

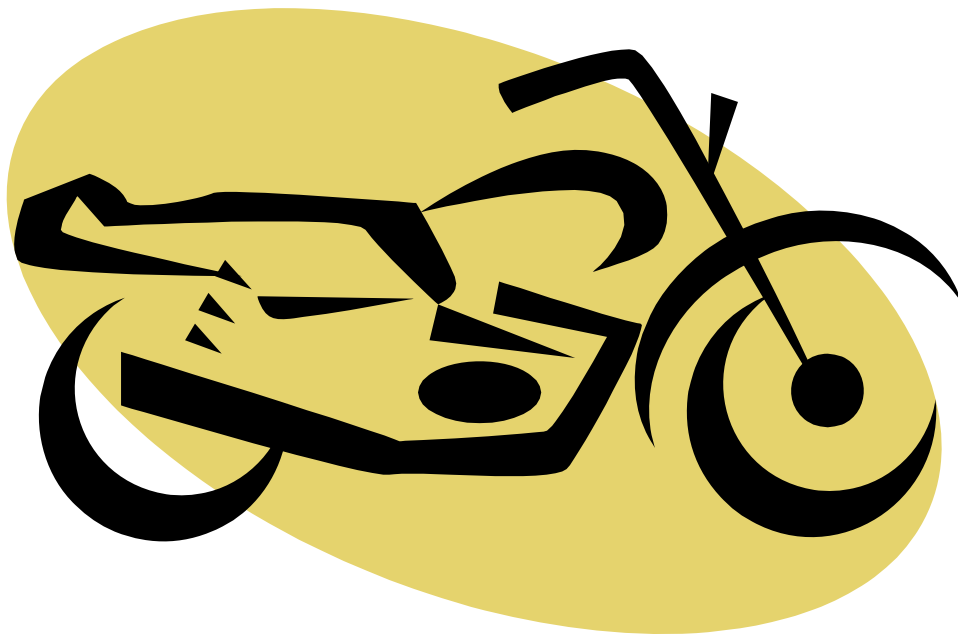


Australian
National
University

Research School of Accounting

BUSN3003
Advanced Management Accounting

TEAM ASSIGNMENT (20%)



Zoom Bikes

Due Date:

4.00 p.m. Tuesday 8 October 2019

TEAM MEMBERSHIP

This Team Assignment **must be submitted in teams of either FOUR or FIVE members**. The final submission will be assessed on its merits irrespective of the number of members in a team.

Individual assignments will NOT be accepted unless there are exceptional circumstances and prior approval. All requests for completing the assignment as an individual MUST be made in writing, with reasons, to the lecturer by 20 September 2019.

LEARNING OUTCOMES

The primary objectives of the assignment are to examine your ability to:

- (a) analyse and provide recommendations to improve the operations of organisations through the application of management accounting techniques,
- (b) inquire, examine and prepare a coherent and concise analysis on the assigned topics,
- (c) learn within teams – to cooperate with team members, to assume leadership and to manage differences and conflicts, and
- (d) tolerate ambiguity in managerial and organisational problem-solving

Consequently, you should be able to analyse complex issues, to formulate well-reasoned and coherent arguments and to reach well-considered conclusions. Also, you should be able to present these conclusions via a written format appropriate for the real-life business environment, and be able to perform the necessary processes to prepare internal reports for decision-making purposes.

MARKS ALLOCATION - REPORT

Requirements 1 to 5 (60 marks)	15
Overall format, language and presentation (20 marks)	<u>5</u>
TOTAL MARKS	<u>20</u>

NOTE: This assignment can be completed in teams of either 3 or 4 students. It is expected that each team will manage the tasks required for the assignment in a way that ensures all members contribute fully and effectively to the completion of the assignment. All members of the team will receive the same score as all submissions are assessed on a team basis, i.e., **all members of the team will receive the same score.**

POLICY ON EXTENSIONS

All requests for assignment extensions must be made in advance of the due date to the course coordinator. Significant reasons must exist for an extension and supporting medical evidence may need to be provided.

LATE ASSIGNMENT

Late submission of assessment tasks without an extension are penalised at the rate of 5% of the possible marks available per working day or part thereof. Late submission of assessment tasks is not accepted after 10 working days after the due date, or on or after the date specified in the course outline for the return of the assessment item.

SUBMISSION INSTRUCTIONS

- Only **ONE assignment** is required to be submitted per team. Specifically, nominate one team member to be the one to upload the submission.
- Add the Team ID (e.g. Team 1, Team 28) clearly labelled as the header in the report. Name the submission file TeamXX.doc or TeamXX.pdf and submit:
 1. The TeamXX.doc or TeamXX.pdf assignment file (with TEAM ID as a header in the report) AND team members' information on the cover sheet via the [Team Assignment Including Cover Sheet link](#). ONLY ONE team member needs to submit the file.
 2. Remove the cover sheet but make sure the TEAM ID is still the header to submit via the [Team Assignment with Team ID as Header - NO cover sheet](#) Turn-it-in link. Again, please name the file TeamXX.doc or TeamXX.pdf for submission. ONLY ONE team member needs to submit the file.
- **These submission instructions are on Wattle.**
- Please remember to retain the original computer file (**including the completed cover page**) for your own reference and as insurance in the event that a copy of your assignment is requested.
- **Do not** hand your assignment to your tutor or lecturer; assignments delivered in this manner may be deemed **non-submissions**.

FORMAT AND PRESENTATION

You should ensure that your assignment is well-presented and is as clear and concise as possible. Presentation includes formatting and layout considerations to suit a professional business report, which assist in conveying information to the reader in a manner that is easy to follow. Ensure that you appropriately cross-reference your work. Also, if you draw on information from other sources, ensure that you apply an appropriate referencing style *consistently*.

Your assignment must be word-processed, using the Times New Roman font size 12 (or equivalent). The line spacing must be at least a line and a half and there must be a minimum page margin 2.5 cm on all sides. Round figures to 2 decimal points where necessary.

QUERIES

All the necessary information you require to complete this assignment is provided in this document. It is recommended that you use Microsoft Excel or equivalent to complete requirement 1 of this assignment due to its mathematical nature. **Please do not directly approach individual staff with queries about the assignment.** Should it be necessary to ask a question about the assignment, email your question to the principal of Renegade Consultants, William Renegade via his email address (WX.Renegade@gmail.com). He will endeavour to respond to valid questions within 2 working days of receipt of your email. Responses to all *valid* queries will be posted on the “*Team Assignment FAQ*” link on Wattle. Please note that any queries received after 12pm Friday 4 October 2019 will not be answered as Renegade will be unable to access email while he is on an expedition to Greenland.

INTRODUCTION

You are part of a team of consultants employed by Renegade Consultants. The principal, William Renegade, calls a meeting with your team to brief you on a new client, Zoom Bikes.



THE CLIENT: Zoom Bikes

Zoom Bikes Limited manufactures motorbikes and is located in Brisbane. Zoom Bikes was founded ten years ago under the principles of innovation, efficiency and family values and is based in Adelaide. Zoom Bikes is widely known in the hobby motorcycle industry as a premier manufacturer of motorbikes. Although leading in reputation, the company has experienced declining sales and increasing costs over the last few years. David Stevenson, owner and CEO has helmed Zoom Bikes from the start and grew it to the size it is today. He started Zoom Bikes and applied the following founding philosophy:

“Throughout our business, we try to create a culture of excellence. One of my favourite phrases is - Perfect, that is all. Our expectation is perfection, because our reputation can be ruined with just one mistake.”

A few years ago, he (and the other senior managers) realised that by improving certain functions within the company, the overall efficiency of the company can be improved. It is then that the company undertook a comprehensive evaluation and analysis of all company functions to identify opportunities for improvement. The main outcome of the evaluation and analysis found evidence of idle and waiting time from production process to process, unnecessary processing time in the assembly function, increasing defects and excessive inventories, problems taking too long to rectify and increasing waste. It is then that the company implemented a just-in-time (JIT) system for materials and components needed for the manufacture of its motorbikes.

Supplier Evaluation System

More than 70 per cent of the cost of the company's motorbikes consists of material and components, which are purchased from Australian suppliers. As part of long term improvements at the company, the Chief Financial Officer (CFO), Sarah Walker introduced a comprehensive supplier evaluation system to monitor the performance of its suppliers about twelve months ago.

Each supplier was given a three-year contract that guaranteed large orders as long as it performed according to Zoom Bikes' strict requirements. Each supplier's performance was measured by considering its adherence to delivery schedules (Zoom Bikes works on a JIT system), accuracy of orders delivered, number of components rejected on delivery, and its achievements in reducing its production costs (and, therefore, its material and component prices) over the contract period. Performance in all of these four criteria will determine whether Zoom Bikes renews the supplier's contract or offers the contract to another supplier. The suppliers are aware that there are many alternative component suppliers who would be eager to enter into a long-term contract with Zoom Bikes.

After holding discussions with the purchasing manager, as part of the review process, the CFO conducted a study to determine the full cost of dealing with suppliers. While the company uses a series of non-financial performance measures to measure most aspects of supplier performance, Sarah believes that the calculation of the total cost of ownership will provide an additional perspective to evaluating supplier performance. The following table shows supplier-related activities and costs have been identified for the last twelve months:

Table 1: Supplier-related activities and corresponding costs and volume

Activity	Total cost	Number of activities
Order components from supplier	\$1,800,000	6,000 orders
Receive order	9,000,000	10,000 deliveries
Return reject components to supplier	38,500	55 returns
Receive late deliveries	260,000	130 late deliveries
Production downtime due to late delivery	2,400,000	800 hours
Production downtime due to defective material	3,600,000	3,000 hours
Process invoice and pay supplier	1,050,000	3,000 invoices
Dispute invoiced amount	40,000	50 disputes
Quality audit of suppliers	500,000	10 audits

For their top of the line motorbike, Extreme, Zoom Bikes purchases the exhaust systems from two suppliers: Quantum Systems and King of Chrome. Over the last twelve months, Zoom Bikes purchased 3,000 units from Quantum Systems at \$100 per unit, and 4,000 units from King of Chrome at \$90 per unit. Both of their suppliers provide an identical exhaust system that is required by Extreme.

Additional data collection and analyses revealed the following activities relating to the two suppliers over the last twelve months (see Table 2).

Table 2: Purchasing-related activity by Supplier

Activity	Quantum Systems	King of Chrome
Order components from supplier	90 orders	130 orders
Receive order	90 deliveries	150 deliveries
Return reject components to supplier	15 returns	16 returns
Receive late deliveries	6 late deliveries	28 late deliveries
Production downtime due to late delivery	45 hours	59 hours
Production downtime due to defective material	20 hours	28 hours
Process invoice and pay supplied	12 invoices	130 invoices
Dispute invoiced amount	3 disputes	3 disputes
Quality audit of supplier	1 audit	2 audits

Specifically, the CFO wants to know the cost per unit of driver for each supplier-related activity and the total cost per unit for the two suppliers in order to derive the supplier performance index. She has also recently been pushing King of Chrome to reduce their late deliveries to 12 (which would reduce production downtime due to late delivery down to 30 hours). Further, she has started looking into implementing electronic systems for transacting with suppliers given advantages that might eventuate to both Zoom Bikes and its suppliers.

Future Improvement Considerations

Senior Management, after hearing about the increasing adoption of Lean Operations in the industry, decided to consider sweeping changes to inventory, production and quality management. The following are changes being considered:

- Inventories of raw materials, work in process and finished goods to be halved by next year, and then reduced by a further 10 per cent per year.
- Defect rates in work in process and finished goods are to be reduced by 20 per cent per annum.
- Zero defects in five years' time.

- Reduce the number of raw material suppliers to just one or two suppliers for each major raw materials/components
- Production employees trained to stop the production line the moment they identify a quality problem and to start it again once they have corrected the problem.
- Shifts to start 15 minutes early to allow for a quality meeting to be attended by all managers and line employees.
- Manufacturing times to be reduced by 25 per cent over the next two years.
- Employees to focus on processes and on the needs of customers, both internal and external.

Senior Management was met with resistance and defensive reactions from lower levels of management and production employees. The CFO then suggested the company procure the services of a consulting firm to help with both the supplier evaluation and also guide the company in relation to making improvements towards lean operations.

After a productive meeting with William, Renegade Consultants was hired for the job. Given the resistance from employees, William decided to gather more information to find out the reasons behind the sentiment.

Interview with the Production Manager

William Renegade met up with the production manager, Andrew Choi, to discuss some of the recommendations and his interview transcript is below:

William: Does the production team believe it possible to reduce inventories?

Andrew: *This is a recipe for disaster! If we cut our inventories, the unions will have a field day. Every time they call a stop-work meeting, we'll run out of bikes for our customers. There'll be no stockpile to tide us over. Our suppliers will also be able to hold us to ransom.*

William: What about the employees stopping production when there is a quality issue?

Andrew: *A stoppage in production will shut us down, especially if we confine ourselves to only one or two suppliers for each of our major materials. And, how are we supposed to cut defects by that amount each year? We need to spend big money on quality inspections so that we can find defects. Further, if the shopfloor people can stop the line whenever they feel like it. With virtually no inventories, every delay will mean a delay in meeting customer orders.*

William: Reducing manufacturing time?

Andrew: *How could we cut manufacture time by 25 per cent and shut down the production line every time we have a quality problem? We would just be encouraging our people to work more slowly. Don't they see? We're going to get slower, not faster! Anyway, they don't understand our problems with factory layout. As we've grown, our layout has become chaotic. We have material and work in process that has to be moved all over the plant. Shorter manufacturing times will require a huge capital investment.*

William: What about involving employees in quality meeting?

Andrew: *Most of the production people won't make the meeting, although I bet they'll collect the extra pay. Even if they did come, they're not going to open up to you and me about the problems in production. They're into hiding problems, not talking about them. As if they're going to confess to all their mistakes! Anyway, why talk to production staff when we can talk to their managers? We know that the best way to run this place is to hold the managers responsible for the performance of their department. Some managers are always making excuses for not being able to keep up with the production rate.*

The Job

Zoom Bikes has enlisted the help of Renegade Consultants to address the issues arising from the improvement considerations towards lean operations as well as assisting with the evaluation of the exhaust systems suppliers. The specific requirements are provided below.

REQUIREMENTS

Your team is required to write a **business report** to management, responding to the requirements and other issues listed below. Ensure that you follow the format and presentation guidelines outlined on page 3. The report is to include an executive summary and to be **no more than 2,500 words** (excluding the executive summary).

1. Determine, assess and compare the two exhaust systems suppliers' performance in accordance with the CFO's requirements and provide appropriate recommendations. Further, William wants your team to also discuss the following in our assessment: *(25 marks)*
 - a. What is the total cost per unit for King of Chrome if they agreed to reduce late deliveries to 12?
 - b. What are changes that could be implemented to minimise supplier-related costs?
 - c. What are feasible performance measures for each of the four supplier performance criteria?
 - d. What are some advantages of implementing electronic systems for transacting with suppliers?
2. Provide a brief explanation about lean operations and discuss typical characteristics as well as advantages and disadvantages of a lean approach for Zoom Bikes. *(5 marks)*
3. How does lean manufacturing differ from more traditional approaches to production? Of the key lean characteristics, which ones do you think are most important and why? *(10 marks)*
4. Based on the case, what do you believe to be the most significant challenges for implementing lean operations? How can organizations overcome these obstacles? Explain the rationale behind each of the future improvement recommendations. *(15 marks)*
5. Provide an explanation of the Six Sigma (Define, Measure, Analyze, Improve, Control) approach for process improvements. What would a Six Sigma approach be able to offer Zoom Bikes? *(5 marks)*

While some discussion may be general in nature, ensure that your report makes specific reference to Zoom Bikes' circumstances where applicable.

ASSESSMENT CRITERIA

Your assignment will be assessed based upon the following criteria:

- compliance with relevant management accounting principles and practices and application of management accounting techniques on the assigned topics
- depth and breadth of coverage, critical elements and structure (e.g., level of analysis, level of research, relevance of discussion), and language and conventions (e.g., consistency with a professional presentation). *See Grade Related Descriptors below.* **Note:** A well written, structured, and organised report will receive low assessments if it is not relevant to the given problem and circumstances.

The criteria listed above are not mutually exclusive but are complementary in the overall assessment of the assignment.

Grade Related Descriptors

Grades	Depth and Breadth of Coverage	Critical Elements	Structure, Language and Conventions
High Distinction 80% - 100%	All aspects of the issue(s) were covered in a thorough way.	The report shows great depth of thought, excellent development of discussion, logical analysis and insight into the subject.	All aspects of the report conform to a high professional standard.
Distinction 70% - 79%	Most aspects of the issue(s) were addressed in great depth.	The report shows some evidence of analysis, supported by logical discussion and insight into the subject.	Most aspects of the report conform to a high professional standard.
Credit Pass 60% - 69%	Most aspects of the issue(s) were addressed adequately.	The report shows evidence of elementary analysis and the development of discussion.	Most aspects of the report conform to an acceptable professional standard.
Pass 50% - 59%	Key aspects of the issue(s) were addressed adequately.	The report demonstrates basic understanding of the topic.	The report displays basic report structure.
Fail <50%	Responses were superficial and / or inadequately addressed the issue(s).	The report demonstrates limited understanding of the topic.	The report is not of a professional standard.