

# NDSU FSAE Electric Vehicle



Presentation Team:

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- Background
- Student Focus
  - Training
  - Networking
- Design Focus
  - Full Car Overview
  - Accumulator
- Questions



## Formula SAE Electric Vehicle Competition



### Design Competition

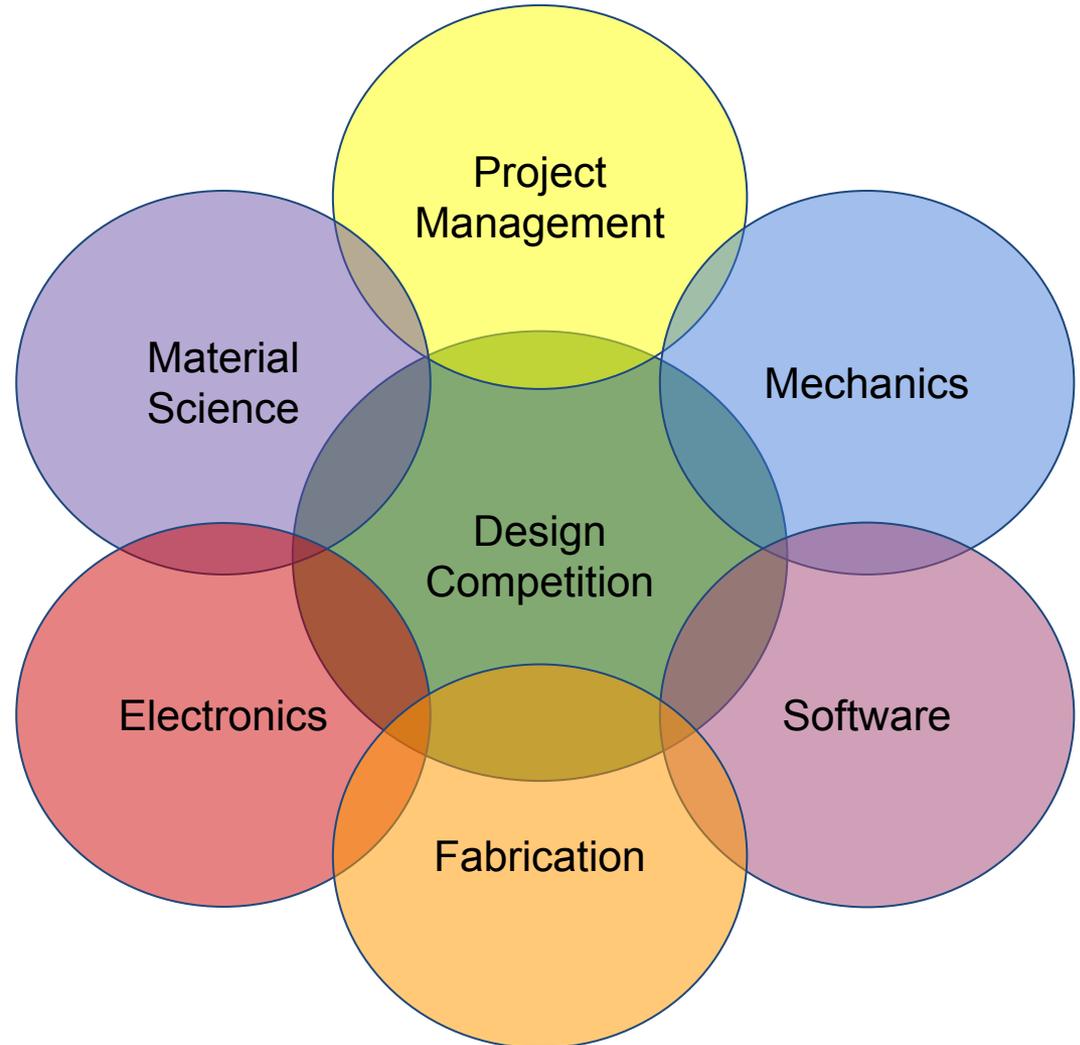
- Technical Inspection
  - Design
  - Cost
  - Presentation
  
- Static Events
  - Skidpad
  
- Dynamic Events
  - Acceleration
  - Autocross
  - Endurance

NDSU's first electric vehicle!



## Training

- Encouraging participation
- Applying engineering principles
- Sharing common management practices
- Expanding knowledge with software tools
- Hands-on experience
- Challenges
  - Diversity
  - Background
  - Knowledge Level



## Networking

### Community Outreach



### Industry Collaboration

- John Deere
- CNH Industrial
- Volvo
- Polaris
- McNeilus Steel Inc.

### Team Building



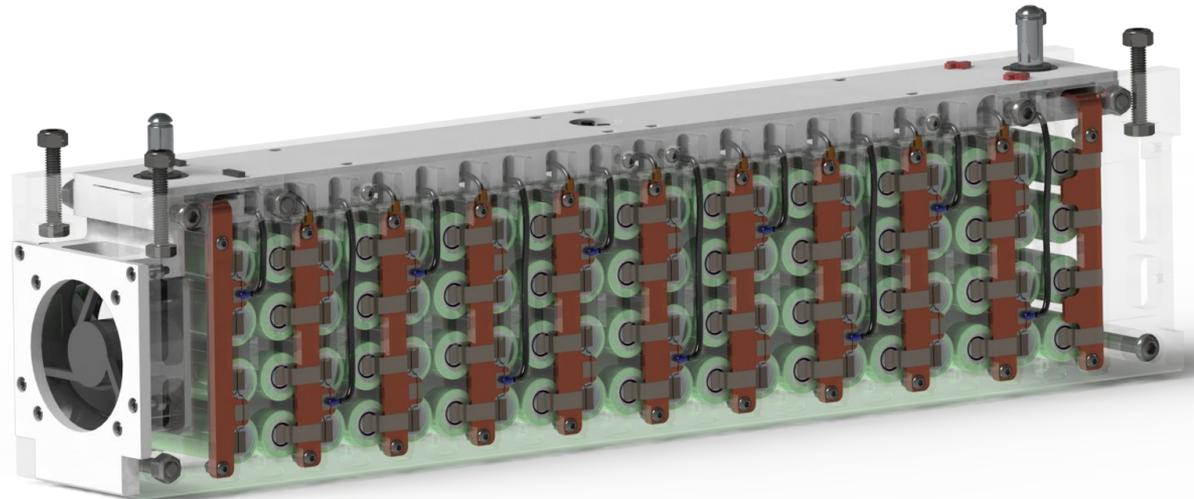
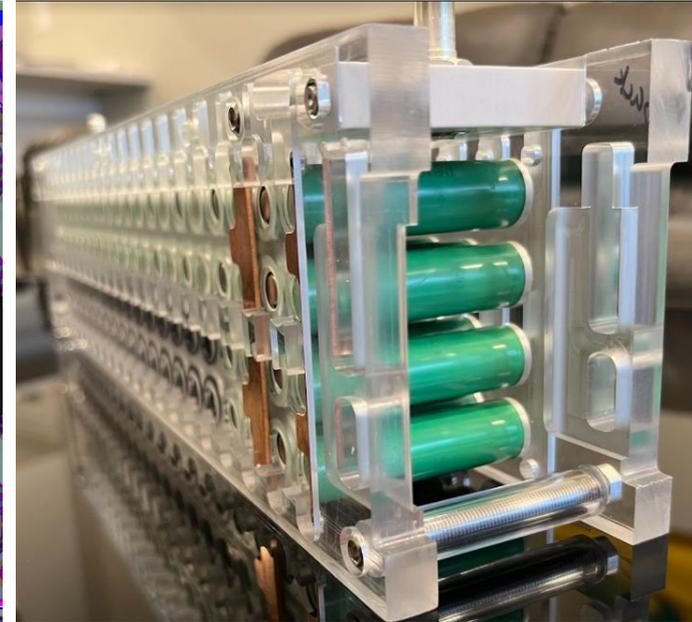
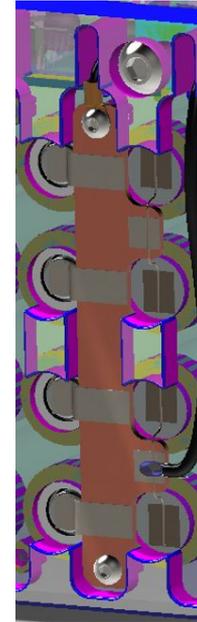
## Full Car Overview

- Mechanical
  - Powertrain
  - Suspension
  - Frame
  - Cockpit
  - Body
  - Uprights & Braking
  
- Electrical
  - Low Voltage Systems
  - High Voltage Systems
  - Software



## Accumulator

- **What it does:**
  - Supplies power for car
- **Specs:**
  - 480 18650 cells
    - 120S4P
  - 504 VDC, 444 VDC Nominal
  - 40.3 Kw
  - 5.04 Kwh
  - 80A
- **Main Systems:**
  - Segments (6x)
  - Case & Internal Structure
  - Data Monitoring



# Questions?

