



# 2015 Community Career+Education Forum *for students*

Hosted by:

Endress+Hauser



In partnership with:



**ASPIRE**  
**JOHNSON COUNTY**  
Imagining . Inspiring . Impacting a Great Community

*"When kids look up to great scientists the way they do to great musicians and actors, civilization will jump to the next level."*

*~Brian Greene (author and scientist)*

# Table of Contents

3	Dear Guests
4	Special thanks
5	Order of activities
6	Thanks to our booth participants
12	PTU® (Process Training Unit) Challenge
13	Going places with STEM Passport
14	Map of booths and activities
16	Join the conversation

# Dear Guests,

Welcome to the Community Career+Education Forum. This event brings together educators, counselors, parents, industry partners, universities, and of course students. Please join us to discuss STEM careers, get hands-on experience, talk about college and/or technical school after high school, take production center tours, win prizes, get tons of good career information that parents appreciate, see robots in action, and have a good time! Come hungry! A free dinner and ice cream sundae bar will be available as well! Plus we have several surprises in store!



Todd Lucey

We want to thank the following partners: Central Nine Career Center, Aspire Johnson County and the Johnson County Development Corporation for helping us bring everyone together for this event.



Brandyn Ferguson

As you know, today, market demands for skilled workers in technical fields such as engineering far outpaces graduation rates and entry into our US manufacturing workforce. With the departure of our Baby Boomer Generation from the workplace, this has brought about a serious need for new graduates in STEM related fields and emphasizes the need to better develop our next generation of workers – the “millennial” generation and our upcoming middle school-aged students, “genEdgers.”

Through speaking with several local students, parents and educators, we found that our community is mostly unaware of the exciting career opportunities that exist right here in their own backyard. As an example, many students and parents believe they need to go elsewhere to find a good job. It is critical that we, as employers and leaders in the industry, work alongside educators and partner with our community leaders to encourage the highest quality science, technology, engineering and math (STEM) education.

In an effort to collaboratively educate the community on what manufacturing looks like today, the importance of STEM related education, and the types of careers and opportunities that exist in advanced manufacturing while addressing issues around talent, retention and attraction, the Community Career+Education Forum was born.

Throughout the evening as you connect with manufacturers, colleges, robotics teams, educators and other members and groups of the community, we hope to make a real impact on our youth’s education, careers and ultimately their entire future.

A handwritten signature in black ink that reads "Todd Lucey".

Todd Lucey  
General Manager,  
Endress+Hauser Sales Center USA

A handwritten signature in black ink that reads "Brandyn Ferguson".

Brandyn Ferguson  
Vice President of Human Resources,  
Endress+Hauser Sales Center USA

## Special thanks

- Advantis Medical
- Aramark
- Aspire Johnson County
- Automation Federation (AF) and The International Society of Automation (ISA)
- Beech Grove City Schools
- G.E. Booth Co., Inc.
- Caterpillar® Remanufacturing (Cat Reman)
- Center Grove Community School Corporation
- Central Nine Career Center
- Clark-Pleasant Community School Corporation
- Cummins, Inc.
- Duke Energy
- Fair Oaks Farms
- *FIRST*® Team 234, Cyber Blue Robotics (Perry Meridian High School)
- *FIRST*® Team 1529, CyberCards Robotics (Southport High School)
- *FIRST*® Team 1741, Red Alert Robotics (Center Grove High School)
- *FIRST*® Team 3180 Blaise of Glory (Indian Creek High School)
- *FIRST*® Team 8791 & 8793 The Green Machine (Greenwood Robotics)
- Endress+Hauser Automation Instrumentation Inc.
- Endress+Hauser Flowtec
- Endress+Hauser Infoserve
- Endress+Hauser Sales Center
- Endress+Hauser Wetzler
- Frakes Engineering
- Franklin College
- Franklin Community Schools
- Franklin Township Community School Corporation
- Greenwood Community Schools
- Heartland Machine & Engineering
- Nineveh-Hensley-Jackson United School Corporation
- Ivy Tech Community College (Franklin Campus)
- Johnson County Community Foundation
- Johnson County Development Corporation
- Kirby Risk Electrical Supply
- Measurement, Control & Automation Association (MCAA)
- Nachi America
- NSK Corporation
- Perry Township Schools
- Purdue Polytechnic Institute - Purdue University
- Rockwell Automation
- Roncalli High School
- Rose-Hulman Institute of Technology
- 2015 CCEF Planning Committee
- 2015 CCEF Volunteers

## Order of activities

<b>Time</b>	<b>Topic</b>
5:30 pm	Kickoff
5:30 – 8:30 pm	<ul style="list-style-type: none"><li>■ Complementary food, drinks and ice cream sundaes available in cafe</li><li>■ Event activities</li></ul>
6:30 pm	Check presentation/Classroom Grants
6:00 – 7:30 pm	PTU Challenges
6:00 pm	Production Center Tours
6:20 pm	
6:40 pm	
7:00 pm	
7:20 pm	
8:00 pm	Duke Energy Demonstration
8:30 pm	Event concludes

# Thanks to our participants



## **Advantis Medical**

Advantis Medical designs and manufactures world-class metal and thermoformed case and tray products for the medical device community. Advantis defines customer service through their commitments to quality products, short lead times and on-time delivery.



## **Aspire Johnson County**

Launched in 2013, Aspire Johnson County is one of Indiana's most unique community initiatives. We come from all walks of life and every part of our central Indiana county. We share a common purpose - imagining, inspiring and impacting a great community. Our mission is to make Johnson County a destination to live, work, play, and learn. We do this through three teams, Infrastructure Barriers, Talent Retention and Attraction, and Placemaking. Our teams envision and execute projects that enhance our quality of life, improve our county and create economic opportunities.

We meet monthly as a group to learn more about our county's needs and opportunities. We discuss and determine how best to engage public, private and non-profit partners. We then engage our teams to plan our initiatives and make them happen.

We are a program of the Johnson County Development Corporation. Please see our website for more information and learn how to participate at [www.aspirejohnsoncounty.org](http://www.aspirejohnsoncounty.org)



## **G.E. Booth Co., Inc.**

George E. Booth Co., Inc. is a manufacturer's representative and stocking distributor organization specializing in measurement and control products for the industrial process market. Visit us at [www.gebooth.com](http://www.gebooth.com).



## **Caterpillar® Remanufacturing**

Cat Reman is making progress possible finding new ways to reduce, reuse, recycle, and reclaim materials which once would have gone into a landfill. A leader in remanufacturing technologies and processes, Cat Reman returns products at the end of their lives (called 'core') to same-as-new condition and helps reduce owning and operating costs by providing our customers same-as-new quality at a fraction of the cost of a new part. Once a returned core arrives at a Reman facility, it is disassembled down to the smallest part, losing its original identity. Each element goes through a cleaning process and is inspected against strict engineering specifications to determine if it can be effectively salvaged. Accepted worn out components are then converted into production ready material through advanced salvage techniques which use the same rigorous engineering process that goes into new Cat machines. Cat Reman is just one way Caterpillar is developing new solutions to grow the business and help create a more sustainable world.



### **Central Nine Career Center**

A public high school/career center providing College & Career Readiness to students from 9 area high schools. Mission: "We provide the necessary facilities, appropriate equipment, technological instruction, and learning environment relevant to business and industrial needs in order to enhance student success." Central Nine Career Center is an area career/technical school dedicated to the development of the knowledge and skills necessary to prepare students for employment in a chosen career and/or furthering their education at a post-secondary institution. Central Nine is located at 1999 U.S. 31 South in Greenwood, Indiana, and provides career and technical education for a geographic area that encompasses all of Johnson County, the southeast township of Morgan County, and a main portion of the southern third of Marion County including students transported to those districts from the Indianapolis Metropolitan area. The school serves eight school corporations, which send students from nine high schools. Those high schools are: Beech Grove High School, Center Grove High School, Franklin Central High School, Franklin Community High School, Greenwood High School, Indian Creek High School, Perry Meridian High School, Southport High School, and Whiteland Community High School.



*Working Right.*

### **Cummins Inc.**

Cummins Inc., (NYSE: CMI) a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service engines and related technologies. Headquartered in Columbus, Indiana, (USA) we serve customers in approximately 190 countries and territories through a network of more than 600 company-owned and independent distributor locations and approximately 5,200 dealer locations.



### **Duke Energy**

Duke Energy makes life better for millions of people every day by providing electric and gas services in a sustainable way – affordable, reliable and clean.

We are the largest electric power holding company in the United States, supplying and delivering energy to approximately 7.3 million U.S. customers. We have approximately 57,500 megawatts of electric generating capacity in the Carolinas, the Midwest and Florida – and natural gas distribution services in Ohio and Kentucky. Our commercial and international businesses own and operate diverse power generation assets in North America and Latin America, including a portfolio of renewable energy assets.

Headquartered in Charlotte, N.C., Duke Energy is a Fortune 250 company traded on the New York Stock Exchange under the symbol DUK.



Endress+Hauser

### **Endress+Hauser**

Endress+Hauser is one of the largest instrument manufacturers in the United States' industrial automation industry – specializing in automation solutions for the chemical, food and beverage, oil and gas, water and wastewater, life sciences, power and energy, primaries and metals, and pulp and paper industries. Endress+Hauser, a Switzerland based company, first began operations in the U.S. in 1970. Since that time, Endress+Hauser has continued to invest in its U.S. operations - investing an average of 10% of its annual revenue into its infrastructure. Between the years of 2012-2014, Endress+Hauser will have invested over \$40 million into their U.S. operations alone – located right here in Greenwood, IN. A leading employer, Endress+Hauser was named one of the 2013 Best Places to Work in Indiana in the large companies category (250-999 U.S. employees) by the Indiana Chamber of Commerce. For more information about Endress+Hauser, please visit [www.us.endress.com](http://www.us.endress.com).



### **FIRST® Team 234, Cyber Blue Robotics (Perry Meridian High School)**

Cyber Blue is focused on exceeding known limits. We concentrate on education, community, and competition. Whether we are inviting the community into our lab to experience robotics firsthand or helping out our neighboring teams in *FIRST*®, Cyber Blue is determined to be a force and recognized name in our Southside Indianapolis community. The setup and vision of Cyber Blue is designed to teach students of all interests to apply for the team, and we diversify our team by accepting many different types of learners. We find that the creation of a robot is not only about engineering, but about creativity and idealistic thinking



### **FIRST® Team 1529, CyberCards Robotics (Southport High School)**

*FIRST* Team 1529, the Southport CyberCards, has participated in the high school *FIRST* Robotics Competition (FRC) since 2005 at Southport High School. Currently the team has over forty students engaged with the program and five mentors. The team has a large number of underclassmen involved with the program who are eager to increase their community outreach and engage local middle schools in the *FIRST* program. Learn more about FRC 1529 at their website: <http://frc1529.wordpress.com/> or follow them on twitter @FRC1529.



### **FIRST® Team 1741, Red Alert Robotics (Center Grove High School)**

*FIRST* Team 1741 Red Alert Robotics is located at Center Grove High School in Greenwood, Indiana. For the past eight years, since our team began in March of 2005, Red Alert has been led by a group of students, mentors, parents, and the Center Grove School Corporation, focused on STEM education and spreading the mission of *FIRST*, “To inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.”



### **FIRST® Team 3180 Blaise of Glory (Indian Creek High School)**

FRC 3180, Blaise of Glory, at Indian Creek High School has been participating in FIRST since 2010. Currently the team has about 20 members along with 3 mentors who assist the team year round. We are a young team working on expanding our program.



### **FIRST® Team 8791 & 8793 The Green Machine (Greenwood Robotics)**

The Greenwood Robotics program is a chance for students from the Greenwood School Corporation to transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.

Many students from the Greenwood Community School Corporation attended the 1st Annual Community Career and Education Forum for students at Endress+Hauser. After attending the forum, several Greenwood students and administrators were eager to establish a program that would allow students to compete in an event that combines the excitement of sport with the rigors of science and technology. Led by Mr. Campbell and Mrs. Vest from GMS, several mentors from Greenwood volunteered to start the Greenwood FIRST Tech Challenge program (The Green MACHINE). Students from grades 7-12 can participate.

This year Mrs. Sirkin has added a Lego League (FLL) at GMS where 6th graders can now get started in robotics. Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that teach science, engineering, and technology skills. We hope to inspire innovation, and foster well-rounded life capabilities including self-confidence, communication, and leadership. In short, Greenwood Robotics Programs are growing good people, by designing, building and competing with robots.



### **Frakes Engineering**

Frakes Engineering is a full-service, independent system integrator with capabilities in SCADA systems build and install, UL panel building, industrial control system cybersecurity, I&C calibrations, online system upgrades and conversion and 24 hour Emergency services. For more information on Frakes Engineering, please call (317) 577-3000.



### **Franklin College**

Founded in 1834, Franklin College is a residential, liberal arts institution located approximately 25 miles south of Indianapolis. The college prepares students to think independently, to lead responsibly and to serve with integrity in their professions, their communities and the world. The college offers its approximately 1,000 students Bachelor of Arts degrees in 51 majors from 25 academic disciplines, 42 minors, 11 pre-professional programs and five cooperative programs. In 1842, the college began admitting women, becoming the first coeducational institution in Indiana and the seventh in the nation. Franklin College maintains a voluntary association with the American Baptist Churches USA. For more information, visit [www.FranklinCollege.edu](http://www.FranklinCollege.edu). Find Franklin College on Facebook and follow@FranklinCollege on Twitter.

### **Heartland Machine & Engineering**

Heartland Machine and Engineering is a full service machine tool distributor providing sales, service, engineering, and automation to customers in Indiana, Michigan, Ohio, Kentucky, and Tennessee. Heartland's sales team and engineers use a collaborative approach to selling and providing engineering services. Heartland specializes in turn-key projects that require a high level of integration and engineered content in order to provide our customers with a superior manufacturing system.



### **International Society of Automation (ISA) / Automation Federation**

The International Society of Automation ([www.isa.org](http://www.isa.org)) is a nonprofit professional association that sets the standard for those who apply engineering and technology to improve the management, safety, and cybersecurity of modern automation and control systems used across industry and critical infrastructure. Founded in 1945, ISA develops widely used global standards; certifies industry professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its 36,000 members and 350,000 customers around the world. ISA is the founding sponsor of The Automation Federation ([www.automationfederation.org](http://www.automationfederation.org)), an association of non-profit organizations serving as "The Voice of Automation."

The Automation Federation ([www.automationfederation.org](http://www.automationfederation.org)) is a global umbrella organization of sixteen (16) member organizations and six working groups engaged in automation activities. The Automation Federation enables its members to more effectively fulfill their missions, advance the science and engineering of automation technologies and applications, and develop the workforce needed to capitalize on the benefits of automation. The Automation Federation is "The Voice of Automation."



### **Ivy Tech Community College**

Ivy Tech Community College is the state's largest public postsecondary institution and the nation's largest singly accredited statewide community college system serving nearly 200,000 students annually. Ivy Tech has campuses throughout Indiana. It serves as the state's engine of workforce development, offering affordable degree programs and training that are aligned with the needs of its communities. In addition, its courses and programs transfer to other colleges and universities in Indiana. It is accredited by the Higher Learning Commission and is a member of the North Central Association



### **Kirby Risk Electrical Supply**

Founded in Lafayette, Indiana in 1926, Kirby Risk Electrical Supply is recognized as an industry leader in the electrical distribution business. With 38 supply locations throughout Indiana, Illinois and Ohio, Kirby Risk Electrical Supply provides high-quality, state-of-the-art electrical, automation, lighting and power distribution solutions to people responsible for maintenance, design and installation of electrical systems.



### **MCAA**

The Measurement, Control & Automation Association (MCAA) seeks to become the primary trade organization for North American companies providing process control solutions and services throughout the world. MCAA helps the management teams of process control product and solution providers run and grow successful businesses by offering timely, unique and highly specialized resources acquired from shared management benchmarks and strategies where proprietary company information is secure.



### **Nachi America**

Nachi America is the sole authorized U.S. distributor for Nachi-Fujikoshi Corporation, one of the world's most innovative manufacturers of anti-friction bearings, precision cutting tools, hydraulic equipment and high speed steel. Nachi America is proud to deliver products manufactured to the highest possible standards and maintains an ongoing commitment to Incredible Quality™ in everything we do.



### **NSK Corporation**

NSK Franklin Campus consists of two manufacturing plants and two warehouses. The Franklin Hub Bearing Division produces wheel hub bearings and bearing component parts for the automotive industry whereas NSK Precision America manufactures linear guides, ball screws, linear actuators, and integrated solutions for several industries. Both facilities were in operation in 1993, to handle fulfillment and distribution more effectively for the US market.



### **Purdue Polytechnic Institute - Purdue University**

The Purdue Polytechnic Institute academic programs combine theory-based applied learning, team-based projects, integrated humanities studies, competency-based credentialing, and a series of experiential components such as industry-sponsored senior capstone projects, internships, global immersions, and certification-earning activities. The Polytechnic learning experience is designed to produce graduates who not only have deep technical knowledge and applied skills in their chosen discipline, but also possess problem-solving, critical thinking, communications, and leadership skills sought by industries and communities.



### **Rockwell Automation**

Rockwell Automation, Inc. (NYSE: ROK), the world's largest company dedicated to industrial automation and information, makes its customers more productive and the world more sustainable. Headquartered in Milwaukee, Wis., Rockwell Automation employs about 22,000 people serving customers in more than 80 countries.



### **Rose-Hulman Institute of Technology**

It's true Rose-Hulman has been ranked No. 1 by U.S. News & World Report among institutions whose highest degree in engineering is the master's. With 99% placement, the school is ranked in the Payscale top 10 for starting salaries. Rose-Hulman has 2,100 undergraduate and 100 graduate students majoring in engineering, science or mathematics. As students prepare for their careers, they experience a hands-on education while learning the value of teamwork as well as formulas and equations.

# PTU CHALLENGE



Sign-up outside the PTU®

6:00 - 7:30 PM



Take the PTU® (Process Training Unit) Challenge and see what it's like to work as a plant engineer or instrument technician in a simulated process plant! Here you will get hands-on experience with the types of operation and troubleshooting found in real-life process plants and get the chance to win cool prizes! **Student participants only. Must be present to win.**



# Going places with STEM PASSPORT

Visit as many booths as you can, fill your passport with stickers that you receive at each booth. Fill in the contact information for a chance to win cool prizes! Make sure to drop off your passport when you exit. You will be contacted by phone or email if you are a winner!



**PASSPORT**

GOING PLACES with **STEM**

Visit as many booths as you can, fill this passport with stickers (you'll receive at the booths) and fill in your contact information for a chance to win cool prizes! Make sure you drop off your passport when you exit. Student participants only. You will be contacted by phone or email if you are a winner!

Name: \_\_\_\_\_

School: \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

Grade: \_\_\_\_\_

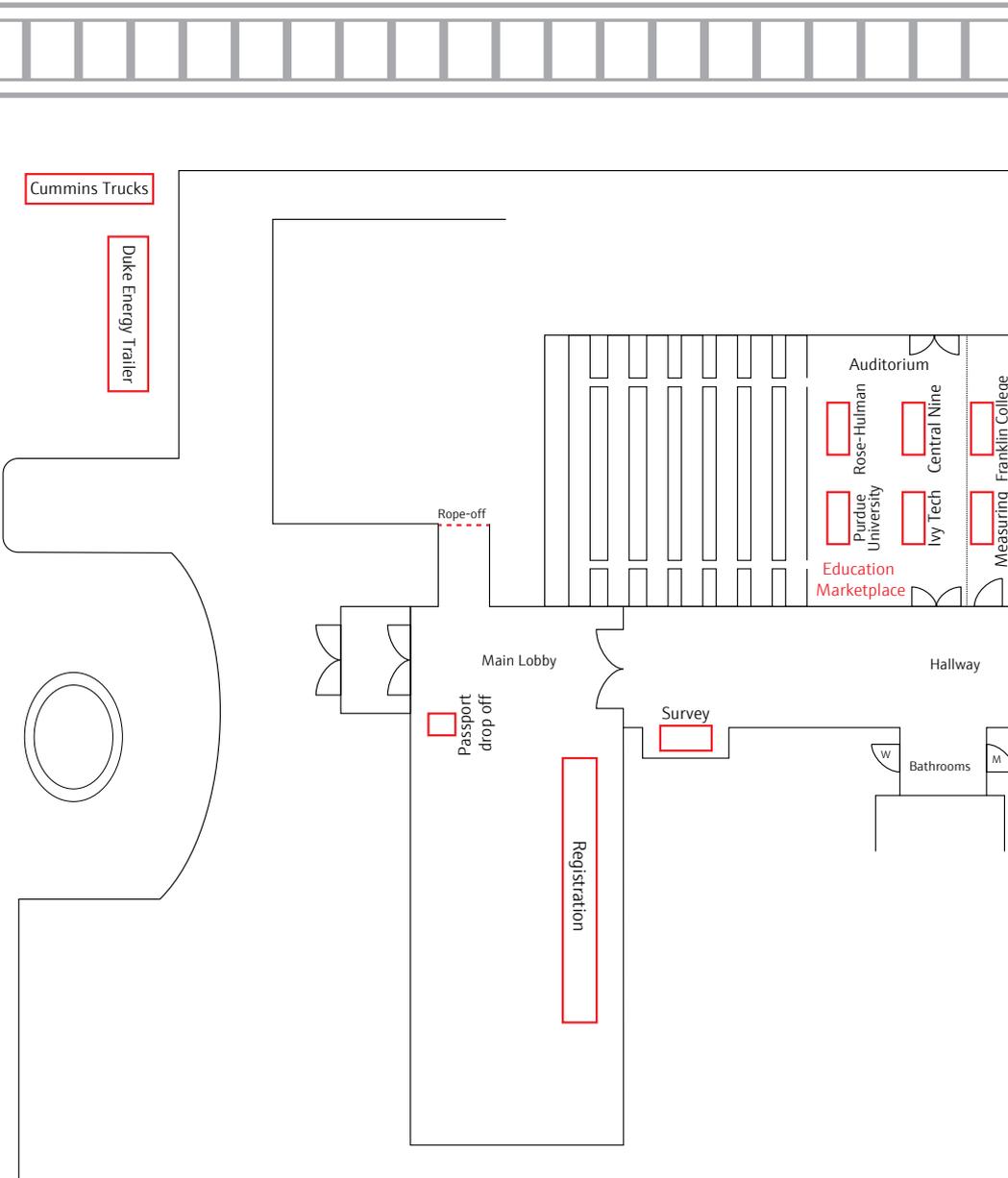


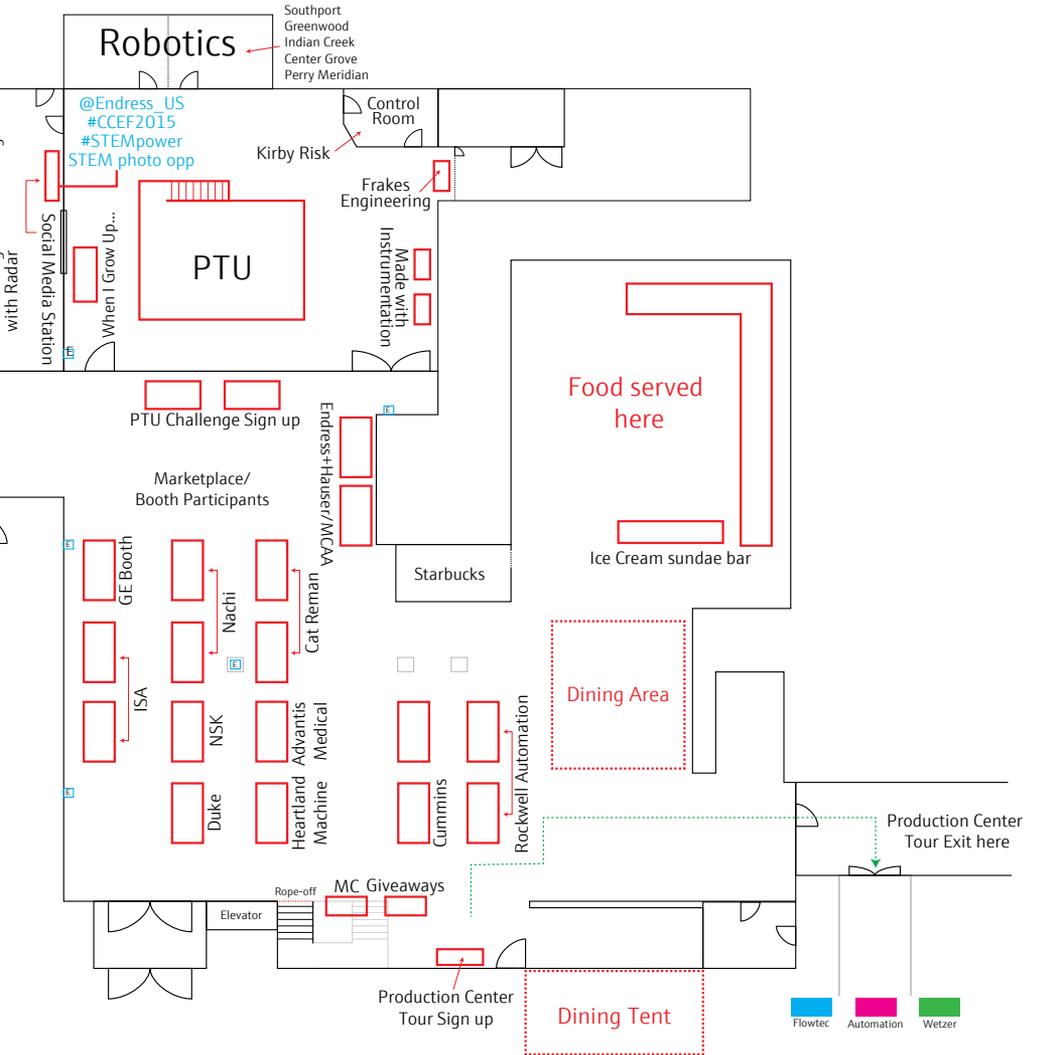
Booth participants

Place sticker next to booth name

<input type="checkbox"/>	ADVANTIS	<input type="checkbox"/>	
<input type="checkbox"/>	CATERPILLAR	<input type="checkbox"/>	NACHI
<input type="checkbox"/>	DUKE ENERGY	<input type="checkbox"/>	NSK
<input type="checkbox"/>	EM	<input type="checkbox"/>	PURDUE
<input type="checkbox"/>	FRANKLIN COLLEGE	<input type="checkbox"/>	Rockwell Automation
<input type="checkbox"/>	HEARTLAND	<input type="checkbox"/>	R
<input type="checkbox"/>	ISA	<input type="checkbox"/>	PTU CHALLENGE
<input type="checkbox"/>	Ivy Tech	<input type="checkbox"/>	@Innovate_US #CCBP2015
		<input type="checkbox"/>	Measuring with Radar
		<input type="checkbox"/>	Production Center Tours
		<input type="checkbox"/>	Robotics Teams
		<input type="checkbox"/>	When I grow up

# Map of booths and activities





# Join the conversation!



**@Endress\_US**  
**#CCEF2015**

## What's your #STEMpower?

Stop by the social media booth to choose your **#STEMpower** (Science, Technology, Engineering or Math) and pose for a picture that could be featured on the @Endress\_US Twitter feed. Every hour we'll select one photo to be featured. If we pick your photo, you'll win an awesome prize! You'll also be able to download your photo after the event. We'll be sending download instructions to all attendees via email.

Have questions about the event or any of the exhibitors?  
Send a tweet to @Endress\_US and we'll tweet back an answer!

Thanks for following us!

