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Second annual E2E Convergence takes an in-depth look at higher ed, industry practices to bridge the “skills gap” throughout Indiana



Former Indiana Lt. Gov. and incoming Ivy Tech Community College President Sue Ellspermann gives the keynote address during Innovate Indiana’s second annual E2E Convergence conference held May 19 at IUPUI’s Campus Center.
(Photo by Liz Kaye | IU Communications)

Since 2013, the state of Indiana has added more than 140,000 jobs. That’s a good story to tell, said former Lt. Gov. **Sue Ellspermann** — but there’s a catch.

“The tough part about that if you’re the employer ... is you know how difficult it now is to find employees,” Ellspermann said. “That’s the challenge we’re in now ... to find that skilled workforce, those professional degrees. And that ranges from computer science to information technology and all the health care fields to advanced manufacturing and even aerospace.”

The “skills gap” dilemma — one that holds huge economic implications for all Hoosiers — was the focal point of the second annual **Education-to-Employment (E2E) Convergence** conference hosted by **Innovate Indiana** on Thursday May 19 at **IUPUI’s Campus Center**. By providing students more opportunities and enhanced experiences at developing job skills while still in college, it is hoped that future graduates will enter Indiana’s workforce more smoothly.

In turn, this would help reduce the growing “gap” between higher demand for technically skilled workers and the number of graduates who have such skills. If Indiana colleges and universities cannot meet such demands, future opportunities for economic growth will be lost to states whose workforce does possess such skills.

As keynote speaker for the day-long event, Ellspermann recalled her time as vice chair of the **Indiana Career Council**, when it was found that 65 percent of Indiana’s new jobs going forward will require some post-secondary training — meaning either two-year or four-year degrees, or a technical certification.

By 2025, Indiana hopes to have 60 percent of its workforce possessing some

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level of post-secondary job training, she said. At present, about 42 percent of Hoosier workers hold such credentials.

“So there’s a lot for all us in this room to figure out,” said Ellspermann, who was appointed president of **Ivy Tech Community College** the day before the conference. “Certainly a big part of that is the alignment to what you as employers need. And that includes getting the counseling right in the schools ... but first, how do we know what the true demand is? Today we really don’t know how many of each job we need.”

Some of those answers are on the way, Ellspermann said. Recently the state legislature tasked the **Department of Workforce Development** to track about 800 job titles — and their matching skill sets — statewide and regionally over periods that range from immediate demand up to five-year projections.



“That data will start rolling out late this summer and then it will be our task — as institutions — to make sure we are serving that need in Indiana. That information will be incredibly important in figuring out how we go forward and how we line up our programs.”

– Ivy Tech President Sue Ellspermann

Another promising approach, one that helps eliminate career indecision among college students, involves the concept of “orientteering.”

Devised by Indianapolis-based Bitwise Solutions as part of an apprentice learning program, it entails two days in which high school students — after taking a battery of personality and skill assessments — meet with “mentors” from local companies to talk about a “day in the life” in a range of occupations. At the end of the first day, students develop a “beginning map” of a career they are interested in — and then must defend it against people they know.

“By the end of the second day, they have a map — not of the coordinate of where they want to go, but a quadrant — a direction — where they want to go,” Ellspermann said. After one such session, about one-third of the students ended up with an internship “because the mentors met somebody they would like in their workforce eventually,” she added.

Another focus involves work-and-learn initiatives that bring schools and employers together through internships, apprenticeships, cooperative arrangements and other programs.

“We need even more of them. We need to have more of our students in your (employers) place earlier than later,” Ellspermann said. “I really ask in every way as employers that you partner with your universities, with us at Ivy Tech and across the state. Because we need — if possible — every student to have that kind of experience before they graduate.”

practices to bridge the “skills gap” throughout Indiana

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Archives

- May 2016
- April 2016
- March 2016
- February 2016
- January 2016
- December 2015
- November 2015
- October 2015
- September 2015
- August 2015
- July 2015
- June 2015
- May 2015
- April 2015
- March 2015
- February 2015
- January 2015
- December 2014
- November 2014
- October 2014
- September 2014
- August 2014
- July 2014
- June 2014
- May 2014
- December 2013
- November 2013
- October 2013
- September 2013
- August 2013
- June 2013
- May 2013
- April 2013
- November 2012
- October 2012
- September 2012
- August 2012
- July 2012
- June 2012
- May 2012
- April 2012



Stephen Fry, Eli Lilly and Co.
(Photo by Liz Kaye, IU Comm.)



Mark Osowick, Cummins Inc.
(Photo by Liz Kaye, IU Comm.)

Featured speakers

Following opening remarks by IU Vice President of Engagement **Bill Stephan** and IUPUI Chancellor **Nasser Paydar**, **Stephen Fry** of Indianapolis-based drugmaker **Eli Lilly and Co.** emphasized the need for college graduates who are “learning agile” — a trait he described as being highly correlated with leadership potential.

Along with deep technical knowledge, today’s graduates must also be able to work well with colleagues from different disciplines and backgrounds, as work increasingly takes place on a collaborative and global scale, Fry said.

“We want (job) candidates who can boldly live out our principles of connecting with people, being determined and driving continuous improvement. Bold leadership can change lives, change communities — even change the course of history,” said Fry, Lilly’s senior vice president of human resources and diversity. “The best leaders are determined to make a difference. They pursue goals with tenacity, grit and courage. They envisage what is possible and pursue it with great confidence. These are the leaders we are looking for.”

Mark Osowick of Columbus-based engine maker **Cummins Inc.** the quality of talent is likely the sole factor that determines a company’s success over its competitors.

“You can buy anything else. You can buy tools, you can buy equipment, you can buy machinery, you can license products and technology,” said Osowick, Cummins’ vice president of human resource operations. “But the real competitive edge is the quality of your talent and how effectively you have that talent working together.”

Osowick added that the “talent gap” is not only an Indiana problem, but a problem nationwide as competition becomes increasingly global for workers with STEM (science, technology, engineering, math) skills.

“Twenty-five percent of all the college hires we place in an undergraduate, graduate or Ph.D level are foreign national students completing their degrees in the U.S. So diversity matters and certainly global diversity matters,” he said.

“But the fact of the matter is we’re not doing a good enough job of getting American women and American citizens on a STEM path. We are leaving women on the sidelines still in many career areas and we’re leaving U.S. minorities on the sidelines in many career areas and disciplines. We need to find a way to dig deeper and get those talented people engaged in STEM education and STEM careers much earlier.”

Panel discussion

Five experts who address education-to-employment issues on a daily basis spoke at length about various programs, initiatives and experiences they have encountered in their efforts to recruit an increasingly technically oriented workforce.

- March 2012
- February 2012
- January 2012
- December 2011
- November 2011
- September 2011
- August 2011
- July 2011
- June 2011
- May 2011
- April 2011
- March 2011
- February 2011
- January 2011
- December 2010
- November 2010
- October 2010
- September 2010

Categories

- Association of American Universities (3)
- Association of Public and Land-Grant Universities (15)
- Association of University Technology Managers (3)
- Ball State University (3)
- Bill Brizzard (2)
- Bill Stephan (64)
- Bloomington Economic Development Corp. (15)
- Bloomington Innovation Conference (2)
- Bloomington Technology Partnership (3)
- Charles Bantz (2)
- China (4)
- City of Bloomington (9)
- College of Arts and Sciences (2)
- Computer Science (3)
- cybersecurity (1)
- David Gard (88)
- Defense (26)
- Delta Microinverter (1)

David Johnson, president and CEO of **Central Indiana Corporate Partnership**, announced the formation of the Central Indiana Workforce Development Initiative, a “sector agnostic” effort designed to bring together CEOs and college/university presidents together to drill down and isolate specific causes behind Indiana’s growing “skills gap.”

“We are really trying to find out what those issues are, whether they are sector specific, whether they are occupation specific and work company-by-company and higher ed institution-by-higher ed institution to really begin to deliver some detailed solutions to this,” Johnson said.



Panel discussants (L-R): Moderator Naomi Pescovitz; Stephen Fry, Eli Lilly and Co.; David Johnson, CICP; Janet Boston, Indiana INTERNnet; Alan Hill, Wabash College; Erin Morris, Zimmer Biomet; Susan Sciamme-Giesecke, IU Kokomo. (Photo by Liz Kaye, IU Communications).

At **Indiana University Kokomo**, one of the main tasks is transforming students with a largely rural background into prospective employees who are equipped to work in a global environment, university Chancellor **Susan Sciamme-Giesecke** said.

“They come from a small community, they’ve never seen an African-American person ... They don’t have a sense of what it means to deal with people who come from a variety of different cultures and countries,” she said.

“So we’re delivering a curriculum that provides students with (technical and soft) skill sets. As you know, the research is very clear. That in order for a student to come out with some deep learning and applied learning, they need to be engaged in three to five high-impact practices minimum during their college career. That is, undergraduate research, internships, practicum, applied learning, applied projects — all of those kinds of things.”

Alan Hill, dean for professional development at **Wabash College**, echoed Sciamme-Giesecke’s sentiments on the need for students to appreciate what he described as “the value of difference.”

“I remind these young men I work with every day at Wabash College: ‘I’d hate to be in your shoes when your first boss is a woman — and you’re not prepared. You don’t appreciate it, you don’t value it, you don’t expect them to be as smart as you. And I hope she’s black,’” he said. “And they fell out of their chair because I knew they weren’t ready for that. Don’t let that be the first time you really appreciate and value women, when you’re in an interview setting and you interact with someone who’s different from you.”

As of mid-May, **Indiana INTERNnet**, which serves as a statewide clearinghouse for internships, had almost 7,000 employers and 14,000 active students on its website, with 700 internships open at that time, Executive Director **Janet Boston** said. In some cases, Indiana INTERNnet has pushed its listings to other sites to help spread the word about such opportunities.

“We know the schools have told us that sometimes they’re taking them off our website and putting them on theirs because they’re trying to provide access for their students and we know the students benefit,” she said. “This has been a great experience, so we’re hoping to do this with other schools.”

For companies like Warsaw-based **Zimmer Biomet**, which are not household names beyond their region or industry, recruiters sometimes have to work harder to attract talent coming out Indiana’s colleges and universities.

“For those of you who are familiar with (Warsaw), we call ourselves the orthopedic capital of the world. Prior to the merger of Zimmer and Biomet

E2E Convergence (5)
Economic Development (385)
Economic Outlook/Forecast (52)
Education (16)
Eli Lilly & Co. Foundation (2)
Engagement (68)
Engineering (14)
Entrepreneurship (148)
Eric J. Messner (5)
Eskenazi Hospital (1)
Euzeli dos Santos (1)
federal government (2)
Food and Drug Administration (1)
FORCES (1)
Fred H. Cate (6)
Fulbright Scholar (1)
funding (23)
Funding Opportunities for Research Commercialization and Economic Success (6)
Global Business (67)
Guest Blogger (9)
Health Care (72)
Herron School of Art and Design (4)
Higher Education (236)
Indiana Biosciences Research Institute (1)
Indiana Business Research Center (6)
Indiana Business/Economy (170)
Indiana Clinical and Translational Sciences Institute (6)
Indiana Health Industry Forum (2)
Indiana Office of Defense Development (2)
Indiana Small Business Development Center (1)
Indiana State University (2)
Indiana University Foundation (7)
Indiana University Research and Technology Corp. (IURTC) (87)
Indy Chamber (1)
Informatics and IT (41)
information technology (11)
Innovate Indiana (94)
Innovate Indiana Fund (25)
innovation economy (255)
Intellectual property (74)

last year, we had three of the major players in the musculoskeletal space headquartered in Warsaw, said **Erin Morris**, Zimmer’s talent acquisition leader. “But some of these college students ... they just don’t know about us. So we do a couple of things. We target schools in the Midwest to find talent and do a lot of co-op and internship programs. We generally have between 75 and 100 co-ops and interns at any given point throughout the year.”

Additional efforts include arranging speaking engagements for Zimmer Biomet employees at their alma mater, partnering with **Orthoworx** — a Warsaw-based industry support organization — and early career development programs in such areas as finance, operations, quality control, human resources and other career tracks, she said.

Closing remarks

Critical thinking. Careful analysis. Perceptive reading. Problem solving. Working productively with other people. Appreciating diversity. Genuine inclusion of the perspectives of others with differing backgrounds or cultures. Global experience. The ability to adapt to new information and new conditions. Strong ethics. Awareness of the needs of others. Knowing how to learn and having a passion to learn.

All of those traits are known as “soft skills” — and mastering them is essential for doing business on a global scale in the 21st century, said **John Applegate**, IU’s executive vice president for academic affairs. Such skills are not easy to obtain, some are among the most difficult to get.

But if colleges and universities are to meet the expectations of employers who compete on a global stage — as many Indiana companies do — it is essential that they expose students to as many opportunities to hone “soft skills” as possible and apply them in tandem with the technical knowledge they acquire.

“They’re not obtained in one class. They’re not obtained very directly. And they’re not obtained just in class,” Applegate said. “They’re part of the larger experience of higher education. These are the skills that are the differentiators for students.”



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- [International Engagement](#) (7)
- [Inventors](#) (112)
- [Inventrek Technology Park](#) (2)
- [IU Alumni Association](#) (1)
- [IU Council for Regional Engagement and Economic Development \(CREED\)](#) (27)
- [IU East](#) (15)
- [IU Foundation](#) (1)
- [IU Health](#) (12)
- [IU Kokomo](#) (19)
- [IU Northwest](#) (19)
- [IU Public Policy Institute](#) (3)
- [IU School of Dentistry](#) (1)
- [IU School of Education](#) (2)
- [IU School of Medicine](#) (52)
- [IU School of Medicine Northwest](#) (1)
- [IU South Bend](#) (12)
- [IU Southeast](#) (12)
- [IU-Bloomington](#) (99)
- [IUB Innovation Conference](#) (1)
- [IUPU-Columbus](#) (6)
- [IUPU-Fort Wayne](#) (14)
- [IUPUI](#) (69)
- [Ivy Tech](#) (15)
- [Jacobs School of Music](#) (1)
- [Jennifer Finefield](#) (2)
- [Jerry Hunter](#) (1)
- [Joe Carley](#) (18)
- [Joe Trebley](#) (7)
- [Johnson Center for Entrepreneurship and Innovation](#) (4)
- [Johnson Center for Entrepreneurship in Biotechnology](#) (6)
- [Johnson Center for Innovation and Translational Research](#) (9)
- [Judd Leighton School of Business and Economics](#) (4)
- [Keith R. Davis](#) (6)
- [Kelley School of Business](#) (42)
- [Ken Green](#) (4)
- [Kevin Berkopes](#) (1)
- [Kirk White](#) (39)
- [Lee Saberson](#) (1)
- [Legal Issues](#) (7)
- [licensing](#) (8)
- [Life Sciences](#) (70)
- [Lilly Endowment](#) (12)
- [Marie Kerbeshian](#) (6)
- [math](#) (5)

[Maurer School of Law](#) (4)
[Mervin C. Yoder](#) (1)
[Michael A. McRobbie](#) (20)
[Midwest University HealthTech Showcase](#) (2)
[Military](#) (28)
[Nassar Paydar](#) (7)
[National Institutes of Health \(NIH\)](#) (14)
[National Inventors Day](#) (3)
[National Science Foundation](#) (2)
[National Security](#) (15)
[Naval Support Activity Crane](#) (7)
[Naval Surface Warfare Center Crane](#) (8)
[Nicholas Port](#) (1)
[Office of the Vice President for Engagement](#) (50)
[Office of the Vice President for Research](#) (7)
[One](#) (2)
[option](#) (1)
[Organizational Leadership](#) (31)
[patent](#) (1)
[Proof of Concept Centers](#) (28)
[Public Policy](#) (38)
[Purdue University](#) (14)
[Radius Indiana](#) (3)
[Rebecca Carl](#) (6)
[Regenstrief Institute](#) (4)
[Regional Campuses](#) (74)
[Regional Economic Development Fund \(RED Fund\)](#) (18)
[Regionalism/Regional Clusters](#) (65)
[Research](#) (154)
[Richard DiMarchi](#) (5)
[Rick Van Kooten](#) (1)
[Rob Lowden](#) (1)
[Robert H. McKinney School of Law](#) (3)
[Rose-Hulman Ventures](#) (1)
[Rural](#) (26)
[School of Informatics and Computing](#) (22)
[School of Optometry](#) (3)
[School of Public and Environmental Affairs](#) (18)
[Science Coalition](#) (16)
[Small Business & Entrepreneurship](#) (147)
[Small Business Innovation Research grant](#) (2)
[Small Business Technology](#)

[Transfer grant](#) (2)
[Spin Up](#) (5)
[startups](#) (15)
[Statewide Engagement](#) (130)
[STEM \(science\)](#) (64)
[Steven Hitzeman](#) (1)
[students](#) (18)
[Success Stories](#) (100)
[technology](#) (82)
[Technology Transfer](#) (126)
[TechPoint](#) (8)
[Tony Armstrong](#) (44)
[Translational Research](#) (65)
[Translational Research Pilot Grants](#) (1)
[Uncategorized](#) (5)
[University Economic Development Association \(UEDA\)](#) (8)
[University of Notre Dame](#) (7)
[University of Southern Indiana](#) (2)
[website](#) (4)
[welcome](#) (5)
[WGN](#) (1)
[Workforce](#) (40)



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