



Classrooms to Combines

Teachers in the Workplace

STEM at Work Team

Newport Beach, USA

November 16th, 2018

Collaboration
Need partner



CNH

INDUSTRIAL



CASE **ii**
AGRICULTURE

STEYR
TRAKTOREN

CASE
CONSTRUCTION

NEW HOLLAND
AGRICULTURE

NEW HOLLAND
CONSTRUCTION

IVECO

IVECO
ASTRA

IVECO
BUS

HEULIEZBUS

MAGIRUS

IVECO
DEFENCE VEHICLES

FPT
POWERTECH TECHNOLOGIES



 **12**
BRANDS

 **63,356**
EMPLOYEES

 **\$ 3.9**
MILLION
INVESTED IN
TRAINING

 **53**
R & D
CENTERS

 **6,000**
INDIVIDUALS
DEDICATED TO
INNOVATION

 **5.8%**
OPERATING
MARGIN
INDUSTRIAL
ACTIVITIES

OUR COMPANY

Key Figures
(31 December 2017)


 **66**
PLANTS

 **9,629**
ACTIVE
PATENTS
OWNED

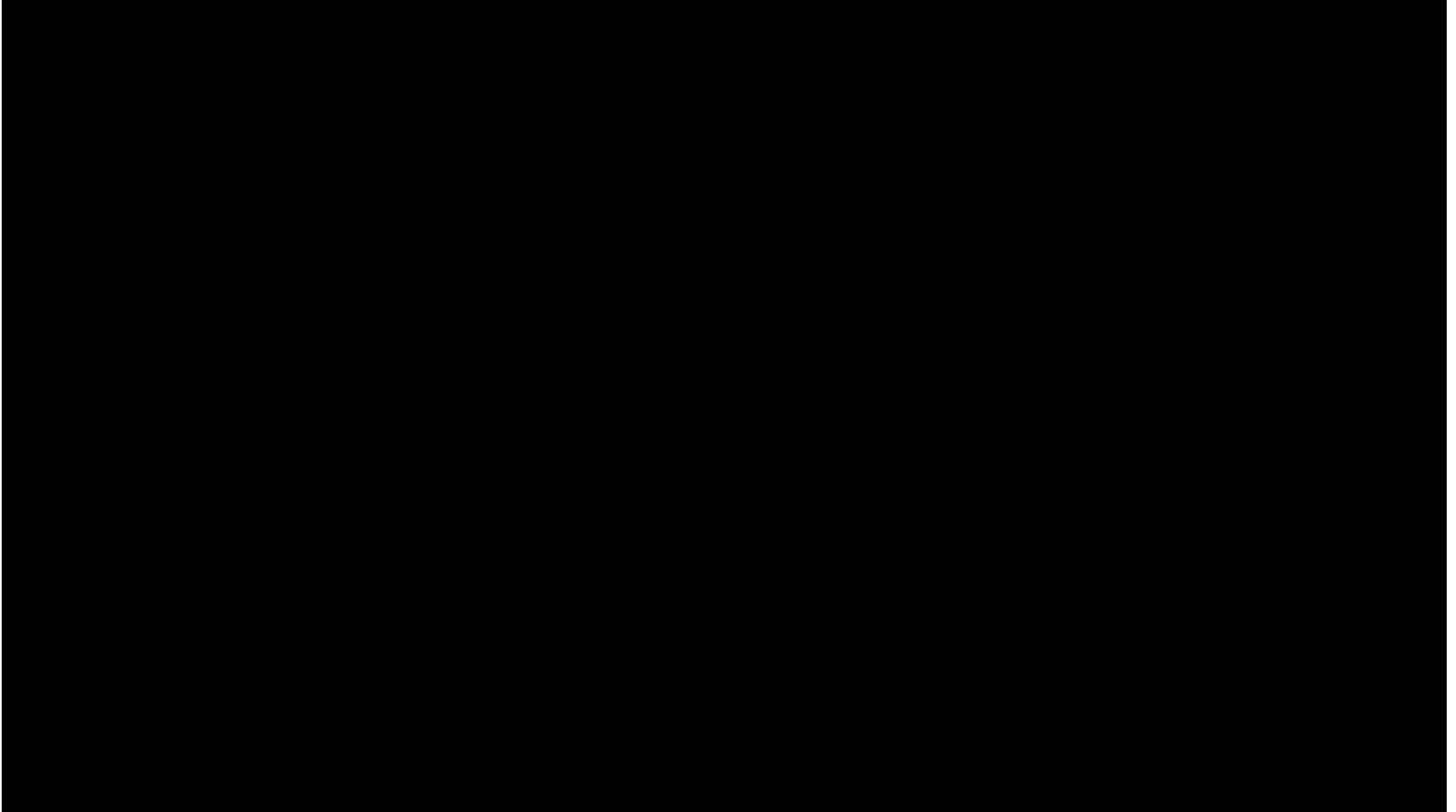
 **\$ 27.4**
BILLION
REVENUES

 **180**
NATIONAL
MARKETS

 **\$ 957**
MILLION
INVESTED
IN R & D

 **\$ 9.4**
BILLION TOTAL
AVAILABLE
LIQUIDITY

Note: all figures provided herein are on a US GAAP \$ basis unless otherwise indicated





Picture from blogs.edweek.org

When you were in High School.....



Picture from unsplash.com

Many destinations, even more routes.....

Team Structure

Divide and conquer



Leader



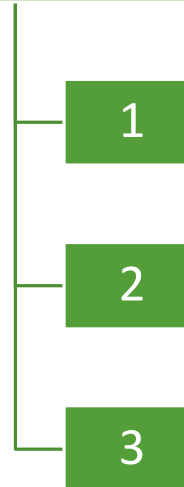
COM

ENG

MFG

LOG

- Started October last year
- Theme – Product life cycle
- Monthly core team planning meetings
- Focus group of teachers early in the planning cycle
- 9 CNHi people on core team – Business & HR
- 120 people, ~5000 hours invested
- Supported by:



Rotation by Day



Tuesday 14th August		
Time	Minutes	Red Team
COMMERCIAL		
8:15 - 8:30	15	Admin. Building Parking Lot for Transport
8:30 - 8:35	5	Refreshments and Welcome - Mark Lowery
8:35 - 8:50	15	Hay Industry / Hay Making - Tim Douglas
8:50 - 9:00	10	Defining the Need - Tim Douglas
9:00 - 9:45	45	Design/Create/Build (hands on activity)
9:45 - 10:00	15	Break
10:00 - 10:15	15	Product Launch - Aimee Culbert
10:15 - 10:30	15	Marketing/Advertising - Brooke Brown
10:30 - 11:15	45	Name product, create advertising poster (hands on activity)
11:15 - 11:30	15	Transport to Group Lunch
11:30 - 1:00		Group Networking Lunch
1:00 - 1:20	20	Transport Back
1:20 - 1:40	20	Financing Process at Capital - Stephanie Gill
1:40 - 2:25	45	Worksheet to Define Costs, Set Price (hands on activity) - Greg Arkatin
2:25 - 2:55	30	AfterSales/Machine Support - Kevin Brookhart & Zach Neiderer
2:55 - 3:10	15	Break
3:10 - 3:40	30	PLC summarized - Opportunities - Skill Requirements - Apprenticeship Program
3:40 - 4:00	20	Recap and awards to product design - Mark Lowery & Jon Hundley
4:00 - 4:15	15	Transport to NH Plant or Ride N Drive Track or Admin. Building Parking Lot
4:15 - 5:15	60	Optional Plant Tour and/or Ride N Drive
5:15 - 5:30	15	Transport back to Admin. Building Parking Lot

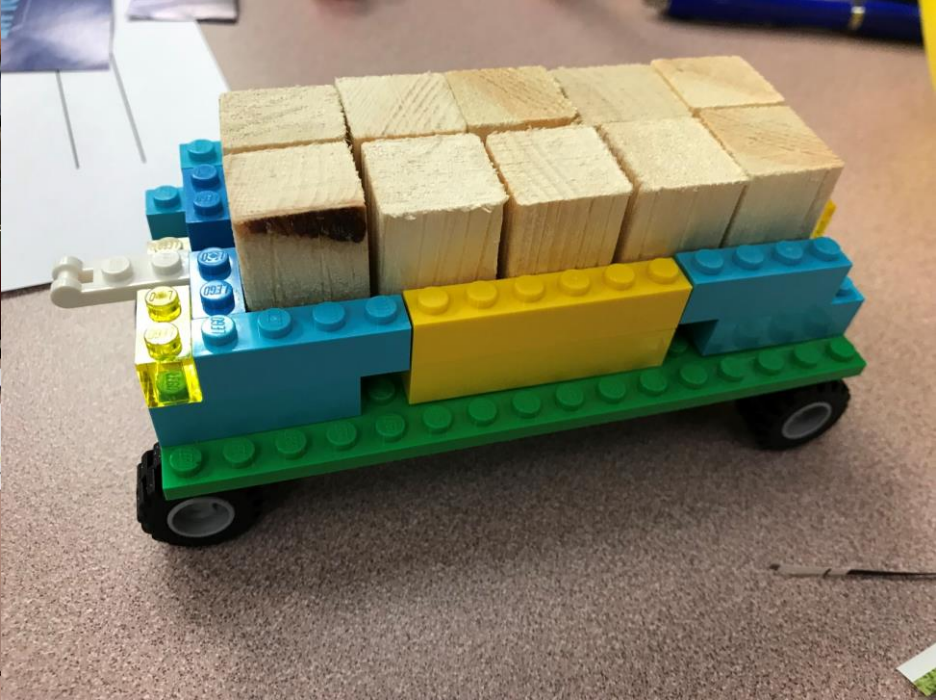
Tuesday 14th August		
YELLOW TEAM		
MANUFACTURING		
Admin. Building Parking Lot for Transport		
New Holland Plant Introduction - Ryan Alleman		
Machining Overview on Shop Floor - Ken Stephens		
Laser and Fabrication Overview on Shop Floor - Corey Messner		
Paint Department Overview on Shop Floor - Heather Rutenkroger		
Transport to Group Lunch		
Group Lunch and Networking		
Transport Back		
Welding Overview on Shop Floor - Jeff Bender		
Assembly Overview on Shop Floor - Ryan Heffner		
Design Project Time on Shop Floor - Greg Gerwitz		
Open time		
Transport to Headquarters, NH Plant or Ride N Drive Track		
Optional Plant Tour and/or Ride N Drive		
Transport back to Headquarters Parking Lot		

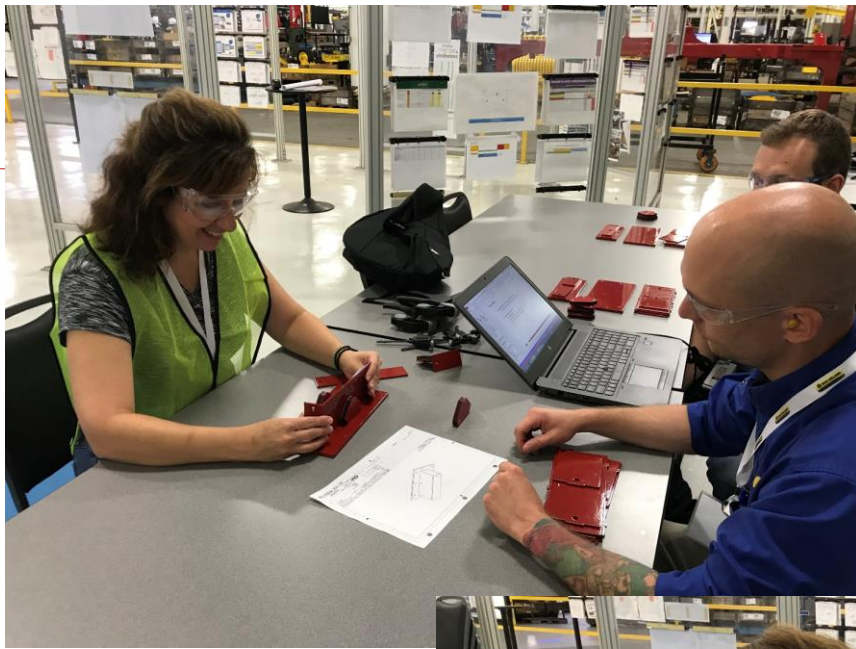
August		
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1		
ion 1		
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12:50 - 1:00	10	Move from lunch to Tech Center, Conference Room #5
1:00 - 1:10	10	Move to Engineering - session 4
1:10 - 2:00	50	Engineering - Session 4
2:10 - 3:00	50	Engineering - Session 5
3:10 - 4:00	50	Engineering - Session 6
4:00 - 4:15	15	Transport to Headquarters, NH Plant or Ride N Drive Track
4:15 - 5:15	60	Optional Plant Tour and/or Ride N Drive
5:15 - 5:30	15	Transport back to Headquarters Parking Lot

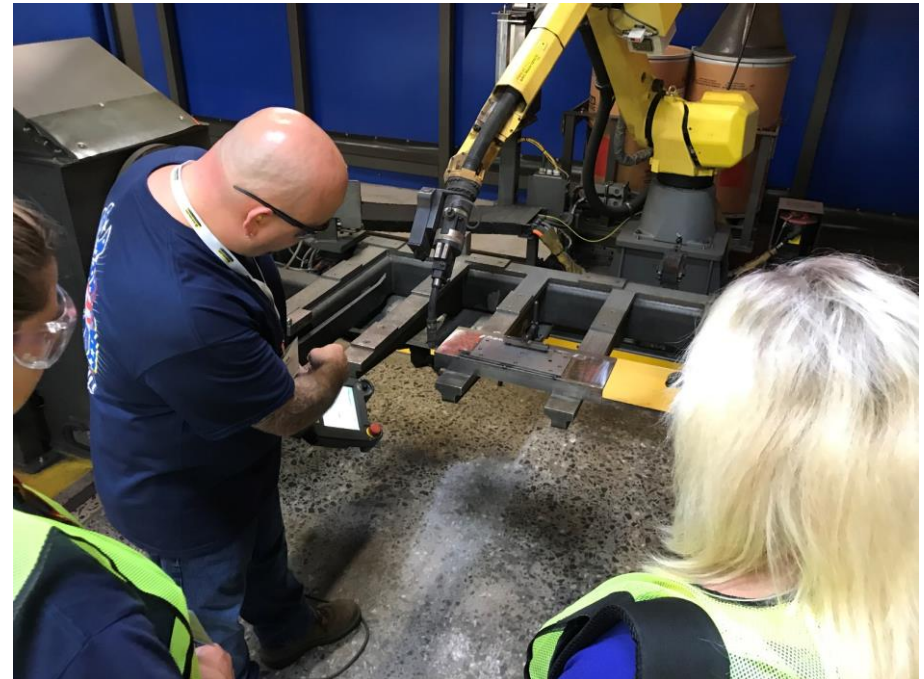
Goal was for 1 on 1 interaction between participants and employees

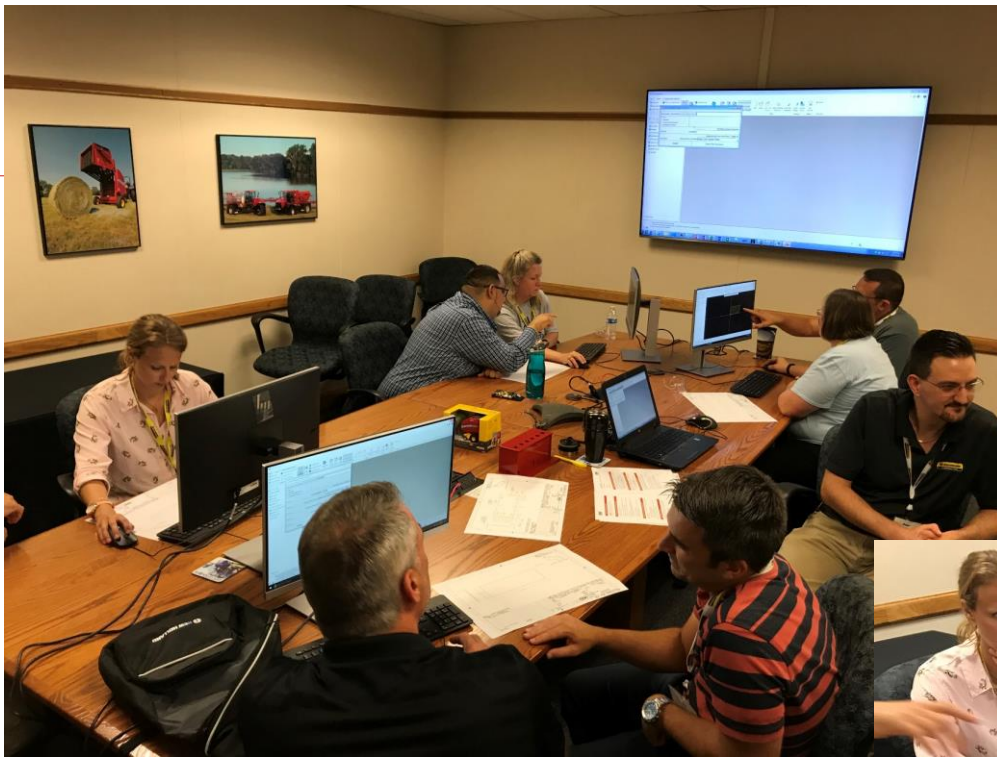
60 participants split into 15 teams

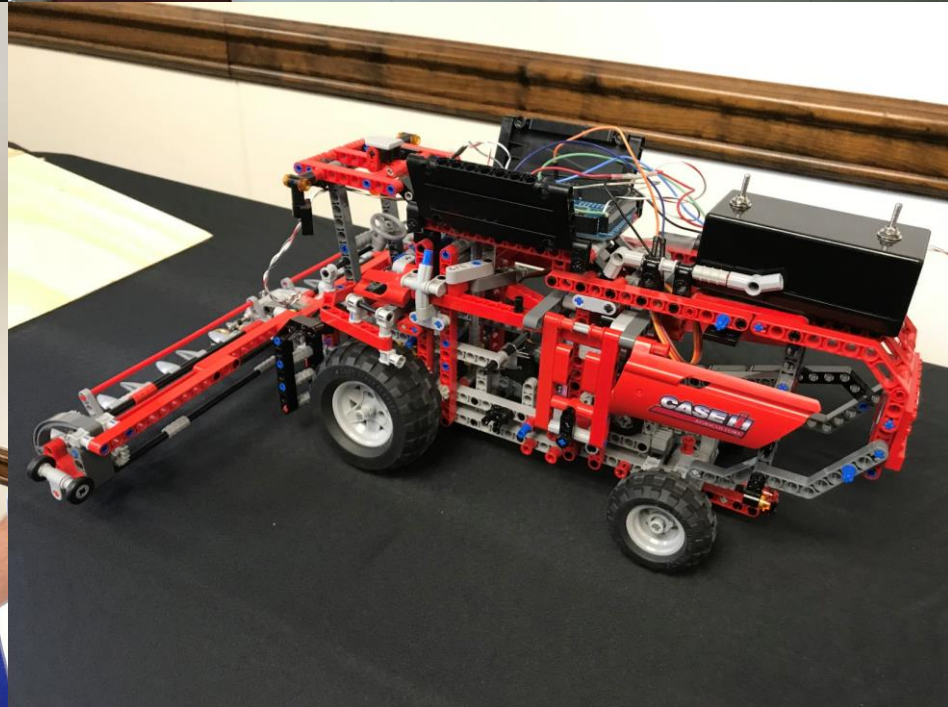
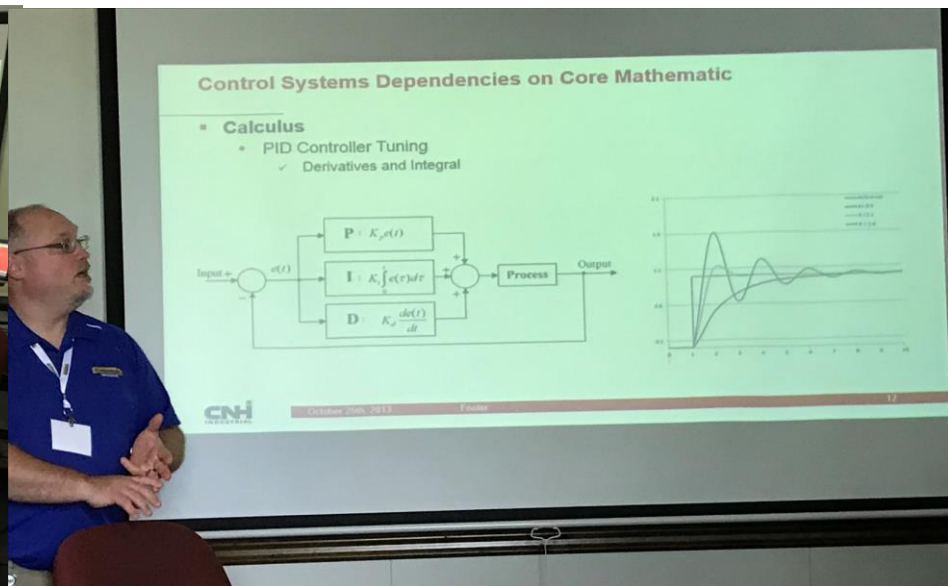


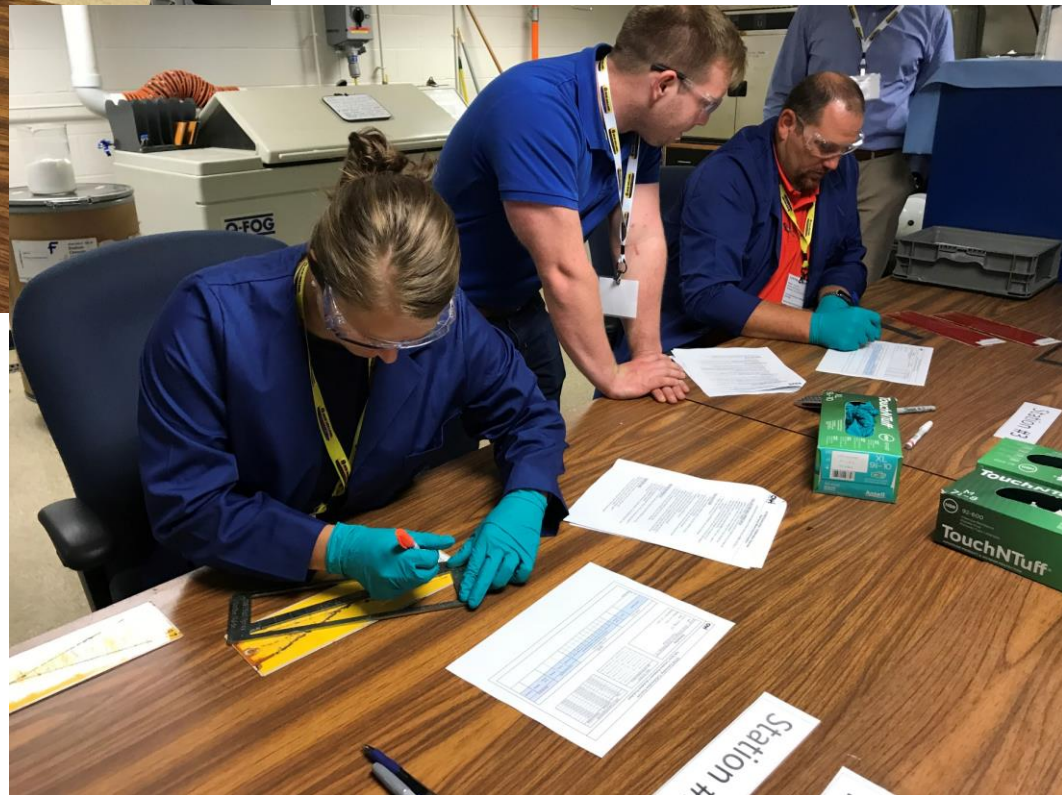


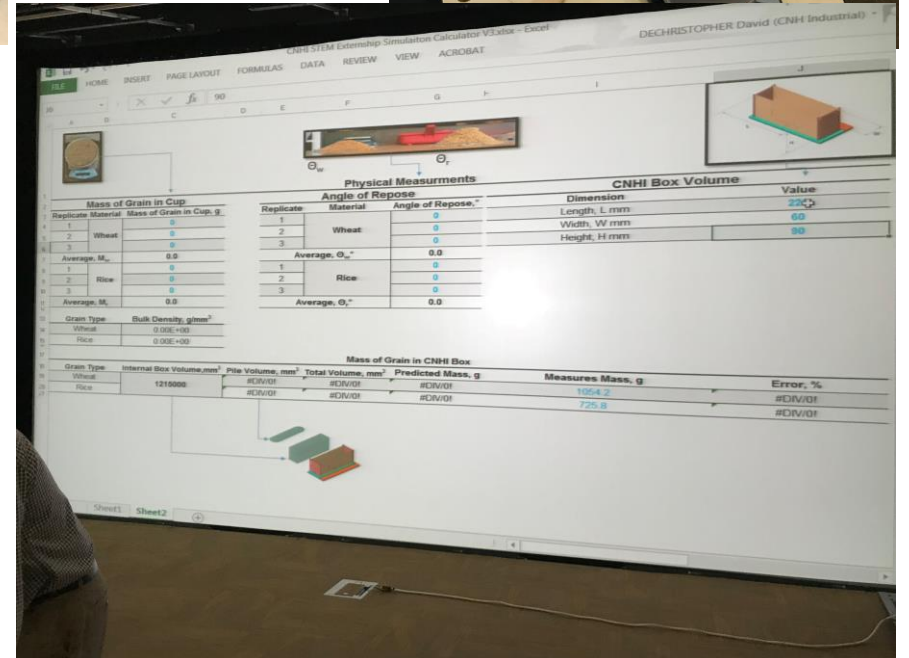










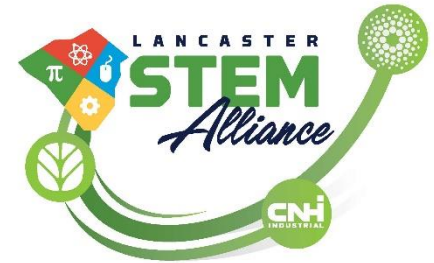






Participant Testimonial

Willonda McCloud



What We Learned

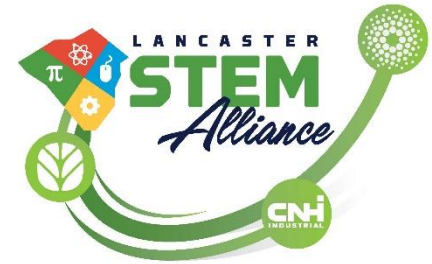
Willonda McCloud



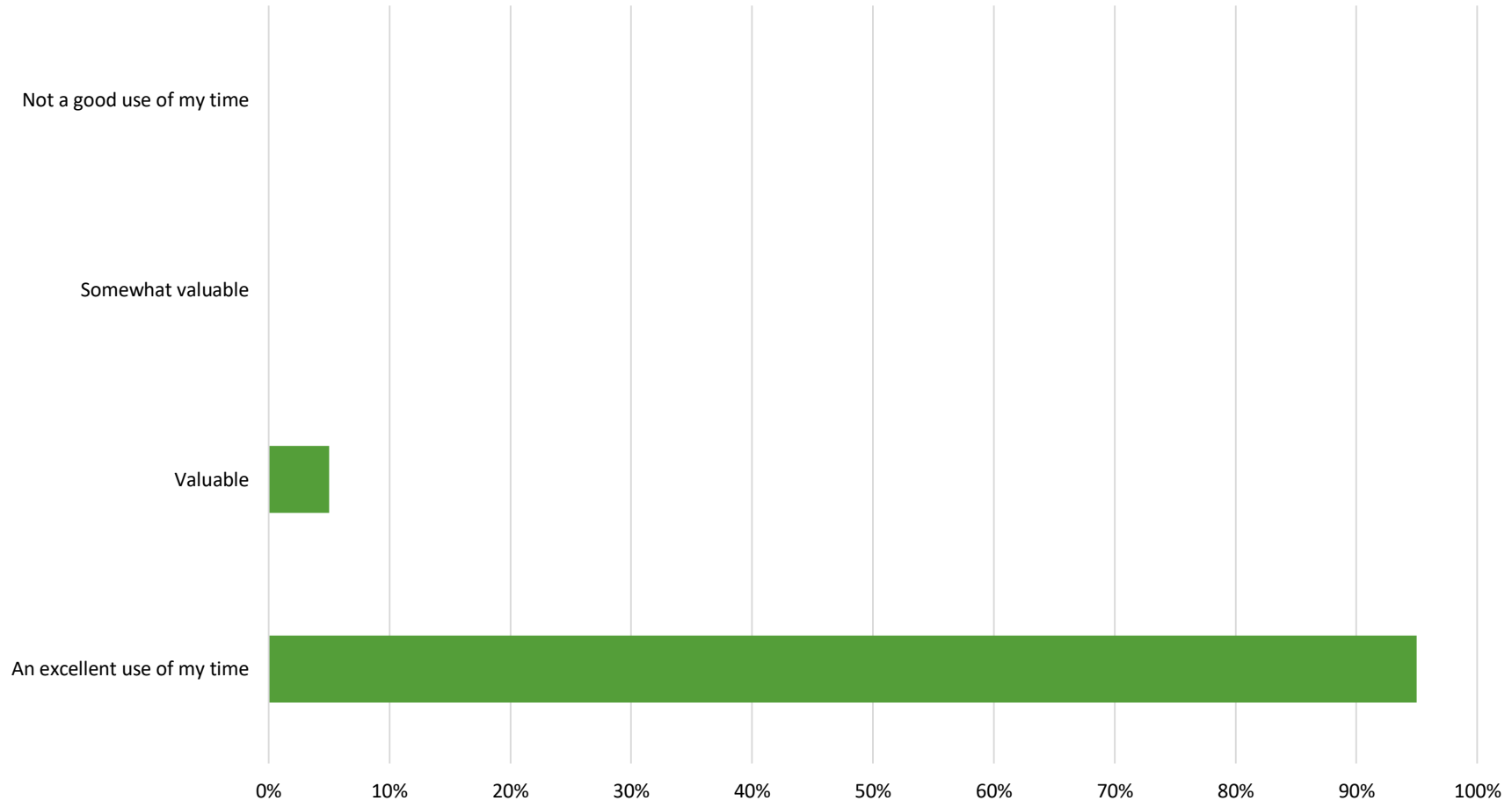
- CNHi is an employer with many and varied employment opportunities for all Lancastrians.
- You will use Algebra 2 some day!
- Agribusiness is about more than farming, it's about feeding the world.
- Work-based learning makes a lasting impression in many areas.

Follow Up Survey Results

Overall Experience – 74% response rate

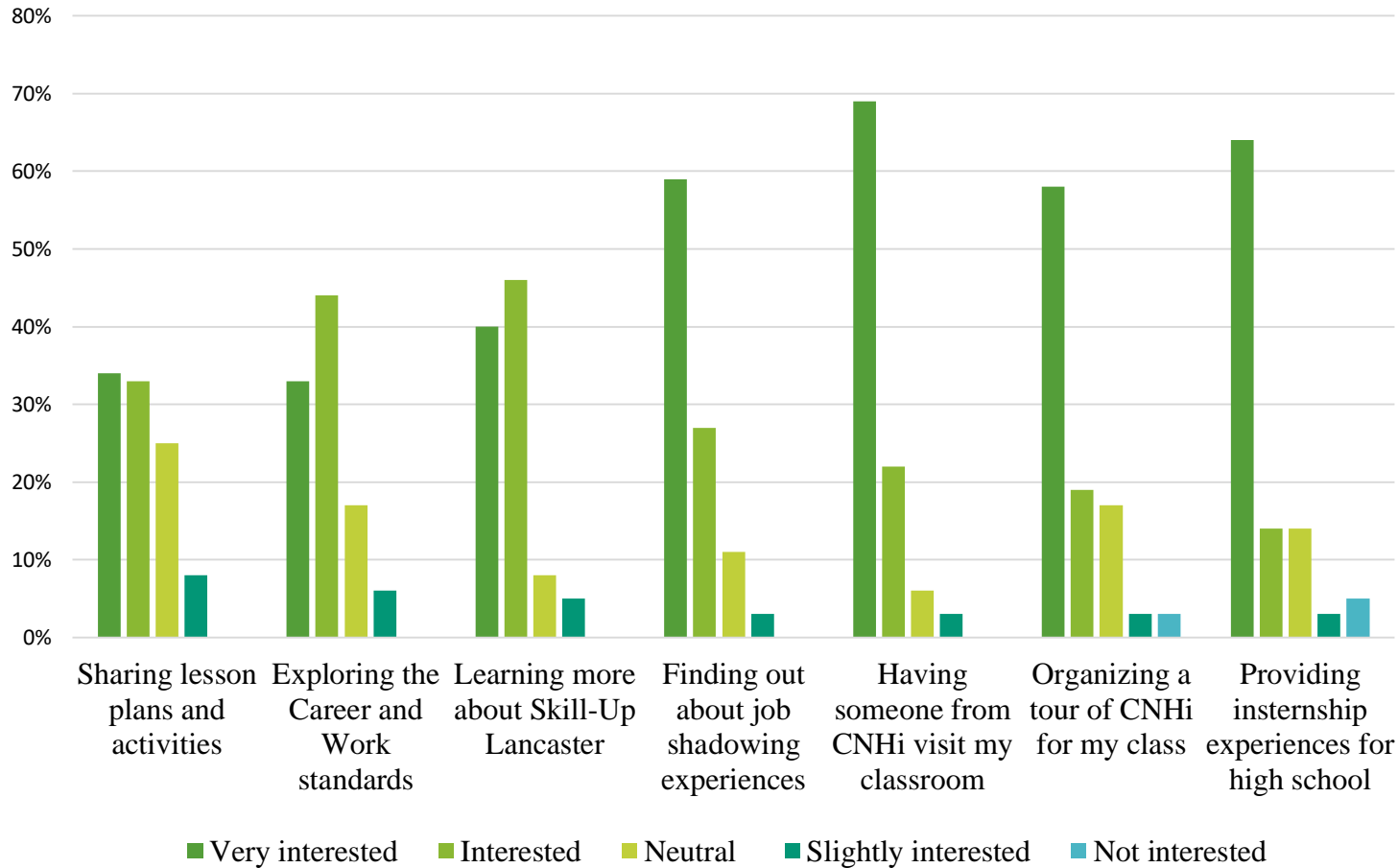
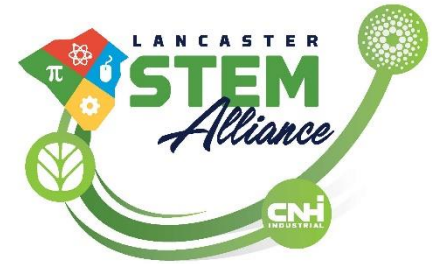


Overall, the externship experience was:



Follow Up Survey #1 Results

Interest in Follow Up Activities



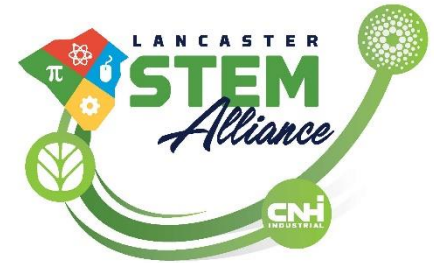
Follow Up Survey #1 Results

How can the externship team support you throughout the school year?



- Availability for follow up
 - Field trip to CNHi
 - Guest speaker in the classroom to support lessons we were given
 - Engineer to help robotics club
 - Provide opportunities for students to experience externship presentations
 - Provide some of the materials (tractor building block kits)
 - Guest speaker for career opportunities
 - Provide project ideas for STEM club
-
- There will be additional surveys at the 3 and 6 month marks

Not a destination

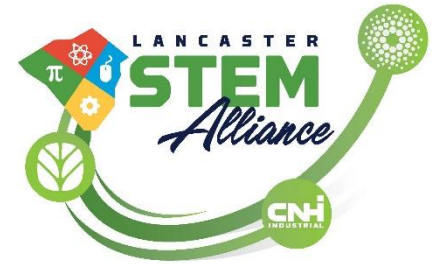


- Teacher in the workplace grant - 8 Webinars
- Continued dialogue and support of the educators
- New STEM at Work team

Experiential Learning

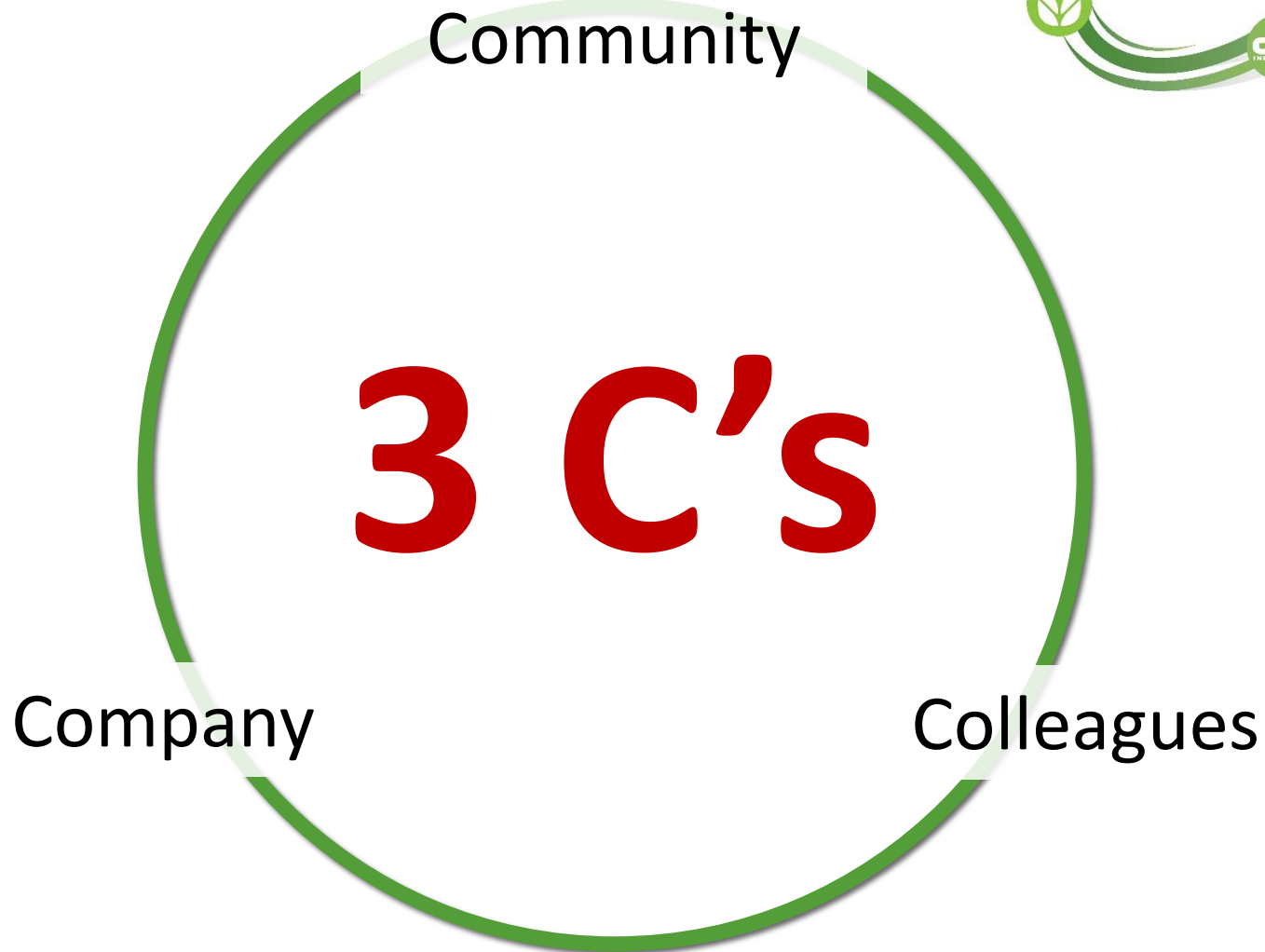
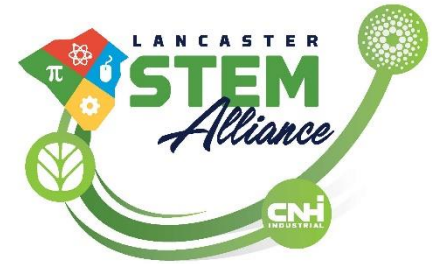
A balanced assembly line

- Olivia Walters



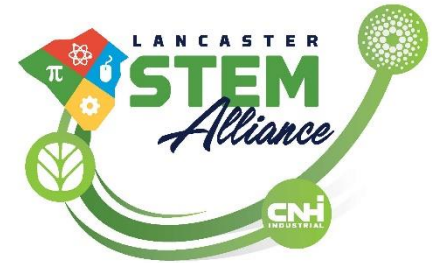
CNHi Testimonial

Why did CNH Industrial invest well over half a million dollars in this program?



Transforming Lancaster County

Everyone needs to be engaged



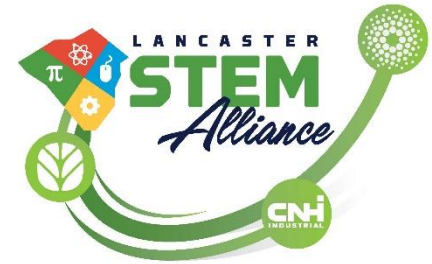
- CNHi employees have dedicated nearly 5,000 hours to narrow the industry/education gap through the externship
- CNHi is committed to creating meaningful experiential learning opportunities for the community
- Full, active collaboration of all stakeholders is required to change Lancaster County into a STEM literate community with needed 21st Century skills
- Failure to act will drive job creators to find alternate solutions without Lancaster County



As a hub for STEM literacy and experiential learning, Lancaster County will attract and retain visionary job creators, inspire learners of all ages to achieve academic excellence, and engage all its citizenry in building a prosperous future.

Process Already Underway for next Year

Passing the baton





Getting Started – Lessons Learned

- Start planning a year out; *everything* takes longer than you think it will.
- Context matters; one size does not fit all.
- Create a core team to represent various business functions and unleash their creativity.
- Choose a relevant and meaningful learning theme to provide overall coherence.
- Set the dates a year out and communicate them well in advance to school leaders.



Recruiting Teachers – Lessons Learned

- Involve school leaders in the recruitment process.
- Design slots equitably across different sized districts.
- Create scoring criteria tied to individual commitment and relevance of learning outcomes.
- Have a teacher point-of-contact outside the business setting.
- Accept teachers early and maintain regular contact with them prior to the externship.
- Repeat safety and logistical information multiple times.



Designing Activities – Lessons Learned

- Stress the importance of **hands-on learning** for teachers.
- Try to ban PowerPoint!
- Incorporate employee career stories whenever possible.
- Use tangible manipulatives that teachers can take back to the classroom.
- Encourage competition among planners and among participants.
- Don't forget to plan logistics such as travel time, meals, extra activities.
- Schedule a practice session or two with each business unit.



Show Time – Lessons Learned

- Prepare for last-minute cancellations and late arrivals.
- Engage VIPs in showcasing your business.
- Have back-up plans in place for inclement weather.
- Distribute an onsite emergency phone contact for all participants.
- Take lots of pictures and videos to share with the community.
- Have fun!



After Action Plan – Lessons Learned

- Don't underestimate the impact of the experience on employees, teachers, students and community members.
- Collect evaluation data that can be shared with others.
- Plan follow-up conversations with teachers who try to implement activities in the classroom.
- Create communication structures for teacher support requests.
- Plan community engagement activities to roll out following the externship.

Thank you for your participation in today's session.



Questions?

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