Southern Regional College | Business & Economic Engagement

Department for the Economy
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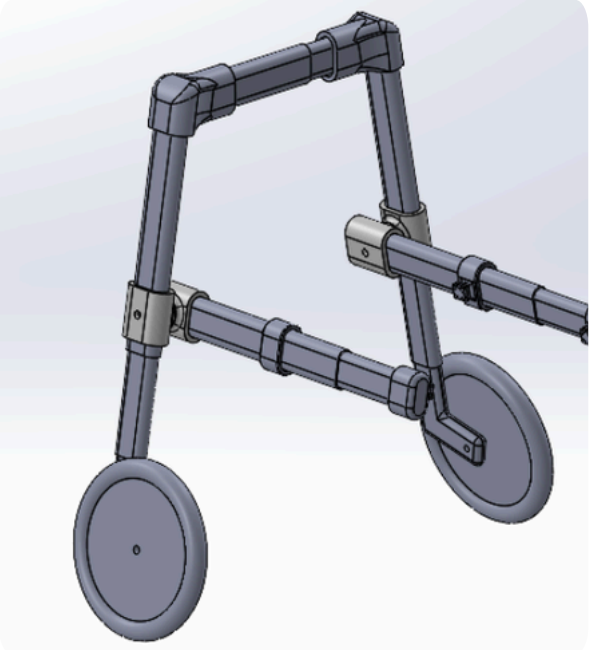
InnovateUs

Wee Waggy Wheels



Introduction - Wee Waggy Wheels aimed to design a modular wheelchair for dogs with mobility issues. They noticed that most existing products shared similar designs and problems, often being manufactured overseas in China or Germany and resold, making spare parts and resizing difficult. With clear aesthetic and functional ideas in mind, Wee Waggy Wheels sought support to create a CAD model and develop a product suitable for local manufacture.

Challenge - Wee Waggy Wheels needed support with the CAD model and design for manufacture and assembly (DFMA). The wheelchair had to be modular for easy production, repair, and sustainability, with replaceable parts. It also needed accurate, scalable sizing for all dog breeds and a straightforward fitting process that ensured safety, comfort, and ease for both dog and owner.

Solution - Together, we developed several design concepts, combining the best features of existing products while addressing their weaknesses. These ideas were merged into an initial CAD model, refined through testing and feedback. A 3D-printed prototype allowed hands-on assessment and fitting on volunteer dogs. This led to further refinements and a final design optimised for manufacture, using off-the-shelf parts to simplify assembly. The completed design was then handed over, allowing Wee Waggy Wheels to prepare for production.

Impact - The new design has enabled Wee Waggy Wheels to move forward with launching their business, investing in manufacturing and assembly equipment tailored to the product. They are now preparing to release the wheelchair alongside their dedicated measuring service.