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Within the automotive industry there are many <sup>smaller</sup> branches ~~that~~ such as the repair industry that can find it difficult in transitioning with the ~~rest~~ rest of the automotive world with the new technologies being used in vehicle design and manufacturing.

These challenges are attempting to be ~~addressed~~ addressed to ensure a sustainable practice to continue to operate as a <sup>business</sup> ~~business~~.

With many of the world's leading manufacturers of Nissan, Toyota, BMW, Mercedes and many more progressing with the times to use technology to create groundbreaking designs when manufacturing ~~a~~ new models in their production line. With the use of exotic materials such as carbon fibre being more commonly used in sports cars the businesses within the automotive repair industry are attempting to reply with the technology by purchasing new machinery, technology and materials to accommodate for the changes.

The significant changes in technology has greatly affected how machinery now manufactures vehicles with new designs resulting in more sophisticated construction of chassis or external body aesthetics such as bumpers and so on. With this new technology a large repair job can be very difficult for a ~~basic~~ repair business to cope with ~~the~~ to get the job correct and to ensure that they are following the correct practices.

The sophisticated new parts may be unconventional however the repair businesses are addressing the challenge by purchasing new equipment such as electronic engine computers that are now essential when attempting to repair a modern car as the computer and technology is so advanced. By purchasing these new devices and machines the businesses are able to work on the vehicles and to be within the guidelines of sustainable practice.

Materials in the entire automotive industry <sup>are</sup> ~~is~~ becoming much more advanced and very expensive especially to repair. Materials such as aluminium and carbon fibre are many used by manufacturers in this day and age for their characteristics of increased strength and of their lightweight nature results in a stronger, stiffer body that is also lighter in weight. However in the result of an accident it is difficult for repair business to effectively repair the damage. To address the issue, businesses can and are employing specialists in the area of the materials as compared to ordinary steel materials, aluminium and carbon fiber have very different characteristics in the way they can be welded or re applied to a vehicle. As carbon fiber is not very common in sedans and popular everyday cars, there will be the occasional sports car that needs repairing and unless there is a certified carbon fiber repair person, many repair business do not have any people certified to work on and to repair it, which can

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result in a loss of business for the workshop as they are not addressing their challenges in the industry.

In the 21st century the design and techniques in which cars are built can be difficult to repair, and in some instances business may not be allowed to operate on a car as they may breach practice or work laws for repair jobs. Businesses within the repair industry are faced with this challenge and find it difficult to address it. However business can address it, for example on a repair job a certain part or aspect of the car can not be repaired at the premises or the building, therefore the business has the option to outsource the repair or certain aspects to another company that is licensed to do so and is within the practice code. Outsourcing can save costs as the business may not need to purchase new machinery, tools or to employ specialist workers as the outsourced company can use the correct repair techniques to fix the issue properly to be sure of any possible fines and to avoid breaching.

Business within the automotive repair industry are seeking ways to address the challenges presented to them in the form of new technologies, materials, repair techniques and new laws and regulations regarding <sup>work</sup> practices. These issues are resulting in loss of business however with introduction of new <sup>having addressed</sup> equipment and machinery the repair business can continue to operate by <sup>the</sup> challenges.

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