Leaders for Global Operations

The MIT Leaders for Global Operations program (LGO), now in its 30th year, is a partnership of the MIT Sloan School of Management, the MIT School of Engineering, and major companies who support the program's commitment to excellence in manufacturing and operations. This two-year, dual-degree program offers an MBA from the MIT Sloan School of Management and an SM from the MIT 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, and is co-chaired by Jeff Wilke (LGO '93) of Amazon.com and Denise Johnson (LGO '97) of Caterpillar. The operating committee, chaired by industry co-director Vah 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 seven engineering programs: Aeronautics and Astronautics, Biological Engineering, Chemical Engineering, Civil and Environmental Engineering, Electrical Engineering and Computer Science, Mechanical Engineering, or the Operations Research Center. 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.

Don Rosenfield's Passing

The LGO and MIT communities suffered a tragic loss in January 2018 with the untimely death of Donald (Don) Rosenfield, the founding program director of LGO—originally called Leaders for Manufacturing (LFM)—who served in that role from 1988 through 2014. He leaves a legacy of more than 1,000 alumni whom he admitted into the program and mentored; a distinguished record of scholarly contributions to operations research; and the friendships he formed with so many at MIT and beyond.

Rosenfield's memory was honored at an MIT gathering in April, and he will also be remembered at the annual LGO alumni conference on campus in November. An endowment was established in his name to support LGO student fellowships. To date, it has received over \$300,000 in gifts and pledges.

Academic Activities

Operations Lab

LGO has a long history of pioneering action learning within MIT. Last year, LGO action learning programs were incorporated into a broader Sloan course known as Operations Lab (Ops Lab). Ops Lab teams are structured as a spring semester class with action learning projects. The aim is to bring the LGO "operations toolkit" to host companies throughout the world. In the past year, 28 teams of LGO and other Sloan students conducted Ops Lab team projects at sites throughout the US, as well as in Brazil and Peru.

Lion Teams and China Leaders for Global Operations

LGO students worked in Asia with students from the China Leaders for Global Operations (CLGO) program – LGO's sister program at Shanghai Jiao Tong University – on a successful Lion Team project in the Shanghai area.

Students from CLGO also visited MIT in July 2018 for a week of tours, classes, meetings, and social events.

Plant Tours

- Local plant tours for first-year students took place in summer 2018 at Amgen in West Greenwich, RI; Amazon Robotics in North Reading, MA; Raytheon IDS in Andover, MA; UTC Pratt & Whitney in Middletown, CT; Verizon in Waltham, MA; National Grid in Sutton and Northborough, MA; and Quest Diagnostics in Marlborough, MA.
- Students on the annual two-week Domestic Plant Trek in January 2018 visited Caterpillar in Peoria, IL; Boston Scientific in Minneapolis, MN; Shape (AIP), Boeing, and Amazon in Seattle, WA; Raytheon and Verizon in Dallas, TX; Flex in Austin, TX; Amgen in Thousand Oaks, CA; UTC Pratt & Whitney in Columbus, GA; and Sanofi in Swiftwater, PA.
- The weeklong International Plant Trek in March 2018 took students to Brazil and Argentina. They visited Petrobras in Rio de Janeiro and Sanofi and Volkswagen in Buenos Aires.

Global Operations Leadership Seminars

LGO students attend weekly on-campus seminars with faculty and industry experts to explore leadership, business issues, local, national, and international manufacturing. There were 24 speakers in fall 2017 and spring 2018 including:

- Donald Rosenfield (former director, MIT LFM/LGO)
- Cecilia Zenteno and Bethany Daily (operations research manager, MGH's Perioperative Services; senior administrative director, MGH's Perioperative Services)
- Matthew Bromberg (president, UTC Pratt & Whitney Military Engines)
- Andrew Shapiro (CEO, Broadscale Group)
- Mark Reed, Viju Menon, and Jeremy Giese (chief supply chain officer, Verizon)
- Jason Kra and Pamela Mar (executive vice president, LF Sourcing; director, supply chain Futures, Fung Academy of Li & Fung)
- Denis Gallagher (vice president and general manager, North Region of Quest Diagnostics)
- Joe Hitt (CEO, GoXStudio)

- Mike Mullane (retired astronaut, NASA)
- leader, Amgen Cambridge)
- Norbert Majerus (lean champion, Goodyear)
- Suheb Haq (president, GM-Honda JV Fuel Cell)
- Tay Fitzgerald (vice president, Raytheon's Operations, Space and Airborne Systems)
- Newsha Ghaeli and Brad Householder (co-founder, Biobot Analytics; partner, PWC)
- Stephen Greenlee (president, ExxonMobil Exploration)
- Odile Smith and Ulli Bruggemann (director, Sanofi's Manufacturing Technology; head, Sanofi's Academics and Innovation)
- Christian Green and Elizabeth Ohrt (vice president, Space X's Supply Chain)
- Bill Budinger (CEO, Rodel / Aspen Institute)
- Dan Burseth (general manager, Autocraft)
- Rick Dauch (CEO, Accuride)
- Jeanette Ramos (vice president, Boeing's Supply Chain)
- Tanja Vainio (president, ABB Czech Republic)

Admissions

Forty-eight new students in the LGO class of 2020 matriculated and began an intensive summer session in June. The class has an average of five years of work experience. The class break down by engineering discipline is as follows:

- Aeronautics and Astronautics: 1
- Biological Engineering: 1
- Chemical Engineering: 3
- Civil and Environmental Engineering: 10
- Electrical Engineering and Computer Science: 6
- Mechanical Engineering: 25
- Operations Research Center: 2

LGO received 324 applications and admitted 18%, of which 85.7% accepted a place in the program.

Graduates

The LGO class of 2018 had 47 graduates in June. Each student completed a six-month internship at a partner company, where their research on solutions to an operations

• Aine Hanly (vice president, Amgen's Drug Substance Technologies and site

• S. Holly and M. Thacker (vice president, Bell Helicopter's Manufacturing Operations; executive vice president, Bell Helicopter's Technology & Innovation)

or manufacturing problem led to their master's thesis. Six members of the class did international internships in locations including Hong Kong; Shanghai; Frankfurt, Germany; Regensburg, Germany; Vasteras, Sweden; and La Coruña, Spain.

To date, 55% of the class of 2018 has accepted a position in a manufacturing and operations company, where 65% of these positions (17 of 26 hires) are at LGO partner companies.

Alumni

LGO will hold its annual MIT LGO Alumni Conference on November 1–2 with a roster of prestigious speakers from industry and the public sector. This event will also mark the 30th anniversary of the founding of LGO.

The LGO Alumni Association elected a new board and was approved as an affinity group of the overall MIT Alumni Association. The board is led by Dan Shockley (LGO '07). Dennis Arnow (LGO '92) is the official alumni voice on the LGO Operating Committee.

Annual giving by alumni to support LGO was \$167,265 for the year.

Partner Companies

AstraZeneca, LFM Capital, and Target joined as partner companies to LGO in the past year, bringing the total roster to 28 as of July 2018. These companies represent a wide variety of industries including pharmaceuticals, medical devices, energy, telecommunications, and retail to complement our core of manufacturing firms.

Awards

Awards and honors for LGO community members included the following:

- Jonathan Zanger (LGO '18) won the LGO Best Thesis Award for a predictive analytics and deep learning project at Massachusetts General Hospital.
- Maria Emilia Lopez (LGO '19) won the LGO Harrison Smith Award.

Thomas Roemer Executive Director

Duane Boning Engineering Co-director Clarence J. LeBel Professor in Electrical Engineering Professor of Electrical Engineering and Computer Science

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

Vah Erdekian Industry Co-director