Classrooms to Combines
Teachers in the Workplace

STEM at Work Team

Newport Beach, USA
November 16th, 2018
Collaboration
Need partner

November 16th, 2018
## Key Figures (31 December 2017)

<table>
<thead>
<tr>
<th>Category</th>
<th>Figure</th>
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<tbody>
<tr>
<td>Brands</td>
<td>12</td>
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<tr>
<td>National Markets</td>
<td>180</td>
</tr>
<tr>
<td>Plants</td>
<td>66</td>
</tr>
<tr>
<td>Active Patents</td>
<td>9,629</td>
</tr>
<tr>
<td>R&amp;D Centers</td>
<td>53</td>
</tr>
<tr>
<td>Revenue</td>
<td>9.4 billion</td>
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<tr>
<td>Invested in R&amp;D</td>
<td>957 million</td>
</tr>
<tr>
<td>Invested in Training</td>
<td>3.9 billion</td>
</tr>
<tr>
<td>Total Available Liquidity</td>
<td>9.4 billion</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>5.8%</td>
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</tbody>
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Note: all figures provided herein are on a US GAAP $ basis unless otherwise indicated.
When you were in High School......
Many destinations, even more routes......
Team Structure
Divide and conquer

- 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:

November 16th, 2018
Rotation by Day

<table>
<thead>
<tr>
<th>Time</th>
<th>Minutes</th>
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<tbody>
<tr>
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<td>8:30 - 8:35</td>
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<tr>
<td>8:35 - 8:50</td>
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<tr>
<td>8:50 - 9:00</td>
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<tr>
<td>11:30 - 1:00</td>
<td>80</td>
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<tr>
<td>1:00 - 1:20</td>
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</tr>
<tr>
<td>1:25 - 2:10</td>
<td>45</td>
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<tr>
<td>2:15 - 3:00</td>
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<td>60</td>
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<tr>
<td>5:15 - 5:30</td>
<td>15</td>
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</tbody>
</table>

**Tuesday 14th August**

### Red Team

**COMMERCIAL**

- Refreshments and Welcome - Mark Lowery
- Hay Industry / Hay Making - Tim Douglas
- Defining the Need - Tim Douglas
- Design/Create/Build (hands on activity)
- Break
- Product Launch - Aimee Culbert
- Marketing/Advertising - Brooke Brown
- Name product, create advertising poster (hands on activity)
- Transport to Group Lunch

**YELLOW TEAM**

**MANUFACTURING**

- 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

**BLUE TEAM**

**ENGINEERING**

- Move to Engineering - session 4
- Move to Headquarters, NH Plant or Ride N Drive Track

**YELLOW TEAM**

**GROUP LUNCH**

- Refreshments and Welcome - Mark Lowery
- Financing Process at Capital - Stephanie Gill
- Worksheet to Define Costs, Set Price (hands on activity) - Greg Arkatin
- Alterations/Machine Support - Kevin Brookhart & Zach Niederer
- Break
- Recap and awards to product design - Mark Lowery & Jon Hundley
- Transport to NH Plant or Ride N Drive Track or Admin. Building Parking Lot
- Optional Plant Tour and/or Ride N Drive
- Transport back to Admin. Building Parking Lot

**COMMERCIAL**

- PLC summarized - Opportunities - Skill Requirements - Apprenticeship Program
- Recap and awards to product design - Mark Lowery & Jon Hundley
- Break

- Marketing/Advertising - Brooke Brown
- Product Launch - Aimee Culbert
- Design/Create/Build (hands on activity)

**COMMERCIAL**

- Recap and awards to product design - Mark Lowery & Jon Hundley
- Break

- Marketing/Advertising - Brooke Brown
- Product Launch - Aimee Culbert
- Design/Create/Build (hands on activity)

**COMMERCIAL**

- Recap and awards to product design - Mark Lowery & Jon Hundley
- Break

- Marketing/Advertising - Brooke Brown
- Product Launch - Aimee Culbert
- Design/Create/Build (hands on activity)

**COMMERCIAL**

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- Break

### Goal

- 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:

- An excellent use of my time: 90% response rate
- Somewhat valuable: 5% response rate
- Not a good use of my time: 0% response rate

November 16th, 2018
Follow Up Survey #1 Results
Interest in Follow Up Activities

November 16th, 2018
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?

3 C’s

Company

Community

Colleagues
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

November 16th, 2018
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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