

## **CGMAX MANAGEMENT CASE STUDY MAY 2019 EXAM** **ANSWERS**

### **Variant 4**

#### **Section 1**

##### **Consistency with our current vision and mission**

Linus is partly right to be concerned about whether we will remain true to our vision in that the houses build for the Corvolan government's programme will be standard in design, rather than state of the art. Also, whilst we will need to strive to achieve a high quality, we may not be able to achieve the levels of quality we do with our existing houses, due to the need to achieve a lower price and the greater volumes we will be expected to produce.

The government's proposal to build standard designed prefabricated houses to help to solve Corvola's housing problems is an interesting one. The main issues which may cause us some concern in relation to this proposals' suitability are the requirement to build 'standard' designed houses, in much greater volumes, rather than our small volumes of bespoke designs, and the level of quality expected of the builds.

Our vision is 'to be acknowledged as the industry leader in the design and construction of state-of-the-art prefabricated buildings which are of the highest quality, cost effective and environmentally sustainable'. There is seemingly no reason why this vision needs to be compromised through our involvement in this proposal. This may be an opportunity for us to use our expertise and industry experience in state-of-the-art design, to develop standard designed houses which still meet our levels of quality and sustainability expectations, even if in greater volumes. These are clearly important criteria of the programme, as the news blog clearly indicates the governments drive for increasing sustainability of its housing stock. We are industry leaders in this and therefore it could be an opportunity to use this expertise in this way. Our cost-effective focus will also likely be consistent with the outcomes of the proposal, as customers will be looking for homes which are cost effective and efficient.

However, there may be more concern in terms of the proposal's suitability with our mission statement, particularly in relation to our customers. Our current customers invest in a Jord home for several reasons: its high quality, its environmental sustainability and for many, the fact that it is a truly unique product. If Jord is to become involved in this programme, this may be a threat to our claim to offering

unique homes and this may de-value our competitive advantage. This is something we need to seriously consider as we do not want to lose our existing customer base. However, we could look at it that in fact the customer in this contract will be the contractor rather than the individual homeowner.

As for the element of our mission relating to our people, this shouldn't be affected by this potential contract. In fact, part relating to secure employment and career progression is actually enhanced due to the extra work that the contract will bring. Our mission in terms of the communities we serve will most certainly be enhanced by taking part in this programme, as we will be actively contributing to the communities in which we operate by helping to provide an environmentally and sustainable living environment for our community.

### **Upside and downside risks of participating in the Government's housing programme**

There are of course, several risks we must consider before involving ourselves in this housing programme. Firstly, there is a product reputation risk to consider. Involvement in this programme may impact on our reputation in the industry as a provider of high-quality bespoke homes. Our current customers value the fact that we offer bespoke designs and there is a certain degree of 'kudos' in owning a Jord home. This may be adversely affected if we decide to manufacture large numbers of standard designed homes.

However, there could also be a potential upside risk to this, as our product reputation may in fact be enhanced by our involvement in the programme. If we continue to ensure that we produce high-quality, albeit standard designed houses, this opens up our availability to a much wider market and our brand will in fact be much wider-known. Our expertise in prefabricated design could be exploited in a much larger marketplace, thus making the Jord product more prominent in the industry.

There is also a downside product risk in that we may not deliver what is expected or needed by the end customer or the Government. Mass produced, standard housing is a completely new concept in Corvola, where large housing estates are not normal practice. It may be that, although the government is keen to solve the housing shortage with such housing developments, the end customers themselves may not be interested in buying standard designed houses on housing developments. This in turn may impact on the reputation of our product, if our houses remain unsold and in low demand.

There is an operational risk of working with customers (i.e. the land developers) that we have not worked with before and this may cause severe challenges in our ability to deliver the product required. We are not used to working with large businesses such as land developers or with the Government and their involvement may hinder our own productivity and the way we would normally operate.

There is also an operational risk that we will lose focus on our core customer base and as a result lose our competitive advantage as the leading provider of high- quality bespoke houses. If customers perceive that we are no longer an 'exclusive' product then it could severely impact on our core business. There is no guarantee that standard house production will be a long-term prospect for us but it could in the short-term, damage our long-term competitive advantage. Also, we would likely need to change some of our processes and systems in order to be able to incorporate the new work. We need to be mindful of the fact that we wouldn't want to unduly affect our existing operations. An upside risk here is that we may end up with better processes and systems than we currently have.

There is a risk that if the project is unsuccessful, or runs into problems, Jord's brand image could be damaged as we will be seen as partly responsible, even if the problems are not within our control. This could have a knock-on effect on our other, more profitable customers. An upside risk here, though, is that if the project does go well, this could significantly enhance Jord's reputation and may lead to further projects not just with the Corvolan government but with other governments as well.

## Section 2

### **Impact of ModPod acquisition on preparation of financial statements post acquisition**

According to international accounting standards, when a company has control over another, a parent/subsidiary relationship is deemed to have been made. This will be true if Jord's offer of a 75% stake in ModPod is accepted. This means that Jord will need to prepare group accounts on the acquisition basis and consolidate ModPod as a subsidiary in Jord's group financial statements. The assets of both Jord (the parent) and ModPod (the subsidiary) will appear on the statement of financial interest, with the 25% not owned by Jord (the non-controlling interest) appearing within equities. Firstly, we need to consider the impact on our equity in the statement of financial position. As a result of a 75% acquisition of ModPod, Jord's equity will be increased by the fair value of the equity that has been issued, which will be the purchase price quoted of C\$10 million. One other option we could propose to acquire ModPod, is that we could acquire a 75% stake of ModPod's shares by issuing Jord shares to the value of the final agreed price to the Lingar family, and they would then give us 75% of their family owned shares in ModPod in return. If we decided to use this method, these newly issued shares would then need to be recorded at their nominal value. A credit to the share premium account would need to be made for the difference between the nominal value of the shares and the purchase price of C\$10 million.

Secondly, we would need to value all of ModPod's assets at their fair values, in order to establish the amount of goodwill on acquisition. This should not be too problematic for the tangible assets, such as buildings and equipment, but IFRS3 requires that certain intangible assets such as brand names, that are not recognised in the subsidiaries individual financial statements (as it would have been internally generated by ModPod) may be recognised on consolidation, if they are identifiable.

Therefore, a challenge we will face in consolidation of the financial statements, is establishing a fair value of our investment in the ModPod brand name. There is unlikely to be an identifiable market value for the ModPod brand name, therefore, we should include a separate valuation based on what we would have paid for it otherwise. However, this indeed is likely to be highly challenging without a market value. Therefore, we would need to apply the principles of IFRS 13 – Fair Value Measurement to arrive at a fair value and if the fair value of the brand cannot be reliably estimated then we would need to include it in goodwill (which would effectively be the balancing figure in an initial consolidation).

We must ensure that the goodwill is revalued each year and any reduction in value (known as an impairment), is written off to the statement of profit and loss for that accounting period, with the revised value shown on the statement of financial position. This re-valuation would never allow goodwill to be revalued upwards. Also, in the year of acquisition, only the post-acquisition results should be included in the consolidated results. For consolidation purposes, it is normally assumed that costs and revenues

accrue evenly over the period, so the post-acquisition results are apportioned on a time basis.

In the longer term, the impact on the consolidated financial statements will be to increase equity and liabilities. Reported revenues and earnings may also increase in the event that ModPod continues to undertake work outside of the Jord group. In the short term, this is not likely, based on current capacity and the level of work ModPod are likely to be required to commit to through this proposal.

### **Managing ModPod as an investment centre**

Given the size of a potential investment in ModPod and the difference in the nature of the operations undertaken, it is recommended that Pep should present a report on performance of the investment centre at every board meeting, to maintain a good and positive level of communication and understanding of objectives, requirements and outcomes for the business. We also need to ensure that Pep remains motivated and enthused in working for Jord and therefore by reporting regularly at board level should ensure his continued drive and enthusiasm.

Retaining Pep Lingar as the Managing Director would certainly maintain continuity and hopefully ensure that the acquisition is not too disruptive to the staff of ModPod. The Lingar family seem to have created an excellent business and have proved their skills and capabilities in developing and running a successful business in this growing market. Therefore, it is recommended that we should be willing to allow Pep to continue to retain a significant amount of discretion in managing the newly formed investment centre. It may however also be advised to ask some of the Jord board members to work alongside Pep in order to understand how ModPod operates and to provide Pep and his senior managers advice on how Jord operates to ensure a smooth integration process.

It will be important that we make it very clear to Pep what is expected of ModPod, within the newly formed Jord Group so that ModPod has a clear sense of purpose, and so that the freedom and flexibility offered to ModPod is put to the best possible use. We also need to establish very early on the level of external work which ModPod will be able to continue with or whether we in fact want to have ModPod working exclusively for Jord on the design and delivery of its standard housing units.

We will also need to consider how we manage controllable and uncontrollable costs within ModPod, making sure that we do not discourage ModPod from making decisions in terms of investment in new technology on the basis that this may impact on this investment centres performance. It would not be appropriate for ModPod to aim to minimise costs which could discourage investment and thus impact on the successful achievement of opportunities, such as the government's proposed housing programme. Therefore, we will need to be careful in how we manage ModPod as an investment centre, as we do not want to discourage active and positive investment for the sake of hitting overall organisational performance measures.

One of the key areas of contention is likely to be the area of intra group trading. Given the nature of our set up it is likely that intra group transactions will take place. It will be important to ensure that fair prices are agreed between ModPod and the rest of the business, to that goal congruent behaviour is achieved. What we certainly don't want is for ModPod to be buying services from outside of the group in order for them to improve its profitability.

### Section 3

#### Applicability and usefulness of learning curves

It would appear from your conversation with Pep that in production of the proposed standard built houses, there will be a tendency for labour time per unit to reduce over time. The datasheet provided by Pep illustrates this. The learning process starts from the point when the first house begins construction, and would continue until the 50<sup>th</sup> house, when a steady state occurs. A 90% learning curve rate would mean that each time cumulative output of houses doubles the cumulative average time per house falls to 90% of its previous value.

Pep has calculated that the average labour hours per house for the first 50 houses would be 600 hours  $\times 50^{-0.152}$ , which gives us 331.06 hours. This is then multiplied by 50 to calculate the total time taken to build 50 houses. Similarly, the cumulative average time for 49 houses should be used to calculate the total time taken to build 49 houses. The difference between these two totals is the time taken to build the 50th house. This will then be the time taken to build each subsequent house. Note the time taken to build the 50th house is not 331.056 hours: that number is the cumulative average time per house when 50 houses have been built (it is the total time taken to that point divided by the output to that point). As steady state occurs from the 50th house we can then use the difference between the totals as the standard time for all subsequent houses. The final line of the datasheet shows the cost of building 200 houses, made up of the total time for the first 50 houses plus the time for the 50th house multiplied by 150 and then the total of these times multiplied by the labour cost of C\$90 per hour. Thus, the estimated labour cost is C\$5,284,924.

Whilst learning curves would not have helped us in the past, it is likely that they will be of some use for houses produced by Jord Modular, as they have been to ModPod in the past. This is because each of the houses will be more or less the same on each site. This will mean that most of the same operations will be repeated time and time again. For each site, the learning curve will take effect, as each site has a different standard design.

Learning curves could be useful for us in terms of budgeting because budgets and standards will only provide reliable benchmarks to measure actual performance against if we take account of the learning effect. Potentially it could be difficult to set labour standards where a learning curve applies, and so we would have to reassess and re-set standards regularly until a 'steady state' has been achieved. The calculation of applicable standards would facilitate effective control. The initial cost estimates for our proposed new houses may be high, but if we apply the learning curve, it may allow us to set a more competitive price. This may be crucial considering we will not be the only producer of these standard houses within the Government's housing programme. Application of learning curves may assist us in more accurate work scheduling, enabling production and construction to take place on time.

However, it could be suggested that there is in fact little benefit to of us applying learning curves. As suggested, the effect it will only occur for the first 50 houses and therefore we should weigh up whether the costs of undertaking such an approach do indeed outweigh the benefits. It could be argued that there are indeed changes in design from site to site but as a skilled tradesperson, these differences would in fact be minimal and the learning curve effect would be very minor. We will need to reassess Pep's data in more detail to evaluate whether it would be useful to this particular aspect of our business.

### **Segmental reporting and analysis of Jord Modular's results**

The proposal appears to be that Jord could report Jord Modular's results as a separate business segment in the Jord Group's consolidated financial statements. Segmental reporting is generally dealt with by IFRS 8 *Operating segments* which does not apply to unquoted companies such as Jord. That would not, however, prevent us from offering segmental information on a voluntary basis.

It would be unusual for an unquoted company to volunteer segmental information. That would create the impression of openness and transparency in Jord's financial statements. Stakeholders who accessed those figures might be more open to the idea of doing business with Jord. Segmental reporting is generally acknowledged as a means of communicating business risk and so the information provided might be considered reassuring. As far as the shareholders are concerned, 60% of the shares belong to members of the Larsson family, some of whom are on the Board, and so they may not feel that they require this information because they can access it directly. The remaining 40% belongs to investment institutions, who hold relatively large proportions. They, too, may be able to obtain regular management reports. Indeed, they may have imposed such access as a condition for buying their stakes in the company in the first place.

Another disadvantage is that the information provided may have some value to competitors. Being able to break Jord's business down between the Jord Modular business and the traditional activities could equip competitors to identify opportunities to win business from Jord. In that case, the disclosure could prove harmful. Especially if the competition does not provided segmental information or does so in a manner that does not assist Jord in countering the threat.

A further disadvantage is that Jord will probably be unable to stop publishing this information in future years, even if it creates problems as described above.

Stakeholders who have become used to receiving it will infer a problem if the company stops publishing it. They will feel that Jord wishes to conceal "bad news" such as losses incurred by Jord Modular.

In a related way, the decision to volunteer this segmental information could encourage stakeholders to seek further segmental breakdowns, such as geographical analysis of revenues and profits. Such requests will be more difficult to refuse given that the



company is providing a partial segmental report. Jord's Board could be accused of cherry-picking specific matters for voluntary disclosure on the grounds that they make the company look better.

## **Section 4**

The Project Quality Plan (PQP) defines the quality techniques and standards that are to be applied throughout the project, in order that the end product of the project delivers to expectations. It will include the responsibilities required for achieving this. Quality is important in all projects, but especially important for Jord whose brand image is built on delivery quality designs and constructions.

### *1. Risk assessment*

This must be carried out to assess the possible internal and external risks that are likely to affect the project and the alternative actions which we must employ to reduce these risks. This is important as it sets out the level of risk that the project carries and will be updated as the project progresses.

### *2. Project overview*

This is an outline of the main activities to be carried out in the project. This will ensure that all necessary project activities are identified and responsibilities assigned. It will include a description of the work to be carried out and the expected deliverables. Only by knowing this at the start of the project will we be able to know whether the project has been a success.

### *3. Project requirements*

This is a detailed description of all of the work to be carried out, including the timescales and deliverables. This must be cross referenced to the project requirements specification.

### *4. Project organisation*

This sets out all of the management roles and responsibilities. This will clearly determine the allocation of resources and staff to each of the project activities at the correct time and in the correct amounts. It is important to ensure that everyone knows what is expected of them and who to approach for assistance when required in order to ensure that decisions are made appropriately and in a timely manner.

### *5. Monitoring and reporting procedures*

This identifies how the project will be monitored and what to do if slippage occurs. It also states the frequency and content of project reports as well as key control processes, such as end of stage meetings, and procedures for evaluating the final project deliverables. This is important in order that relevant stakeholders are kept informed of the progress of the project, as it affects them, throughout the duration of the project.

### *6 Key development stages and processes*

This sets out the activities that will need to be carried out during the project life cycle.

### *7. Quality standards and assurance*

This will help to ensure quality outputs and sets the standards that need to be evaluated and will include production and development standards.

### **Project constraints and key performance indicators**

The three most commonly recognised constraints on performance throughout a project are time, cost and quality. These are sometimes referred to as the “iron triangle” as whenever one of these constraints is affected, there will be some impact on the other two. At the start of the project, a project schedule (time) will have been agreed, along with a budget for the project (cost) and the standards that are expected (quality).

#### *Time constraint*

The first constraint to consider is the time we have available to achieve the overall project objective. For this project, we have yearly schedules to complete 200 prefabricated houses for the next four years. We have signed a contract with Glenvale for specified start and end dates and therefore, this is a key constraint for the project, as should we not meet these contracted dates, we are likely to face penalties from the contractor.

A key performance indicator we could use to monitor our achievement of the time constraint is a measurement of the percentage of tasks completed. Alternatively, a measure of missed project milestones could be used. Measurement of actual activities completed and time taken against the project plan should give us an understanding of which activities are causing us time delays.

#### *Cost constraint*

A second constraint is project cost. This will be based on the project budget, which will include a cost estimate of all of the resources that we will use in the design and manufacture of the 200 homes per year. Most of these costs will be driven by the project-related activities of Jord Modular who will be responsible for delivery of this project and therefore will be responsible for presenting the detailed project budget. Obviously, we will be expecting this project to be profitable and therefore cost management is a key project management activity.

A key performance indicator would be to calculate a cost variance based on calculating the difference between planned costs versus actual cost at a given time throughout the project.

It indicates whether the estimated cost of your project is below or above the planned baseline, and will allow us to establish throughout the project whether we are below or above our planned project budget.

#### *Quality constraint*

The third project constraint is quality. We will be aiming to complete this project within the budget and by the agreed dates AND to the Glenvale’s quality requirements. It is critical to ensure that prior to the project planning the project team has a clear

understanding of Glenvale's specifications and quality requirements, and that we keep them informed of project progress throughout the project. The project plan must include monitoring activities to ensure that quality expectations are fully met. A key performance indicator would be a measure of customer satisfaction based on the number of queries/ complaints/ requests for re-work from the developer. It is likely that Glenvale will be monitoring closely our progress on delivery and will have their own building quality assessors to review the houses as they are built and they will feedback to us if they are not satisfied with quality levels.