

Business Case for Top Gear Bikes's ERP implementation initiatives

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PREFACE

To ensure the success of this ERP project, this document — prepared for TGB Board of Directors — is included here to:

- Present the research, findings, and recommendations of ERP
- Assess the business value of the proposed solution
- Provide the justification based on the current situation
- Describe the implementation and financials of the proposed solution **Nike_worth**

1. INTRODUCTION - Jason

Answering all these questions with the background information of TGB Inc. :

- What is the company about? What was their status? What will their prospect?
- Why will we do this report? (Problem)
- What will we do? What will we contribute? (Solution)
- Why does our report matter? (Implication) → Hope to give a suggestion with our through research
- How will this report be organised?

2. BUSINESS OBJECTIVES - David

What do you think about this format? Seems good to me

Four core outcomes that Top Gear Bikes (TGB) plan to achieve through

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the implementation:

- **Better customer management.** The system will enable and enhance the online customer order transparency, such as information about the relevant customers and products. The company aims to use transparency to coordinate all the company's dealers and provide better support to them.
- **Optimise inventory management.** The system can manage Vendor inventory stocks online. With this new functionality, the company aims to achieve an optimal control of their demand and inventory management.
- **Enhance manufacturing management.** The system will be able to work globally in countries that the operations will expand into, such as Vietnam, India, and China. This expandability will enable the company to seamlessly track the profitability and manufacturing costs of all product ranges in different branches/countries.
- **Enhance business decision making.** The system can provide the company's remote Business Area Sales Managers a real-time interaction with their ERP system. The company aims to assist its managers in performing better predictive analytics. The improved analytics will support strategic planning (e.g., increase market share, profit maximisation, etc) and decision-making processes more effectively.

Therefore, this implementation could be beneficial for suppliers, customers, and manufacturer by increasing cost effectiveness and visibility of order as well as enhancing inventory management and business decision making.

3. CURRENT SITUATION AND PROBLEM/OPPORTUNITY STATEMENT - Jason

3.1. Problems that TGB are facing

A variety of legacy systems that were built specifically for the company and business process have been used since 1989 for TGB; they adopted a functional business model for their information and material flows. This has functioned well for decades because the process worked well with the system in early days. However, in the era of globalisation, the competition is no longer regional and companies have to be agile to adopt the market change. And the current systems have been working in silos in which the exchange of information between operating groups (e.g., area of manufacturing and finance) is handled by the top management. As such, without the information being knowledgeable across individual function

area, this implementation poses some challenges and could hardly align with the business strategy (i.e., saving manufacturing cost, stay competitive, and maximising profits) which are explained below:

First, the current implementation could not seamlessly track profitability and manufacturing costs of all their product range. For example, due to economies of scale, TGB is considering an offshore manufacturing or material procurement in countries like China and Vietnam which has a time difference; however, the unintegrated system might not be able to provide relevant and correct data in a real-time manner. Therefore, without seamlessly tracking profitability and costs, TGB is hard to measure which parts of inefficient process cost the most and costs could not be optimised.

Second, TGB could not stay competitive. The functional model limits the information flow among the process because it is top-heavy (Monk & Wagner, 2012). That is, when information only controls by a handful of people in organisation and data is not provided in timely fashion, the staff could not make effective decisions to react quickly to change.

Third, TGB could not maximise the profit. The above mentioned that the legacy systems follow an obsolete business process and information flow. The data produced by systems are not informed in a timely. This limits the potential growth of TGB without being competitive (e.g., finding a new demographics of customers) and makes top managements hard to make critical decisions (e.g., how to re-engineer their current business process). Therefore, TGB is encountering the hindrance of profit maximisation.

3.1. Opportunity that TGB can seize

Since the current systems could not support the strategies mentioned above, the situation bring opportunity for system upgrade. Finding a right ERP system could help TGB stay competitive, fend off threats from disruptive forces, improve overall enterprise efficiency by improving the current business process.

Trek bicycle — TGB's biggest competitors — proved this point: they had been leveraging Oracle's Netsuite eCommerce system (Oracle, 2022) and Microsoft CRM system (Microsoft, 2022). The information flow of these ERP systems follow a process business model which embraces flexibility and rapid decision making. In 2021, Trek bicycle's revenues increased to \$900.0 million (Pang, 2022) by leveraging these up-to-date systems with emerging technologies such as AI, Machine Learning, IoT, Blockchain, Autonomous Database. So, when a digital transformation project is done properly, companies could use the system to understand cus-

tomers' preferences better, match the demand, and hence gain competitive edges.

4. CRITICAL ASSUMPTIONS AND CONSTRAINTS - Jason and David

- A summary of 6 factors to ensure a successful ERP implementation relevant to the case. **Note: Each team member is required to research on 2 factors and the respective name should be indicated in the final submission. An individual mark is allocated to this section**
- Any other assumptions and constraints

5. ANALYSIS OF OPTIONS AND RECOMMENDATION - Jason and David

- Critically evaluating 4 ERP systems and offer a recommendation. This evaluation should include a Weighted-Scoring Model.
- Should also include an analysis on software as a service (SaaS) and cloud ERP as well as in-memory computing.
- This section should only include a summary of your research of the different options and a detailed research of this should be included in Exhibit B.
- **Note: Each team member is required to research on 2 factors and the respective name should be indicated in the final submission. An individual mark is allocated to this section**

6. PRELIMINARY PROJECT REQUIREMENTS - Jason and David

- The main features or requirements for the recommended option (from 5.0)

7. BUDGET ESTIMATE AND FINANCIAL ANALYSIS - TBC

- A preliminary estimate of the costs involved, and the expected benefits gained for the recommended option (from 5.0).

- This should be a summary based on a comprehensive Cost-Benefit analysis, which should be included in Exhibit C.

8. SCHEDULE ESTIMATE

Milstones	Description	Time Estimation (Days)
Project Preparation	After technical and business teams are organised, they come together to define the system landscape, scope and objectives. Then they select hardware and system vendors.	15-20
Business Blueprint	Produces detailed documentation of the business process requirements of the company	25-40
Realisation	Project team members work with consultants to configure the ERP software in the development system	50-80
Final Preparation	Testing the system throughput for critical business processes.	35-55
Go Live and Support	Before system rollout, these duration needs to go through 1) configuration of help desk for end-users; 2) data migration and system integration; and 3) conducting end-user training. Then, they define the dates of going live, and project completion. Finally, they conduct PIR monitoring system performance and see if satisfactory.	24-30

Table 1: Schedule estimate for TGB's ERP system going live.

Figure 1 shows the estimated time required for the project. We included five major milestones, and the time estimation suggested by Monk and Wagner (Monk & Wagner, 2012).

9. POTENTIAL RISKS - Jason and David

- Summarise the top 5 potential risks that this project might face and the possible response strategy.
- Likelihood of the risks impacting on the implementation and the success of this ERP initiative.
- A detailed risk analysis should be included in Exhibit D. (You should identify and analyse at least 10 risks, but you only need to summarise the top 5 risk in the business case)

10. EXHIBITS

Exhibit A: Critical Success Factors (CSF) for a successful ERP implementation

Include a detailed research (and well referenced) on the 8 factors mentioned with justification. [Note: Each team member must research on 2 factors, and this will be an individual mark - indicate the respective student's name].

Why do some companies have more success with ERP than the others?

People

CSF1: Extensive education and training

Adequate training is vitally important. In ERP implementation project, in spite of the willingness to spend millions of dollars and hundreds of hours, companies skimp on employee training adequately (Al-Mashari et al., 2003); this is a common mistake that lots of companies make (Gupta, 2000). TGB's personnels possess various levels of computer literacy (i.e., experienced users, inexperienced core users, inexperienced casual users, and users requiring simple system awareness.), and it is detrimental if they are unskilled. For example, the change of the system implies that the way of inputting data is changed; if the users are not well-trained in TGB, chances are that data (e.g., routing capacity, bill of material, lead-time, resources to be allocated, manufacturing plant, inventory need, etc) would be misinputted. In mid-long term, as these incorrect data accumulated, the other useful information (e.g., demand forecasting) would be perceived incorrectly too. This will defeat the purpose of having an ERP system — which is to drive up profit, increase process efficiency, and strengthen competitive position. So, even a skilled user requires some degree of training due to the changes in the procedures and new way of inputting the data. It ensures all TGB's employees understand their impact on using IT system towards the business objectives.

In particular, companies spending less than 13% on training and education are three times more likely to fail ERP implementations (Monk & Wagner, 2012). So, Gartner Research recommends one should allocate at least 17% of a project's budget to education and training, the cost of which could include on-the-job training with materials about the ERP system (e.g., step-by-step manuals) and a two-to-three-month course of introducing to all users of the system and explaining the changes and new procedures, and how the data controlled by employees affect the entire business operation. This could boost the chance of success to 80% (Volwer, 1999). Therefore, having an adequate training is important, otherwise full benefits cannot be realised by TGB's employees.

CSF2. Top management commitment

Having the involvement and support of the top management is seen as the most essential factor of ERP implementation (Ngai et al., 2008). HP considered that ERP implementation is about people, not processes or technology (Al-Mashari et al., 2003). When an organisation embarks on ERP implementation, it brings a pervasive transformation for users of the system and other stakeholders, whether they are end-users or not. An example of the change for TGB's users (i.e., 80% of the employees) might need to adopt the new system (e.g., new way of data entry, making reports, changing existing business processes, etc.). While such a process change could bring organisational benefits, it could bring organisational disaster without top management's meticulous plan. Because people resist changes for many reasons (e.g., Ripple effects, Past resentments, etc) (Kanter, 2012), it can trigger political conflicts between various interest groups. Therefore, management has the responsibility to resolve and mediate them (Juma, 2016). Another example of the change is for non-main users (i.e., 20% of the employees): During the 'go-live' weekend which is a critical time-point, Umble (Umble et al., 2003) pointed out that the physical reorganisation of the manufacturing plant (e.g., relocation of the machines) were required. TGB's managers (i.e., 2.5% of the employees) needs to prepare with extraordinary dedication, effort, and ability to facilitate such a transition. Therefore, as an ERP system roll-out span divisional boundaries and affect different stakeholders in an organization, the effective change management from top is critical; not only they need to constantly monitor the progress of the project and provide direction to the implementation teams, but also they need to harness the energy and creativity of employees. Rabaai (Rabaai, 2009) mentioned that top management needs publicly and expressly to identify the project as a top priority. A successful implementation entails provision of required resources for the implementation, strong leadership, commitment, and participation by top management.

CSF3. Visioning and planning

While IT strategy plays an important role in organisation in supporting business objectives, executives should not blindly hope that the new ERP software will solve fundamental business problems that are irremediable by any software. TGB's business process has been operating for more than 35 years, so some core part of it might be obsolete and invite fatal flaws. As such, executives should determine if TGB is willing to change its business flow to fit the software, or the other way round. And ERP implementation was deemed technological, business, and organisation-wide project, rather than a solely IT project; therefore, both business strategy and technology strategy are equally important (Al-Mashari et

al., 2003). Executives should consider how re-engineering to a single information system for all sites of TGB organisation would yield what kind of transformation, and consider if they are in sync with business objectives. For example, when TGB leveraging ERP system, they can redesign the manufacturing blueprints by incorporating their potential offshore site (i.e., China and Vietnam). Such process re-engineering could improve the business performance and save the cost of manufacturing — which meets the third and fourth business objectives. Therefore, having a clear defined vision and the formulation of the strategy can lay out the blueprints of success for the implementation.

CSF3. Data management

Change management

Exhibit B: ERP Options and recommendations

Providing a thorough analysis of the 3 or 4 different options and possibly include a weighted scoring model or other technique to evaluate the options.

Exhibit C: Cost-Benefit Analysis

A comprehensive Cost-Benefit analysis with justification.

Exhibit D: Risks Analysis – likelihood and impact and response strategy

A detailed risk analysis of at least 10 risks with proper justification.

Reference

- Al-Mashari, M., Al-Mudimigh, A., & Zairi, M. (2003). Enterprise resource planning: A taxonomy of critical factors. *European journal of operational research*, 146(2), 352–364.
- Gupta, A. (2000). Enterprise resource planning: The emerging organizational value systems. *Industrial Management & Data Systems*.
- Juma, C. (2016). *Innovation and its enemies: Why people resist new technologies*. Oxford University Press.
- Kanter, R. M. (2012). Ten reasons people resist change. <https://hbr.org/2012/09/ten-reasons-people-resist-change>
- Microsoft. (2022). Microsoft dynamics 365 ai. <https://dynamics.microsoft.com/en-au/ai/overview/>
- Monk, E., & Wagner, B. (2012). *Concepts in enterprise resource planning*. Cengage Learning.
- Ngai, E. W., Law, C. C., & Wat, F. K. (2008). Examining the critical success factors in the adoption of enterprise resource planning. *Computers in industry*, 59(6), 548–564.
- Oracle. (2022). Commerce cloud | oracle. <https://www.oracle.com/au/cx/ecommerce/>
- Pang, A. (2022). Trek bicycle software purchases and digital transformation initiatives. <https://www.appsruntheworld.com/customers-database/customers/view/trek-bicycle-united-states>
- Rabaai, A. (2009). Identifying critical success factors of erp systems at the higher education sector. *Proceedings of the Third International Symposium on Innovation in Information and Communication Technology*, 133–147.
- Umble, E. J., Haft, R. R., & Umble, M. M. (2003). Enterprise resource planning: Implementation procedures and critical success factors. *European journal of operational research*, 146(2), 241–257.
- Volwer, J. (1999). Learning in the play pit. *Computer weekly*, 27, 34.