

Leaders for Global Operations

The MIT [Leaders for Global Operations](#) program (LGO), now in its 28th year, is a partnership of the MIT Sloan School of Management, the MIT School of Engineering, and major companies that support the program's commitment to excellence in manufacturing and operations. The two-year dual-degree program offers an MBA from the Sloan School of Management and an SM from the School of Engineering.

Governance and Leadership

LGO is run by a governing board of senior officers from the program's partner companies, program co-directors, and MIT deans. It is co-chaired by Jeff Wilke (LGO '93) of Amazon.com and Mick Maurer of United Technologies–Sikorsky. The operating committee, chaired by industry co-director Vahram Erdekian, handles ongoing program management. The program's executive director is Thomas Roemer.

Academic Program

The LGO curriculum offers a mix of management, engineering, and leadership courses. Students can earn their SM from one of six engineering programs: Aeronautics and Astronautics, Biological Engineering, Chemical Engineering, Civil and Environmental Engineering, Electrical Engineering and Computer Science, or Mechanical Engineering. Within some of these engineering departments, students can focus on topics related to manufacturing and operations in tracks such as biomechanics, energy and environmental sustainability, information and decision systems, engineering systems, manufacturing, supply chain, ocean engineering systems, and transportation.

Academic Activities

Global Operations Action Learning

LGO introduced Global Operations Action Learning teams (GOAL teams) as a new action learning offering. GOAL teams are structured as a spring semester class that is given action learning projects. The aim is to bring the LGO operations toolkit in a consulting format to host companies outside New England. In the past year, nine teams of LGO students conducted GOAL team projects at sites throughout the US as well as in Chile, France, and the United Kingdom.

Lion Teams and China Leaders for Global Operations

LGO students worked in Asia with students from China Leaders for Global Operations (CLGO)—LGO's sister program at Shanghai Jiao Tong University—on two successful Lion Teams. Lion Teams are based in the Asia Pacific region and staffed by a combined team of LGO students and CLGO students

The projects were hosted in Malaysia in collaboration with the Asia School of Business (ASB) in Kuala Lumpur. The Asia School of Business was created in partnership with MIT Sloan. ASB asked LGO to help them launch their action learning–based curriculum by staffing ASB-sourced projects with MIT LGO and China LGO student teams.

The Johnson & Johnson team was asked to analyze manufacturing process and achieve cost reductions in an already very efficient plant. The team leveraged their LGO International Plant Trek experience in Brazil (see below) to recommend automated box packaging, resulting in \$250,000 to \$450,000 in savings over the next three years. The Boeing joint venture team observed scheduling of autoclave equipment done by hand, schedule not followed by production. The team built and demonstrated a scheduling tool that produced a reduction in make-span of at least 10%.

Students from China LGO visited MIT in July 2016 for a week of tours, classes, meetings, and social events.

Plant Tours

Local plant tours for first-year students took place in summer 2016 at National Grid in Sutton and Northborough, MA; Amgen in West Greenwich, RI; United Technologies–Pratt & Whitney in Middletown, CT; Raytheon in Andover, MA; Amazon in North Reading, MA; Quest in Marlborough, MA; and American Industrial Partners (AIP)/Presstek in Hudson, NH.

Students on the annual two-week Domestic Plant Trek in January 2016 visited Caterpillar in Peoria, IL; Danaher/VideoJet in Chicago, IL; AIP Aerospace, Boeing, and Amazon in Seattle, WA; Nike in Portland, OR; Pacific Gas and Electric Company in San Francisco, CA; Raytheon in Tucson, AZ; and Amgen in San Juan, Puerto Rico.

The weeklong International Plant Trek in March 2016 took students to several locations in Brazil. They visited the Comitê Olímpico do Brasil, Granado Farmácias, and EMC² in Rio de Janeiro and Honda in Manaus.

Global Operations Leadership Seminars

LGO students attend weekly on-campus seminars with faculty and industry experts to explore local, national, and international manufacturing, leadership, and business issues. There were 26 speakers in fall 2015 and spring 2016. They included Mallik Angalakudati, vice president for financial and resource management at Pacific Gas and Electric; Mark Barrocas, president of SharkNinja; Jerry Becker, executive director of business model transformation at Dell; Sparsh Bhargava, partner at American Industrial Partners; Barbara Borgonovi, vice president of operations in space and airborne systems; John Zedro, deputy director of operations manufacturing; and Lincoln Sise (LGO '03), factory manager, all at Raytheon; Matthew Bromberg (LGO '00), president, commercial engine aftermarket at United Technologies–Pratt & Whitney; Sarah Chandler, director of operations product development and environmental initiatives at Apple; Steve Cook (LGO '98), founder of LFM Capital; Mike Feld, president of X-ray optical systems at Danaher Corporation; Jens Gruenkemeier, vice president of supply chain and procurement at Amazon Web Services; Matthew Hasik (LGO '06), senior vice president of commercial programs at Bell Helicopter; Greg Jackson, vice president of supply chain at Gogo; Uwe Kaltenborn, head of corporate technology at Maschinenfabrik Reinhausen; Norbert Marjerus, lean champion at Goodyear; Marcy Reed, president of National Grid in Massachusetts; Steve Schiveley (LGO '04), supplier engineering director, and Michael O'Loughlin, director of process development, both at Boston Scientific; Mark Swenson,

vice president of production engineering and quality at Nissan North America; and Marni Walden, executive vice president and president of product innovation and new businesses at Verizon.

Admissions

Forty-eight new students in the LGO Class of 2018 matriculated and began an intensive summer session in June. The class has an average of 5.5 years of work experience. The entering class, broken down by engineering discipline, is as follows:

Aeronautics and Astronautics:	6
Civil and Environmental Engineering:	9
Electrical Engineering and Computer Science:	2
Mechanical Engineering:	31

LGO received 308 applications. Nineteen percent of applicants were admitted; of those, 84% accepted a place in the program.

Class of 2016 Graduates

The LGO Class of 2016 had 49 graduates in June. Each student completed a six-month internship at a partner company, where their research on solutions to an operations or manufacturing problem led to their master's thesis. Ten members of the class (twice as many as last year) did international internships in locations including Hong Kong, Singapore, Shanghai, London, Frankfurt, Melbourne, and La Coruña, in Spain.

To date, 74% of the Class of 2016 has accepted a position in a manufacturing and operations company; 76% of those positions (28 of 37 hires) are at LGO partner companies.

Alumni

LGO held its annual alumni conference in Charleston, SC, in May with a roster of prestigious speakers from industry and the public sector.

Aaron Raphel (LGO '06) continues as the official alumni voice on the LGO operating committee. An alumni advisory board headed by Kristin Toth Smith (LGO '03) oversees fundraising, the annual conference, operating committee representation, and networking events. Through an organized fundraising effort, alumni contribute to three funds: the William C. Hanson, Don W. Davis, and Jan Klein Leadership Fund; the Alumni Annual Fund; and the Endowed Discretionary Fund. Funds are used both for immediate needs and to support student scholarships and plant tour expenses. The alumni fundraising total was approximately \$89,000.

Partner Companies

Maschinenfabrik Reinhausen joined last year, bringing LGO's roster to 26 partner companies as of July 2016. In addition to manufacturing, our partners are active in a

wide variety of industries, including pharmaceuticals and medical devices, energy, telecommunications, and retail.

Awards

Awards and honors presented to members of the LGO community included the following:

- Andrew Byron (LGO '16) won the LGO Best Thesis Award by developing a test plan and process for metals advanced manufacturing at Raytheon Missile Systems.
- Sean Hanson (LGO '17) won LGO's Harrison Smith Award.
- Vrajesh Modi (LGO '15) was elected to the MIT Corporation.
- Iris Zielske (LGO '16) was one of 85 students named in the "2016 MBAs to Watch" list by Poets & Quants.
- Professor Arnold Barnett, the George Eastman Professor of Management Science and professor of statistics, was awarded a Jamieson Prize for Excellence in Teaching, MIT Sloan's most prestigious teaching prize.

Thomas Roemer
Executive Director, LGO Program

Retsef Levi
Management Co-director
J. Spencer Standish (1945) Professor of Management

David Simchi-Levi
Engineering Co-director
Professor of Civil and Environmental Engineering and Engineering Systems

Vah Erdekian
Industry Co-director