has been credited with many innovations in the Indian automobile industry, notable among them being the introduction of India's first two-seater moped. Krannert alumnus Venu Srinivasan (MSM '77) is the chairman and managing director of TVS Motor Company. Participants have a distinctive occasion to take concepts learned in the classroom and apply them to real life business situations. The

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TVS was **the highlight of my Krannert Life.**

I learned strategic planning as well

as operational execution. It was an amazing opportunity to apply my knowledge from Krannert and solve real world challenges,” says Hyejin Kim, MBA 2017. This innovative and challenging global program is celebrating 11 years with a total of 146 students having participated, represented by



MBA, MSHRMs, and engineering students. Work on this three credit course begins in mid-February when students begin communication with their mentors. Discussions with their mentors regarding project objectives and completion of research pre-departure for India help to ensure a productive and successful internship for everyone involved. The course culminates in May with a three week visit to Bangalore, India where students continue work

on their projects with TVS mentors and present their final work to TVS Company representatives. The internship lasts three weeks ending after final presentations to management on the final day. Students receive intimate exposure to TVS Motors and its strong culture through presentations and discussions from company leadership, a plant tour, and a visit to one of their corporate social responsibility villages. TVS also ensures that students get a taste of Indian culture outside of the office by coordinating dinner for the students to meet with various Indian families in their homes as well as provide an evening of classical Indian music

and dance. **“Bangalore is a vibrant city,”**

Dennis Hernandez, MBA 2017. A weekend trip to the Taj Mahal is yet another highlight to the trip. TVS arranged a visit to the beautiful Bangalore Infosys campus where students learned about how the company develops its human talent. Mason Preusser, MBA 2017 reflects on the company exposure during the trip, “My internship at TVS granted me irreproducible insight into how companies work overseas.



CENTER PROJECTS OVERVIEW

BRIDGING INDUSTRY, STUDENTS, AND FACULTY.

Both the exposure to consumer sentiment and business culture in India are invaluable assets.”

TVS selects their projects primarily based on meaningful work product. Part of the success of the program rests on the fact that students are aware that the consulting projects carry great importance to the firm, and if done well, they will likely become part of an adoption and implementation strategy. The projects that the firm ultimately offers tend to have a unique balance of the following qualities: analytical complexity, urgency for resolution, lack of available resources to assign internally, and a desire to test a current business situation against international best practices. Projects cover many different management areas including Operations and Supply Chain Management, Human Resources Management, Sales, and Management Information Systems, naming just a few. Deron Leslie, MBA 2017, sums up the trip- “The TVS

Motors Internship in India gave me **a new, refreshing perspective on friendship, culture, global industry and life in general”**



My internship at TVS granted me irreproducible insight into how companies work overseas.

-Mason MBA 2017

same footsteps with a heavier emphasis on both short and long term projects. Currently we have projects covering such topics as: manufacturing floor space allocation, divisional or company consolidation, supply chain in both internal and external areas, and manufacturing

and supply chain technology integration. Industry types include manufacturing, medical, start-ups, and non-profit organizations, each with unique and varying scopes. In many cases these projects result in a technical speaker for one of our yearly conferences.





A special **thank you** to all who contribute to scholarship funding for our students.

STUDENT SCHOLARSHIPS

Through the generous sponsored scholarships provided by our industry partners, students who express sincere interest in supply chain management and manufacturing management can benefit from Krannert's highly regarded undergraduate and MBA programs.

JOHN DEERE

Marquette Minner
Richard Luan-Jimenez
Darren Young

SUBARU ISUZU SCHOLARSHIP FELLOWSHIP

Collin Taylor

MAPLE LEAF FARMS SCHOLARSHIP

Cline, Linnea N.
Brumfield, Benjamin D.
Chackochan, Oswin P.

ENSIGN BICKFORD MANUF. ENDOW

Alexandra Rocholl-Werner

STUDENT SCHOLARSHIP RECIPIENTS: Marquette Minner, Richard Luan-Jimenez, Darren Young, Jessica Miller, Blake Mawhorter, Alexandra Rocholl-Werner, Collin Taylor **STUDENT GSCM & MTM OPTION CERTIFICATE RECIPIENTS:** Gustavo A. Acosta, Othman Alkharraz, Ignatius Arthur Rajvir Singh, Egel Ben-Marvin, Chien Wen Cheng, Prasenjit Datta, Rewat Singh Fageria, Jacob C. Haury, Jonathan Henry, Dennis Hernandez, Justin Hodapp, Ashwini Jain, Glen Mishal John Kennady, Thomas J. Kappock, Hyungrok Lee, Philip D. Lemperle, Deron Leslie, Gokulkannan Madhusundararaju, Hideto Mitsuoka, Garima Namdeo, Nikhil Pallavali, Kramer M. Phalen, Abhinandan Rangappa Lakshmana, Braulio Rodrigues, Mohit M. Sahu, John M. Scott, Sayan Sinha, Lamis Sleiman, Alexander Sterdjovich, Viren Tulsian, Krisli Vasili, Cherukuri VDS Chowdary, Shruti Vishwakarma, Zheng Wang, Justine Weatherman, Ruoxin Wu **TVS STUDENT INTERNS:** Mike Hanson, Sheldon Anderson, Adam Myers, Alphonso Myers, William Harbert, Sarinah Marie Narciso, Christina Rasquinha, Katie Mullen, Sharanya Madhavan, Yating Fang, Hannah Little, Shree Frazier, Shea Thomas **STUDENT PROJECT TEAM:** Vibhav Mishra, Yash Ambegaokar, Shounak Joshi, Satwik Kulkarni, Rushabh Banthia, Sushant Bhat, Rong Liao, Taeyong Kim, Kalyan Sashank Mupparaju, Manita Dagar, Humphrey Kanyoke, Matt Foust, Shashank Chinnolla, Jerry Jana, Amitesh Mishra, Claire Conneely, Anand Deshmukh, Pekham Dey, Taylor Haws, Matt Jung, Kristine Kim

student involvement

(STARTING AT TOP,
LEFT TO RIGHT)

GEMMA BERENGUAR

TOM BRUSH

SURESH CHAND

AMY DAVID

ANNABELLE (QI) FENG

GREG HUNDLEY

ANANTH IYER

JUSTIN JIA

KARTHIK KANNAN

ELLEN KOSSEK

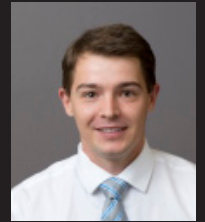
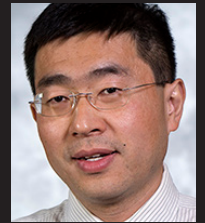
YANJUN LI

YAROSLAV ROSOKHA

OLGA RUSYAEVA SENICHEVA

GEORGE SHANTHIKUMAR

SUSAN WATTS



KRANNERT FACULTY

We are grateful to the many faculty at Krannert who participate in Center sponsored events, projects and research. Thanks to each one for their efforts to progress the scholarly works in Operations and Global Supply Chain Management.

current center staff



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