Volkswagen Group and AI Case Study Analysis

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Identification of Business Issue

Volkswagen released its Strategy 2025 plan with the goal of turning the company into something more than what it had been, which for most of its history was a traditional vehicle manufacturer built around combustion engines, brand reputation, and industrial strength. The plan includes electric vehicles, artificial intelligence systems, mobility services, and autonomous driving technologies, but the plan itself does not automatically address the reality that the organization was not originally designed to support any of those things at scale or with the kind of integration that modern systems require. When a company is this large, with as many departments and regional operations as Volkswagen, changing direction is not just about investing in the right technologies or writing new mission statements. It involves adjusting the way people work, the way departments interact, the systems that move information across the organization, and the assumptions that shape daily decisions, all of which are harder to change than a product lineup.

The issue Volkswagen faces is not centered on a lack of innovation, since the company has already committed to large-scale research and development spending and continues to grow its presence in electric vehicle design. The problem is that existing structures, including supply chains, production lines, and internal governance models, were created in a different context, and now those same structures are being asked to operate under a new set of expectations without first being restructured to meet them. It creates a situation where the company has to manage current operations that are still profitable and still functional while also building something else entirely inside of the same system, and it is not always clear how the two sides of the business can be aligned without causing friction or inefficiency during the transition period.

The emissions scandal that damaged Volkswagen's reputation has also introduced a layer of complexity into how the company approaches this transformation, since decisions are no longer evaluated purely on their technical or financial value but also on how they are perceived by regulators, partners, and the public. Rebuilding trust in a context where new technology is involved requires not just transparency but coordination across teams that may not have experience working together. Artificial intelligence introduces new challenges in areas like data handling, ethics, and system accountability, and these are challenges that depend as much on organizational culture as they do on technical design.

Industry and Competitive Analysis

Automakers used to compete by building vehicles that lasted longer, drove better, and fit into the structure of ownership that most people accepted as normal, but over time that structure has started to change in ways that don't always feel like a direct replacement of old systems with new ones. Electric vehicles didn't arrive all at once, and neither did mobility platforms or autonomous features, but they have each started to influence how companies think about their future role in the market. Volkswagen is trying to adjust to these shifts, not just by releasing new products, but by changing the shape of the organization that supports them.

The use of artificial intelligence across Volkswagen's operations isn't something that can be added in one place and expected to work everywhere else automatically, since most of the company's internal systems were built at different times and for different purposes, and a lot of those systems don't communicate in ways that make integration easy. Some departments have more modern tools than others, and the history of mergers, brand expansions, and regional operations means there isn’t always a clear line between who owns what part of a process, which creates gaps when trying to introduce something new. Even when the plan is clear, the work of connecting one system to another can take longer than expected, especially when each part of the company is moving at its own pace. The sub-brands that fall under Volkswagen don’t all follow the same standards, and although that helps the company reach different markets, it also means that technology developed for one brand won’t always fit with another without needing to be reworked, and sometimes the rework ends up being just as complicated as starting from scratch.

Some newer companies started with software as their foundation, and they’ve been able to design vehicles and services around code instead of adapting existing production models. Others, including long-established manufacturers, are trying to find a middle ground between protecting the parts of their business that still work and experimenting with new approaches that might eventually replace them. Volkswagen operates with a larger footprint than many of these companies, and that footprint includes factories, partnerships, regulatory responsibilities, and long-standing consumer relationships that have to be considered every time a change is introduced.

Stakeholder Groups

The people who work at Volkswagen, meaning the employees across its factories, its engineering teams, and its administrative areas, are already starting to see parts of their jobs shift toward processes that depend more heavily on automation and artificial intelligence, although in most cases those changes are happening in pieces, and not every employee has the same access to information about what those changes mean. A person working on a production line might hear about automation long before they see it, and the effect of that delay is often uncertainty, which can grow over time if communication isn’t clear. In other departments, especially ones tied to data or new product development, the transition is already part of their daily work, which creates a difference in perspective that leadership needs to manage. Some roles will stay mostly intact while others may be replaced entirely. And some will continue to exist in name but not in function, which tends to happen when new tools are introduced but no one explains what is still expected.

Customers aren’t directly involved in the internal structure of the company, but they are still influenced by how quickly or unevenly the transformation happens. The customer who walks into a dealership looking for an electric option with a long battery life and seamless integration with home charging or smart navigation systems will notice whether those features feel reliable and consistent, and if they aren’t, they may not connect the issue to internal coordination problems inside Volkswagen, but they’ll still respond by choosing something else. Others may care less about technology and more about cost or maintenance support, which means the company has to plan for different types of needs while building systems that weren’t designed for flexibility.

The investors and shareholders paying attention to Volkswagen’s strategy are usually more focused on numbers than process. What matters most to this group tends to be whether the transformation leads to results that are measurable in terms of revenue, margins, or market growth, and if not, they may start asking why a company with so many resources is not performing at the level expected. This creates pressure on management to show progress, even if the internal systems are still being rebuilt. If decisions are made too quickly to satisfy quarterly reports, the deeper goals of the strategy can be pushed aside in favor of short-term moves that keep the numbers in line, and when that happens, the long-term picture can become harder to hold onto.

Governments and regulators are watching Volkswagen for different reasons. The emissions scandal has changed the company’s relationship with public agencies in ways that still matter, especially when it comes to new product approvals, environmental compliance, and data security. If Volkswagen moves too fast or presents systems that aren’t fully understood, regulators may respond by slowing things down or asking for changes that take time to resolve.

Suppliers and technical partners are often expected to keep pace with Volkswagen’s internal changes without being given full access to what is changing or why. If new systems require different inputs, or if development timelines are shortened to meet new product targets, suppliers may be asked to deliver under conditions that do not match their capacity. This creates breakdowns in coordination, especially when communication is limited to surface-level deadlines or part specifications.

Analysis of Alternatives

Alternative 1: Create a Separate Internal Division for AI and Innovation Projects

This option involves building a new group inside Volkswagen that is not embedded in any existing brand or department, but instead operates as a separate unit focused entirely on AI development, data systems, and experimental tools for new mobility platforms. It would report to a small number of senior executives and would be staffed with engineers, analysts, and developers whose work would not be tied to current vehicle programs or production cycles.

The people who work in this new division would likely come from outside the company or from other teams that are already involved in digital projects. Existing employees might see the division as a signal that innovation is being centralized elsewhere, and they may feel disconnected from the transformation. For customers, there may not be any immediate change unless the new unit produces something that can be implemented quickly and publicly, which depends on coordination that doesn’t always exist between experimental teams and operational teams. Leadership might support the move if it can be justified through efficiency or speed, but over time, this structure can become disconnected from the rest of the organization. Suppliers may also find it harder to keep up if the division makes decisions that do not follow normal development timelines or part specifications.

Alternative 2: Rely on External Partnerships to Build AI and Mobility Platforms

Instead of trying to build everything internally, Volkswagen could decide to bring in outside companies that already work in areas like artificial intelligence, platform design, and systems integration, not because that option is more advanced or more strategic on its own, but because the company doesn’t currently have the same level of experience or available capacity to develop those systems while still managing everything else it’s responsible for.

This option would change the role of Volkswagen’s employees, since they would no longer be leading the development process for major new systems, but instead managing relationships with contractors or integration specialists. That change can be hard to adjust to, especially for workers who joined the company to design and build products directly. Some customers might start to see new features show up faster, especially if the outside companies are already working on similar systems for other clients, but the speed of development doesn’t guarantee that those systems will fit with how Volkswagen’s vehicles are designed or how the software is supposed to behave once it’s installed. Investors might accept the arrangement if it lowers up-front costs and avoids having to hire large internal teams, but there’s also the risk that the company loses track of what it owns and what it controls. Regulators, especially in regions where data use and vehicle safety laws are stricter, might ask questions that don’t have easy answers, because when systems are written and managed by people outside the company, the documentation and the testing process can look different, and that difference can turn into a problem once the product is on the road.

Alternative 3: Prioritize AI Integration Inside Manufacturing and Supply Chain Operations

Instead of leading with new customer features or external projects, Volkswagen could start by integrating artificial intelligence into internal systems that already exist, such as logistics management, production planning, and quality control. These systems are critical to the company’s daily function, and improving them would support every brand and region without needing to restructure product lines or marketing strategies.

Employees in these areas may be more open to new tools if they are introduced through direct support and training, especially if the tools are clearly designed to help rather than replace. These changes would not affect customers right away, but over time, better supply chain performance and factory consistency would likely improve delivery schedules, reduce recalls, and support more reliable service experiences. Investors might see slower returns at first, but they would also see fewer disruptions, which often matters more in the long term. Regulators would likely support improvements in traceability and reporting, especially if AI systems help ensure compliance in manufacturing standards. Suppliers would be directly involved in this process, and while they might face new technical requirements, they would also benefit from more predictable schedules and clearer expectations, which usually leads to better coordination.

Recommendation and Justification

Of the options available, the one that makes the most sense for Volkswagen right now is the one that focuses on changing how the company runs internally, specifically in its factories and supply systems, where artificial intelligence can be introduced without forcing the organization to reorganize itself around something it doesn't fully understand yet. There is less attention placed on these areas in public, but they are the parts of the company that determine whether anything else can move forward without breaking or stalling halfway. If production isn't stable, then it doesn't matter how advanced the software is or how bold the announcements are, because nothing that was promised will actually be delivered in the form it was supposed to take.

Using artificial intelligence in manufacturing does not guarantee success, but it does give Volkswagen a way to make progress without depending on changes that need a hundred people to agree before one line of code can be written. This kind of work touches scheduling systems, inventory databases, inspection tools, and forecasting models, all of which are things that already exist, and the idea is not to replace them overnight but to start adding layers that can improve how they function over time. Most of these systems are not connected across departments, and fixing that will take longer than expected, but if the company can begin where the risk is lower and the outcomes are easier to measure, then the larger parts of the transformation will have a place to land when they're ready.

The other two options might look better on the surface, especially to people looking for faster results or bigger headlines. Building a separate division dedicated to AI and innovation gives the impression that something serious is being done, but when a group is pulled out of the structure and given different rules, it usually ends up working in isolation, and once that happens, the work becomes harder to share or apply at scale. The organization becomes split between those who are changing and those who are waiting, and that split tends to grow over time until the two sides are no longer working toward the same thing.

The choice to rely on outside partners follows a similar pattern. It works well at first, especially if the goal is to move quickly into areas where Volkswagen doesn’t have much experience, but speed is not the same as control, and if the company becomes dependent on systems it didn’t build, it may not be able to adapt those systems later when regulations shift or customer expectations change. Once a piece of infrastructure is written into the company by someone else, changing it means rewriting more than just the code.

What makes the factory-first approach different is that it doesn’t try to prove anything to the outside world right away. It doesn’t solve the whole problem, and it doesn’t make the company innovative just by saying so. But it gives Volkswagen a way to learn how to work differently, and it does that inside the part of the business where consistency, accuracy, and timing already matter, which is exactly the kind of environment where artificial intelligence has the most room to be useful without becoming the center of attention too soon.