

Ferrari in 2025: Balancing Tradition and Innovation to Grow

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Born of Enzo Ferrari's passion for car racing in the early decades of the Twentieth Century, by 2025 the company that bore his name was world-renowned for its iconic prancing horse emblem, success on the Formula 1 circuit, roar of its V12 engines, and track record of producing some of the most beautiful and powerful automobiles ever built. Ferrari leaders attributed the company's success, in part, to its ability to innovate without losing sight of its legacy [**F values**]:

Tradition and innovation drive each other. The ongoing quest for lasting firsts is what fuels the Ferrari legend. Our ability to combine revolutionary technological solutions with exceptional artisanal craftsmanship is what enables us to create icons that stay timeless in a fast-changing world.¹

In 2024, Ferrari was pursuing a strategy of “controlled growth” to protect and extend its leading position in the luxury performance car market.² The company had nearly doubled the number of vehicles it shipped in the preceding decade, while increasing revenues from \$3.2 billion in 2015 to \$7.2 billion in 2024 [see exhibit tab **F financial summary**]. Looking forward, Ferrari planned to further increase revenues and profits by expanding in growth markets, appealing to a new generation of customers, and introducing new models—including its first fully-electric vehicle slated for 2025. The company aspired to grow without diluting the value or exclusivity of its storied brand.

Successfully executing the controlled growth strategy would require Ferrari to innovate without losing sight of its heritage. Ferrari CEO Benedetto Vigna explained:

I like to say that we have two eyes. With one eye, we have to look at the past. With another eye, we have to look at the future...Many startup companies today, they don't have any past, so you have to look with two eyes only to the future. But in our case, the future and the past, innovation and tradition, must coexist so that the DNA of the company can evolve through the history.

The Luxury Performance Automobile Market

In 2024, the global market for premium and luxury passenger vehicles totaled more than 10 million units and \$770 billion in retail sales [**PL market**]. In terms of units sold, this market was dominated by premium brands, including Mercedes-Benz, BMW, Tesla, Audi, Lexus, and Porsche, which typically sold at retail for prices between \$60,000 and \$100,000 [**PL share**]. Sales of premium cars were projected to grow by an average of 8% per year between 2021 and 2031, versus 1% average annual growth for mass market vehicles.³

The high end of the market consisted of luxury vehicles produced by companies including Maserati, Bentley, Lamborghini, and Bugatti [**luxury automakers**]. Among luxury carmakers, a handful focused on high performance vehicles—traditionally two-door sports cars with powerful V8 or V12 engines. Ferrari defined the luxury performance segment as including two-door and four-door cars and sports utility vehicles priced in excess of €180,000 (\$190,000) with engines that produced more than 500 horsepower [**luxury performance**]. Ferrari estimated that more than 85,000 such vehicles were sold globally in 2024.⁴ Sales of luxury vehicles were forecast to increase at a rate of 9-14% per year between 2021 and 2031.⁵

Traditionally, the luxury automotive industry was dominated by well-established brands--including Rolls-Royce, Bugatti, Aston Martin, Maserati, and Bentley--that were more than a century old. Many established luxury carmakers had been acquired by larger automotive groups, which invested significant sums in research and development relative to standalone luxury automakers [**auto subsidiaries, peer performance**]. A few, like Aston Martin, had retained their independence. Founded in 1913, Aston Martin became synonymous with high-end British sports cars, driven by James Bond in the 007 films and by King Charles for more than fifty years.⁶ In 2021, Aston Martin returned to Formula 1 racing after a fifty-year hiatus.⁷ Two years later, Aston Martin partnered with Lucid Group to produce its first electric vehicle scheduled for 2025, but delayed production a year due to “lack of consumer demand.”⁸

Among new luxury performance automakers which entered the industry since 1990, most focused on supercars—also referred to as hypercars. With top speeds approaching 300 mph (faster than a Formula 1 car), supercars were produced in small numbers and cost millions of dollars.⁹ Pininfarina began as a design firm that designed nearly every Ferrari model between 1951 to 2012.¹⁰ When Indian automaker Mahindra & Mahindra acquired Pininfarina in 2015, it created Automobili Pininfarina to design and produce supercars in Italy.¹¹ Automobili Pininfarina launched its first vehicle, the Battista, in 2021 and planned to manufacture only 150 units that sold for \$2.2 million per car.¹² A follow-up, the B95, would sell ten cars at a \$4.8 million each.¹³

Founded in 2012 and headquartered in Dubai, W Motors established itself as an emerging supercar producer. Priced at \$3.4 million, W Motors’ Lykan HyperSport was the first car to have headlights embedded with diamonds. W Motors produced only seven HyperSports, one of which appeared in the *Furious 7* film.¹⁴ The company’s Fenyr SuperSport was priced at \$1.9 million, offered a top speed of 250 mph, and was limited to a total production of 110 units.¹⁵ In 2020, W Motors announced it would produce a fully electric vehicle, codenamed "Wolfie."

The performance of the luxury performance car segment closely mirrored trends in the broader luxury goods sector, and both were buoyed by rising global wealth and demand for high-end products in the first quarter of the twenty-first century. During the global recession of 2008-2009, however, demand for luxury performance vehicles dipped (although Ferrari’s shipments remained steady) [**LP units**].¹⁶ Vigna viewed his company’s cars as luxury goods rather than utilitarian means of transportation:

*A luxury company is a company that is using technology, innovation, storytelling, heritage, everything, with the ultimate goal to feed that emotional side that we all have...When I get invitations to talk to conferences, I won’t attend if I hear two words — utility or mobility. We don’t make a useful product. We make an emotional product.*¹⁷

Unsurprisingly given their price, luxury automobiles were targeted at wealthy customers. There were just over 600,000 ultra-high-net-worth individuals (having a net worth exceeding \$30 million) globally at the end of 2022, and that number grew by nearly 70 per day during 2023 [uhnw count].¹⁸ Driving experience, performance and design were among the most important factors customers considered when buying a luxury vehicle [luxury KBFs]. Brand was another important consideration, and premium and luxury automakers accounted for six of the hundred most valuable brands in the world [brand value] and attracted large followings on social media [social media].¹⁹

Growth in the number of ultra-high-net-worth individuals expanded the pool of potential consumers for a range of luxury products besides automobiles, including art, watches and rare whiskey. Many ultra-high-net-worth individuals enjoyed owning luxury goods but also viewed them as investments which they expected to appreciate in value [luxury investments].

The Rise of the Prancing Horse

Born in 1898 in Modena, Italy, Enzo Ferrari (hereafter Enzo refers to the founder and Ferrari to the company) was captivated by motorsports from a young age. Enzo made his racing debut at age 21 and quickly earned a reputation as a skilled driver.²⁰ After winning a race in Ravenna, Enzo met the parents of a World War I fighter pilot who displayed a prancing horse on his plane for good luck.²¹ Enzo adopted the prancing horse as his emblem and added a yellow background to honor his hometown.²²

In 1929, Enzo founded Scuderia Ferrari (“Ferrari Stable”) to enter drivers in races around Europe.²³ After manufacturing airplane components during World War II, Ferrari resumed racing car operations when the war ended, focusing only on the engine and chassis—leaving the bodywork to others.²⁴ Enzo incorporated Ferrari S.p.A in 1947, and the company’s first car, the 125 S, debuted that same year. The heart of the car’s design was a 12-cylinder engine, and powerful engines would become a defining feature of Ferrari cars.²⁵ Enzo’s focus on engine performance stemmed from his belief that “aerodynamics are for those who can’t manufacture good engines.”²⁶

Ferrari’s success on the racetrack attracted an elite clientele, including aristocrats and celebrities, eager to own a Ferrari. Capitalizing on Ferrari’s win at the famed Mille Miglia race in 1948, Ferrari debuted road versions of the racing car.²⁷ Road cars combined Ferrari’s racing heritage with luxury touches including leather upholstery and wind-up windows.²⁸ Potential customers arrived at Ferrari’s door, where they were often left waiting for hours to place an order.²⁹ For Enzo, road cars were a way to fund racing, which in turn, fueled demand for road the company’s road models.³⁰

Scuderia Ferrari’s entry into the inaugural Formula 1 (F1) World Championship series in 1950 began an important era for Ferrari. In 1952, the team secured its first Drivers’ World Championship, and Enzo’s relentless push for perfection became a defining trait of the company. Enzo was known for his ruthless criticism of staff and drivers to spur continuous improvement.³¹ He hired more drivers than available cars, for instance, so Ferrari’s drivers had to compete with one another to race. Enzo’s belief in continuous innovation was encapsulated in his mantra that “the best Ferrari ever built is the next one.”³²

The large investment required for racing strained Ferrari’s finances, and in 1963, Ford Motor Company attempted to buy Ferrari for \$18 million. The deal fell apart over a clause that would have restricted Enzo’s control of the racing budget.³³ A few years later, Italian automaker Fiat acquired a 50% stake in

Ferrari for \$11 million, allowing Enzo to retain full control over racing operations while securing the Ferrari's financial future. After stepping down as president in 1977, Enzo continued to wield influence until his death in 1988.³⁴

In 1991, Luca Cordero di Montezemolo, who had previously served as Scuderia Ferrari's team principal, was appointed CEO of Ferrari. Di Montezemolo modernized the company, revitalized the road car lineup and expanded into merchandising.³⁵ Under his leadership, Ferrari dominated F1 from 1999 to 2008, winning eight of ten Constructor titles over a decade [**F1 champs**]. Ferrari's unique position within Formula 1 was solidified by the Concorde Agreement, which guaranteed the company a share of the prize fund each year, irrespective of its standings during the season in recognition of Ferrari's enduring contribution to the sport. Chase Carey, CEO of Formula 1 Group, remarked: "Scuderia Ferrari and Formula 1 have gone hand in hand since 1950... it is part of the very DNA of this sport."³⁶

As Ferrari thrived, its parent company Fiat, faced a series of setbacks. In 2004, Sergio Marchionne took the helm and led a sweeping restructuring, slashing costs, streamlining management, and successfully returning Fiat to profitability.³⁷ In 2009, Marchionne acquired a stake in the bankrupt Chrysler and, by 2014, had engineered a full takeover and merger, creating Fiat Chrysler, the world's seventh-largest car manufacturer.³⁸ In 2014, Marchionne became CEO of Ferrari.³⁹ Under his leadership, Ferrari went public in 2015 with the ticker symbol "RACE."⁴⁰

In 2021, Ferrari appointed Benedetto Vigna as the new CEO. Trained as a physicist, Vigna began his career at STMicroelectronics, Europe's preeminent semiconductor company. Vigna founded STM's motion-activated sensors division, and led its growth to nearly \$4 billion in 2020, when it was the parent company's largest and most profitable business unit.⁴¹ Vigna was a prolific inventor, obtaining over 200 patents prior to joining Ferrari, including a patent for three dimensional motion sensor used in the Nintendo Wii.⁴²

Ferrari in 2025

Ferrari generated nearly 90% of its 2024 revenues of \$7.2 billion from the sale of cars and spare parts, with the remainder from sponsorship revenues from F1, branded merchandise, and until 2023 the sale of engines to Maserati [**F income statement**]. Ferrari's sales were distributed across regions, and in contrast to other luxury brands which relied heavily on Chinese sales, Ferrari derived only 8% of its revenues from mainland China [**F sales by region**]. The company estimated that it had a 14% share of the global luxury performance automotive market including four-door models and SUVs, and 23% of the market for two door performance luxury sports cars [**F market share**].

When evaluating the performance of the company's top executives, the board of directors [**F board**] considered Ferrari's total shareholder returns relative to a set of luxury peers, EBITDA versus targets, and performance against innovation and ESG objectives [**F equity incentives**]. Since its 2015 IPO, Ferrari's total shareholder returns had outperformed all of its luxury peers [**peer TSR**].

Although Ferrari did not promote its brand through traditional advertising, participation in competitive racing—particularly Formula 1—provided global visibility, especially as F1 gained popularity among younger audiences through Netflix's Drive to Survive series. Television viewership of F1 more than doubled in the U.S. between 2018 and 2023, when 28% of American adults identified as Formula 1 fans.

More than half of fans credited the Netflix show for their interest in the sport.⁴³ Formula 1's fan base grew by 40% globally between 2018 and 2022, when 40% of fans were women (versus 25% in 2018) and the average age was 37 years old (versus 40 years in 2018) [Global sports].⁴⁴ Ferrari carefully managed its communications with stakeholders, including racing fans, sponsors, and media and influencers to bolster its brand [F stakeholders].

Ferrari's Lifestyle business aimed "to establish Ferrari as a unique brand with a dual identity: exclusive in relation to the luxury pricing and aspirational character of our cars, but also inclusive in relation to our community."⁴⁵ The Lifestyle division licensed the brand to select partners who produced and sold Ferrari-branded luxury goods (high-end watches, pens, and sportswear) and collectibles such as miniature models of F1 race cars.⁴⁶ Ferrari launched its own fashion collection in 2021 with a dedicated fashion show. The Lifestyle division also sold Ferrari-branded merchandise through 14 directly-operated retail stores and two franchised outlets, ran the company's two museums and theme parks in Abu Dhabi and Spain. Between 2018 and 2023, Ferrari terminated half of its licensing agreements and closed 11 stores to ensure a consistent brand positioning.

Joining the Ferraristi club. Ferrari, which referred to its clients as "Ferraristi," identified two primary customer segments. The *sports car driver*, according to Ferrari was "looking for an elegant and understated design, who likes driving their car in a variety of locations and conditions, alone or with passengers, and who uses their Ferrari for longer journeys."⁴⁷ The *pilot* valued "a high performing and extreme sports car, who intends to drive their car on track and on challenging roads, and who is looking for an exciting driving experience."⁴⁸ Between January 2022 and January 2023, Ferrari grew their active client base by 10%, with 40% of new clients under the age of 40.

Ferrari actively cultivated relationships with automotive collectors, such as LeBron James and Gordon Ramsay, who were particularly passionate about Ferrari automobiles.⁴⁹ In 2024, 81% of Ferrari's new cars were sold to existing clients, with 48% of sales going to clients who owned multiple Ferraris.⁵⁰ Morgan Stanley estimated Ferrari's sales to repeat customers accounted for 80% of revenues (and 86% of EBITDA) because repeat customers tended to purchase more expensive models compared to first-time buyers.⁵¹ By way of comparison, Italian luxury fashion house Moncler reported that 40% of unit sales went to existing customers.⁵² Between 2018 and 2022, Ferrari cultivated its top collectors, 60% of whom were new clients and expanded the number of cars in their garage by an average of 25%.⁵³

Ferrari periodically produced limited edition models, which it offered directly to the company's most valued customers. Before Ferrari launched the LaFerrari Aperta hybrid convertible in 2016, Enrico Galliera—Ferrari's Senior Vice President of Commercial and Marketing—sent a small box including a car key and an invitation to buy the car (which was not yet in production) to 200 of Ferrari's most valued customers.⁵⁴ All but one said yes, sight unseen. One collector, who already owned a dozen Ferraris and bought four more solely to increase his odds of securing a LaFerrari Aperta, was still turned down.⁵⁵ Galliera observed:

*The most difficult part of my job is to say no... We have much higher demand than the availability. So, what we do is identify criteria that is rewarding good customers. The limited edition cars we consider a gift to our best customers.*⁵⁶

"Giving someone the right to pay more than a million dollars is an odd reward," one of Ferrari's top clients observed, "but given the fact that [the car] will surely appreciate in worth, it makes sense."⁵⁷ For reference, a three-year old LaFerrari (the hard-top predecessor to the Aperta) was sold by a dealer in Florida for \$4.7 million, more than three times the original purchase price [NA used cars].⁵⁸ Of the ten most expensive cars sold at auction through May 2025, seven were Ferraris [used auction]. "To be chosen by Ferrari for one of their hypercars is a true milestone for any collector" said one Ferrarista who owned 42 Ferraris before being selected to buy one of 799 F80s, with a base price of \$3.7 million.⁵⁹

Historically, Ferrari dealers chose who could buy a supercar, sometimes allocating them to friends or family rather than loyal Ferraristi. With the launch of the LaFerrari in 2014, Ferrari centralized the decision of who was offered the chance to buy supercars based on clients' relationship with the brand. "What we try to measure," Galliera said, "What is your interaction with Ferrari?"⁶⁰ To qualify to buy a supercar, clients had to have purchased another Ferrari within the past three years and own a minimum number of Ferraris (on average collectors owned ten before receiving an offer to buy a LaFerrari or Icona). When deciding who qualified, Ferrari also considered participation in company-organized events, racing programs, ownership and restoration of classic vehicles, among other factors. "We track everything," Galliera observed.⁶¹

To nurture a sense of community and reward its most loyal clients, Ferrari worked with dealers and nearly 200 regional Ferrari clubs to organize and support invitation-only events including car shows, road trips, visits to the Maranello factory and Ferrari museums, and F1 racing events [F events].⁶² More than one thousand Ferrari owners participated annually in a series of races organized by the company, including the Ferrari Challenge Series and the XX Programme, where clients could race their own cars against other Ferraristi on some of the world's most prestigious tracks. The most exclusive events were reserved for Ferrari's most valued customers. The company reserved the iconic Ponte Vecchio bridge in Florence, for instance, to host a dinner for 90 of its top clients.⁶³

Ferrari's dealer network. Ferrari dealers were the starting point for prospective clients to discover, test-drive, purchase and customize their cars. Ferrari sold its cars in sixty geographic markets worldwide through a network of 178 authorized dealers operating 200 points of sale [F dealers].⁶⁴ Ferrari's largest dealer accounted for almost 3% of the company's shipments and the 15 largest dealers for 22% of shipments in 2024.⁶⁵ The company did not own any dealerships. Authorized dealers marketed the brand, took orders for new cars, sold used vehicles and provided existing clients with after-sales service, company news, and invitations to Ferrari events.⁶⁶ Ferrari sold its cars exclusively through dealers (except for limited editions sold directly to end clients).⁶⁷ Ferrari provided a suggested retail price, but dealers negotiated final prices with customers.

Ferrari carefully vetted potential dealers, evaluating their reputation, financial resources, track record, and commitment to providing the highest quality service.⁶⁸ Dealers might own multiple franchises, but in those locations that sold Ferrari, "the great majority of the client interface and retail experience is exclusive to Ferrari."⁶⁹ Ferrari set and maintained strict guidelines for dealers to ensure every point of sale presented the brand consistently. The Ferrari Academy trained dealers' employees in sales, after-sales service, and technical skills, as well as offering specialized courses such as luxury experience management. Ferrari closely monitored the financial performance of its dealers to ensure their financial stability and ability to service customers, and Ferrari executives regularly visited dealers to ensure

compliance with operating standards. Dealer turnover was low, but Ferrari reserved the right to terminate relationships with dealers if they failed to meet the company's exacting standards.

Ferrari sold parts through its dealer network for customers who wanted to customize their vehicles, improve performance, or qualify to participate in Ferrari racing events. These upgrades were particularly common when used cars changed owners.⁷⁰ "The sale of parts is a profitable component of our product mix," according to the company's annual report, "and is expected to benefit from the increase in the number of Ferrari cars in circulation." In 2024, according to Andrea Scioletti, the head of Ferrari Pre-Owned, "more than 90% of the total Ferrari production – beyond 300,000 cars – is still on the road."⁷¹ Ferrari maintained strict standards on vehicle maintenance, provided ongoing training and support to dealers, including the company's "flying doctors"—highly trained Ferrari engineers who traveled around the world to consult on the most challenging technical issues.⁷²

The Ferrari Classiche program, launched in 2006, helped customers maintain their vintage Ferraris with "the objective of keeping as many of these classic cars on the road as possible."⁷³ Ferrari Classiche offered Certificates of Authenticity for range cars over 20 years old (and for all track cars, Icona, and supercars regardless of age), certifying they remained true to their original specifications.⁷⁴ Ferrari's extensive archives contained the technical records of every car produced since 1947, allowing the company to certify that classic models conformed exactly to their original designs. The Ferrari Classiche program offered services including restoration to a car's original condition in the Maranello facility, a driving school for vintage cars, and support for customers attending company-sponsored races and events. According to the company, the Ferrari Classiche program

*aims to create a platform of information and technical expertise to preserve and enhance over time the awareness and value of Ferrari's heritage and brand. We view the surviving Ferrari vehicles of historical value as the tangible legacy and incarnation of our brand.*⁷⁵

Different Ferrari for different Ferraristi. Ferrari believed its cars were "the epitome of design, performance, and driving thrills."⁷⁶ The company's product portfolio was designed to offer "different Ferrari for different Ferraristi, different Ferrari for different moments," with models varying in terms of their sportiness, interior space and design, comfort, and performance.⁷⁷ The company divided its vehicles into four main categories: Range, special series, Icona, and supercar [F models]. Range models combined comfort with high performance and represented more than 90% of unit shipments.

Ferrari's special series vehicles were limited-production variants of its range models, that incorporated features like advanced aerodynamics inspired by Ferrari's racing heritage. Special series models appealed to the sports car driver and collectors and served as a transition point to the higher-end Ferrari vehicles in the Icona and supercar categories, which represented the pinnacle of Ferrari's offerings [F new models]. These vehicles, produced in extremely limited numbers, were often created to commemorate milestones in Ferrari's history. The LaFerrari Aperta, for example, celebrated Ferrari's 70th anniversary, and was limited to 210 units.⁷⁸ Icona and supercars boosted Ferrari's bottom line:

*These more exclusive offerings generate higher revenues and provide better margins than those generated on shipments of our Range and Special Series models...We plan to launch our Icona models more frequently compared to our Supercars...to reduce the volatility in financial performance that we have at times experienced historically due to the cadence of launches of our Supercars.*⁷⁹

As part of its controlled growth strategy, Ferrari introduced new models rather than increase unit production of existing models. The company launched 15 new models between 2018 and 2022, a pace of new model introductions unprecedented in the company's history.⁸⁰ The new models included the SF90 Stradale and Spider—the company's first plug-in hybrid range models, and the Purosangue, its first sports utility vehicle. The Purosangue broadened Ferrari's appeal to women, non-sports car enthusiasts, and wealthy customers in China, many of whom were driven by chauffeurs.⁸¹ Galliera noted: "You can now have a Ferrari with a family. This answers all our clients' needs."⁸² Ferrari planned to launch 15 new models between 2023 and 2026, including its first fully-electric vehicle.⁸³

Ferrari offered customers different levels of personalization for their vehicles [F personalization].⁸⁴ The Special Equipment and Atelier program allowed customers to create "a highly personalized car through a wide catalogue of special items such as different types of rare leathers, custom stitching, special paints, special carbon fiber, and personalized luggage sets designed to match the car's interior."⁸⁵ The company's Tailor Made program offered clients a wider range of design options including interior fabrics ranging from cashmere to denim, as well as a dedicated Ferrari designer to help customize the car.⁸⁶ The One-Off program allowed Ferrari's most valued customers to design and craft a completely unique vehicle.⁸⁷ The majority of customers personalized their car [F personalization rates].

In 2019, Ferrari opened its third Tailor Made Center in New York City, following centers in Maranello (opened in 2011), and Shanghai (2014).⁸⁸ The design centers evoked Ferrari's early days, when celebrities would travel to the company's headquarters and beg Enzo to design a car to suit their tastes. One reporter described the newly opened New York center:

The Park Avenue showroom looks more like a luxury fashion boutique than a car-design shop. Swatches of buttery leather, spools of brightly colored threads and samples of suede and denim fill the cabinets... You don't just pick your own paint color — you can create a new one, name it after yourself and have it forever immortalized on Ferrari's gleaming wall of paint color samples. One popular color is "Grigio Ingrid," a warm gray that was created by Italian director Roberto Rossellini to match the eyes of his wife, Ingrid Bergman.⁸⁹

Ferrari received payment 30 to 40 days after the vehicle shipped, or earlier when the company or one of its dealers provided financing (Ferrari paid suppliers after 60 to 90 days).⁹⁰ Customers who bought Icona, special series, limited edition, and certain range models paid in advance. Ferrari only built vehicles after an order had been placed, eliminating the need to carry an inventory of unsold cars. Waitlists for Ferrari models typically ranged from 12 to 18 months, while certain models, such as the Purosangue and Icona series, required customers to wait more than two years for delivery. Vigna explained:

We are a brand that is not looking for volume... The client is giving a value to our cars because they are unique, because they are limited, because they are exclusive. We could make more, but that doesn't make sense. We will offend our clients.⁹¹

Designing and crafting excellence: Ferrari's commitment to research and development was deeply intertwined with its Formula 1 legacy. Frequent movement of engineers between the Formula 1 and road car divisions ensured innovations for the racetrack ultimately found their way into range models.⁹² Ferrari's first foray into hybrid technology, for example, came during Formula 1's 2009 season with the introduction of the Kinetic Energy Recovery System, which allowed energy generated during braking to

be stored and used later to boost acceleration.⁹³ This early experimentation with hybrid technology “opened the doors for the next generation of Ferrari road cars.”⁹⁴

Ferrari’s production capabilities took place in two locations in Italy. Aluminum and carbon body-shells were crafted at the company’s Modena facility, and the remainder of production, including aluminum alloy casting, engine construction, machining, car assembly, painting, and final testing, took place in the Maranello plant.⁹⁵ To speed product development and meet the company’s demanding specifications, Ferrari operated its own foundry and machining department to produce the main components of its engines, including engine blocks, cylinder heads, and crankshafts. Ferrari deployed a combination of automatic and manual operations to produce an average of 89 engines per day in 2023, with two separate production lines: one for V6, V8, and hybrids and the other for V12 engines.

Ferrari’s manufacturing operations employed 1,797 engineers, technicians, and production workers in 2024.⁹⁶ The typical blue-collar employee was Italian (93%), male (92%), between the ages of 30 and 50 (66%), and unlikely to leave the company in any given year (average annual attrition of 4.1%) [**F employees**]. Among Ferrari employees who wrote reviews on Glassdoor, 71% would recommend the company to a friend, 79% had a positive outlook on the company’s future, and 81% approved of the CEO [**F Glassdoor**]. Ferrari increased its production flexibility by cross-training employees to work across different jobs and operating below full capacity so night or weekend shifts could be added to accommodate spikes in demand.⁹⁷

Ferrari produced key components in house to preserve technological know-how, while outsourcing others like transmissions and brakes.⁹⁸ The company managed over 70,000 unique components, sourced from approximately 500 suppliers, with the top ten suppliers accounting for one-fifth of total procurement costs.⁹⁹ “We generally do not qualify alternative sources for most of the single-sourced components we use in our cars,” according to the Ferrari 2023 Annual Report, “and we do not maintain long term agreements with a number of our suppliers.”¹⁰⁰

Luxury performance goes electric

In 2008, the first production version of the Tesla Roadster was delivered to Elon Musk, the company’s CEO.¹⁰¹ The Roadster Sport, which listed at \$129,000, was the first highway-legal fully electric luxury performance car and could accelerate from 0-60 mph in 3.7 seconds. The Roadster could also “whoosh around unsuspecting Camry drivers, zapping from 40 to 60 miles per hour in two seconds while the startled victims eat your electric dust,” according to a *Wall Street Journal* reporter, “Tesla’s message is that ‘green’ technology can appeal to the id, not just the superego.”¹⁰²

The Roadster signaled the start of a race towards a more electric future for luxury cars. Approximately 7,000 hybrid and electric luxury cars were sold in 2021, and one forecast estimated that number could increase to 280,000 by 2031 [**LEV market**]. Part of the impetus to switch to electric vehicles stemmed from regulations that would ban the sale of new internal combustion vehicles starting as early as 2025 in some countries [**EV Policy**]. The European Union passed legislation mandating that all cars and vans sold in the EU must have zero CO2 emissions by 2035, with exemption for automakers producing fewer than one thousand vehicles per year.¹⁰³

Many of Ferrari's ultra-high-net-worth (UHNW) customers considered environmental impact in their purchase decisions. Globally two-thirds of UHNW customers were attempting to reduce their personal carbon footprint and 40% were planning to switch to electric vehicles [**uhnw carbon**]. Among current owners of internal combustion engine (ICE) luxury vehicles, 18% planned to buy a hybrid and 44% planned to buy an electric vehicle in the future.

Ferrari's competitors varied in how quickly they planned to integrate hybrid and fully electric technology [**future LEVs**]. In 2020, Bentley committed to launch one new electric vehicle every year from 2025 through 2030, by which time 100% of the company's vehicles would be electric [**sustainability plans**]. Porsche followed two years later with a pledge that 80% of its cars would be electric by 2030, and the company sold two of the highest rated electric luxury vehicles in 2024 [**best LEVs**]. Lamborghini and McLaren, in contrast, set more flexible targets: Lamborghini planned to launch its first fully electric model by 2028, while McLaren focused on hybrid models.

Despite customers' stated intention to switch from ICEs, some luxury automakers were revising their initial electrification goals due to slower than expected customer adoption. "The consumer demand [for electric vehicles], certainly at an Aston Martin price point, is not what we thought it was going to be two years ago," observed Aston Martin's Executive Chairman in April 2024.¹⁰⁴ As a result, Aston Martin postponed its first fully electric vehicle launch from 2025 to 2026 at the earliest. Similarly, Bentley CEO Frank-Steffan Walliser noted: "What we see in the luxury market right now [is that] people reject electric cars. They consider luxury cars only with the combustion engine."¹⁰⁵ The market for used luxury hybrid vehicles also suggested demand might be weaker than initially expected. When Ferrari launched its first production hybrid model, the SF90 Stradale, the resale values spiked by nearly one-third in 2022 due to COVID-induced supply disruptions.¹⁰⁶ Two years later, used SF90s were selling at a 20-25% discount.¹⁰⁷ Ferrari's second hybrid model, the 296 GTB, also experienced slight drops in resale value.

Range anxiety and charging infrastructure limitations remained a potential obstacle to wider adoption of electric vehicles. One report indicated that Europe would need nearly nine million charging points by 2030 to meet decarbonization targets—a figure that would require 1.2 million new chargers per year, eight times the historical installation rate.¹⁰⁸ Nearly two-thirds of charging points were concentrated in just three countries—the Netherlands, France, and Germany—leaving other countries underserved.¹⁰⁹ Similar infrastructure limitations existed in the U.S. and worldwide.

"Electric vehicles have rapidly evolved from being a curiosity to a disruptive force," concluded one auto industry analyst, "They're upending the relationship between car manufacturers and dealerships, redefining the future of automotive service, and creating customer experience challenges for the entire automotive industry."¹¹⁰

Ferrari accelerates into an uncertain future

In 2013, Ferrari launched its first hybrid vehicle—the LaFerrari supercar—manufacturing just 399 units, which sold for more than \$1 million each. The car was powered by a 6.2-liter V12 engine and an electric motor, which produced 950 horsepower and could accelerate from 0 to 60 mph in 2.4 seconds.¹¹¹ Seven years later, Ferrari launched the SF90 Stradale hybrid, followed in quick succession by a series of hybrid models—the SF90 Spider (2021), 296 GTB (2022), and 296 GTS (2023). Hybrid vehicles accounted for 2% of Ferrari's unit shipments in 2020, growing from 15% in 2021 to 51% in 2024.¹¹²

In a presentation to investors in 2022, Ferrari CEO Vigna announced the automaker's plan to launch its first all-electric model in 2025, as part of the company's broader ambition to reduce its net emissions of carbon dioxide and other greenhouse gases to zero.¹¹³ Ferrari targeted a portfolio that would be 55% hybrid, 40% internal combustion engine, and 5% fully electric by 2026. Vigna also said that by 2030, approximately 20% of Ferrari's new models would be ICE, 40% hybrid and 40% fully electric.¹¹⁴ When it came to the ultimate mix of cars Ferrari sold, however, the company maintained a "technology neutral" stance. Ferrari would offer a range of ICE, hybrid, and electric models, but customers would ultimately decide the mix of vehicles sold based on which models they chose to buy.

True to Enzo's belief that "the engine is the soul of the car," Ferrari planned to design, develop and handcraft its electric powertrains in Maranello, along with other core components critical in differentiating the technology and performance of its hybrid and electric cars. Ferrari promised its first electric vehicle would be rooted in the company's heritage and offer a genuine Ferrari experience across all dimensions, including sound and driving experience.

EVs require specialized components like batteries, electric motors, electric axles, software, and power electronics—areas where Ferrari historically had not built in-house expertise [**EV capability**]. Ferrari planned to source the battery cells externally to ensure the highest quality and latest technology and assemble the batteries in Maranello [**EV suppliers**]. The handcrafted battery modules would be integrated into the chassis of cars in a process focused on reducing weight, increasing performance and creating a unique driving experience.¹¹⁵ Unlike mass-market automakers, Ferrari faced challenges with its batteries such as managing higher temperatures in its supercars. Ferrari unveiled a state-of-the-art laboratory in 2024 dedicated to researching lithium battery cells, with plans to share its advancements with key suppliers including South Korean battery maker SK On.¹¹⁶

Ferrari opened a new "e-building" at its Maranello headquarters in 2024, where electric engines, inverters, and batteries would be designed, handcrafted, and assembled.¹¹⁷ The e-building also provided additional capacity for personalizing vehicles. Vigna explained the role this new building would play:

*The e-building is not just about "electric." It will allow us to put all the pieces of the puzzle together so that the entire research and development and manufacturing process is optimal. We are pursuing a multi-energy strategy, understanding where Ferrari fits into the landscape. Ferrari is faster moving than a traditional automotive company, but slower than a technology company. Ferrari is actually a unique combination of the two. Hi-tech touches the rational side of the brain, luxury speaks to the emotional and involves heritage and storytelling. We are in touch with both dimensions."*¹¹⁸

Even as Ferrari made strides in electric vehicles, the company had not chosen to enter Formula E, the electric vehicle counterpart to Formula 1. Since its inaugural season in 2014, Formula E had emerged as the premier racing series for electric vehicles, showcasing the fastest electric cars competing on leading racetracks around the world.¹¹⁹ While competitors like Maserati, Jaguar, McLaren, and Porsche had embraced Formula E, Ferrari stayed out. Rumors had circulated about discussions between Ferrari and Formula E as Ferrari worked on its e-building. Vigna, however, dismissed these speculations at the factory's launch: "We remain focused on Formula 1, because that's where we see a lot of traction. Formula E's...appeal is not so strong."¹²⁰

Pursuing a controlled growth strategy

Looking forward, Ferrari aspired to grow its leadership position without diluting the brand's exclusivity. Growth required new model introductions that appealed to current clients and a new generation of customers, but the transition to hybrid and electric vehicles also brought risks. New regions offered the potential for further growth but also held uncertainties. The company recognized that its controlled growth strategy entailed risk [F risks]:

We may encounter difficulties in entering and establishing ourselves in these markets, including in establishing new successful dealership networks and facing more significant competition from competitors that are already present in those regions....Our ability to create new cars and to sustain existing car models is affected by whether we can successfully anticipate and respond to consumer preferences and car trends...Our controlled growth strategy may expose us to new business risks that we may not have the expertise, capability or the systems to manage.¹²¹

Vigna pondered a series of questions about how best to pursue the growth strategy. Would the global luxury performance automotive industry be attractive in the future? What was the source of Ferrari's competitive advantage? What were the key threats to the company's ability to create and capture value in the future? Did Ferrari have moats to keep competitors at bay, and would they offer sufficient protection against future threats? Could a new entrant disrupt Ferrari from its leadership position? Most importantly, which were the biggest opportunities to grow profitably, and how should Ferrari pursue these growth opportunities?

¹ Benedetto Vigna quoted in Brian Kenny, “[Can Sustainability Drive Innovation at Ferrari?](#),” *HBS Working Knowledge*, 12 December 2023.

² Ferrari 2023 Annual Report, pages 28-29, 175.

³ Mingyu Guan et al., “[Five trends shaping tomorrow's luxury-car market](#),” *McKinsey Report*, July 8, 2022.

⁴ [Ferrari 2024 Annual Report](#), Ferrari, February 2025, Pgs. 50-51.

⁵ Mingyu Guan et al., “[Five trends shaping tomorrow's luxury-car market](#),” *McKinsey Report*, July 8, 2022.

⁶ <https://variety.com/2023/film/focus/aston-martin-james-bond-cannes-1235613291/> ; <https://www.amazon.com/Aston-Martin-Story-British-Icon/dp/1529410789>

⁷ <https://www.cnbc.com/2021/03/03/aston-martin-launches-amr21-f1-car-to-be-driven-by-vettel-and-stroll.html>

⁸ <https://www.cnn.com/2023/06/26/business/aston-martin-lucid/index.html> ; <https://www.reuters.com/business/autos-transportation/aston-martin-posts-smaller-than-expected-annual-loss-2024-02-28/>

⁹ Caesar, Ed. “[The World's Fastest Road Cars—and the People Who Drive Them](#).” *The New Yorker*, December 18, 2023.

¹⁰ <https://www.autonews.com/article/20130328/ANE/303299998/divorce-italian-style-no-but-a-design-change-at-ferrari/>

¹¹ <https://www.mahindra.com/blogs/mahindra-and-pininfarina-designing-a-better-future-together> ;

<https://autodesignmagazine.com/en/2018/04/mahindra-presenta-automobili/>

¹² <https://www.topgear.com/car-news/supercars/pininfarinias-pf0-supercar-will-have-nearly-2000bhp>

¹³ <https://www.roadandtrack.com/news/a44842541/pininfarina-b95/>

¹⁴ <https://newatlas.com/w-motors-lykan-hypersport/26119/>

¹⁵ https://www.motorauthority.com/news/1124555_w-motors-sells-five-fenyr-supersports-to-a-single-buyer

¹⁶ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg 50.

¹⁷ Robert Frank, “[The five secrets to Ferrari's success as a luxury brand](#),” *CNBC*, July 4, 2024.

¹⁸ Liam Bailey et al., “[The Wealth Report](#),” Knight Frank, 2024, page 4.

¹⁹ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg 50.

²⁰ Williams, R., “Enzo Ferrari: A Life”, *Yellow Jersey Press*, 2001, Pg. 18.

²¹ Williams, R., “Enzo Ferrari: A Life”, *Yellow Jersey Press*, 2001, Pg. 25.

²² “[The début of the Prancing Horse](#)”, The Official Ferrari Magazine, Apr 2, 2019.

-
- ²³ Williams, R., “Enzo Ferrari: A Life”, *Yellow Jersey Press*, 2001, Pg. 44.
- ²⁴ Higgins, Cóilín, “[Enzo Ferrari’s First Car: Auto Avio Costruzioni Tipo 815](#),” *ROSSOautomobili*, Accessed Nov 1, 2024.
- ²⁵ Williams, R., “Enzo Ferrari: A Life”, *Yellow Jersey Press*, 2001, Pg. 127.
- ²⁶ Snyder, John, “[Marchionne: all-electric Ferrari 'an obscene concept'](#)”, *Autoblog*, Mar 4, 2016.
- ²⁷ [Launch of 166 MM](#), *Ferrari*, Accessed Oct 25, 2024.
- ²⁸ [Launch of 166 MM](#), *Ferrari*, Accessed Oct 25, 2024.
- ²⁹ Barlow, Jason, “[The life of Enzo Ferrari](#)”, *GQ Magazine*, Nov 3, 2017.
- ³⁰ Dal Monte, Luca, “Enzo Ferrari: The Definitive Biography of an Icon”, *Mobius*, 2024, Pg. 342.
- ³¹ [F1 Origins | How Ferrari Grew Into The Most Famous And Successful Team In Formula 1 History](#), *YouTube*, Formula 1, Sep 9, 2020.
- ³² Brown, Ross, “[The best Ferrari ever built is the next one](#)”, *The Official Ferrari Magazine*, Feb 18, 2022.
- ³³ Williams, R., “Enzo Ferrari: A Life”, *Yellow Jersey Press*, 2001, Pg. 228-229.
- ³⁴ Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ³⁵ Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ³⁶ “[Ferrari signs the 2021-2025 Concorde Agreement](#)”, *Ferrari*, Aug, 18, 2020.
- ³⁷ Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ³⁸ Topham, Gwyn, “[Sergio Marchionne, 'saviour' of Fiat and Chrysler, dies aged 66](#)”, *The Guardian*, Jul 25, 2018.
- ³⁹ Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ⁴⁰ Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ⁴¹ <https://www.ferrari.com/en-EN/corporate/articles/ferrari-appoints-benedetto-vigna-as-chief-executive-officer-corp>
- ⁴² European Patent Office, “[Benedetto Vigna: Three-dimensional motion sensor](#),” European Inventor Award, 2010.
- ⁴³ Mark Cipolloni, “Hawes, Chris, “[F1 USA TV audience up 123.8% in 5 years](#),” *Autoracing1*, 1 August 2023.
- ⁴⁴ [F1's fanbase is shifting — and the 'Netflix effect' is only part of that](#)”, *CNBC*, Apr 30, 2024.
- ⁴⁵ Liberty Media, [2023 Investor Day Presentation](#), 9 November 2023, slide 11.
- ⁴⁶ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, page 271.
- ⁴⁷ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, pages 75-76.
- ⁴⁸ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, page 53
- ⁴⁹ Lai, Gladys , “[The wildest, most expensive celebrity car collections of all time](#)”, *GQ*, Aug 19, 2024.
- ⁵⁰ [Ferrari 2024 Annual Report](#), *Ferrari*, February 2025, Pg. 20.
- ⁵¹ Jonas, Adam et al, “Benedetto’s Secret.” Morgan Stanley Research Report, May 22, 2024, Pg. 2.
- ⁵² Jonas, Adam et al, “Benedetto’s Secret,” 2024, Pg. 2.
- ⁵³ [Ferrari Capital Markets Day 2022-2026 Strategic Plan](#), *Ferrari*, Jun 16, 2022.
- ⁵⁴ Tony Davis, “[Meet Ferrari’s Dr No](#),” *Drive*, 18 July 2017.
- ⁵⁵ Fleming, Charles, “[He owns a dozen Ferraris and has loads of cash. Why can’t he buy the elusive \\$2.2-million LaFerrari Aperta?](#)”, *Los Angeles Times*, June 15, 2017.
- ⁵⁶ Tony Davis, “[Meet Ferrari’s Dr No](#),” *Drive*, 18 July 2017.
- ⁵⁷ <https://www.wired.com/2014/10/herjavec-ferrari-laferrari/>
- ⁵⁸ <https://carbuzz.com/news/will-the-ferrari-laferrari-ever-depreciate/>
- ⁵⁹ Wilmot, Stephen. “The Wild Economics Behind Ferrari’s Domination of the Luxury Car Market.” *Wall Street Journal*, February 21, 2025. <https://www.wsj.com/articles/the-wild-economics-behind-ferraris-domination-of-the-luxury-car-market-8427df0>.
- ⁶⁰ Enrico Galliera quoted in Wilmot, 2025.
- ⁶¹ Enrico Galliera quoted in Wilmot, 2025.
- ⁶² Ferrari 2023 Annual Report, page 31.
- ⁶³ Simona Poli and Massimo Vanni, “[Ponte Vecchio affittato scoppia la polemica](#),” *la Repubblica*, 1 July 2013.
- ⁶⁴ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 318.
- ⁶⁵ Ferrari 2024 Annual Report, page 67.
- ⁶⁶ <https://ferraridealers.com/it-IT>
- ⁶⁷ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 65.
- ⁶⁸ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 65
- ⁶⁹ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 65.
- ⁷⁰ [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 68.
- ⁷¹ Fraser, Tom, “[Over 90 per cent of all Ferraris are still on the road: How Maranello supports older models](#)”, *Drive*, Oct 30, 2024.
- ⁷² [Ferrari 2023 Annual Report](#), *Ferrari*, February 2024, Pg. 68.

-
- ⁷³ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, page 70
- ⁷⁴ [Ferrari Classiche website](#), Accessed 12 October 2024.
- ⁷⁵ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 70.
- ⁷⁶ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 46.
- ⁷⁷ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, page 53.
- ⁷⁸ “[161-Mile 2017 Ferrari LaFerrari Aperta](#)”, Bring a Trailer.
- ⁷⁹ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, page 95.
- ⁸⁰ Ferrari 2023 Annual Report, page 29.
- ⁸¹ Narayan, Tom and Dadhania, Piral, “‘Emotion Driven by Technology’ – Takeaways from Ferrari’s E-Building Event”, RBC Capital Markets Research Report, June 24, 2024, page 7.
- ⁸² “[Ferrari Purosangue: Interview with Ferrari’s Enrico Galliera](#)”, *Automotive Daily*, Sept 14, 2022.
- ⁸³ Ferrari 2023 Annual Report, page 29.
- ⁸⁴ Data from Kristina’s Customization Tab—need to ask here which one.
- ⁸⁵ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 57.
- ⁸⁶ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 57.
- ⁸⁷ Data from Kristina’s Customization Tab—need to ask here which one.
- ⁸⁸ Ferrari, “[Ferrari Opens Tailor Made Center in New York City](#)”, Ferrari press release, 3 October 2019.
- ⁸⁹ Robert Frank, “[Inside Ferrari’s New York design lab where the super rich can customize \\$500,000 cars](#)”, *CNBC*, 15 October 2019.
- ⁹⁰ Ferrari 2023 Annual Report, page 108
- ⁹¹ Sanchez, Jet, “[Want a new Ferrari? This is how long you'll have to wait](#)”, *Driven Car Guide*, Aug 30, 2023.
- ⁹² Turconi, Stefano, Ferrari: Strategy in transition, *London Business School*, May 2019.
- ⁹³ Ross Brown, “[Hybrid power unleashed](#)”, *Ferrari Magazine*, 14 September 2021.
- ⁹⁴ Ross Brown, “[Hybrid power unleashed](#)”, *Ferrari Magazine*, 14 September 2021.
- ⁹⁵ Ferrari 2023 Annual Report, pages 61-62.
- ⁹⁶ [Ferrari 2024 Annual Report](#), Ferrari, February 2025, Pg. 63.
- ⁹⁷ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 62.
- ⁹⁸ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 61-63.
- ⁹⁹ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 61.
- ¹⁰⁰ [Ferrari 2023 Annual Report](#), Ferrari, February 2024, Pg. 26.
- ¹⁰¹ Wikipedia, “[Tesla Roadster \(first generation\)](#)”
- ¹⁰² Joseph B. White, “[The surge in electric cars](#)”, *The Wall Street Journal*, 16 December 2009.
- ¹⁰³ European Parliament, “[Fit for 55: zero CO2 emissions for new cars and vans in 2035](#)”, Press Release, 14 February 2023.
- ¹⁰⁴ [Aston Martin Adapts Electrification Strategy to Better Serve Discerning Customers](#), *Aston Martin Montreal News*, April 30, 2024.
- ¹⁰⁵ Berk, Brett, “[New Bentley CEO Talks about the Marque's Changed EV Strategy](#)”, *Car and Driver*, Sept 25, 2024.
- ¹⁰⁶ Bryant, Chris, “[\\$399,000 Ferrari Supercars Growl a Warning for EVs](#)”, *Bloomberg*, July 1, 2024.
- ¹⁰⁷ Bryant, Chris, “[\\$399,000 Ferrari Supercars Growl a Warning for EVs](#)”, *Bloomberg*, July 1, 2024.
- ¹⁰⁸ de Vries, Sigrid, “[Europe’s EV conundrum: more chargers, sustained market support, smarter policies](#)”, *ACEA*, May 31, 2024.
- ¹⁰⁹ de Vries, Sigrid, “[Europe’s EV conundrum: more chargers, sustained market support, smarter policies](#)”, *ACEA*, May 31, 2024.
- ¹¹⁰ Joe Fuca, “[EVs are disrupting the automotive industry—here’s how](#)”, *Automotive World*, 22 November 2022.
- ¹¹¹ Krajina, Nikolina, “[Ferrari LaFerrari: The Best Hybrid Supercar Ever?](#)”, *TopSpeed*, Oct 4, 2022.
- ¹¹² [Ferrari 2023 Annual Report](#), Ferrari, February 2024, page 55.
- ¹¹³ [Ferrari Capital Markets Day Sept 18, 2018](#), Ferrari, Pg. 18.
- ¹¹⁴ [Ferrari Capital Markets Day 2022-2026 Strategic Plan](#), Ferrari, Jun 16, 2022.
- ¹¹⁵ [Ferrari Capital Markets Day 2022-2026 Strategic Plan](#), Ferrari, Jun 16, 2022.
- ¹¹⁶ Lepido, Daniele, “[Ferrari opens battery lab in northern Italy as it gears up to produce its first fully electric supercar amidst heated EV competition with BYD and Lamborghini](#)”, *Fortune Europe*, Apr 9, 2024.
- ¹¹⁷ Barlow, Jason, “[The E-Future Starts Here](#)”, *The Official Ferrari Magazine*, Jun 21, 2024.
- ¹¹⁸ Barlow, Jason, “[The E-Future Starts Here](#)”, *The Official Ferrari Magazine*, Jun 21, 2024.
- ¹¹⁹ “[The history of Formula E’s cutting edge race cars from GEN1-2-3 to GEN3 Evo](#)”, *FIA Formula E*, Apr 28, 2024.
- ¹²⁰ Pattini, Vijay, “[Ferrari on Formula E: "the appeal is not so strong"](#)”, *BBC TopGear*, Jul 4, 2024.
- ¹²¹ Ferrari 2023 Annual Report, pages 29.