



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING
Institute for Leadership Education in Engineering

Annual Report 2011–2012



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Director's Welcome

“Engineers leading change to build a better world.”

This is the vision that guides all that we do. We seek to make a contribution to engineering education that will better prepare our graduates to meet the challenges of leading change in service of society. We do this with programming, in and out of classrooms, with research, and by learning through a community of practice, across the University and beyond.

The Institute for Leadership Education in Engineering (ILead) is new, founded in 2010, but it is built on ten years of leadership development programming in the Faculty of Applied Science & Engineering at the University of Toronto. The Engineering Leaders of Tomorrow (LOT) program, growing since 2002, will continue to serve our students in classrooms and beyond, at the core of ILead.

Our values light our path and, in particular, the following five values are central to who we aspire to be: Education and Lifelong Learning; Realizing Personal Potential; Mindfulness and Reflection; Service and Contribution; Compassion and Appreciation. At ILead we seek to create “a unique learning environment where personal growth is empowered, creativity is encouraged, humility guides learning, diverse perspectives are invited, and exuberance is contagious.”

Executive Summary

The Institute for Leadership Education in Engineering enjoyed an industrious year marked by progress.

Our programming for students, delivered through the Engineering Leaders of Tomorrow program, vigorously continued its work of empowering students with leadership curriculum. We expanded our roster of academic courses with two new undergraduate courses: (1) APS442, *Cognitive and Psychological Foundations of Effective Leadership* and (2) APS443, *Leadership and Leading in Groups and Organizations*. We continued to deliver our Leadership Infusion Lectures to undergraduate students. Our co-curricular certificate programs remain a popular opportunity for students who seek leadership developmental exercises outside of regular class time.

The Department and Division working groups continue to be a lively hub of student activity. We have also worked hard this year to engage First Year students through the continued work of our TrackOne initiative. Furthermore, we have worked closely with a number of student organizations who have sought our expertise in leadership development. Our consultation and facilitation work leverages our unique strengths within the Faculty and creates significant value for students.

In the area of student recognition, we are eager to announce that we now have two more endowed awards: (1) The ERCO Worldwide Leaders of Tomorrow Award for First Year students and (2) The Professor Douglas Reeve Leaders of Tomorrow Award for MSc or PhD students.

Our research capacity expanded with pedagogical inquiry being undertaken by our first PhD student in engineering leadership education. Our work on teaching team effectiveness in large classrooms has moved forward, supported by funding from the Higher Education Quality Council of Ontario. We also initiated an exploratory study on leading research groups that aims to generate knowledge to help professors build more successful research programs and to create teaching content and pedagogy. We launched our large-scale research endeavour, the Engineering Leadership Project (ELP), to ask the questions: “How do engineers participate in leadership in engineering-intensive enterprises?” and “How do we better prepare engineering students for leading?” This marks an important milestone in the growth of our research platform.

Our outreach activities this year led to exciting conversations and collaborations across four continents. We have strengthened ties to engineering leadership educators in the United States, leading to the formation of The Community of Practice for Leadership Education for the Twenty-first-century Engineer (COMPLETE) whose mission is “to enhance engineering education by infusing leadership development into the collegiate experience.” We developed other international connections with visits to universities in Australia, Singapore, India, China, Sweden, the UK, and the U.S. Furthermore, we welcomed visitors from Southern Methodist University, Dallas, Texas and McMaster University, Hamilton, Ontario. We participated in the International Leadership Association Conference in London, UK, the American Society for Engineering Education in San Antonio, Texas, and the Canadian Engineering Education Association in Winnipeg, Manitoba.

Through the ELP we are deepening our connection to our four sponsoring companies: ERCO Worldwide, Google Canada, HATCH, and Vale. Furthermore, we have been building our connections with senior engineering leaders in the Greater Toronto Area. Our Board of Advisors now has five members who are distinguished counsellors and supporters of ILead.

We have had an exciting year rich in productivity and are pleased to share our progress with you in this annual report.

Celebrating 10 years

This is a special year for engineering leadership development at the University of Toronto. In 2012 we mark 10 years since the establishment of the Leaders of Tomorrow (LOT) program. LOT has flourished since 2002 to grow from a summer program in the Department of Chemical Engineering & Applied Chemistry to become the comprehensive Institute for Leadership Education in Engineering (ILead) it is now. We invite you to celebrate this milestone with us.

2002

Leaders of Tomorrow began as a summer leadership program for undergraduates in the Department of Chemical Engineering & Applied Chemistry (ChemE).

2005

The summer program expanded year-long into the Fall/Winter academic terms. The Faculty submitted a proposal to the Academic Initiative Fund (AIF) to provide Faculty-wide student experience in leadership development program.

2006

LOT received AIF Provostial funding, allowing the program to expand across the Faculty, sparking the beginning of the Working Groups beyond ChemE.

2007

LOT offered its first academic course, APS501: *Leadership and Leading in Groups and Organizations*. APS501 became instantly popular, with applications far exceeding available space.

2008

LOT launched the Leadership Infusion Lecture Series. That same year, the Team Skills Certificate Program was offered for the first time. The LOT:G Working Group expanded beyond ChemE to become a Faculty-wide program for engineering graduate students.

2009

LOT delivered two new academic courses, APS1010: *Cognitive and Psychological Foundations of Effective Leadership* and APS1011: *Concepts and Applications of Authentic Leadership*. The co-curricular program developed its second certificate, *Self-Leadership: Leading from the Inside Out*.

2010

The Institute for Leadership Education in Engineering was established. This marked a watershed in the program's history. ILead became the umbrella organization for LOT, which continues its trailblazing work on delivering student leadership education. ILead began outreach to peer engineering leadership programs in the U.S., including MIT and Penn State University.

2011

ILead began pedagogical research by accepting its first PhD student in engineering leadership education. Planning for the Engineering Leadership Project (ELP) began, marking the growing research capacity of the Institute.

2012

The ELP begins its research to answer the question: "How do engineers participate in leadership of engineering intensive enterprises?"

ILead and LOT mark 10 years of engineering leadership education at University of Toronto Engineering. We thank all the students, staff, faculty, alumni, and friends who have made the past decade so exciting and fulfilling. We look forward to the future, one of optimism and unwavering dedication to *engineers leading change to build a better world*.

Strategic Planning

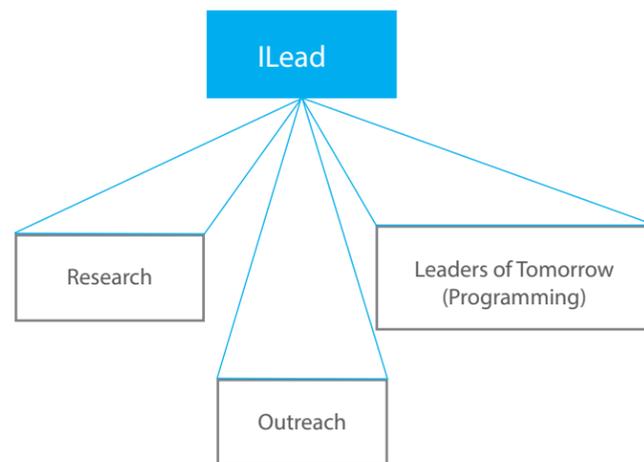
Over five days between November 25, 2011 and January 25, 2012, the ILead team met to engage in collaborative strategic planning. Our goal was to chart a direction for the development of our Institute: to discover meaning (Why are we undertaking this work?), to develop our processes (How do we work together?), and to determine what we want to achieve (What are our goals?).

Team building exercises deepened our relationships with each other and with the Institute. We employed Dr. David Colcleugh's "Levels of Thought" planning framework. Through this process we sought to discover our values and beliefs, to formulate our operating philosophy, and to articulate our vision for the future. With this in hand, we were then poised to create concepts and projects to manifest the vision, to devise strategies for action, and to enumerate measures of success. Our mission was to set the stage for ILead for the next several years of its development.

From our strategic planning we uncovered our vision, values, philosophy, and mission.

Three branches of the Institute

Through our extensive strategic planning, we discovered ILead's work was naturally divided into three branches: research, outreach, and programming, delivered by the Engineering Leaders of Tomorrow program.



Our Vision

Engineers leading change to build a better world.

The Values that light our path

We articulated eleven values:

- Education & Lifelong Learning
- Realizing Personal Potential
- Mindfulness & Reflection
- Service & Contribution
- Compassion & Appreciation
- Creativity & Innovation
- Diversity
- Discovery & Creating Knowledge
- Collaboration
- Excellence in Execution
- Exuberance

For each of our values we devised accompanying beliefs and operating principles, for instance:

Realizing Personal Potential

Our Beliefs

- Social change begins with personal change.
- We can only lead others to the extent we can lead ourselves.
- Authentic leadership comes from embracing who we are.

Our Principles

- We will provide students with opportunities for personal growth.
- We will encourage our students to recognize their inherent leadership potential.
- We will promote greater self-awareness as a foundation of effective leadership.

We identify our full set of values, beliefs, and principles in our document *Visioneering*, available at lot.engineering.utoronto.ca.

The Philosophy that guides our actions

Engineers are uniquely positioned to create innovative solutions to many local and global challenges. Leadership skills complement technical capabilities and enhance translation of those capabilities into work that benefits society. By establishing path-breaking programming and pedagogy based on research and best practice wherever we find it, the Institute is developing leadership learning opportunities and cultivating a new generation of leader-engineers. Emerging from the Institute's unique learning environment where personal growth is empowered, creativity is encouraged, humility guides learning, diverse perspectives are invited, and exuberance is contagious, the leader-engineer will lead the change required to build a better world.

The Mission that sets our direction

- To develop curricular, co-curricular, and extra-curricular programming for leadership education for undergraduate and graduate students in engineering
- To conduct research on the pedagogy of leadership education in engineering
- To conduct research on leadership practice in engineering-intensive enterprises
- To reach out to others to develop a community of practice dedicated to advancing engineering leadership

Transforming education, transforming engineers

The Team

The ILead team aspires to live the values on the opposite page. This is who we aim to be. There is also much that we aim to do. To accomplish our ambitions, the team has doubled in the last year. The ILead team below is dedicated to "transforming education, transforming engineers."

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* **Annie Simpson** is on maternity leave.
** **Estelle Oliva-Fisher** is on maternity leave.
*** **Brian Tran** served from 2010–2012.

Leaders of Tomorrow

Program Overview

The Engineering Leaders of Tomorrow (LOT) Program is ILead's programming arm for students in the Faculty of Applied Science & Engineering. At the heart of the program lies the belief that leadership education will empower engineering graduates to contribute more effectively to innovation and positive social change.

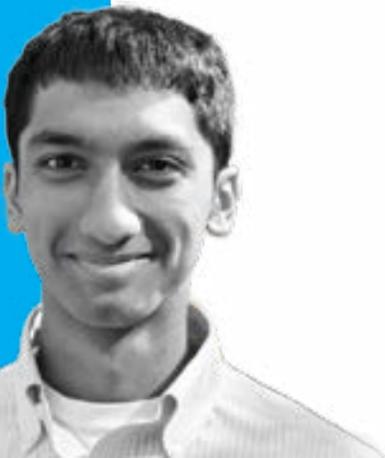
LOT offers diverse learning opportunities with multiple points of entry for students along curricular, co-curricular, and extra-curricular dimensions.

- Curricular programming consists of structured, academic learning in the form of academic courses and our leadership infusion lectures.
- Co-curricular programming consists of our certificate programs as well as a number of stand-alone workshops, seminars, and other forms of delivery that have targeted learning objectives.
- Extra-curricular programming consists of events with more organic learning objectives.

This year we have continued to deliver high quality student programming. LOT's year has been defined by continued refinement of existing programming as well as growth in areas that stem from previous successes. We have worked to strengthen relationships with students and student groups in order to become a more recognized resource.

Amir Allana (EngSci 1T2)

As President of Engineers Without Borders at the U of T, Amir has been involved in key issues such as international development and poverty. He has played a major role in supporting new leadership programs in engineering and Engineering Science.



Academic Courses

We have expanded our academic course offerings this year. Until 2011–2012, LOT delivered academic courses primarily at the graduate level. To meet the demand for engineering leadership courses for undergraduate students, we launched two new courses this academic year: APS442 (cognate APS1010) and APS443 (cognate APS1501). This brings our course offerings to five half-credit courses offered annually:

- APS442H1. Cognitive and Psychological Foundations of Effective Leadership
- APS443H1. Leadership and Leading in Groups and Organizations
- APS1010H. Cognitive and Psychological Foundations of Effective Leadership
- APS1011H. Concepts and Applications of Authentic Leadership
- APS1501H. Leadership and Leading in Groups and Organizations

This expansion in our curricular programming reflects our focus on providing rigorous education on leadership that will complement our other programming elements. We had 167 students enrolled in our courses in 2011–2012.

We surveyed students at the end of term to help us understand how our courses have changed their perceptions of their own leadership competencies. Figure 1 presents feedback results as a combined average of all five courses.

Figure 1

Supplementary feedback results on leadership learning (on a 7-point Likert scale; n=138)



Leadership Lectures

In addition to academic courses, LOT offers six leadership lectures within other undergraduate engineering courses—our Leadership Infusion Lecture Series.

We have been delivering our lectures for four years. Our objective is to provide all engineering undergraduate students with basic knowledge and understanding of leadership concepts before they graduate. The lectures also give us a platform to reach students who might otherwise not have learned about our program. We designed our lectures to be loosely sequential based on year of study. We can expect to give First Year students Lecture One, Engineering Leadership, as a way of broad introduction, and progress to Lectures Five and Six by the time a student reaches his or her fourth year.

In 2011–2012, LOT delivered 19 lectures, reaching nearly 2,000 students. This year we continue to lecture to students across all four years of study as well as from every discipline.

Our six lectures are:

1. Engineering Leadership
2. Developing Your Potential
3. Leadership & Teamwork
4. Developing Vision
5. Leadership & Citizenship
6. Reflection & Personal Growth

We have posted lecture slide decks and handouts online and welcome you to access them at lot.engineering.utoronto.ca.

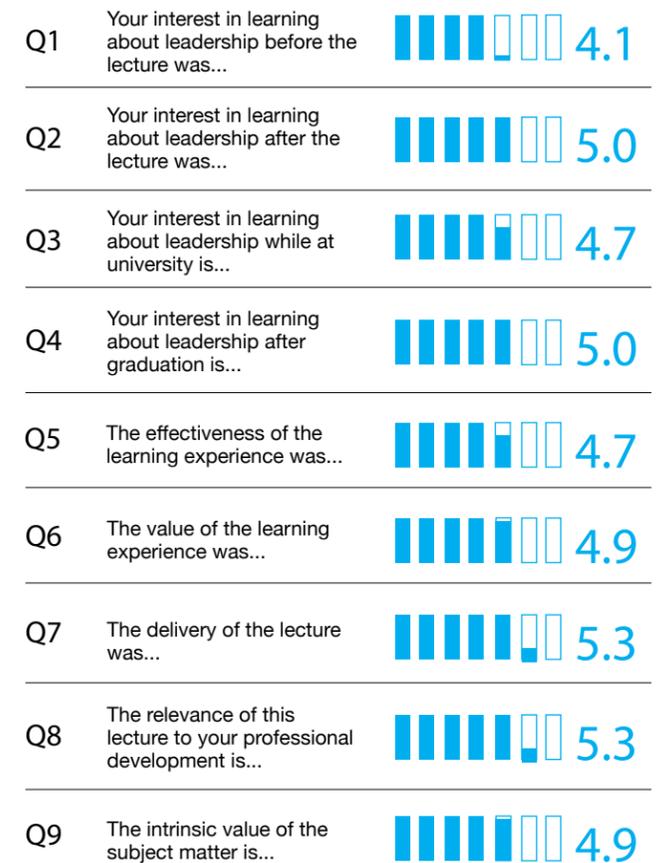
We collected student feedback following our lectures. Figure 2 presents our survey results.

The calibre of U of T Engineering students is remarkable. We are pleased to showcase six distinguished students who have been involved with the LOT program and have gone on to win the prestigious Gordon Cressy Student Leadership Awards in 2012. Read the full story on Engineering's Cressy winners at engineering.utoronto.ca.

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Figure 2

Leadership infusion lecture feedback results (on a 7-point Likert scale; n=768)



Michelle Chen (MechE 1T2)

As Founder and Chair of the Social Change and Youth Challenge, Michelle organized a two-day conference to educate young people about the complexities of global challenges and their capacity to create change in their local communities. She was also Co-President of Engineers Without Borders.



Certificate Programs

Our co-curricular certificate programs give students the opportunity to engage in in-depth leadership learning within a structured environment outside of a regular classroom setting. Students enrolled in a leadership certificate program attend weekly, two-hour workshops over a five-week period. Those who successfully complete the program receive a certificate in recognition of their learning and commitment.

In 2011–2012, we delivered our Organizational Leadership program in the Fall Session, and our Team Skills program in the Winter Session. In total, we awarded 57 co-curricular certificates over the year. Both the Organizational Leadership and Team Skills programs were well-received by students. In Figure 3 we present survey feedback taken before and after the programs and are encouraged by the positive feedback.

Figure 3

Certificate program feedback results (on a 7-point Likert scale)

		Before n=28	After n=24
Organizational Leadership (Fall Session)			
Q1	I can identify the various facets of organizational leadership.	3.8	5.9
Q2	I employ tools to uncover deeper motivations and values of others.	3.9	6.0
Q3	I recognize and demonstrate elements of constructive and empowering feedback with my teammates.	4.6	6.0
Q4	I can identify tools for recognizing and rewarding team members.	4.0	6.1
Team Skills (Winter Session)			
Q1	I feel confident in my ability to contribute leadership skills to a team.	5.1	5.8
Q2	I have a clear sense of the strengths that I bring to a team.	5.0	6.1
Q3	I am familiar with techniques that I can use to resolve conflicts.	4.3	5.5
Q4	I am confident in my ability to facilitate a group/meeting.	4.9	5.9

Engaging Student Groups

In addition to formal programming offered throughout the year, LOT delivered customized leadership development experiences to engineering student groups. Our consultation and facilitation work offers targeted curriculum to address each group's specific needs. This service leverages our unique strengths within the Faculty and creates significant value for students.

This year we have worked closely with a number of student organizations who have sought our expertise in areas such as team skills, interpersonal competence, personal leadership styles, developing vision for a team, and effective meeting facilitation. We believe that work in these areas translates into more effective teams that deliver peak performance. Student organizations with whom we have worked in 2011–2012 include, to name only a few:

- The Undergraduate Engineering Research Day (UnERD) committee
- Canadian Federation of Engineering Students (CFES) Summer School
- Young Bioconversion Scientists Network
- Universities of Toronto and Tokyo (UT²) Materials Science Engineering Delegation
- The Next 36, Canada's Entrepreneurial Leadership Initiative
- LGBTQAE
- safeTALK at U of T

We have also worked with other units within the University as facilitators or collaborators. These include the Engineering Student Recruitment & Retention Office, Engineering Student Outreach Office, Southern Ontario Centre for Atmospheric Aerosol Research, BioZone, Student Life Professionals network, ULEAD, and Engineering First Year Office.

Sami Khan (ChemE 1T1 + PEY)

Sami has created a real sense of community as Chair of the Undergraduate Chemical Engineering Council (Chem Club). While participating in the Leaders of Tomorrow program, he led a university-wide debate on carbon taxes. He also founded the Chem Book Program for First Year students.



Departments & Divisions

Our Department & Division programs are important points of entry for students wanting to get involved directly with leadership development. Students meet with their peers within their discipline to form a leadership “working group,” under the guidance of staff and faculty members and LOT's Leadership Education Specialist. Throughout the year, these students engage in leadership development meetings and organize leadership-oriented events.

In the summer of 2011 we delivered a facilitated training session for the staff and faculty liaisons that support our students in the working groups. Our goal was to provide them with not only tools and resources that will better prepare them for the year, but also to provide a forum for discussion for how best to support their students.

ChemE

The Chemical Engineering & Applied Chemistry working group organized three research days, interview preparation workshops, and a popular seminar on financing your education.

ChemE also continued their Summer Program, delivering leadership development opportunities over the summer months to students undertaking research on campus. The LOT office lent support to the Summer Program by delivering five sessions on different elements of engineering leadership in addition to assisting with the design and execution of the program.

Sabrina Tang (IndE 1T1 + 1)

Sabrina co-founded the Curriculum Enhancement program at Engineers Without Borders to promote critical thinking and design of appropriate technology in the curriculum. She has been class representative for two years and was a member of the Academic Board.



CivE + MinE

The Civil & Mineral Engineering working group was established in January 2012, marking an exciting development for the Department & Division programs. During the Winter Session the working group invested time in visioning and goal setting, putting them on a good track for rich leadership learning in 2012–2013.

ECE

The Electrical & Computer Engineering working group initiated their “myPatent Series,” a mentorship certificate series that focuses on leadership in innovation and entrepreneurship. This certificate series brought in informative and engaging speakers from the Faculty, industry, and government. In addition to this successful initiative, the group continued to offer workshops and seminars that focused on networking and academic support.

MIE

The Mechanical & Industrial Engineering working group established weekly “table topic” discussions that incorporated intentional learning, encouraging confidence and poise. The group organized “Lunch and Learn” events on research conducted by their professors. They also organized a successful public speaking workshop.

Marc Pilon (MechE 1T0 + PEY +1)

Marc has made the Faculty of Applied Science & Engineering a more inclusive place. He chaired a national conference on women in engineering and, as president of the LGBTQ group in the Faculty, has brought visibility to minority sectors of the engineering population.



MSE

This year, the student group in Materials Science & Engineering took the approach of supporting the passion projects of individual members, with the intent of developing the personal interests and leadership talents of each team member. From this approach the working group delivered a cover letter and resume workshop, a PEY panel discussion, a research showcase, a technology feasibility competition, an Amazing Race, and finished off the year with charity initiatives.

LOT:G

The Leaders of Tomorrow: Graduate chapter, formed by graduate students across the Faculty, started off a productive year with setting a vision and mission for their group. From this foundation they set out to coordinate a number of events, including an improv communication workshop, innovation workshops, and a social entrepreneurship case competition. Furthermore, they integrated leadership learning into their meetings through internal workshops that included team building, visioning, and constructive, non-violent communication.

TrackOne

This year LOT continued an initiative that began last academic cycle that supported the development TrackOne¹ students. This consisted of guiding a team of students throughout the year to engage with the foundations of effective decision-making and group facilitation that would be useful throughout their student career. Our close work with this year's cohort of TrackOne working group members culminated in April 2012 when they delivered a highly polished presentation to their peers in APS 191: Introduction to Engineering.

¹The TrackOne program for First Year students is designed to allow entering students the ability to gain broad exposure to the different engineering disciplines prior to choosing a program.

Awards

We have the good fortune of working with exceptionally bright young people who have demonstrated enormous potential as leaders. It is essential to formally recognize students who exhibit tremendous talent and achievement.

Leaders of Tomorrow Awards seek to "...recognize students who have shown the potential to become outstanding leaders. This potential may be demonstrated in a number of ways, including participation in student councils or clubs, community organizations, cultural groups, or athletics. Applicants should enumerate their service to others through volunteering or community work. Recipients should have the ability to inspire others to action and to excellence" (awards description available at undergrad.engineering.utoronto.ca). The awards pay out \$5,000 to worthy applicants. The first Leaders of Tomorrow Award was established in 2006.

In the past year we have endowed two more awards bringing the total to five:

- Students in First Year — The ERCO Worldwide Leaders of Tomorrow Award (new in 2012)
- Students in Second Year — The Professor James W. Smith Leaders of Tomorrow Award
- Students in Third Year — The Class of 5T9 Leaders of Tomorrow Award
- Students in Fourth Year — The Troost Family Leaders of Tomorrow Award
- Students in MASc or PhD Studies — The Professor Douglas Reeve Leaders of Tomorrow Award (new in 2012).

Tulika Gupta (ElecE 1T2)

Tulika organized Women in Science & Engineering workshops dealing with scholarships. Working with Engineers Without Borders, she taught high school students developing world poverty and water scarcity issues.



Research

Teaching Team Effectiveness

In June 2011, Patricia Sheridan joined our team as ILead's first PhD student. For her thesis, Patricia is studying teaching team effectiveness in large classrooms. As part of this study she is creating and assessing a novel, web-based teaching tool. We hope that this tool will increase students' motivation to learn teamwork skills resulting in a measured improvement in their effectiveness. This tool will: 1) help instructors to form teams that exhibit diverse characteristics according to students' learning styles, leadership styles, or personality types, 2) provide students with structured 360° feedback from teammates, and 3) provide students with personalized exercises and actionable strategies that guide targeted learning. The tool will be assessed through pilot implementation in selected courses.

We received \$58,510 in funding from the Higher Education Quality Council of Ontario² (HEQCO) to support this study. Additionally, this research project brings together staff and faculty from across the University including investigators from the Department of Psychology, Division of Engineering Science, and at the Department of Mechanical & Industrial Engineering, as well as the Faculty of Engineering at Ryerson University.

Preliminary data collection for the assessment of this tool was completed between January and April 2012 in Praxis II, a First Year cornerstone design course in Engineering Science. This preliminary work has resulted in two conference presentations and publications to date. The first, "A Proposed Framework for Teaching Team-effectiveness in Team-based Projects," was accepted to the 2012 American Society of Engineering Education's Annual Conference and presents the pedagogical foundations of the proposed tool. The second, "Guiding Useful Self- and Peer-assessments of Team Effectiveness in a First Year Engineering Design Course" was accepted to the 2012 Canadian Engineering Education Association Annual Conference.

²HEQCO is an assessment body created by the Government of Ontario under the Ministry of Training Colleges and Universities to assess and inform the Ministry about advances in teaching and learning in higher education.

Engineering Leadership Project

The Engineering Leadership Project seeks to answer the question: "How do engineers participate in leadership of engineering-intensive companies?" It is a two-year, multi-method research project that will identify key elements of successful leadership by engineers and create curriculum for enhancing development of leadership capability in engineers.

We have been developing methodologies, marketing our ideas, and recruiting partners since May 2011. The company partners we have been seeking are engineering-intensive, notably committed to development of their employees, and based in the Greater Toronto Area. We have done research on, and made contact with, over sixty companies. We have been successful in recruiting four companies to date: ERCO Worldwide, Google Canada, HATCH, and Vale with matching funding to give us a budget exceeding half a million dollars over three years.

The project started officially on May 1, 2012. Through focus groups and interviews we will gather qualitative data and identify and articulate key elements of successful leadership by engineers. We are interested in junior-, middle-, and senior-level engineers in both technical and managerial roles. Based on the qualitative data we will formulate and execute a survey of a large number of engineers in a wider range of companies.

We will consequently design curricula to develop and empower engineering students and practitioners.

The Engineering Leadership Project will initiate a community of practice for educators and employers to advance the transformation of engineering leadership education and practice.

Outreach

Leading Research Teams

New professors typically have little preparation for how to lead a research group. While they have great expertise in their research specialization, they have less familiarity with the organizational and relational aspects of running groups.

From a student's perspective, much of the learning in research-based graduate engineering education (MAsc, PhD) focuses on the acquisition, interpretation, and dissemination of technical knowledge. Considerable personal growth also occurs and additional competencies and transferable skills may be acquired. This learning is mostly indirect and experienced by immersion in the culture of the research group, department, and field. These competencies and skills may, however, be more important to their long-term success than the technical knowledge that they acquire, depending on their career path, especially non-academic trajectories. Therefore there is a need to re-examine how we educate graduate students through research experiences.

In 2011–2012 we initiated a study looking into leadership development to support research teams. Our goals are to: 1) generate knowledge to help professors build more successful research programs while better preparing their students for lifelong success and 2) create teaching content and pedagogy to translate this knowledge into action.

This study is still at a formative stage. An exploratory literature review has been initiated and faculty members at universities in Australia and Asia were interviewed to help refine the study questions and hypotheses. In 2012–2013 we will interview faculty at Canadian universities so as to identify challenges, opportunities, and best practices in a Canadian context. The expectation is that this will support development of a more comprehensive online survey to substantiate assumptions, evaluate hypotheses, and support the development of recommendations.

Summer Institute

In June 2011 ILead delivered its third annual Summer Institute. This was a day-long professional development workshop open to staff and faculty across the University. It is an opportunity for us to deliver innovative leadership curriculum to our peers across the many faculties, departments, and divisional arms across the three campuses. The Summer Institute also allows us to connect with our colleagues in a rich learning environment that draws upon the experiences of our diverse community.

We invited Julie Diamond, PhD, to facilitate our session titled, "Tools and Techniques for High Performance, Cross-Disciplinary Teams." Feedback from participants was positive and encouraging. Our colleagues found the content interesting and applicable, and also found great value in connecting with peers across the University in a collaborative forum. A great majority of respondents indicated that the session increased their interest in further leadership development activities.

Building Our Community

Over the past year we have made a number of connections with other institutions interested in engineering leadership education.

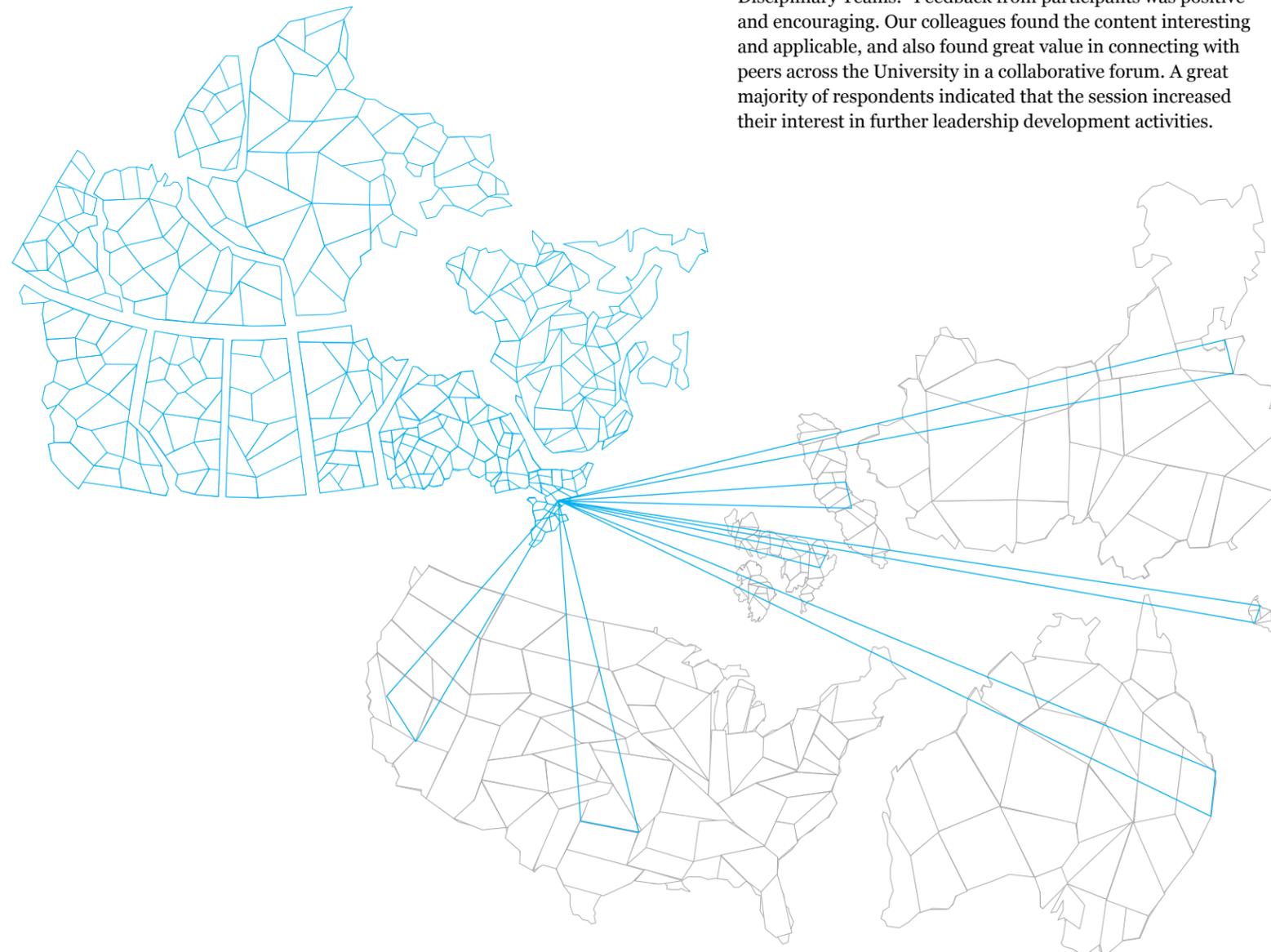
In February 2012 we met at the University of California, San Diego with the engineering leadership working group of nine U.S. schools and ourselves—the third such meeting. We arrived at a name for the group: The Community of Practice for Leadership Education for the Twenty-first-century Engineer (COMPLETE) with the mission *to enhance engineering education by infusing leadership development into the collegiate experience*. In September 2012, ILead will host the fourth COMPLETE meeting at the University of Toronto.

We developed other international connections with visits to universities in Australia, Singapore, India, China, Sweden, the UK, and the USA. Furthermore, we welcomed visitors from SMU, Dallas, Texas and McMaster University, Hamilton, Ontario.

We participated in the International Leadership Association Conference in London, UK, the American Society for Engineering Education Conference in San Antonio, Texas, and the Canadian Engineering Education Association Conference in Winnipeg, Manitoba.

We have been building our connections with senior engineering leaders in the Greater Toronto Area. Our Board of Advisors now has five members who are distinguished counsellors and supporters: William Blundell, David Colcleugh, Elizabeth Mills, Emily Moore, and William Troost. As part of our commitment to bringing leadership into the engineering curriculum, we organized two panel discussions with CEOs. We set up an interview project involving ten CEOs whereby each team of five students visited each CEO in their corporate habitat. Both students and CEOs were enthusiastic about these projects.

In the next phase of our outreach, we have ambition to form the ILead Community of Practice on Engineering Leadership and Engineering Leadership Education. We welcome your interest and participation.



Rethinking engineering thinking

Institute for Leadership Education in Engineering

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