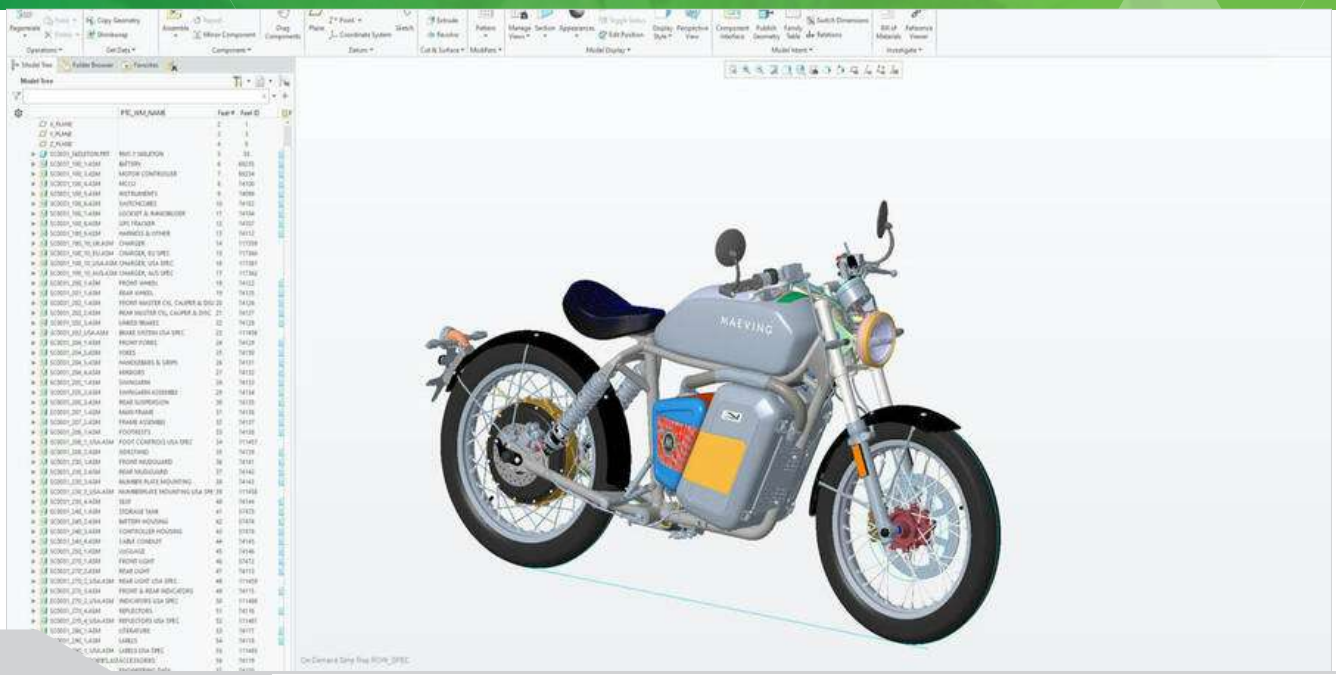
Maeving Revolutionizes Urban Commuting with Electric Motorcycles Designed in Creo

How Maeving's innovative approach to sustainable transport, powered by advanced design technology, is reshaping urban mobility.



Challenges:

Maeving sought to redefine urban transportation by creating an electric motorcycle that seamlessly combined classic British design with cutting-edge technology. The challenge was not only to address the issue of "range anxiety" but to provide a stylish, eco-friendly solution for urban commuters.

Results:

Supported by PTC Partner, Concurrent Engineering, and with the power of Creo's advanced design and simulation tools, Maeving developed the RM1—an electric motorcycle that is lightweight, customizable, and equipped with removable batteries. This breakthrough set a new standard for sustainable urban transport.

Solution:

PTC Creo

Introduction

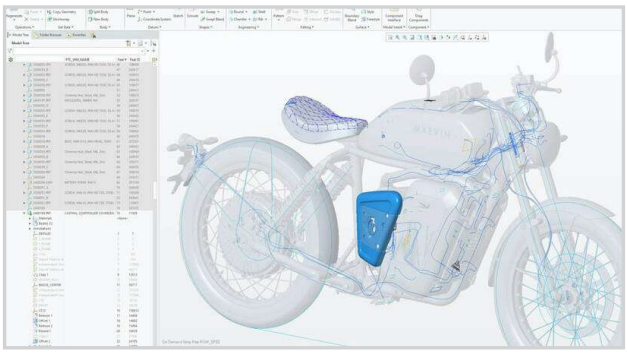
Maeving, a pioneering electric motorcycle manufacturer based in the UK, was founded by Seb Inglis-Jones and Will Stirrup. Their mission was clear: to combat climate change while delivering a practical, stylish solution for urban commuting. Inspired by the widespread adoption of electric two-wheelers in China and fueled by their passion for the timeless beauty of British motorcycles, they envisioned a product that could both address environmental concerns and honor Britain's rich design heritage.

But creating a motorcycle that balanced performance, sustainability, and an iconic look was no easy feat. Maeving's solution? The RM1—an electric motorcycle designed with PTC's Creo, combining vintage style with modern technology.

The Solution: Marrying Tradition with Innovation

The RM1 is the perfect marriage of classic aesthetics and cutting-edge engineering. Drawing design inspiration from the café racer era of the 1960s and the sleek, minimalist lines of the 1920s, the RM1 stands out for its stripped-back, metalwork-forward appearance, free of unnecessary plastic or digital distractions.

Underneath its timeless exterior is a modern marvel. Using Creo's advanced 3D CAD tools, Maeving meticulously designed 90% of the RM1's components in-house to meet exact specifications. Creo's robust surfacing tools and finite element analysis (FEA) capabilities allowed the engineering team to optimize every part for performance, ensuring a lightweight yet durable build that handles daily city use with ease.



Designing for Performance and Sustainability

A key challenge for Maeving was achieving a balance between performance and sustainability—two often conflicting goals in vehicle design. Electric motorcycles need to be lightweight for efficiency, yet strong enough to withstand everyday wear and tear. By leveraging Creo's built-in FEA tools, Maeving was able to simulate real-world conditions, optimizing weight distribution and material usage to ensure the RM1 was both high-performing and energy-efficient.

One of the RM1's standout features is its removable battery system, which allows riders to charge their motorcycles at any standard outlet—eliminating the need for specialized charging infrastructure. This not only alleviates "range anxiety" but also makes electric mobility accessible to urban residents who lack easy access to EV chargers.

Aesthetic and Functional Innovation

Functionality and style were equally important to Maeving's design process. Utilizing Creo's surface design capabilities, the team carefully crafted every element of the RM1, from its streamlined tank to its analog speedometer, both of which pay homage to classic motorcycle designs. Even the seat—a subtle but crucial element of rider comfort—was designed using a mix of modern 3D printing and traditional clay modeling, striking a perfect balance between old-school craftsmanship and modern innovation.

As Peter Taylor, Maeving's lead project engineer, notes: "Creo gave us the flexibility and control to bring our vision to life. Every part was designed with precision, ensuring that the RM1 met our high standards for both performance and aesthetics."

A Sustainable Future

As the company grows, they are expanding their operations to meet increasing demand across the UK and abroad. Their newly established 50,000 square foot facility has the capacity to produce over 11,600 motorcycles annually, with a particular focus on North America and Europe.

This year saw the launch of the RM1S, a faster and more powerful version of their flagship model, capable of reaching speeds of 70 mph—ideal for both urban commuters and suburban riders. With each new product, Maeving continues to push the boundaries of what electric motorcycles can achieve, all while staying true to their roots of sustainability and design excellence.

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Peter Taylor,
Maeving's Lead Project Enginer

Conclusion

Maeving's story is one of passion, innovation, and a commitment to a greener future. By combining advanced technology with traditional design principles and using Creo to power their engineering processes, Maeving has created a motorcycle that is timeless. As they continue to expand, Maeving is poised to lead the charge in sustainable urban transportation, proving that the future of mobility can be as stylish as it is eco-friendly.

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