

CGMA AUGUST 2017 EXAM ANSWERS

Variant 1

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SECTION 1

Part 1

Strategic options

The most significant impact on strategic options may be that helping Grant Motors develop its own autonomous system could mean that AutoAuto will lose the opportunity to sell to it in the future. AutoAuto hopes to develop its own autonomous system in the long term, but Grant Motors will be unlikely to buy it if it has its own product that has already been proven. It is also possible that Grant Motors will be able to adapt a successful autonomous vehicle system into a driverless system for its more conventional cars. There are relatively few motor manufacturers and so the loss of even one could be a major blow to AutoAuto.

There could be concerns about the ownership of intellectual property developed in collaboration with Grant Motors and it may be difficult to ensure that AutoAuto can fully exploit its own designs in the future. Clearly, AutoAuto's engineers will have worked on the driverless vehicle system and some of their knowledge and experience will find its way into the Grant Motors product. Any subsequent development of AutoAuto's product line will be open to claims by Grant Motors that its technology has been used in breach of this contract and that could lead to costly legal action. The alternative would be the development of a completely new product that was kept entirely separate from the Grant Motors project, which could lead to delays and substantial costs.

These concerns may not be particularly significant because Grant Motors will almost certainly proceed with this project whether AutoAuto participates or not. If Grant Motors has the ability and resources to develop a competing product then there is little reason for AutoAuto to turn down the opportunity to generate revenue and knowledge through supporting the project. There is already a history of AutoAuto collaborating with vehicle manufacturers to the extent of sharing technical drawings. The threats have clearly been addressed in the past and have been resolved.

This collaboration would create the option of developing a second generation of autonomous vehicle technology, changing the planning horizon for AutoAuto's own system. The engineers who are not tasked to work on Grant Motors' project could be told to start planning for the system that will eventually replace the product that Grant Motors plans to launch. Participation in the project will enable AutoAuto to be aware of the strengths and weaknesses of the initial attempt to create an autonomous vehicle, while generating consultancy revenue. That will free the remaining staff from the burden of developing the first product to market, so they can look towards the development of a newer and better version.

Part 2

Share price

The stock market is constantly sifting through the information that is available about the company, with a view to predicting future cash flows. The fact that AutoAuto will be subject to a non-disclosure agreement means that we cannot release the news that we are working on this product in collaboration with Grant Motors. It may be that Grant Motors will release a limited amount of information in order to keep its own shareholders informed. If it names AutoAuto in the process then our share price may react, hopefully favourably. The impact will depend on the market's perceptions of future cash flows or risks to AutoAuto.

In the absence of an announcement or leak from either company, it is unlikely that the market will respond in the short to medium term. The next year end is not until 30 June 2018 and the financial statements will probably not be published until after that. We are unlikely to offer a great deal of disclosure in our financial statements in terms of this agreement and so reported earnings may not change significantly. The ongoing costs associated with research are unlikely to be affected by this contract and so the impact on profits may be minimal.

This project is likely to divert resources away from AutoAuto's own driverless vehicle project. Any delays in that will be unwelcome news that could reduce the share price. AutoAuto would not normally publish details about progress and so the market may not become aware that the launch has been delayed until some publicly observable deadlines have been missed. If Grant Motors makes an announcement then there may be direct questions about the implications for AutoAuto's own research and that could have an impact on the share price.

Any signals that AutoAuto is engaged in a new venture may be picked up by the business press, who will make it their business to find out as much as they can about the work that AutoAuto is undertaking in order to generate this revenue. Newspaper articles may offer some conjecture as to the source of this revenue and that may have an impact on the share price. Clearly, any uncertainty about the changes to the business model is more likely to harm the share price because the market would expect AutoAuto to release positive and withhold negative news. AutoAuto may also come under pressure to release some information on a highly confidential basis to analysts who specialise in technology shares. While that may not be leaked further, strong form efficiency may mean that the news is incorporated into the share price if these analysts make buy or sell recommendations, even if they are not attributed to this project.

SECTION 2

Part 1

Currency risks

The most immediate currency risk is the economic risk that will arise from any movement in the W\$. If the W\$ strengthens then it will be more expensive for Grant Motors' foreign customers to import these vehicles, which could affect demand and therefore reduce the number of W\$8,000 licence payments. This risk will be mitigated by the fact that these autonomous vehicles are a unique product and so anyone wishing to buy an autonomous taxi or delivery van may have no choice but to buy from Grant Motors. That said, these vehicles are being sold as business assets and so it may be uneconomic to replace conventional vehicles if the cost of autonomous vehicles changes.

Measuring economic risk will be difficult because there is no experience of selling autonomous vehicles in order to determine whether demand is elastic. If the savings associated with replacing drivers are significant then demand may be quite robust unless the W\$ appreciates substantially. Furthermore, any volatility in the currency may affect the timing or sales rather than their overall volume. If the W\$ is strong then potential buyers may defer ordering rather than switching to an alternative product.

There will also be a transaction risk in terms of the impact of the rate between the W\$ and US\$ and its effect on the licence fee. We are hoping to generate fees in excess of W\$8,000 x 12,000 = W\$96m every year and so even a fairly small movement in the rate could affect these receipts quite significantly. We may be able to estimate this risk by considering the historical volatility of the exchange rate and by using expected movements as implied by derivative prices. The estimate will be complicated by the fact that the two risks will tend to cancel out because a strengthening of the W\$ may depress sales, but it will increase the value of each licence payment when expressed in US\$.

The risks are further complicated by the fact that AutoAuto is already selling its products to the worldwide motor industry, presumably including Grant Motors. There may be very little overall impact on the currency risks already being borne by AutoAuto as a result of this project. For example, if AutoAuto imports components from Westland then there will be a natural hedging effect if it now combines that with revenues expressed in the same currency. This impact may be extremely difficult to measure because AutoAuto sells to major manufacturers around the world and so losses in one market will already be offset against gains in another.

Part 2

Social and environmental report

AutoAuto should be prepared for this technology to become a highly contentious issue because the affected parties are highly visible. Many members of the public travel by taxi and most receive goods from delivery drivers. The drivers who face redundancy may protest by causing traffic jams in city centres to draw attention to their concerns. They may also attempt to undermine confidence in the safety and reliability of the system because it is difficult to imagine that there will never be an accident involving an autonomous vehicle.

AutoAuto should pre-empt the adverse publicity by building up the case for autonomous vehicles in the social and environmental report before the product is actually launched. For example, the ability to operate without a driver should reduce costs and that may mean that customers can travel more cheaply or pay less for their online purchases. It may also be safer for road users and for passengers because, unlike a human driver, the vehicle's on-board systems will not be prone to distraction or to break speed limits in order to earn more fares or meet deadlines. There may also be a reduction in carbon emissions and fuel

consumption if the autonomous system drives more smoothly and efficiently than a human driver.

The GRI G4 Guidelines offer a number of principles that are relevant. Stakeholder inclusiveness requires that AutoAuto should at least acknowledge the impact of its product on the drivers who will lose their jobs. The principle of balance suggests that the report should not present the new product as being wholly beneficial to every member of society. There may, however, be offsetting benefits, such as the creation of new jobs in the manufacture of autonomous vehicles and the associated products. It may also be possible to argue that the introduction of this technology will be phased in gradually because it will be too expensive to replace whole fleets of taxis and delivery vans and so many affected employees will have the opportunity to find alternative employment.

The report should cover the economic issues as well as the social and environmental. The new product will generate financial benefits for AutoAuto's shareholders, which is the primary reason for their investment in the company. All such economic benefits are generated at the possible expense of employees or society in general. The report should avoid becoming unduly defensive, but new technologies will often have the potential to reduce employment opportunities.

SECTION 3

Part 1

Big Data analytics

At present, AutoAuto is already gathering large volumes of data about traffic flows and this could be studied further to extract information that will have value to taxi companies. For example, knowing which roads are likely to be slow-moving at particular times of day can be used to plan more efficient routes. Big Data can also deal with velocity in data. For example, directing drivers to quieter roads could cause congestion there and so it may become quicker to revert to the main roads. This information is also objective and factual because it draws upon accurate feedback from the satellite navigation systems.

This proposal adds variety to the data set, enabling Big Data to uncover patterns that might be impossible to derive in any other way. There is only one model of autonomous taxi and so the performance figures in terms of fuel consumption should be comparable. That should make it possible for Big Data to establish whether it costs more to operate a taxi if it is sent on a slightly longer route where it can drive at a more consistent speed. The fact that engine performance can be managed during journeys will also enable AutoAuto to gather information that could be used to improve fuel efficiency and reliability in the future.

Part 2

Maximise revenue

Ideally, AutoAuto will retain control over this data gathering and will be able to avoid sharing it with Grant Motors. It may be that it could reach an agreement over the ways in which different analytics will be used. For example, Grant Motors would have an obvious interest in the ability to gather data about the effect of different engine settings on fuel economy, especially if that can be linked to other factors such as traffic conditions, possibly local weather and so on. AutoAuto might offer to give Grant Motors full access to that aspect of the data in return for agreeing to include the other data collecting facilities in the taxi's operating software. Even that would create revenue for AutoAuto because it should, hopefully, enable more efficient vehicles to be designed so that the licence fees from the sale of autonomous cars increases.

AutoAuto could develop a service for assisting taxi companies, which it might sell on a subscription basis. This might identify opportunities such as estimating the profitability of different fares. For example, Big Data techniques might enable a taxi company to position its cars to maximise revenue. It may be that there is high demand in the city centre, but traffic is too slow to generate much income and so cars might be located to serve customers located in quieter areas at busy times of day. It might also be possible to identify regular, high-value customers and to ensure that a car is on hand to collect such individuals without them having to wait.

Part 3

Ethical issues

The most significant problem is that AutoAuto is collecting some quite private information about passengers. This could be deemed as a lack of integrity on the part of both AutoAuto and the taxi companies. The risk could be mitigated if AutoAuto took great care not to identify the passenger in any way, or to use the data collected for any other purpose. For example, it would be unacceptable to send passengers text messages advertising special offers associated with their destinations because this could pose problems if their phones were seen by, say, an employer.

There could be a question over professional competence and due care if this system meant that some taxi companies did not offer full coverage. For example, it may be that a taxi company is unwilling to make a journey to the airport at a busy time if it would be more profitable to use the car to make several short journeys instead. Failing to offer a comprehensive service could put the taxi company in breach of the rules governing the granting of a taxi licence. It could also prove inconvenient for passengers who are relying on the service, only to be let down.

Part 4

Non-executives

It would be desirable to involve the whole Board, with non-executives playing a part in the decision. The executive directors may be under pressure to accept the more profitable outcome because of profit-related pay or simply the fact that their careers are at stake. Non-executives can clearly be a little more objective because they have no particular reason to bias the decision. The non-executives will, hopefully, have a breadth of experience and a maturity that can help them to reach the correct decision.

It is probably unfair and unacceptable to let the non-executives arrive at the final decision. Giving the non-executives decision making powers would compromise the independence that is a major element of their value. The non-executives are also less involved in ongoing strategic management and may not be as well informed as the executive directors. Finally, the non-executives may be unduly defensive in any decisions that they are permitted to make because they have reputations to protect.