Harley Davidson has been one of the leading motorcycle manufacturers for past decades. With any great company a need for engineering is necessary to progress the company’s needs. In order to maintain its status as a leading motorcycle manufacture, Harley Davidson needed to reinvent its classic motorcycle. By reinventing its classic motorcycle, new boundaries of speed and style were needed to stay ahead of the game.

The problem with Harley Davidson’s classic motorcycles was that they did not appeal to younger generations. Harley Davidson needed to balance art and science to keep veteran riders happy, but gain a reputation with new customers favoring speed and style. In order to make the best product Harley Davidson needed to see what made other companies so successful. By compiling research it was found that the speed of dragsters and the style of speed bikes were very popular. Harley Davidson needed to mimic these ideas, yet keep its on identity. Now that the need was recognized, it was time for Harley Davidson creates its own masterpiece.

A team was assembled at Harley to design the bike from ground up. In order to make a higher performance bike, the team recognized certain requirements would need to be met. First and foremost, a new liquid cooled engine would be needed. This would allow for the wanted speed. Considering the large engine, a new frame was needed to structurally support the bike, yet keep it stylish. New ideas were constantly developed throughout the project until the final product was produced. All ideas created were not considered acceptable for the bike. Compromise was needed to keep the project
successful. While designers wanted regular steal for the frame they allowed engineers to replace it with lighter aluminum. On the other hand, engineers accepted the demands of the design team, and made the radiator appealing to the eye. Though these problems were significant, the real problem was the engine. In order to keep the bike compact certain engines would not fit. Harley wanted a classic V-Twin, but space would not allow for an engine of that magnitude. To resolve this issue, Harley approached Porsche, in hopes of developing a new engine. They needed an engine with high power, endurance, yet compact to fit into the small bikes frame. The final product produced was the VR-1000. It was time for the project to cultivate into the fabrication and testing of prototypes.

The bike came a long way from the original. Though problems still arose, on the first test, the bike broke. Again, changes were needed, and more prototypes were developed. Success was imminent when a prototype finally reached the landmark goal of five hundred hours of continuous riding. Prototypes were then tested for overheating, road endurance, and system failure. The final product was finally complete, and ready for production by Harley Davidson.

Throughout the process, communication was obviously important. Engineers needed to constantly communicate with designers, trying to resolve problems that arose during the design processes. After six years of work, the V-Rod was finally released. It was to become a classic and favorite among all riders, old and new alike.