



# PROTOTYPE ELECTRIC MILITARY SCOOTER

## TASKS

Reduce the complicity for easier manufacturing.

**Re-design** joints.

**Re-design** all the guards and brackets.

## SOLUTIONS

**Create** precise and accurate models and designs by using **SolidWorks** throughout the project.

By implementing **DFA and DFM** principles to reduce part/assembly complexity and costs.

## RESULTS

**Easier assembly and manufacturing.**

Most re-designed features are still used in the current model.

Product is available in market.

# PALLET TIPPER

## TASKS

**Design** and **develop** a cost-effective pallet tipper solution to improve factory operations.

**Lead** project with manufacturing and mechanical part.

Produce all the necessary documentation for **manufacturing**.

## SOLUTIONS

**Create** precise and accurate models and designs by using **SolidWorks** throughout the project.

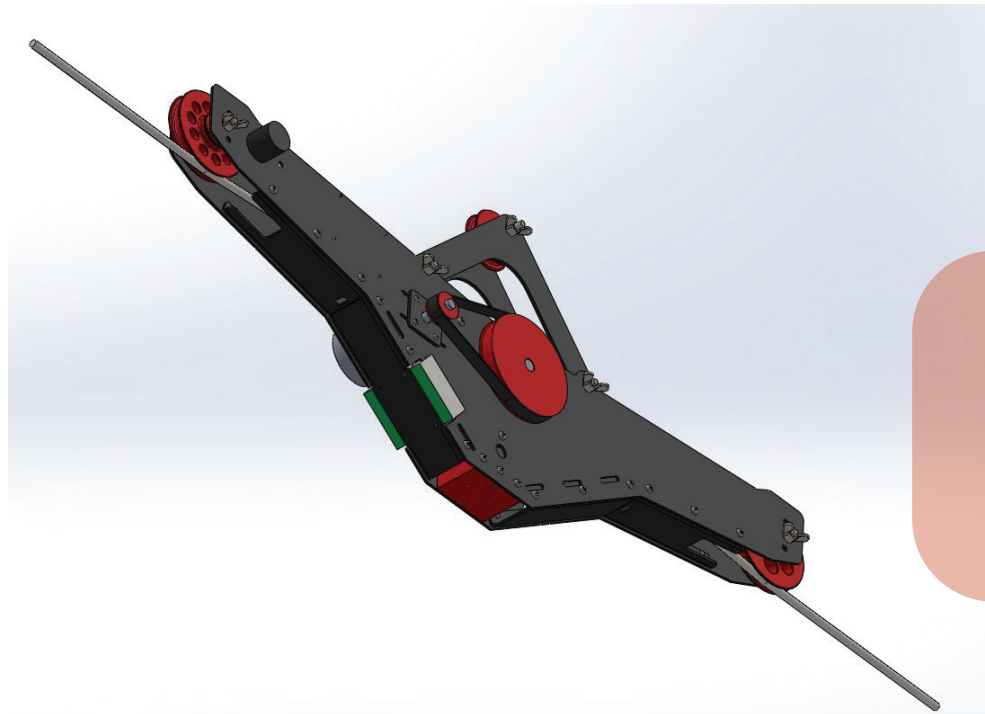
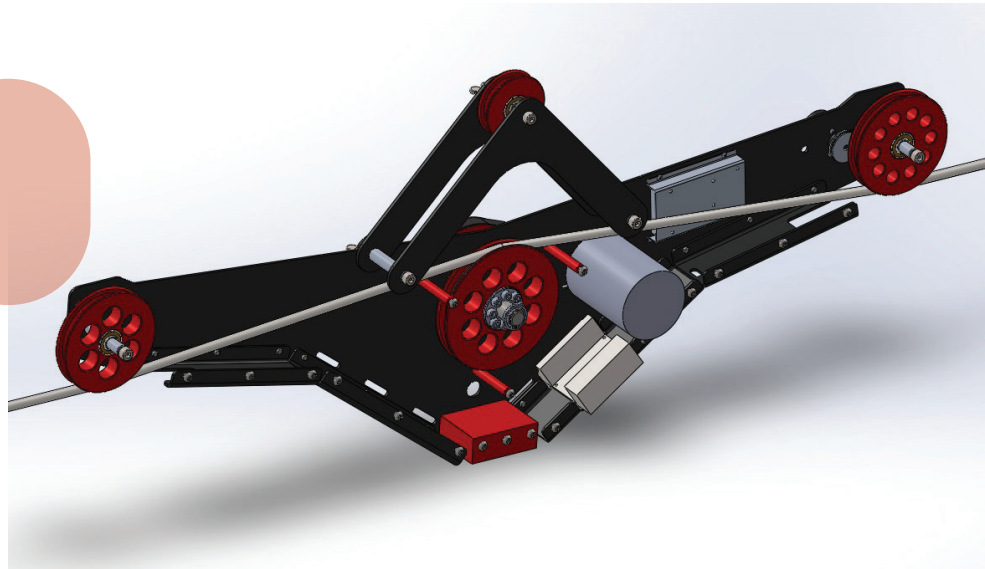
Implemented **DFA and DFM** principles to reduce unique positions in the project.

## RESULTS

**Achieved** significant cost savings by creating a product that is **35% cheaper** than similar off-the-shelf options.

Made a **safer** working environment by proactively addressing **potential hazards** and implementing solutions that prioritize safety.





# CABLE FILMING TROLLEY

## TASKS

**Collaborate** with a visionary filmmaker to design and create an affordable, off-the-shelf filming trolley that meets the needs of the industry.

**Lead** project with manufacturing and mechanical part.

Produce all the necessary documentation for **manufacturing**.

## SOLUTIONS

**Create** precise and accurate models and designs by using **SolidWorks** throughout the project.

By implementing **DFA and DFM** principles to reduce part/assembly complexity and costs.

## RESULTS

**Excellent** performance in large-scale concert.

Helped to start **larger scale** manufacturing process.



# FRUIT BELT PRESS

## TASKS

**Design and develop** a cheaper than off-the-shelf belt press for customer.

**Lead** project with manufacturing and mechanical part.

Produce all the necessary documentation for **manufacturing**.

## SOLUTIONS

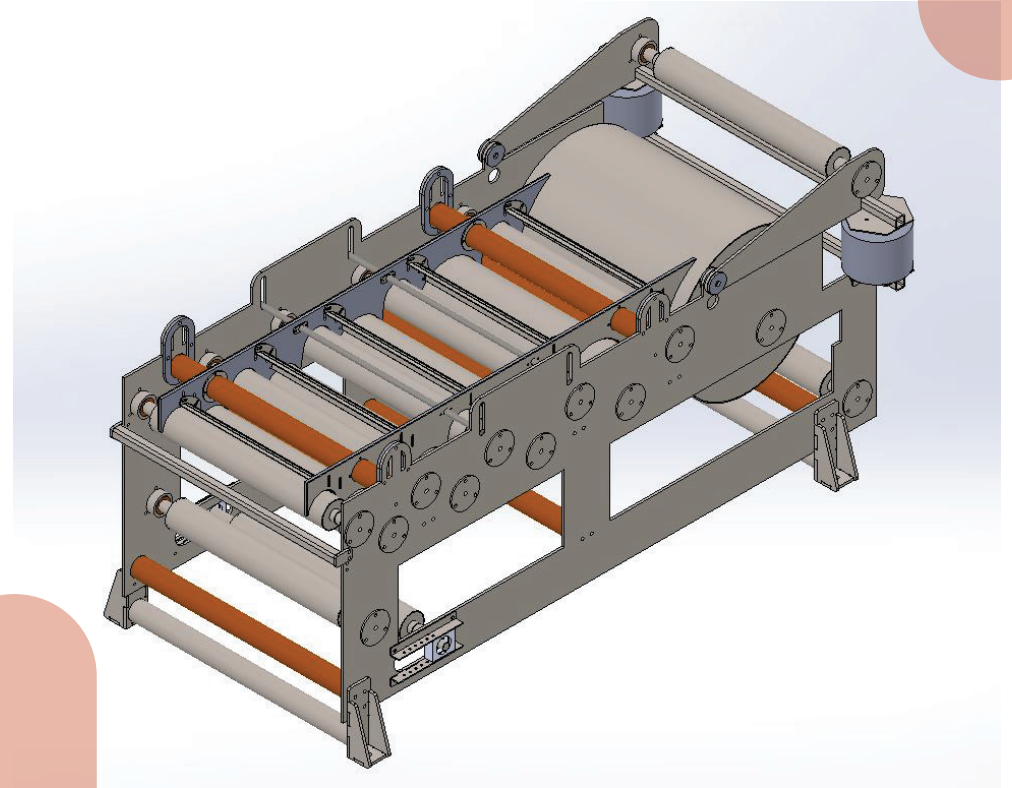
**Create** precise and accurate models and designs by using SolidWorks throughout the project. By implementing **DFA and DFM** principles to reduce part/assembly complexity and costs.

## RESULTS

Achieved significant cost savings by creating a product that is **35% cheaper** than similar off-the-shelf options.

**Easy** day-to-day maintenance.

Customized **interchangeable** mechanical nodes.





# PRODUCT HANDLING SYSTEMS

## TASKS

**Lead** the project from initial design to the integration of electrical systems, **manufacturing**, on site assembly and testing.

## SOLUTIONS

Combine robotics and conveyance technology to **design** efficient and safe automated product handling **systems**.

## RESULTS

**Cost-effective** solution that reduces manual labor, increases **productivity**, improves **accuracy**, and creates a safer work **environment**.



# REVERSE ENGINEERING

## TASKS

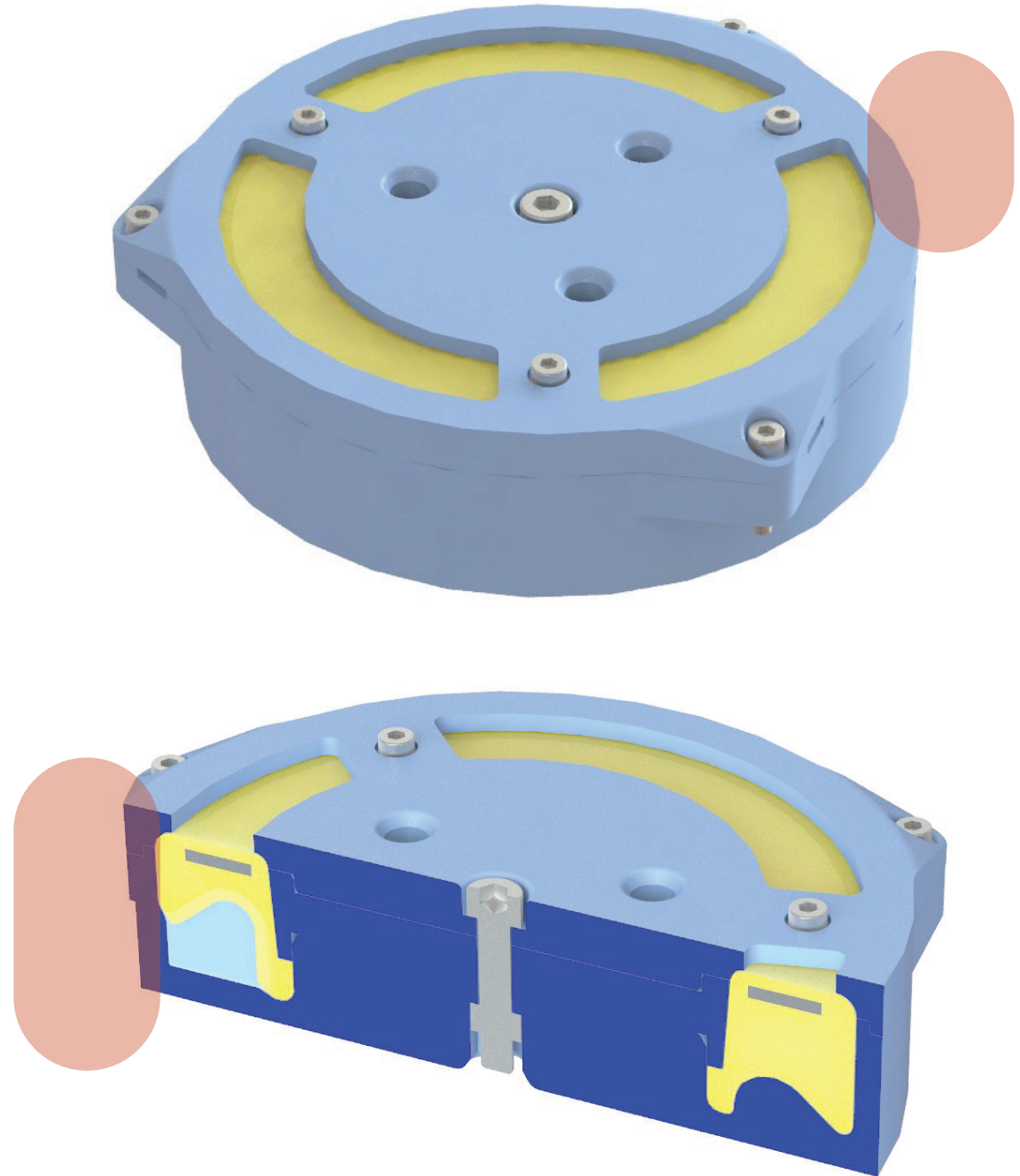
Reverse engineer the rear strut mount for an Audi Quattro using **custom** automotive **designs** based on field measurements and **3D** scanning technology.

## SOLUTIONS

Reverse engineering techniques are utilized to **create** custom automotive designs based on field measurements, **optimizing** weaknesses and adjusting technology for **maximum durability**.

## RESULTS

The result is a **high-quality** and precise **custom designed** rear strut mount that can withstand the rigors of **high performance** driving.



# SOLAR POWERED PROTOTYPES

## TASKS

**Design and manufacture** an autonomous solar powered phone charging prototype, featuring movement sensitive lighting and WiFi, suitable for harsh weather conditions.

## SOLUTIONS

Use solar panels to power phone charging, lighting, and WiFi.

**Construct** the **prototype** with durable materials to withstand harsh weather.

## RESULTS

An autonomous solar-powered phone charging **prototype** that can function in harsh weather conditions year round

The **system** stores energy during the day and charges phones or powers lighting and WiFi at night

The lighting provides safety and the WiFi enables connectivity

