

Rivian's Horizontal Integration into the Farming Equipment Industry

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Introduction:

Our company, Rivian Automotive, Inc., was founded in 2009 and is an American electric vehicle (EV) manufacturer focused on adventure-oriented trucks and SUVs. Rivian has positioned itself within the EV market as a luxury option that aims to create sustainable vehicles. Among the first to dominate the EV truck space, Rivian was able to enter the market in a way that garnered a lot of attention from the public. Backed by investors, Rivian stood out as a substitute for Tesla vehicles and a strong alternative for truck and SUV drivers who wanted to switch to a more sustainable vehicle. In 2025, Rivian was considered one of the world's most sustainable companies (Corporate Knights, 2024). Beyond sustainability, Rivian's R1T model boasts a 94% satisfaction rate amongst their customers, standing above every other EV on the market. Through collecting data via car sensors, cameras, and systems, Rivian utilizes AI to increase customer satisfaction and safety. Because of the company's early success, Rivian has maintained a strong foothold within the EV market, preserving strong brand loyalty and a reputation for high-quality, rugged vehicles.

The key challenges that Rivian faces are scaling production efficiently while managing cash burn, along with differentiating itself in an increasingly crowded EV market. In 2024, Rivian sold 51,579 units (Rivian, 2024); however, their 2025 Q1 results show a 36% decrease from the year prior, while they are still producing more vehicles than in previous years (Rivian, 2025). Despite this decrease in sales, the company has remained optimistic in its ability to meet its revenue goals by the end of 2025. Another area for improvement for Rivian is that they source parts for their EV battery from both LG Energy Solutions and Samsung while manufacturing the battery pack independently. Relying on two separate suppliers to provide parts for their battery brings a lot of reliability, quality control, and bargaining power issues. Rivian has announced its

goal of vertically integrating to manufacture all parts of its battery, though they have not released any formal plans or dates. Historically, Rivian has focused on vertical integration as they now own the software and electrical architecture that control their vehicles, allowing them more control over cost, quality, and innovation.

Our proposed strategic initiative for Rivian is to enter the EV tractor industry. Despite being a very small portion of the tractor industry, electric tractors have seen a rise in popularity over the past years and are expected to only become more prominent as time goes on. Without any major company fully capturing the value of the EV tractor market, Rivian is well-positioned to leverage its brand and appropriate a significant share of the market's value. John Deere, the most used, trusted, and well-known tractor company, has announced plans to release a fully electric tractor by 2026, which raises issues for the Rivian initiative. While John Deere has dominated the tractor industry, they are less experienced with EVs, machine learning, and EV system management when compared to Rivian. If Rivian enters this blue ocean, it is likely to gain brand loyalty amongst farmers for several reasons: it's good marketing to promote that your crops are sourced sustainably, it is cheaper in the long run to use EVs, and system updates can be implemented into the tractors should there be any issues. Our plan to secure longevity within the tractor industry is to sign long-term contracts with farmers; this ensures they use Rivian tractors for several years. By targeting sustainability-first agricultural producers, we would place ourselves into a niche demographic that appears to be growing in popularity. Offering a carbon-neutral product that can charge through renewable resources such as air, wind, or solar, we would appeal to farmers who value environmentally sustainable practices. Another plan to ensure differentiation amongst competitors is by simply having a better product by raising the quality of the tractors. Equipping Rivian tractors with more advanced software systems that

include machine learning, self-driving, precision farming, and unique statistics would make companies like John Deere struggle to replicate. Moreover, a benefit of an EV is the regular updates provided to the systems to patch issues. In the case of tractors, providing newer and better updates incrementally to be consistently up to date with any applications that a competitor might offer.

In-Depth Analysis:

When analyzing an industry, Porter's Five Forces framework helps identify the many structural drivers of profitability. It becomes clear how beneficial it would be for Rivian to expand its EV knowledge into the farming market and specifically tractors when using Porter's Five Forces. This is especially true in this case due to the blue ocean that exists in that market and no current competitors.

The threat of new entrants into this market is relatively low. Entering this specific market requires significant expertise in designing and manufacturing electric vehicles, capital investment, and software integration capabilities. These barriers to entry are high, especially for smaller startups or traditional farming equipment companies without EV experience. Rivian has deep knowledge in electric vehicle systems and battery design that is well ahead of almost all potential entrants.

The bargaining power of suppliers is currently high. EV components such as lithium-ion batteries, semiconductors, and drive systems are in high demand and are sourced from a smaller pool of global suppliers. With all this, Rivian is uniquely positioned to mitigate this risk. Due to their strategic alliances with Ford and Amazon, Rivian provides scale advantages and negotiating leverage that other new entrants would lack. Entering this new sector early also enables Rivian to

establish key supplier relationships before industry-wide competition heats up with companies like Tesla.

When analyzing the bargaining power of buyers, the dynamic shifts in Rivian's favor. Farmers today have almost no access to commercially available electric tractors. They lack alternative options because of that which limits their negotiating leverage. Additionally, Rivian's value proposition, with lower lifetime maintenance and fuel costs, smart farming capabilities, and sustainability benefits, increases buyer willingness to pay (WTP) and makes price less of a concern.

The threat of substitutes in this market is also relatively low. Traditional diesel-powered tractors are not true substitutes in an environmental climate. EV tractors offer advantages in emissions, long-term cost, precision, and it is also stronger in brand alignment with customers who have an environmental focus.

Finally, industry rivalry is currently low. No major players—neither John Deere nor Tesla—have released a fully electric tractor. While John Deere is up and coming, they face significant challenges transitioning to electric powertrains and software integration. Tesla, meanwhile, has no public plans to enter the farming industry and could face credibility challenges in the farming segment. This lack of direct competition gives Rivian a temporary but critical first-mover advantage. Tesla, who would be considered a bigger and more powerful competitor than John Deere overall, would have a hard time overtaking Rivian in this market due to this first-move advantage. Rivian could make use of long-term contracts, which would make it harder for big companies to acquire a large market share.

The five forces altogether suggest that the electric tractor industry is highly attractive in its current form. While supplier power remains a concern, Rivian's position and timing allow it

to shape the competitive dynamics before others fully enter the space. By establishing supplier contracts and customer loyalty early, Rivian can set the standards for this new product category.

Value Chain Analysis

Porter's Five Forces is essential in highlighting this market opportunity. What it helps reveal is where profitability can be captured and where threats may arise. However, industry attractiveness alone does not guarantee success. Strategic positioning also requires an understanding of how a firm's internal operations contribute to value creation. This includes things such as its resources, processes, and relationships. In other words, Rivian must not only enter at the right time but also execute in the right way. It is important to turn to the Value Chain framework when evaluating if Rivian is capable and ready for a move like this. The Value Chain framework also helps uncover how the company can deliver unique and sustainable value within an emerging market.

Rivian's ability to deliver and sustain a competitive advantage depends on how it creates and captures value through its internal operations. The Value Chain framework gives us insight into how Rivian's capabilities can be translated into success in the farming equipment market. Rivian's inbound logistics are already supported by deep and long-lasting relationships with major partners like Amazon and Ford. These relationships help leverage to negotiate favorable supply terms and ensure reliable sourcing of EV components. These relationships also allow for economies of scale that smaller entrants cannot access.

In terms of operations, Rivian benefits a lot from its vertically integrated approach. Traditional automakers often rely heavily on third-party software and hardware. Rivian, on the other hand, builds and controls much of its technology stack. This control allows for greater

customization, better performance optimization, and faster innovation cycles. All of these components are very important when designing a vehicle for a new environment like agriculture.

Outbound logistics and service are another key component. Rivian has its mobile service fleet, predictive diagnostics platform, and direct-to-customer sales model, which are all well-suited for farming communities. Farmers often operate far from urban service centers, and the ability to service tractors on-site through software alerts or mobile units creates added value and trust for the company.

In marketing and sales, Rivian has an opportunity to define the EV tractor category itself. Rivian can make a clear brand message around sustainability in this market since it isn't a saturated consumer car market. They can also utilize their expertise in durability. Younger farmers, large co-ops, and agribusinesses seeking ESG alignment are ideal to adopt early for this kind of message. Rivian's service operations are already one of its strongest assets. The company's vehicles receive over-the-air software updates and use telematics to identify the service needs even before they surface. Extending this model to tractors would not only increase uptime and productivity for farmers, but it would also build customer loyalty and create a higher switching cost.

Supporting activities in the value chain further strengthen Rivian's position. Technology development is core to its identity, from advanced AI-assisted driving systems to IoT integration. In a farming context, these technologies could allow for autonomous plowing, precision seeding, or real-time soil monitoring. Procurement capabilities can be optimized by partnering with agricultural tech startups for sensors, mapping tools, and drone compatibility, which overall expands the total value delivered. Human resources and firm infrastructure also contribute a lot.

Rivian's culture of sustainable innovation, paired with its flexible and mission-driven structure, makes it more adaptive than legacy incumbents.

Company/Business Analysis:

Leveraging its foundation in consumer EV manufacturing, Rivian has the potential to expand into the agricultural sector by introducing an electric tractor. This move would not only align with its core value of sustainability but also capitalize on internal resources and capabilities that provide a strong foundation for this strategic pivot. However, a few critical gaps must be addressed to ensure long-term strategic success. In terms of image, Rivian's reputation as an innovative and sustainable brand caters to customers who are looking for an adventurous and high-tech vehicle. Beyond the product design itself, Rivian actively pursues corporate social responsibility initiatives, including investments in renewable energy, sustainable manufacturing, and community engagement programs. In the global top 100 sustainable companies (Corporate Knights, 2024), Rivian's commitment to environmental and social responsibility enhances customer trust and loyalty, which will be crucial when entering the agricultural sector in an uncertain future. As sustainable practices become increasingly tied to long-term profitability and regulatory compliance, Rivian's early investment in both CSR and ESG not only boosts brand equity but also makes it less vulnerable to legislative pressures and supply chain disruptions. This focus on sustainability also drives continuous innovation within the company, encouraging creative solutions and technological development. Guided by its vision for a sustainable future, Rivian pushes itself to rethink traditional approaches and pioneer technologies, while still upholding ESG principles. With increasing demand for sustainable solutions, Rivian has the

opportunity to offer a value proposition that helps reduce the industry's carbon footprint and meets needs in a largely untapped space. The farming industry, traditionally dependent on diesel-powered machinery, represents an underserved market where Rivian can introduce a compelling, eco-friendly alternative. By placing itself as a pioneer in sustainable farming technology, Rivian can set a new standard for how innovation can provide practical value while still being environmentally conscious.

Aside from being a first-mover, Rivian benefits from strong financial support and strategic partnerships. Backing from major stakeholders like Ford and Amazon sets the company up for long-term success, strengthening its capacity to scale production, invest in R&D, and optimize supply chain logistics. Thus, Rivian's production costs would be reduced while also streamlining the launch of the product itself. Furthermore, the company's established relationships with key suppliers could alleviate significant barriers to entry regarding capital costs and technological integration. With enhanced credibility and access to shared resources, its vertically integrated model could help control costs, quality, and reduce reliance on third-party manufacturers or unstable supply chains.

One of Rivian's most significant internal strengths lies in its extensive technological expertise, particularly in advanced battery systems and software integration. The company's proprietary battery technology enables efficient energy storage and long-lasting performance, making it a strong fit for the demands of intensive farming. More importantly, as a core capability, Rivian's in-house design gives it an edge, with seamlessly integrated features. Whether it is autonomy, real-time diagnostics, or overall connectivity, Rivian enhances both vehicle performance and overall user experience. Rather than simply offering a traditional tractor with electric power, Rivian has the potential to deliver a "smart tractor", or a "computer on

wheels” to elevate and modernize agricultural operations (Rivian, 2022). As a fusion between hardware and software, Rivian can leverage its advanced technology to enhance both the design and function of the hardware. The company’s over-the-air updates would allow farmers to receive software improvements without needing new hardware entirely, offering an added value for more price-sensitive consumers (Rivian, 2022). Because the company specializes in designing durable vehicles with off-road capabilities, Rivian would be prepared to serve the farming industry, where equipment must perform under challenging conditions. With the industry being more traditional, Rivian’s high-performance electric tractor could introduce unprecedented efficiency and easy use for farmers. Rivian’s autonomous features and real-time connectivity can offer a unique competitive advantage by introducing more efficient tools for agricultural productivity that may be missing. With these unique capabilities, Rivian creates added value that is difficult to copy or substitute. This would also open the door to future innovations and adaptations for tractors, whether it is autonomous plowing, crop monitoring, or soil metrics that could revolutionize farming. As a first-mover in the space, Rivian would not just be selling equipment, but could redefine the category itself.

Despite these advantages, some gaps must be addressed. Rivian currently lacks direct experience in agricultural machinery, including knowledge of regulations, requirements, and engineering needs specific to the farming industry. Additionally, its focus on premium consumer vehicles may need to be adjusted to meet the pricing and service expectations of more cost-sensitive buyers in the commercial, low-end of the market. To close these gaps, Rivian will need to build agricultural expertise, either through its employees, partnerships with ag-tech firms, or joint ventures with farming equipment manufacturers. To ensure long-term success, Rivian must also assess its current value chain to fit the needs of agricultural buyers. Aligning its

internal activities with strategic design, infrastructure, and customer engagement decisions will be critical to meet the specific demands of the farming industry.

Rivian's rugged design and commitment to sustainable innovation give it a unique competitive advantage, with the opportunity to redefine the future of agricultural machinery. Unlike traditional tractor manufacturers, Rivian offers a durable electric tractor equipped with advanced software and capabilities, combining sustainability with efficiency for farmers for the first time. By delivering a premium product that exceeds expectations in both performance and user experience, Rivian can lead the transformation of farming technology and set a new standard for innovation in agriculture.

Strategic Recommendations:

To establish a competitive foothold in the agricultural equipment industry, Rivian must implement a targeted differentiation strategy that leverages its core competencies in electric vehicle technology, software integration, and environmental branding. The recommendations outlined in this segment serve to position Rivian as a high-tech, sustainable alternative to legacy manufacturers like John Deere and potential entrants such as Tesla. These proposals aim to increase overall willingness to pay, create switching barriers, promote brand loyalty, and solidify Rivian's place in a growing market for sustainable farming solutions. In particular, Rivian should pursue a multi-pronged approach that encompasses: positioning its electric tractors as premium products; technology-forward alternatives; securing long-term purchase agreements with large farming operations and co-ops; forming strategic partnerships with agricultural technology (AgTech) firms and regional distributors; leveraging ESG and government incentive programs; and preempting competitor moves through early market control. All in all, these

recommendations form a cohesive strategy, rooted in course concepts, and are designed to achieve long-term value creation and sustained competitive advantage.

When horizontally integrating into the farming equipment industry, Rivian should pursue a differentiation strategy by positioning its electric tractors as premium, sustainable, high-tech alternatives to traditional diesel tractors. Rivian should aim to locate the value creation zone of this industry. The Value Creation Zone is the strategic space where a firm's unique resources and capabilities allow it to effectively deliver value that customers are willing to pay for, can be executed profitably, and in a way that competitors can't easily imitate. To achieve this, Rivian must find ways to lower operating costs over time, potentially through fuel and maintenance. Rivian should look into smart technological innovations to integrate into their electric tractors to properly align with the brand. Given the change in stakeholder value on environmental issues, Rivian must continue to put a heavy emphasis on environmental branding that appeals to sustainable agriculture, specifically large-scale farms seeking ESG metrics. Overall, Rivian must sustain the brand quality and make sure the integration properly aligns with the values of the brand.

The Resource-Based View (RBV) is an effective framework to accurately assess the company's core competencies. Rivian's most critical core competencies are its proprietary EV battery systems, rugged modular vehicle design, and vertically integrated software stack. This software capability, in particular, can be leveraged in a horizontal expansion into the agricultural industry, enabling the creation of intelligent, adaptive, durable electric tractors with advanced diagnostics and automation. This would, in turn, offer a clear basis for product differentiation and competitive advantage. While the traditional farming equipment industry is cost-focused, the niche for tech-forward, climate-smart equipment is growing, especially with younger farm

owners. With this said, putting a heavy emphasis on the investment in the software implementation and evolution aligns perfectly with the brand's association with innovation and environmentalism.

Rivian places a heavy emphasis on owning the electronics in its vehicles to control the full stack, including network architecture, software stack, and hardware. This environment provides Rivian with direct access to customer data, enabling the company to effectively analyze and adapt to evolving customer preferences. In the case of electric tractors, it is critical that Rivian's emphasis on premium, high-tech, and sustainable design carries over, as this forms the core of its differentiation strategy in the agricultural market.

Given Rivian's unique focus on data management, analytics, and maintaining a tech-forward brand image, the company is well-positioned to pursue a range of technology-driven innovation opportunities. To enter the agricultural sector effectively, it is crucial that Rivian forms strategic partnerships with agricultural technology firms and regional distributors. The market is currently dominated by incumbents such as John Deere and CNH Industrial, who hold significant scale and distribution advantages. By partnering with agri-tech providers, like Agworld and AGRIVI, Rivian can compete asymmetrically, leveraging greater innovation, flexibility, and data-driven capabilities to differentiate itself in a mature industry.

One strategic opportunity is for Rivian to develop proprietary agricultural software, in collaboration with partners, that allows for over-the-air (OTA) software updates to its electric tractors. By collecting real-time data from its users, Rivian can continuously analyze field performance and operating conditions to improve farming efficiency through software-driven enhancements. These updates could include optimized tractor settings, predictive maintenance alerts, or AI-powered recommendations, all enabled through machine learning, cloud computing,

and advanced diagnostics. This approach builds on Rivian's existing capabilities. As CEO RJ Scaringe noted, "70% of our service actions happen with a mobile service that uses the diagnostics platform built into the vehicle and allows us to be highly predictive with what the vehicles need" (Dignan, 2024). Extending this tech-forward, data-driven model to the agricultural market would serve as a key differentiator, allowing Rivian to compete asymmetrically with incumbents like John Deere and CNH Industrial by offering greater innovation, adaptability, and long-term value.

One key component to the success of Rivian's integration into the farming equipment industry is securing long-term purchase agreements with large farming operations and co-ops. To overcome high capital costs and build trust in a new industry, it is essential that Rivian forms long-term purchase agreements (LPAs) or subscription models with large farms and cooperatives. Long-term contracts are a very attractive option for Rivian due to the fact that they reduce perceived risk and stabilize early cash flow. Additionally, these contracts also create switching costs for competitors and, for this reason, are a key component of Rivian's future success. Securing LPAs with large-scale farmers will require effective marketing, skilled negotiation, and a deep economic understanding of the agricultural market to craft contracts that provide a compelling selling point and are both strategically and economically attractive. Rivian should seek the Strategic Sweet Spot of the industry through a proper assessment of the customer base. Rivian should aim to target progressive mid-to-large-sized farms that seek cost efficiency, emissions reduction, and tech integration. A long-term agreement coupled with smart features, like automatic software updates or predictive maintenance, adds ongoing value beyond the initial purchase. Rivian's experience with direct-to-consumer models can transfer to direct-to-farmer relationship building, a unique capability in a B2B-heavy industry.

The last key component to this strategic recommendation is for Rivian to pursue government and ESG-aligned incentive programs to raise the product attractiveness. One of the ESG incentive programs is the Clean Off-Road Equipment Voucher Incentive Project (CORE). This program offers vouchers for electric tractors and other heavy-duty equipment. Additionally, the USDA's Natural Resource Conservation Service has an Environmental Quality Incentives Program (EQIP), which can subsidize up to 50% of the cost of an electric tractor. These program subsidies help reduce supplier opportunity costs and increase net margins early in the product lifecycle. In addition, this helps position Rivian as both a manufacturer and an ESG value enabler, deepening relationships with clients and regulators. Lastly, this enhances the perception that Rivian's offering is not merely an electric tractor, but a strategic environmental asset designed to support the modernization and sustainability of today's farms.

In summary, Rivian's best defensive effort against both current competitors and future entrants lies in executing a compelling, highly focused differentiation strategy. By combining rugged electric vehicle design, proprietary software integration, and early partnerships with agricultural tech providers, Rivian can create a value proposition that is highly unique and difficult to replicate. This approach raises the barriers to entry by embedding Rivian deeply within the operational workflows of mid-sized farms and securing critical positions in the emerging smart-agriculture ecosystem. The goal for the future is clear: establish Rivian as the default provider of sustainable, intelligent farming equipment before new entrants can gain traction. Differentiation isn't just a growth and sustaining strategy, rather, it is a preemptive strike against future competition.

References

10 Best John Deere Alternatives & Competitors. (2025). Technologycounter.com.

<https://technologycounter.com/products/john-deere/alternatives?srsltid=AfmBOoqKfyz2Jixtlfu64kmpn0CaEUXvoCfPtI4fYAiUhANfUyFjb9yT>

Conservation Agriculture: What is the EQIP Program & How Can It Benefit Farmers? (2024, June 25). Monarchtractor.com.

<https://www.monarchtractor.com/blog/conservation-agriculture-equip-program-how-can-it-benefit-farmers>

DeLisa, C. (2023, June 19). DeSantis hits the brakes on direct-to-consumer auto sales. The Capitalist.

<https://thecapitolist.com/desantis-hits-the-brakes-on-direct-to-consumer-auto-sales/>

Dignan, L. (2024, July 31). What you can learn from Rivian's AI, data strategy. Constellation Research Inc.

<https://www.constellationr.com/blog-news/insights/what-you-can-learn-rivians-ai-data-strategy>

EVBoosters. (2024, October 11). Tesla's popularity soars in 2024, yet Rivian emerges as the best-rated EV. EVBoosters.

<https://evboosters.com/ev-charging-news/teslas-popularity-soars-in->

Jenkins, L. M. (2021, March 22). As EV Startups Enter the Market, They Say Dealerships -- and a Decades-Old Legal Structure -- Stand in Their Way. Morning Consult Pro.

<https://pro.morningconsult.com/articles/electric-vehicles-direct-sales-dealerships-evs>

Johnson, P. (2025, April 30). Rivian (RIVN) quietly built an EV battery supply to brace for Trump's tariffs. Electrek.

<https://electrek.co/2025/04/30/rivian-rivn-built-ev-battery-supply-trumps-tariffs/>

McCarthy, S. (2024). The Global 100 list: How the world's most sustainable corporations are driving the green transition. Corporate Knights.

<https://www.corporateknights.com/rankings/global-100-rankings/>

Ridoutt, M. (2024, August 15). Electrify your farm! Financial incentives to purchase electric equipment - CAFF. Community Alliance with Family Farmers.

<https://caff.org/electrify-your-farm-open-programs-to-purchase-electric-equipment/>

Rivian. (2022). Technology with headroom. Rivian Stories.

<https://stories.rivian.com/vehicle-technology-innovation>

Rivian Releases First Quarter 2025 Financial Results - Newsroom - Rivian. (2025). Rivian.com.

<https://rivian.com/newsroom/article/rivian-releases-first-quarter-2025-financial-results>

Rivian Releases Q4 2024 Production and Delivery Figures - Newsroom - Rivian. (2024).

Rivian.com.

https://rivian.com/newsroom/article/rivian-releases-q4-2024-production-and-delivery-figures?os=iosno_journeys%3Dtrue#