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McLaren RACING | Deloitte.

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Holding pole position in the race toward 100% circularity

McLaren Mastercard Formula 1 Team's moonshot goal inspires a data-driven approach designed to expand circular practices across motorsports.

EFFICIENCY ON THE TRACK DRIVES THE RESULTS.
MATERIALS EFFICIENCY CAN DRIVE CHANGE.

THE SITUATION

McLaren Racing has set an ambitious "moonshot" goal: to develop a circular F1 car. In the highly regulated and competitive context of Formula 1™ (F1) racing, achieving circularity—without compromising performance—may be even harder than winning consecutive Constructors' Championships. But McLaren Racing isn't one to shy away from a challenge.

Put simply, "circularity" involves using fewer resources, reducing waste and maximizing the value of products and materials. This can be challenging in F1, where cars are continually upgraded throughout the season. Building an F1 car requires complex materials, fast development cycles, specialist internal manufacturing and external suppliers. Development, manufacturing and testing processes are strictly regulated and all must be executed within a cost cap every team must adhere to.

Sustainability has long been a priority for McLaren. In 2013, it became the first Formula 1 team to earn three-star Environmental Accreditation from the Fédération Internationale de l'Automobile (FIA), the motorsport's governing body. More recently, McLaren Racing has offset 100% of its business travel and F1 charter logistics with sustainable aviation fuel and ranked in the top 75 most sustainable companies by Sustainability Magazine in 2025.

McLaren sees circularity as more than a sustainability ambition.

Using materials more efficiently could also create opportunities to improve efficiency, manage costs and strengthen decision-making—provided performance could remain uncompromised.

Sustainability, engineering, procurement and leadership teams at McLaren understood circularity's importance at a high level but needed a tangible way to demonstrate its value. McLaren is a data-driven organization. Data helps guide split-second race decisions and it's helped unlock incremental efficiencies for McLaren's People teams. Could McLaren use data and analytics to *demonstrate consistently that sustainability and performance aren't mutually exclusive*?

McLaren wanted deeper insight into its inflows, the materials going into the factory for car development and manufacture, and its outflows, the material disposed of afterward. It also sought to identify circularity opportunities, engage stakeholders who could help advance its objectives, and create a roadmap for a long-term journey toward a circular F1 car.

McLaren knew that improving circularity could only be achieved through strong collaboration within the Formula 1 ecosystem, and by backing up the theory with data. McLaren recognized the potential to align its vision with the regulator and scale the ambition to include other teams. To help drive this forward, McLaren teamed up with Deloitte, its Official Transformation Partner, to bring together industry perspective, sustainability strategy, data and technology—and translate an ambitious goal into measurable action.

The immediate priority was to establish a new way to measure circularity in F1 car construction that could be simple enough for operational teams, credible enough for industry adoption, and rigorous enough to deliver meaningful and accurate insights that could inform McLaren's long-term decision-making. The bigger goal was to establish a repeatable standard, a measurable baseline and a playbook that McLaren could act on.



THE SOLVE

Without a common definition for circularity in F1, Deloitte and McLaren first had to determine what a circular car could be. Which boundaries, materials and data requirements matter most? Together, they focused first on actions an F1 team can influence directly, separating those within McLaren's control from those requiring supplier engagement or constrained by FIA requirements. That focus helped turn a broad ambition into a practical starting point for transformation.

The FIA commissioned the development of an F1 Constructors' Circularity Handbook that could provide a standardized measurement approach all F1 teams could use to track circularity consistently across their chassis manufacture. McLaren believed that over time, the handbook could create a foundation for regulatory change in favor of sustainability and wider adoption of circular practices across F1.

Deloitte approached the initiative through four stages.

First, Deloitte worked with McLaren to *define* its circularity ambition and pursue goals that are realistic, achievable and meaningful in the highly competitive and regulated F1 environment. This helped McLaren gain a better understanding of the challenges and opportunities it could face and the potential metrics that could be tracked.

Then, broadening focus, Deloitte helped *standardize* measurement of circularity in F1 chassis production with the development of a codified methodology that could be applicable to all constructors. While every team gathers cost data for required financial reporting, they may not have been tracking the amount of material they use. The circularity metric methodology supports conversion of spend data to weight data and considers inflows and outflows to arrive at a single percentage. A circularity metric of 100% would represent a fully circular F1 chassis—the ultimate goal.

Deloitte helped McLaren develop a tool it could use to actively *measure* its circularity. The tool automatically pulls from different datasets to quantify total circular inflow and outflow over total material use. Since launching the tool, Deloitte has continued to provide enhancements to the quality, coverage and robustness of the data measured. The enhanced data foundation has enabled more accurate emissions calculations and is able to provide deeper insights into the impacts of McLaren's choices and inform more effective action.

With the circular car as the moonshot goal, Deloitte helped McLaren *strategize* and build a roadmap for reaching it. This strategy drew upon Deloitte's research into new and innovative materials gaining traction across motorsports as well as aerospace, since an F1 car, in many ways, more closely resembles an aircraft than a family sedan. Deloitte also created a framework that McLaren can use to consider the impact of different solutions and prioritize the ones that can enhance its cars' performance.

In April 2025, McLaren Racing, Deloitte and the FIA unveiled the F1 Constructors' Circularity Handbook. Shared with other teams, the handbook was created not to compare performance, but to deepen understanding of circularity in F1 and encourage collaboration on potential regulations and efficiencies. The announcement underscored F1's ability to drive technical advances that could benefit motorsport and the broader mobility sector.

Collaboration was a necessity and something that was practiced throughout the project. McLaren leaders were clear that they wanted to bring other people and organizations along on its circularity journey. Creating the handbook involved collaboration with the FIA and similar industries and sharing learnings to help McLaren's stakeholders better understand why circularity matters.

The balance between circularity and quality, safety, traceability, supply chain resilience, cost and performance is inherently more visible in F1 than in other sectors. But organizations in industries ranging from automotive to technology hardware need practical ways to turn circularity from a concept into measurable progress. That's where Deloitte IndustryAdvantage™ enters the grid. It is designed to bring together deep industry experience, forward-looking insight, technology and ecosystem capabilities to help focus on the moves that matter most and turn them into measurable action. For McLaren, that meant translating a moonshot ambition into a practical measurement system, decision framework and roadmap—while keeping performance at the center.

DATA TURNS CIRCULARITY AMBITIONS INTO MATERIAL EFFICIENCY.

THE IMPACT

McLaren Racing has maintained a focus on circularity while continuing to win F1 Championships, demonstrating that elite performance and sustainability can thrive together. If circular practices can be more accessible and realize wider adoptions in F1—among the world's most demanding engineering environments—it can help shift expectations in other high-performance industries.

But could a bit of healthy competition around circularity also accelerate McLaren's long-term vision and deliver broader benefits?

Building on the handbook, McLaren worked with Deloitte to develop a roadmap of specific actions that could result in a car that is 100% circular by 2040. The Circular Car Roadmap helps McLaren see technical actions as well as areas of opportunity to train its people, further enhance its data, and collaborate with suppliers, waste contractors and, importantly, the F1 ecosystem to bring everyone on the journey toward the moonshot goal.

As Deloitte and McLaren looked to the next phase of McLaren's circularity journey—using Google Cloud and Deloitte's alliance ecosystem—they developed an automated calculation workflow built on Google Cloud. Moving forward, McLaren can use this to ingest, transform and visualize its data and calculate the yearly metric.

McLaren's most recent circularity metric, for 2025, was 22%—an encouraging baseline in a year of high development, when overall material consumption naturally increased and outflows declined slightly. The current score is based on McLaren's enhanced data foundation, and it comprises recycled and bio-derived materials and varied recycling processes.

Importantly, the metric gives McLaren a repeatable way to track progress and evaluate where future interventions could have the greatest impacts. The team developed a tool that enables McLaren to model and compare potential roadmap initiatives before implementation by showing how changes to materials,manufacturing and practices could affect the overall circularity metric. The Impact Assessment Tool gives McLaren access to data-driven insights that support strategic decision making—helping McLaren prioritize investments, identify quick wins and estimate the gains future initiatives could put on the board.



SETTING THE PACE ON CIRCULARITY SO THE FIELD CAN FOLLOW

LET'S CONNECT.

Do these challenges sound familiar?



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