

# Team Effort: A Mobility Solution for the Football Field and Beyond

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When the University of Kentucky football team in Lexington, Kentucky, joined forces with the school's engineering students, Kentucky Children's Hospital and team members at TMNA and Toyota Motor Manufacturing, Kentucky (TMMK), the coalition of talent, skill and passion deployed the power of collaboration to produce a breakthrough.

What came to be known as the "Lift Them Up" mobility project, was literally a team effort, jerseys and all, culminating in an innovative high-tech pushcart that allowed several of the hospital's young patients to participate in the fun and fanfare of the school's home football games.



Photo courtesy of University of Kentucky Athletics

“This project was the result of a challenge to all of TMMK’s engineers from Susan Elkington, our plant president,” says Matt Kubarek, the lead engineer on the project and a manager in TMMK’s stamping department. “We wanted to utilize our engineering skills and expertise in a way that could impact the community in a positive way. We landed on a unique and exciting opportunity for a child to lead the football team into the stadium– a child who otherwise might not be able to attend the game at all.”

While the TMMK engineers headed up the project, they leaned heavily on the expertise of TMNA’s PEMC Tilt Lab, which serves as a kind of engineering think tank for designing and testing new ideas. Together, they incorporated input from the hospital as well as a select group of university engineering students, including junior Luke Fortner, the Wildcats’ starting right guard and a member of the Southeastern Conference Academic Honor Roll.

### **Everybody Wins**

The team’s collective challenge was to construct a cart with interactive features that would also be safe for a child battling a health condition. Highlights include custom suspension, racing seat with seat belt, paper-airplane shaped roof to offer protection from the elements and GoPro cameras to record the experience so that the child

can relive the day over and over again.



Along the way, the students involved in the design and construction of the cart benefitted as well.

“I thought pairing passionate students with the engineers from Toyota could really impact their careers,” says Nelson Akafuah, associate director of the UK Institute of Research for Technology Development. “Talent that I never saw in class started to emerge when they interacted with the engineers. The more we can give students this type of exposure, the better engineers we will produce.”

“The experience I gained in this project was critical in my development as an engineer,” says Fortner. “To have the opportunity to work with professional engineers was eye opening and taught me a lot of crucial skills no matter what I decide to do later in life.”



Ultimately, though, this team effort was all about the children. TMMK truly helped them start their impossible. Homebound and hospital-bound children yearn for freedom of movement just like adults do.

“I am thankful and humbled by the generosity of our friends at Toyota, the ingenuity of our engineering students and the dedication of the UK football team,” says Dr. Scottie B. Day, physician-in-chief at the hospital. “These individual groups came together in a unique way to create an unforgettable experience for the children of Kentucky. We know our patients are champions. And now every fan of UK football knows it, too.”