

An aerial photograph of a city skyline, featuring several tall skyscrapers and dense urban development. A prominent red diagonal graphic element, resembling a stylized arrow or a ribbon, cuts across the image from the top left towards the bottom right. The text "Accelerating Excellence" is positioned to the left of this graphic.

# Accelerating Excellence

2016–17 Annual Report

**NC STATE** Industry Expansion Solutions

# CONTENTS

<b>1</b>	<b>Staff &amp; Organizational Development</b>	<b>5</b>
	—IES Mission	5
	—2016-2017 IES Advisory Board	7
	—Advisory Board Subcommittees	7
<b>2</b>	<b>IES Services &amp; Solutions</b>	<b>8</b>
<b>3</b>	<b>Affiliate Programs</b>	<b>10</b>
<b>4</b>	<b>Systems &amp; Processes</b>	<b>12</b>
<b>5</b>	<b>Financial Systems</b>	<b>13</b>
<b>6</b>	<b>Customers &amp; Stakeholders</b>	<b>14</b>
	—Product Area: Sales Performance	15
	—Federal Grants and Contracts	15
	—Impact	16
<b>7</b>	<b>Success Stories</b>	<b>18</b>



## EXECUTIVE SUMMARY

The 2016-2017 period was one of profound change and excitement for Industry Expansion Solutions (IES). With the appointment of a new Executive Director, every one of the organization's goals and tactics was re-assessed; the organizational structure needed stability, critical resource needs had to be met, and the time and energy of our staff needed renewed focus. We were ready and eager to meet the challenges the year had brought, overcoming them to be the strongest organization possible.

We strengthened the alignment of IES practices and College of Engineering systems and practices. We reevaluated our mission statement, vision and values. We asked questions like, 'Given the values of NC State University, what is the unique contribution IES offers?' Going through the process

helped us reinforce and reiterate the importance of clarity and how these concepts should guide our internal conduct as well as our relationship with the external world.

We named four areas, or "Goals," in which improvement could be reached—improvement that would streamline our operations and reinvigorate our work, allowing us to deliver the best possible results to our customers and partners. Those were:

- › Staff and Organizational Development
- › Systems and Processes
- › Financial Systems
- › Customers and Stakeholders





## OUR VALUES:

### Integrity

Do the right thing—always!

### Innovative Solutions

We foster creative talent to deliver high impact solutions to drive success.

### Customer first

We uphold a culture of exceptional service

### Pursuit of Excellence

We partner to achieve measurable economic impacts for North Carolina and beyond

## GOAL 1

# STAFF & ORGANIZATIONAL DEVELOPMENT

We invested strategically in resources to support a culture of leadership, learning, communication and collaboration:

- › Reconvened Goal One team to foster employee development and engagement, with initiatives like community service activities and staff training and development advocacy and promoting revised IES values
- › Weekly “In the Loop” emails streamlined internal communications and ensured everyone had access to critical information, as well as news of recent successes.
- › Enhanced, monthly Executive Director’s messages that created a direct communications conduit between the new Executive Director and the staff
- › Rolled out “Mini Masters” videos to enhance professional development. These have been designed to showcase the unique knowledge within IES, strengthen internal culture and spread awareness of upcoming courses and events
- › Participated in two Build-A-Block sessions, the collaboration between the Habitat Campus Chapter at NC State, students, faculty, staff, corporate partners and Habitat Wake
- › New employee on-boarding materials developed and posted in central repository on IES staff portal

Over the next twelve months, we aim to cast our net further and engage even more stakeholders with news about our work. We intend for our efforts to lead to new ideas for collaboration. We will continue to encourage employees to develop Individual Development Plans that enable—and inspire—they to access training that will be of the most benefit to them and to our organization.

## OUR VISION

To make North Carolina #1 in every market IES serves.



## IES MISSION

We engineer success for North Carolina business one solution at a time by understanding our partners, building long term relationships, crafting meaningful sustainable solutions and inspiring continuous learning.







71 employees  
60 years experience  
1 goal

Engineer  
Success

We are IES







## 2016-2017 IES ADVISORY BOARD

The Industry Expansion Solutions Advisory Board guides IES on programs, opportunities, business operations and the best service delivery mechanisms to reach manufacturers and other target markets.

**Chris Trevey**, CEO/President Carlton Scale -  
Chair of IES Advisory Board

**Doug Adams**, CEO/President, Aweve LLC

**Martin Kegel**, Fabrication Operations  
Manager, Caterpillar

**John Chaffee**, President and CEO, North  
Carolina's Eastern Region- Kinston

**Jerry Pedley**, President, Mertek

**Michele Holbrook**, Plant Manager, Corning  
Optical Systems

**Ashley Holroyd**, Director of Performance  
Operations, Duke University Health

**David Catt**, Plant Manager, Keihin Carolina  
System Technology

**Bryon Murphy**, Controller, Package Craft

**Phil Mintz**, Executive Director, NC State IES

**Fiona Baxter**, Associate Executive Director,  
NC State, IES

**Teresa Bradford**, Director, Marketing, IES

**Barbara Williams**, Director, Standards and  
Regulatory Services, IES

**Gene Smith**, Director, Process Improvement  
Programs: Lean / Six Sigma, IES

**Wendy Laing**, Director, Professional Learning  
and Instructional Design, IES

## ADVISORY BOARD SUBCOMMITTEES

### Healthcare/Government/Defense

Ashley Holroyd, John Chaffee

#### IES Staff Liaisons:

Gene Smith and Michael Mullins

### Entrepreneurial/Leadership Support

Doug Adams, Chris Trevey, Jerry Pedley

#### IES Staff Liaison:

Barbara Williams and John Dorris

### Advanced Technology & Manufacturing

Martin Kegel (Chair), David Catt, Michele  
Holbrook, Byron Murphy

#### IES Staff Liaison:

Phil Mintz and Wendy Laing

## 02

## IES SERVICES &amp; SOLUTIONS

**STANDARDS AND  
REGULATORY SERVICES**

We offer a multitude of solutions that prepare organizations to consistently focus on meeting their customer requirements and enhancing their satisfaction. We coach our customers to implement policies, processes and procedures to ensure that they can fulfill all the tasks required to achieve their objectives, ensuring continuous value to their customers while supporting ISO certification requirements.

**ENVIRONMENTAL  
HEALTH AND SAFETY**

We offer a wide range of health, safety and environmental services, solutions and certificate programs, all designed to assist our customers in obtaining and maintaining compliance with federal, state and local health, safety and environmental rules and regulations.

**We also craft solutions to meet specific needs.  
If you have a challenge, we can find a solution.**





### **PROCESS OPTIMIZATION**

We offer a suite of Lean solutions that help organizations improve performance and eliminate waste by utilizing various tools and training certification programs. In addition, we offer Six Sigma solutions that employ a statistically driven methodology for eliminating defects and reducing variation in both products and processes.

### **EVALUATION SERVICES AND RESOURCE DEVELOPMENT**

We offer a wide range of services and solutions that include the collection and analysis of data to produce reports, enhance products and document program outcomes. We help organizations understand, measure, communicate and improve their outcomes.

### **OPEN ENROLLMENT AND PROFESSIONAL LEARNING**

We offer a broad range of strategic development, training and learning solutions for a wide variety of organizations. We offer custom content development, hands-on training, and both onsite instructor-led training and online training for individuals or groups.

## **IES's Industries Served**

**Education & Research**  
**Energy**

**Healthcare**  
**Manufacturing**

**Military**  
**Public Sector**

# 03 AFFILIATE PROGRAMS



## NCMEP

Industry Expansion Solutions has served as the North Carolina Manufacturing Extension Partnership (NCMEP) Center since 1995, operating under the College of Engineering. IES, through NCMEP, continues to help state manufacturers grow, innovate and prosper by offering a broad portfolio of solutions and deep industry expertise. IES is joined by partners from the North Carolina Community College System; NCWorks Customized Training; the Economic Development Partnership of NC; the Polymers Center of Excellence; the Manufacturing Solutions Center; and North Carolina A&T State University.



NCMEP offers multiple networking opportunities through programs like Manufactured in North Carolina (MNC), the premiere searchable supply chain directory for North Carolina manufacturers, and the membership-based mfgNC CONNECTIONS. In addition, IES served as the administrator for NCMEP's second mfgCON Conference in 2016, delivering two days of keynotes, presentations and breakout sessions, attracting more than 200 attendees.







### **MINERALS RESEARCH LABORATORY**

The Minerals Research Laboratory (MRL) is a world leader in research, development, and implementation of mineral processing techniques. The MRL is part of the North Carolina State University College of Engineering, under the management of the NC State Industry Expansion Solutions (IES). The MRL serves state, regional and even international customers.



### **NCAFE PROGRAM**

IES serves as the administrator for the North Carolina Awards for Excellence (NCAfE) program, the top state level recognition presented to an organization that has demonstrated, through its practices and achievements, the highest level of performance excellence by applying the principles of the Baldrige Excellence Framework—the Criteria for Performance Excellence.



### **SOUTHEASTERN OSHA TRAINING INSTITUTE EDUCATION CENTER**

Industry Expansion Solutions and the University of Tennessee Center for Industrial Services have partnered to offer OSHA training throughout the states in Region IV since 2008. We are an OSHA-authorized provider of trainer courses, standards and technical courses, as well as two safety certificate programs. We provide the US Department of Labor OSHA Outreach Training Train-the-Trainer Program, OSHA's primary means of training employees in the basics of occupational safety and health. Courses are available for construction, general industry, food and beverage manufacturing and disaster site safety.

At IES, we recognize the value of a strong team and have recruited renowned organizations into our statewide mission to make North Carolina number one in every market we serve.

# 04

## GOAL 2

### SYSTEMS & PROCESSES

We took a cue from the services that we deliver to our own clients, and audited our organization to see where facilities and infrastructure could be made more efficient.

A significant amount of resources could then be redirected toward ensuring client and stakeholder satisfaction, with the overall goal of meeting monthly sales and revenue targets.

#### We achieved:

- › Reduction in infrastructure, with a complete decoupling from the university's Office of Outreach and Engagement
- › Establishment of a customer care team
- › Optimization of financial performance through relevant metrics, data analysis and reporting
- › Maximization of Salesforce investment through increased participation and use
- › Successful use of benchmarking results and increased use of metrics and data
- › Development and launch of a process to bring new products to market
- › A perfect 100 percent on MEP benchmarks based on new scoring methods
- › Ecommerce transition from IEShop to REPORTER, to support data integration
- › Establishment of a Client Engagement Rapid Improvement Team to define and document client engagement processes

We plan to continue refining our processes and will give even further attention to Salesforce to ensure that every lead is nurtured throughout the sales cycle. To help, we'll develop additional communications for users to keep them abreast of the newest updates and changes to the software. We will devote more resources to REPORTER as well, to develop processes for managing events and creating certificates. Lastly, we'll refresh our policies for IES student engagement to more closely match the model developed by the College of Engineering.



## GOAL 3 FINANCIAL SYSTEMS

# 05



The finances of an organization such as ours can be complicated; our sales-generated revenue is supplemented by state appropriations income, and until recently also brought in rent money from entrepreneurs in the Technology Incubator. The Tech Incubator's ownership was reassigned in 2016; it was one tactic in our strategy to more tightly align our activities and related expenditures to our mission. Other tactics include:

- › Hiring a new Business Officer after a two year vacancy
- › Greater alignment of IES practices and College of Engineering systems and practices
- › Enhanced budget planning processes
- › Development of a draft budget template to account for uncertainties and variations in revenue and expenses
- › Closing our Wilmington office to reduce facilities overhead

In the coming year, we have plans to standardize the process for project inception and use real time tracking of open enrollment revenue, to help keep our organization on track to meet or exceed revenue projections for 2017-2018.

## 06

## GOAL 4:

## CUSTOMERS &amp; STAKEHOLDERS

At the heart of it all is you—our customers and stakeholders. Every day we come to work with a single question in mind: how can we better serve you, and the multiple industries across the the state of North Carolina.

In 2016-17, IES:

delivered **353**  
industry service  
projects for fees



utilizing **35** IES  
Extension Specialists  
and Regional Managers



delivered **98**  
open enrollment  
courses and workshops



with **36,845**  
contract hours



serving **1,607**  
students



offered **15**  
online courses



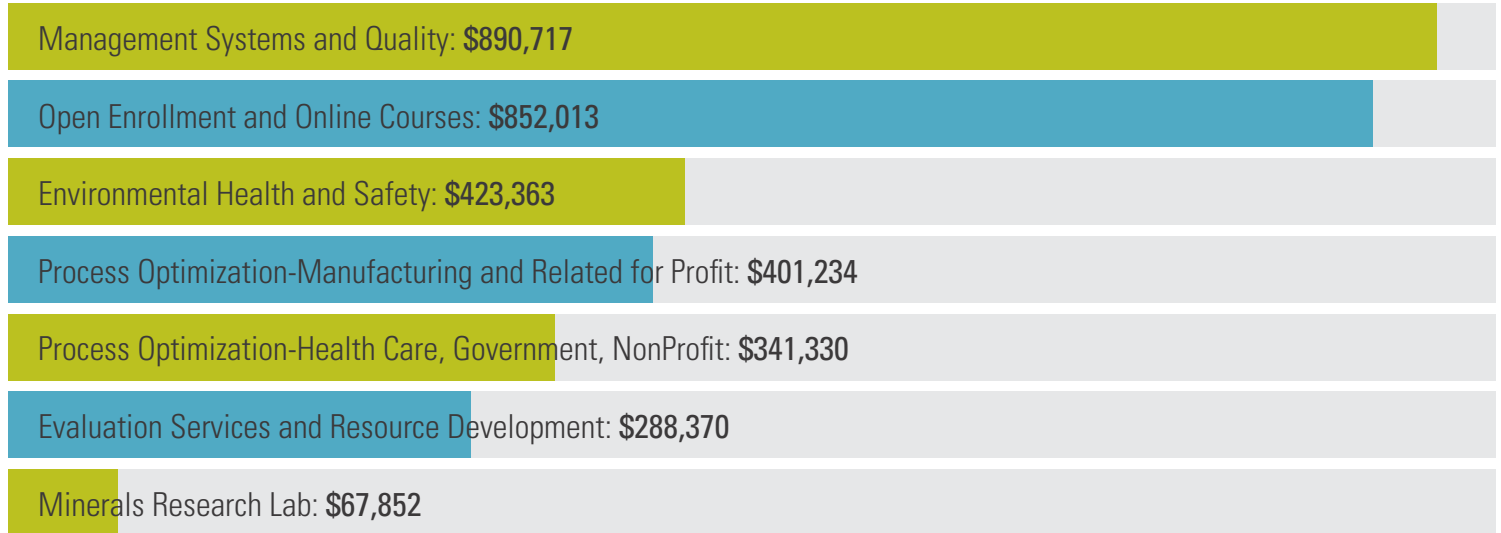
serving **82**  
virtual students



In all, IES recognized  
approximately **\$2,426,300**  
in fees for services and  
**\$852,013** in open enrollment  
and professional learning  
state appropriated receipts.



## PRODUCT AREA: SALES PERFORMANCE



## FEDERAL GRANTS AND CONTRACTS

IES was also awarded the following federal grants and contracts, including:

Government Entity	Year Awarded	Award Amount	Award Type	Project Duration
National Institute of Standards and Technology; Clean Energy Smart Manufacturing Innovation Institute	2017	\$137,500	Subaward	2 yr
MEP/NIIMBL Collaborative Pilot Project				
National Institute of Standards and Technology; National Institute for Innovation in Manufacturing	2017	\$191,052	Subaward	2 yr
The NC Defense Industry Diversification Initiative				
Office of Economic Adjustment   U.S. Department of Defense	2016	\$2,216,603	Grant	1 yr
Embedding NCMEP into PowerAmerica				
National Institute of Standards and Technology	2016	\$1,000,076	Grant	2 yr
Susan B. Harwood Training Grant, Tractor Talks				
Occupational Safety and Health Administration	2016	\$50,000	Grant	1 yr

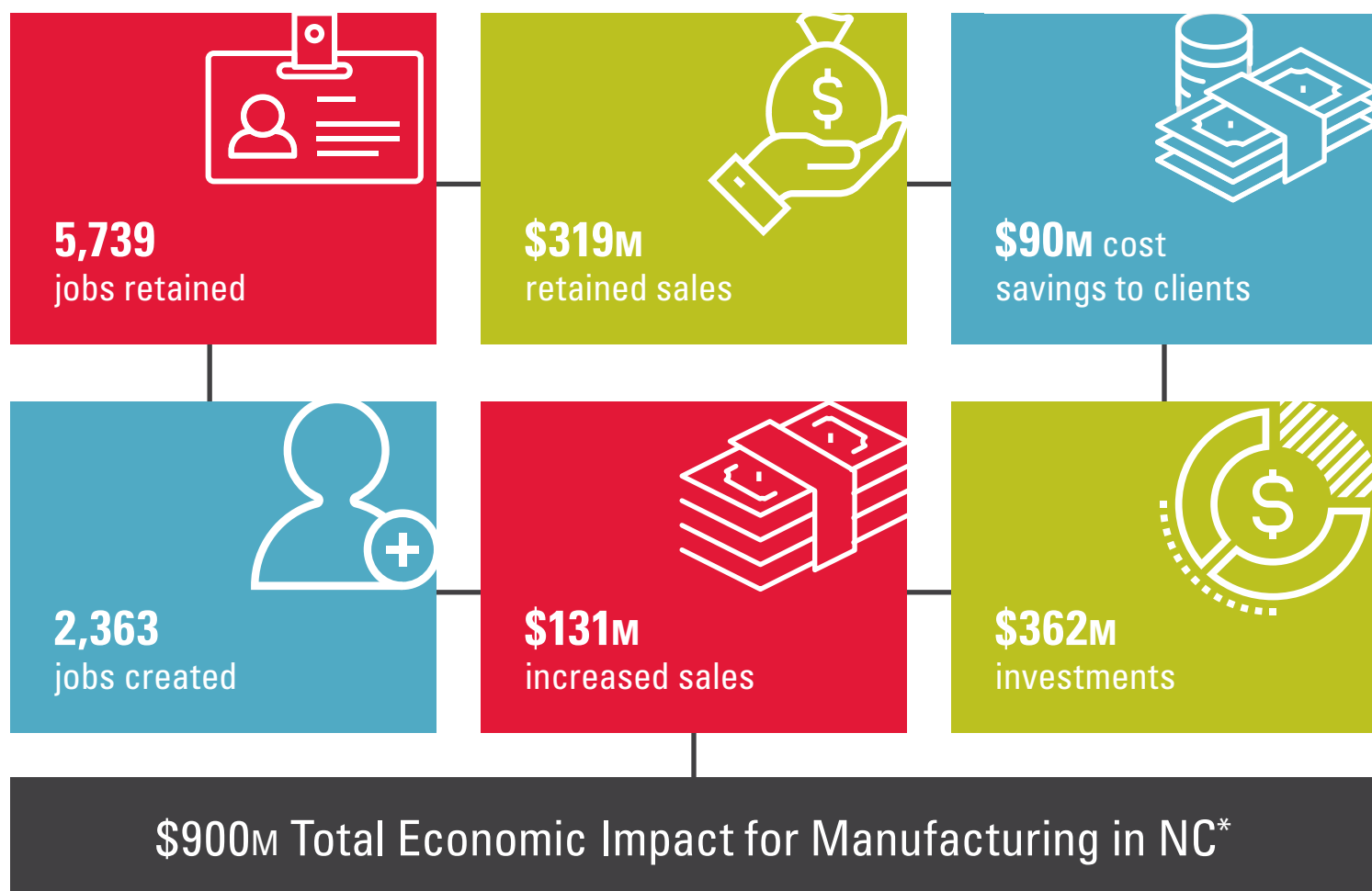


## GOAL 4 CONT. IMPACT

In 2016-2017, clients of IES or IES' NCMEP affiliates in 65 North Carolina counties returned surveys to NIST's third-party survey company, reporting results they attributed to work done by NCMEP affiliates. Manufacturers reported more than \$607 million in economic impact from NCMEP activities and the creation of and/or retaining of 8572 jobs.

We continued to diligently collect data about our clients' needs, and restructured the use of our resources so we could develop solutions to meet those needs more efficiently and effectively. Here are some of the accomplished highlights:

- › Launched a successful 2016 mfgCON manufacturing conference, with 25 percent growth in attendance
- › Dispatched ambassadors to events across the state in honor of National Manufacturing Day
- › Selected to participate in Business North Carolina's Manufacturing Roundtable, featured in the magazine's March 2017 issue
- › Strengthened our Healthcare and Government solutions portfolios
- › Won a Healthcare Heroes Award from Triangle Business Journal
- › Piloted a Lean for Human Resources program
- › Launched an updated North Carolina Awards for Excellence (NCAfE) program
- › Embedded a full-time employee in Power America, promoting the capabilities of NC State's world-class semiconductor manufacturing institute
- › Enhanced awareness of Baldrige Examiner classes
- › Developed a long-term plan and established marketing support for our Asheville, NC-based Minerals Research Lab
- › Made our Professional Learning solutions more accessible with the introduction of webinars and online workshops
- › Redesigned external communications for our Safety & Health audience (launched a new, bi-monthly Safety Guardian newsletter)
- › Redesigned OTI course catalogue for improved readability



- › Enhanced social media communications and launched additional social media channels. Improved use of social media as a call to action, resulting in 983 web page views, a nearly 59 percent increase over the previous year
- › Re-designed Manufactured in North Carolina (MNC) website, the premiere searchable supply chain directory for North Carolina manufacturers
- › Launched a monthly MNC newsletter
- › Enhanced the membership-based mfgNC CONNECTIONS program
- › Continued to refine and enhance the IES website, attracting 96,427 users to the site—a nearly 112 percent increase over the previous year; they engaged in 129,151 sessions, a 105.5 percent increase over the previous year
- › Improved Search Engine Optimization (SEO), resulting in 173,398 page views via organic traffic, an increase of more than 113 percent over the previous year

But even with our long list of accomplishments, we're not done! In the coming 2017-2018 year, we'll continue to explore alternate avenues of communication with our clients, including virtual contact and informal learning groups. We'll pursue grant opportunities that align with College of Engineering and North Carolina Manufacturing Extension Partnership priorities.

And, as always, we'll listen and learn from you, to discover how we can best work together to make North Carolina industry strong and prosperous.



# 07

## SUCCESS STORIES



### Small Shop, Big Results

#### OOWEE PRODUCTS

**Challenge:** Oowee Products, a small manufacturer of specialty beverage accessories, started as a hobby in its founder's home workshop; as it grew, the company needed to standardize its processes and streamline its operations.

**IES Solution:** Lean

**Benefits:** Oowee has ramped up production; the company recently upgraded to a larger facility space and is hiring three new employees.

Lean has helped us to know how to scale up—a couple of years ago, we would turn down orders because we just couldn't meet deadlines.

”

—Gabriel Hargett, Founder, Oowee Products

Inspiring examples of how our clients have discovered success.

Read more at [ies.ncsu.edu/success-stories](https://ies.ncsu.edu/success-stories)



## Changing Lanes

### **GESIPA® FASTENERS USA, INC.**

**Challenge:** GESIPA® was directed by its German parent company to enter the North American automotive parts market, but the company lacked the appropriate certification.

**IES Solution:** ISO/TS 16949

**Benefits:** GESIPA® earned certification and retained \$600,000 in business as a result. The company plans to double its production over the coming years.

We're already looking at doubling the size of our facility to keep up with business. The future is nothing but bright.

”

—Tim Harris, Quality Manager, GESIPA®



## NC DHHS Creates Lean Facilitator Team

### **NC DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Challenge:** NC DHHS wanted a cost-efficient way to deploy Lean tools throughout the entire organization IES

**IES Solution:** Lean Facilitator Certification

**Benefits:** Lean Facilitator-led kaizens across the state have resulted in improved timeliness and accuracy in ten different counties

DHHS identified improvement priorities established a process by which county Department of Social Services Offices could submit requests for DHHS Lean Facilitators to coordinate Kaizen events locally.

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## Accelerating Excellence

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