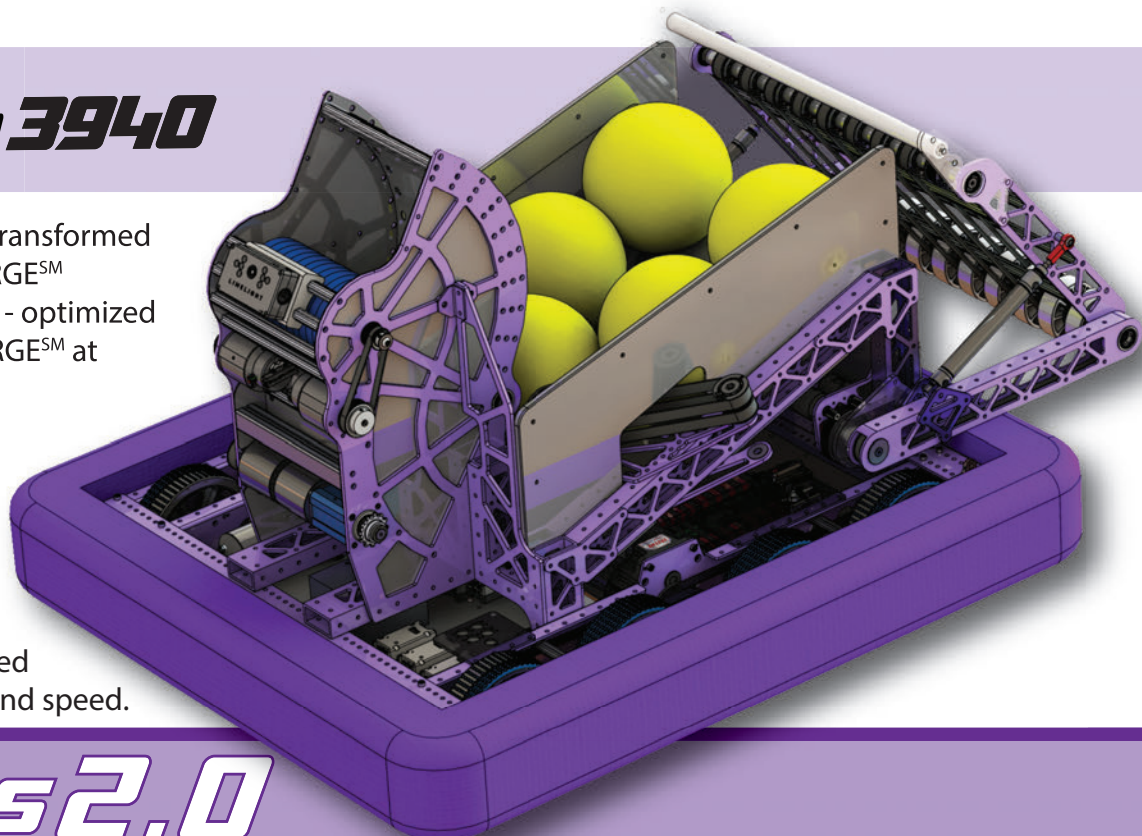




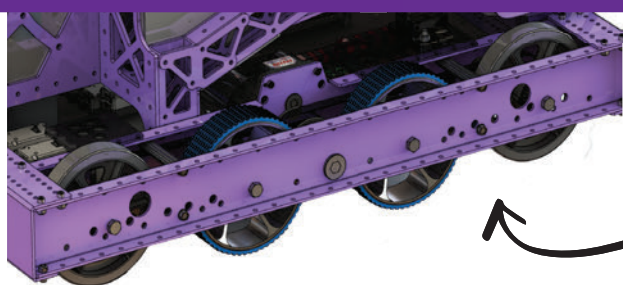
# CyberTooth 3940

**Pegasus** was evaluated and transformed from a 2020 INFINITE RECHARGE<sup>SM</sup> playing robot to **Pegasus 2.0** - optimized for the 2021 INFINITE RECHARGE<sup>SM</sup> at Home Skills Challenges.



Priority was placed on increased accuracy in shooting, agility, and speed.

## Pegasus 2.0



### Drivetrain:

Purple powdercoated AndyMark AM14U4 Frame with 8WD

**'21 Change:** Higher grip 6" XL Performance Wheels with Nitrile Tread in center, Black Smooth-Grip Wheels on corners.

**'21 Change:** CIMs to NEO Brushless for optimal acceleration and speed.

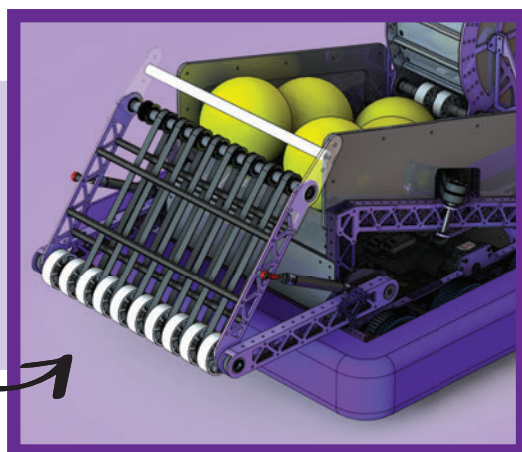
### Intake:

Belts and Compliant Wheels bring Power Cells from floor to hopper designed to be robust and compliant to live outside of frame perimeter during matches.

**Anti-jam features:** Pneumatic flap, Forward and reverse control of motors

**Deployment:** Gravity, tubing and Pneumatics

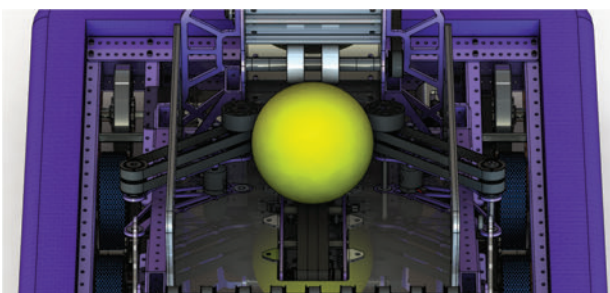
**'21 Change:** "Anti-potato" plate and bar - ensures Power Cells won't get rejected



### Hopper:

Timing belt V-configuration funnels Power Cells to the shooter. Belts are run at different speeds to assist with anti-jamming and for fast transition through robot.

Powered bottom belt for faster loading than only using ramp gravity  
Open-top - useful for HP loading in match - great for at home challenges



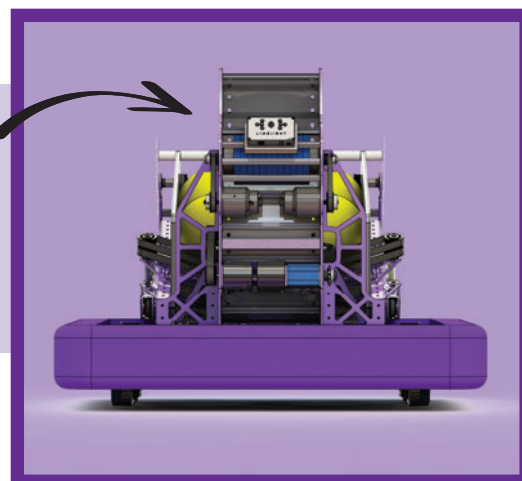
### Shooter:

High-powered, dual brushless driven flywheel hooded shooter.

2-motor shooter to maintain consistent speed

Shooter located on opposite side of robot from intake for easy auto pickup

Feed Roller - ensures Power Cell always centered in shooter



I only shoot when I'm ready!

### Automated Control:

Robot makes decisions based on robot state and where Power Cells are located in the system.

- Banner photoelectric sensors - senses Power Cells in robot
- Limelight - tracks retro-reflective goal tape for auto-targeting
- Built-in Encoders - keep shooter wheel at target speed

