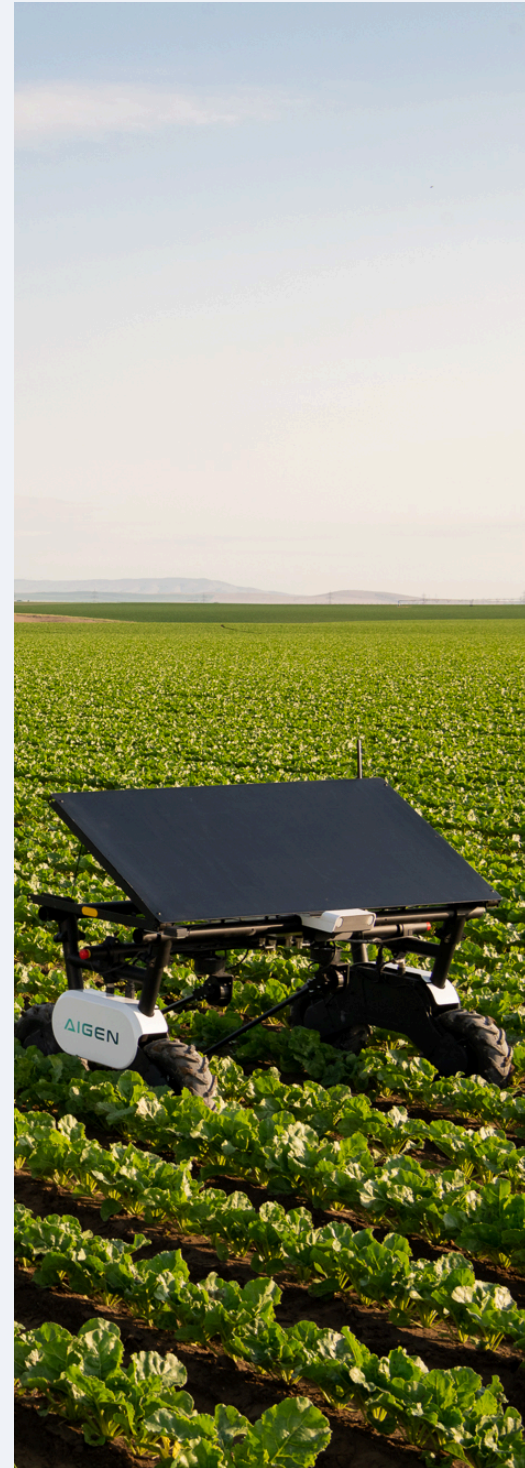


# Some of our current development projects

KENDA Manufacturing GB





# Centaur Robotics



# Centaur Robotics

Centaur Robotics is a British company revolutionizing mobility with its innovative electric vehicle. The Centaur is a self-balancing chair on two wheels designed to give people with limited mobility greater freedom to engage in daily activities.



## Centaur Robotics needs a tire solution that

- Is lightweight with low rolling resistance to maximize battery life between charges
  - Combines low maintenance and high stability to ensure freedom for the user
  - Is non-marking and emits low noise to be suitable for indoor use
  - Has excellent shock absorption to ensure good ride comfort and safety
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## Our solution

The tread and foam are integrated into one layer for an extremely light tire that allows the Centaur to operate for longer periods between charges.

The foam layer is optimised for shock absorption and ride comfort and moulded onto a tough nylon skeleton providing stability and eliminating any risk of detachment.

As a bonus, Centaur Robotics have a solution developed and manufactured locally in the UK which reduces the cost, insecurity and environmental impact of long-distance transportation.



AIGEN

**AIGEN**

# AIGEN

Aigen is an American company empowering farmers with the Element robot: a new approach to eliminating herbicide-resistant weeds and enhancing crop yields without using chemicals. The Element is autonomously driven by AI, network-connected and powered entirely by renewable energy.

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## AIGEN needs a tire solution that

- Has good traction in field terrain
- Is lightweight and narrow to maximise energy efficiency and reduce the risk of soil compaction
- Is maintenance free, so the robots can operate autonomously without human intervention
- Allows easy sideways movement to decrease resistance when skid steering



## Our solution

We designed a deep tread pattern that delivers traction on rough and muddy terrain and combined it with a smooth outer surface designed to repel mud and dirt.

The tread pattern allows the tires to slide sideways with ease, reducing resistance and conserving energy during skid steering.

The tires are designed to be lightweight, significantly reducing energy consumption and extending the robots' operational hours.

A tough tread layer combined with a foam layer provide exceptional shock and vibration resistance, protecting both the crops and the robots.



 **KENDA**

**KENDA**

# KENDA

One of our own current development projects is for the front cutter decks of zero turn mowers. We are engineering a tire and wheel solution that combines the comfort and flexibility of a pneumatic tire with the puncture-proof reliability of a semi-pneumatic tire.

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## **KENDA needs a tire solution that**

- Is low maintenance and puncture proof for maximum value and efficiency
- Is robust enough to withstand the significant stress and impact of mowing operations
- Has excellent shock absorption to protect the machinery and heighten driving comfort
- Has the dynamic flexibility required for mowing close to edges, objects and in uneven terrain



## **Our solution**

To create a practically maintenance free solution, we have fitted our already puncture proof wheel with specialist low friction polymer bushes. We have also eliminated the need for lubrication and any risk of rust by replacing traditional ball bearings.

In order to ensure the robustness required, we have formulated a core with a reinforced nylon component for exceptional axial strength and resistance to side-loads. The core is overmoulded with a tread and foam layer that ensures shock absorption and minimises vibration for superior ride comfort.

The robust core and flexible outer layer provide the impact resistance and superior shock absorption necessary for handling curbs and other obstacles.

A man wearing safety glasses and a dark jacket is focused on working with a blue and grey robotic arm. The arm is positioned over a large, black, diamond-patterned tire. The man's hands are visible, adjusting the arm's position. The background shows a blurred industrial setting with another robotic arm labeled 'GAGE MA'.

**We turn challenges  
into maintenance-free  
tire solutions**

** KENDA**