



Engineering at Caterpillar

Mike Case

About Me – Mike Case

- Born and raised Norborne, MO
 - Grew up on a farm
 - Norborne FFA, Vice-President
 - Livestock Judging, Poultry, Dairy
 - National Ag Mechanics Proficiency & Entrepreneurship
- B.S. Agricultural Engineering - University of Missouri-Columbia
- MBA - Wichita State University
- Married to Jenni with 3 children
 - Grady, Baron, Cassidy
- Like things outdoors, hunting, jogging, music, motorcycles and building/improving things
- Caterpillar FFA Alumni Officer



Engineering Work History

1999-2006 – AGCO, Hesston, KS

- Project Engineer for Precision Farming Systems

2006-2008 – CNH, Wichita KS

- Project Lead & Supervisor for skid steer loader cabs

2008-present – Caterpillar, Peoria, IL

- Engineering Team Leader for QCT & ADT Cabs – 2008
- Sr. Engineer for Cab Components & Systems Sourcing – 2011
- Engineering Supervisor for MG, HEX, FP, MWL, LWL, QCT, ADT, WTS, MTP cabs – 2013
- Cab Engineering Architect for MG & MTP products – 2018
- Program Manager for SPPD Assurance of Supply – 2021
- Earthmoving Supply Resiliency Manager – 2023



Engineers at Caterpillar

Component, System, Machine Development

- Design, analysis, prototypes, validation, production start
- World-wide collaboration
- New & current product development
- Focus on customers, cost, quality and timing targets
- Hands-on opportunities

Technical leadership

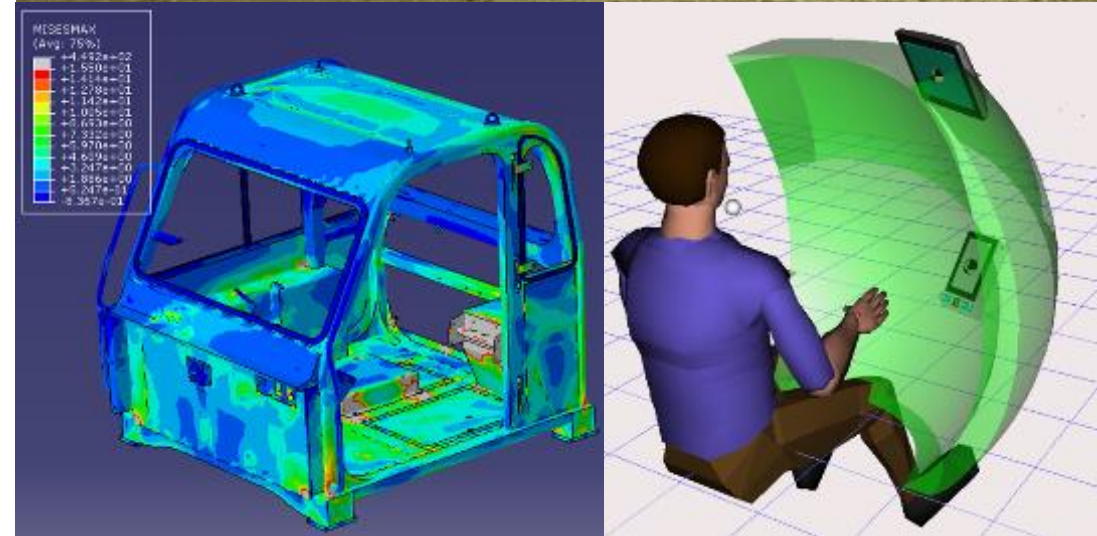
- Global Strategy on future Technologies, Features, Market Segments, Competition
- Resource management (budget & people)

Supplier interaction & startup

- Work with engineering teams to redesign components, rationalize parts and implement with suppliers
- Sourcing

Travel

- Domestic & Global



Basic Requirements – Engineering

High School

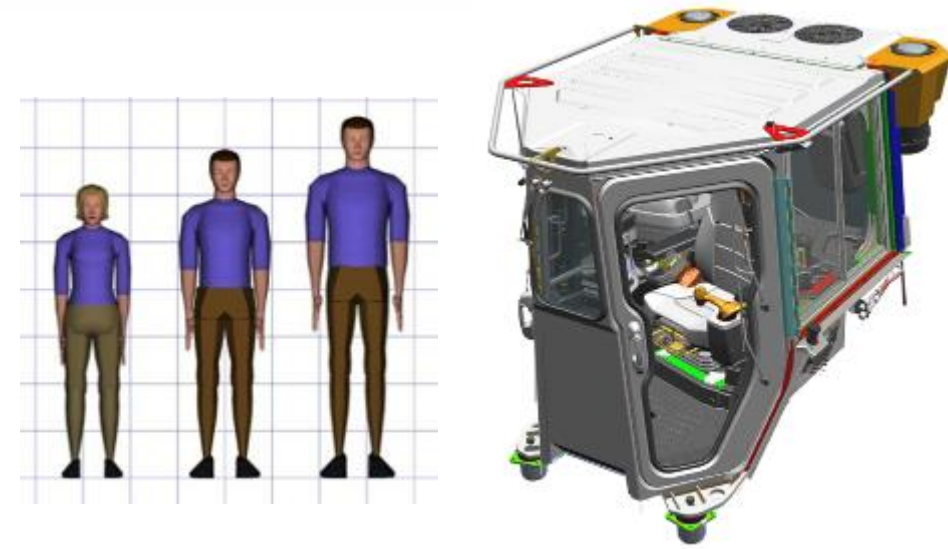
- Focus on Math & Science
 - STEM Classes: Calculus, Physics, etc.
 - Preparation for college classes
 - Awareness to new/changing Technology

College

- A degree in an accredited Engineering, Computer Science, or Materials Science curriculum
- Post-college licensure / accreditation may be required for certain jobs
 - Example - Professional Engineering license for consulting

FFA – what helped me

- Ag Classes
 - Ag Mechanics
 - Record Keeping
- Advisor support on career direction



Key Skills – Engineering

- Analytical Thinking
- Effective Communication
- Manage Multiple Priorities
- Computer Aided Design
- Problem Solving
- Decision Making
- Technical Excellence
- Initiative

FFA – what helped me

- Judging Teams
 - Teamwork
 - Decision Making
 - Giving Oral Reasons
- Leadership
- Hands-on aptitude
- Problem Solving



Career Opportunities – Engineering

Engineering: Designs, develops, builds and implements new components, products, or technologies.

- Engineering Rotational Program
- Design
- Test & Validation
- Autonomy
- Electrical
- Software
- Controls
- Research & Development

Cross-Functional Opportunities:

- Procurement, Field Test, etc.
- Possibilities are endless
 - Multiple careers within same company



Key Skills / Experience

- **What other skills/experiences are highly valued by industry:**
 - Caterpillar has a need for skills and experience across various fields of study and experiences.
 - Corporate Programs: Degrees in Accounting, Finance, Data Analytics, Supply Chain, Industrial Engineering, Computer Science, Communications, Human Resources, etc.
 - Engineering Programs: ABET accredited degree in Mechanical, Electrical, Computer, Agricultural or Aerospace Engineering or Engineering Technology
 - Manufacturing / Technical Programs: Welding, Mechanic/Technician training, etc. (Partnerships with community colleges and Caterpillar dealerships to educate and employee technicians (ThinkBig))
- **What leadership skills are most critical as students enter their careers:**
 - Strong written and verbal communication skills;
 - Analytical skills and critical thinking capabilities; Intellectual curiosity;
 - Ability to quickly gain and effectively apply new skills & knowledge;
 - Ability to successfully collaborate with others of diverse experiences and background
 - Strong interpersonal skills, teamwork, ability to bring the team along with them
- **What content and learning experiences should be valued**
 - Hands on experience is great where possible.
- **What visible form should skills/experiences take so that students can display it on resumes, online profiles, etc.**
 - Resume; Include a line of skills and certifications. These should be applicable to the role.
 - Outline experience and skills with bullet points that are clear and concise about the experiences you have in the classroom, clubs, and at work.
 - What did you do in these experiences that showcase the skills you have, and how those skills enable results aligned to business needs.



Thank you!