



# **ASEE Engineering Leadership Development Division (LEAD)**

## **Strategic Plan 2016-2020**

### **Version 1.0**

Calls for “engineers who are broadly educated, who see themselves as global citizens, who can be leaders in business and public service, and who are ethically grounded.”

*The Engineer of 2020: Visions of Engineering in the New Century*  
National Academy of Engineering, p. 5.

### **Strategic Planning Committee**

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Simon Pitts, Professor of Practice in Engineering Leadership, Director of the Gordon Institute of Engineering Leadership, Northeastern University

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## HISTORY

The genesis of our LEAD Division dates to 2010, when David Bayless and Ron Bennett formed an ASEE Constituency Committee to explore interest among ASEE membership on the topic of engineering leadership. Dave and Ron engaged about 60 members to form this committee in 2011, a number that grew to 200 in 2013. In June 2014, the Constituency Committee exceeded the 200-member threshold and the new ASEE LEAD division was formed that summer with 280 members. Once the division launched, membership grew rapidly to 724 in 2015 and it was during that summer that we decided to form a committee to craft our first strategic plan. This six-member strategy group began to work on this plan in November 2015 and worked continuously for seven months, completing this version on June 24, 2016. We followed a general methodology outlined in David Norton and Robert Kaplan's book, *The Execution Premium*.

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## MISSION

The ASEE LEAD Division serves as a collaborative consortium of engineering leadership development programs that prepare engineering leaders to realize their full potential to make dramatic contributions to their stakeholders.

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## VISION

The ASEE LEAD Division will support the creation of engineering leadership educational programs and outcomes, viewed by those who participate in the programs and those who hire the graduating students, as the best in the world.

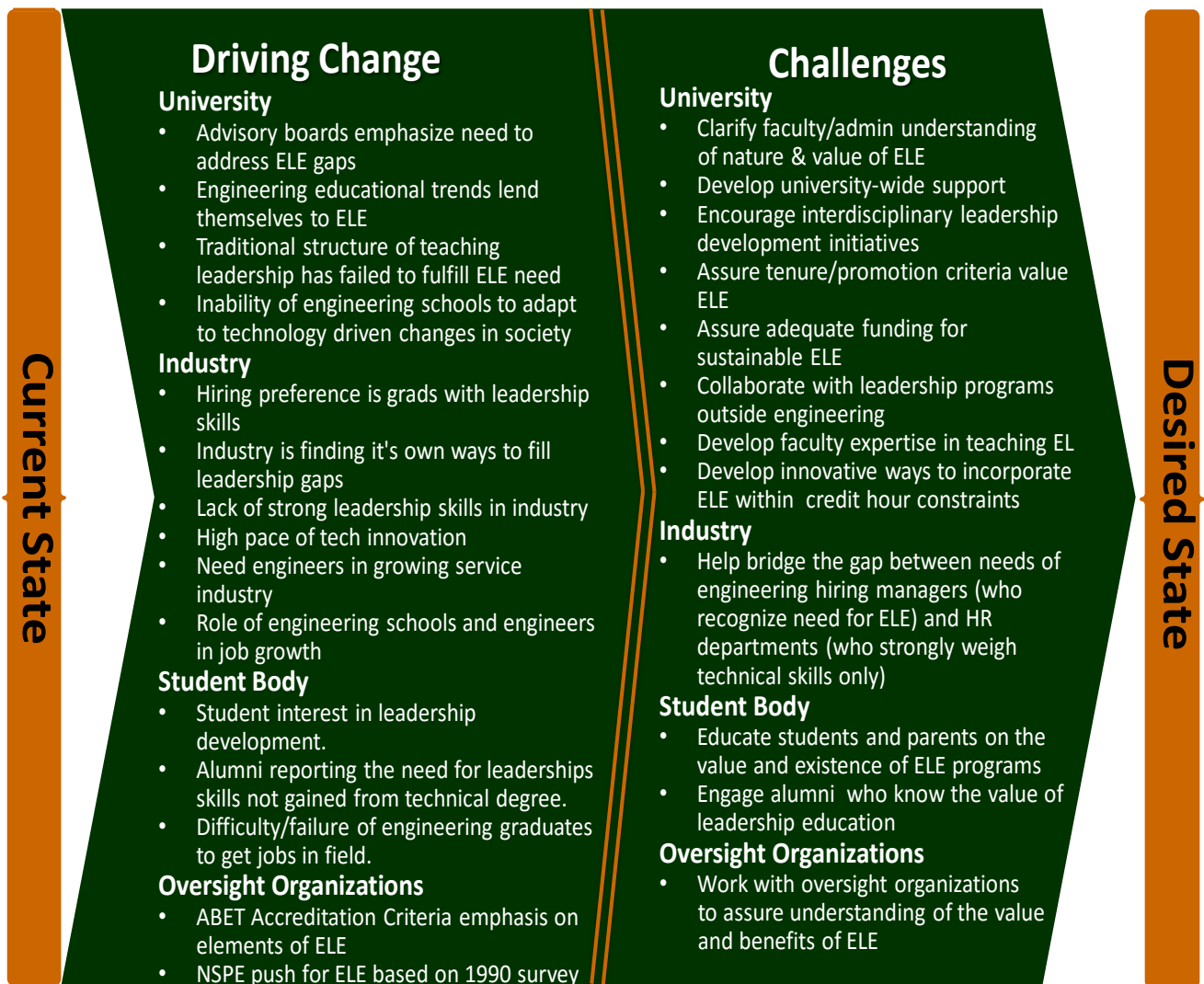
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## VALUES

- Being proactive and impactful
- Encouraging each other to continuously improve the education and practice of engineering leadership
- Developing engineering leaders and followers who
  - are courageous in the face of adversity,
  - continuously strive to reach their full potential,
  - exhibit ethical and empathic inclusiveness, across cultures and nations,
  - create value and deliver benefits to organizations and societies.

**ANALYSIS OF CONTEXT: FORCES DRIVING CHANGE IN ENGINEERING EDUCATION**

The following graphic integrates our understanding of the many complex forces influencing the context of our programs in engineering leadership. The forces on the left illustrate those that we believe are driving the growing interest in educational programming. We believe these explain the “Current State”, which today represents about 32 academic programs in engineering leadership across North America. The forces on the right represent the challenges that we face collectively, as engineering schools continue to create and implement new programs in engineering leadership. All of these forces help us understand the strategic context of change; forces that we must consider as we seek to achieve our new division’s vision, which is embodied in our “Desired State”.



## STRATEGIC ISSUES, GOALS, OBJECTIVES AND MEASURES

Strategic Issue	Goals	Objectives	Measures
<b>A. How to assist university administrators and faculty to understand the significant value of this new field in academia and practice</b>	1. We will positively influence Dean’s and department chairs so that they see the value of ELE	<b>1a.</b> Produce a white paper that outlines the value proposition of ELE (and or Unique Selling Proposition)	Growth in number of supportive deans
<i>Implementation team leader: Simon Pitts</i>	2. We will inform engineering faculty on how we staff our curricular programs	<b>2a.</b> Create white paper with a few sample programs of who teaches what and how. Post this to our ASEE website	Clicks or downloads of this white paper
	3. We will share our collective programs, program growth, and collective impact with the ASEE community	<b>3a.</b> Publish a PRISM article that summarizes our programs, our growth, and our impact. We have a point of contact and provide a link in this article to our ASEE website	Clicks on our website No. of inquiries to point of contact
<b>B. How to resource ELE programs, such as funds, facilities, and capable faculty and staff</b>	1. We will share how our programs originated, are organized, and how our delivery strategies vary	<b>1a.</b> Prepare an integrative summary of our programs and post this to our website	Clicks or downloads of this white paper
<i>Implementation team leader: Kyle Gipson</i>	2. We share how our programs are funded, our facilities footprint, etc.	<b>2a.</b> Prepare an integrative summary of funding, facilities, and other relevant information and post this to our website	Clicks or downloads of this information Survey ASEE members to assess impact of information

## STRATEGIC ISSUES, GOALS, OBJECTIVES AND MEASURES (CONT.)

Strategic Issue	Goals	Objectives	Measures
<p><b>C. How to effectively integrate within the curriculum, teach, and assess leadership development in engineering students from undergraduate to graduate to practicing engineers</b></p> <p><i>Implementation team leader: David Niño</i></p>	<p>1. Niño will lead the creation of an edited book that will synthesize and codify what our university initiatives have collectively learned</p>	<p><b>1a.</b> Create a project vision, recruit editors and authors, create and implement project plan</p>	<p>Number of hard/soft copies of book in use</p>
<p><b>D. How to develop a framework/model that describes the diverse Engineering Leadership needs of companies across industries.</b></p> <p><i>Implementation team leader: Mike Erdman</i></p>	<p>1. We will conduct an industry segmentation process from which to identify unique leadership development needs for each segment.</p> <p>2. Measure the preparedness of graduates from ELE programs to demonstrate that ELE graduates out perform traditional engineering graduates.</p>	<p>1a. Prepare breakdown by type of industry. Develop and distribute surveys to and conduct interviews with representative companies from each segment.</p> <p>2a. Survey graduates to determine the self-reported usefulness of the programs.</p> <p>2b. Survey Industry representatives to determine differences in preparedness of ELE students and traditional students</p>	<p>List of needs from industry segments</p> <p>Study results that show ELE program graduates outperform non-ELE graduates</p>