LEARNING UNIT 3: BUSINESS STRATEGY AND BUSINESS MODELS 2

Activities	Notional study hours
Prescribed reading	Chapters: 1 (12 minutes)
Activities	Activities: 6 (4 hours and 21 minutes) Self-review activity: 1 (Test 4 revision)
Total	**4 hours and 33 minutes**

This learning unit deals with the following topics: IT & data strategy and Disruptive business models
business model as illustrated in figure 3.1.

Learning unit 1, “Strategic analysis and the strategy development process”, deals with the following topics:

- The strategy development process
- External and internal influences on an organisation’s strategy

Learning unit 2, “Business strategy and business models 1”, deals with the following topics:

- Implementing strategy
- The building blocks of a business model

Learning unit 3, “Business strategy and business models 2”, deals with the following topics:

- IT and data strategy
- Disruptive business models

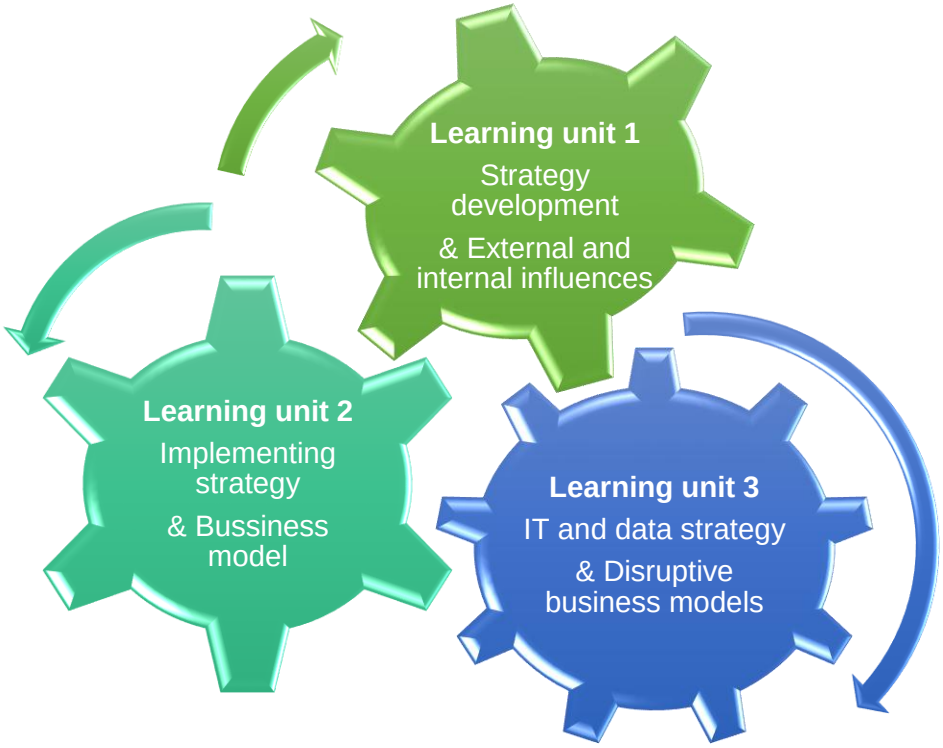


Figure 3.1: Strategy topic with Learning units

Integrated topics (possible and not limited to the list below):

- Strategy questions are often integrated with various other management accounting subject areas such as **risk and performance** management due to the integration of its strategy within an organisations key performance indicators.
- Risk management (identification and mitigation) is further incorporated in other subject fields such as Auditing (e.g. governance, King IV) and Taxation.

Note: Risk management will be studied in detail as part of learning unit 8 and learning unit 9.

Learning unit 3 consists of the following sub-units:

Sub-unit	Title
Sub-unit 3.1	IT and data strategy
Sub-unit 3.2	Disruptive business models

LEARNING OUTCOMES AND ASSESSMENT CRITERIA

Owing to the integrated nature of the strategic topics and integrated concepts in learning units 1, 2 and 3, the learning outcomes, assessment criteria and assumed prior learning are incorporated holistically under the Topic Strategy.

Note: Based on SAICA's 2024 competency framework (SAICA to provide 2025)

3.1 ASSUMED PRIOR LEARNING

The first part of the assumed prior knowledge for learning units 1, 2 and 3 can be found in chapter 1, "The meaning of financial management", which introduces financial management and contains several key concepts.

The second part of the assumed prior knowledge for these strategy-related learning units can be found in chapter 2, "Strategy and business models" (see *Managerial Finance*, 10th edition) of which majority of topics were covered in learning unit 1. For this learning unit, it is important to ensure that you have revised section 2.10, "Information technology strategy" (*Managerial finance*, 10th edition), which includes important concepts such as disruptive technology, artificial intelligence (AI), internet of things (IoT), big data and more.

Learning outcomes assumed to have been attained during prior learning Before you study this topic, you should be able to	***Managerial finance* (10th edition), chapter 2**
1. analyse the need for and recommend an appropriate IT and data strategy	2.10 Information technology (IT) strategy 2.10.1 Technology integration 2.10.2 New technologies are rapidly influencing the 'new way of doing things' 2.10.3 Considerations for a change in IT strategy

3.2 PRESCRIBED READING FOR THIS LEARNING UNIT

After you have refreshed the knowledge you attained during prior learning, read the following sections of the prescribed textbook (*Managerial Finance*, 10th edition) in the outlined order:

Chapter	Section	Estimated time
Chapter 2	2.9.4 Managing change	12 minutes

Note that all sections of chapter 1 and most sections of chapter 2 were included in your assumed prior learning (see learning unit 1).

SUB-UNIT 3.1: IT AND DATA STRATEGY

3.1.1 INTRODUCTION

Withing a continuously evolving information technology (IT) environment an organisations should ensure that its business model is flexible to change and that an appropriate IT and data strategy is implemented to remain competitive.

An organisation's IT and data strategy incorporates its long-term vision for collecting, storing, sharing and using data. It also creates value for an organisation by making it possible for management to make better and faster decisions; reducing fraud; improving customer satisfaction and the organisation's brand; optimising processes; containing costs; supporting the organisation's business models and can even assist the organisation to create machine learning (ML) or generative AI.

Most large businesses run important background IT processes that involve the storage of incredibly large quantities of data. An organisation's IT and data strategy is of utmost importance if it is to remain competitive in an ever-changing economy and competitive markets. As with any decision a cost versus benefit analysis should be done before implementing an IT and data strategy as not all organisation require the same level of IT and data integration within their business models. In addition the governance (risks, safeguarding and confidentiality) associated with an organisations IT and data strategy should be incorporated within the strategic objectives.

In this learning unit you will review and analyse an organisation's overall information technology (IT) and data strategy, which includes data quality, accessibility, interoperability (compatibility) and regulatory compliance.

Note that this content can be linked to enabling competencies, particularly those involving **business** acumen and **decision-making** acumen.

3.1.2 THE IMPACT OF TECHNOLOGY ON STRATEGY

The way in which business is conducted is evolving. Technology and industrialisation are among some of the components that have played a role in this evolution. This shift is taking place across industries, irrespective of the size of entities, enabling entities to market their products or services internationally and to source raw materials from suppliers around the world. Along with the development of advanced technologies and interconnectedness there have also been significant advancements in the financial sector, providing access to capital markets globally. Various stock exchanges are now accessible to most people, with bandwidth being the only limiting factor. In most developing countries there has been an expansion of the reach of these platforms. In addition, there is significant growth in the types of financial products available (in the form of foreign exchange contracts, options, contracts for difference, etc).

Entities are also utilising social media to communicate with customers and suppliers in real time (through X (previously Twitter), Facebook and various other applications (apps)). Real-time communication reduces turnaround times and enhances the customer experience. It has given customers a platform for raising complaints or giving compliments and therefore assists entities in improving their service. Given the increased usage of smart phones by consumers, this form of communication has become relatively wide-reaching and has impacted most industries, such as banking, insurance, flight bookings (online bookings and online check-in) and taxi services (Uber). An advantage of the use of technology for communication is the relatively low cost. Entities encourage the use of technology since it enables them to save costs (physical rent is saved, electronic bookings save time and are more efficient, thereby also enhancing the customer experience, etc).

Industrialisation and the Fourth Industrial Revolution (4IR) have led to a shift towards a mechanised environment, which impacts manufacturing and non-manufacturing/service industries alike (see section 2.10 of *Managerial finance*, 10th edition). The IoT has also influenced production processors, in that assets are equipped with sensors that can capture, communicate and process data (see section 2.10 of *Managerial finance*, 10th edition). This provides the potential to create production distribution efficiencies, which benefits both manufacturers and customers. Studies have shown that the implementation of the IoT could result in significant cost savings, thereby building efficiencies into an entity's production process.

It is, however, important to note that this shift has consequences that extend beyond increasing the profitability of entities – the consequences also include aspects relating to efficiency, effectiveness and the long-term sustainability of entities or industries. One such aspect, which was a theme at the World Economic Forum (WEF) in Davos in 2016, is the use of the surplus labour that arises from industrialisation. According to the WEF, the impact of this aspect is currently unknown and needs to be considered in relation to both developing and developed economies due to the interconnectedness of the global economy. Other risks associated with the extensive use of technology include system failure, fraud (internal and external), a reliance on service providers and so forth. Technology security and business continuity plans are therefore important in order for entities to operate without unnecessary disruptions and to provide assurance to their customers, suppliers and other stakeholders.

3.1.3 ACTIVITIES

After you have studied the above information and read the prescribed material, complete the following activities:

Activity 3.1.1: Rainbow-T (Part A, extracted and adjusted)

(Source: SAICA 2023)

Activity 3.1.1	Estimated time			
	Reading	**Writing**	**Marking and review**	**Total**
Rainbow-T (Part A) 20 marks	10 minutes	30 minutes	12 minutes	52 minutes

Part A: Customised orders

Since April 2023 Tshepo has been considering modifying Rainbow-T's business model to mitigate the risks posed by competition from businesses that sell cheaper imports. He believes that providing customers with the option to order tailor-made jeans customised to their specific preferences will differentiate Rainbow-T from its competitors.

Customers will be able to submit their personalised preferences and personal information by completing a form that is available on the company's website. In May 2023 Tshepo assigned two task teams to develop innovative solutions to give effect to his plan. Below are the proposals that have been presented by each team.

Team A's proposed design for the order form (form A) is as follows:

Personal details:
Name:
Surname:
Date of order:
E-mail address:
Phone number:
Shipping address:
Billing address:

Customised preferences:
Fit (mark with X)
- skinny [ ]
- regular [ ]
- slim [ ]

Size (6–38): [ ]

Colour (mark with X)
- black [ ]
- blue [ ]
- white [ ]

Payment information:
- Credit card number:
- Expiration date:
- Security code:

According to Team A's proposal, customers will need to provide their credit card details to pay for their items at the time of order placement. Once payment has been confirmed, the items will be shipped to the designated addresses via a reliable third-party delivery service.

Team B's proposed design for the order form (form B) is as follows:

Name and surname: E-mail address: Customised preferences: Fit (skinny, regular, slim): Size: Colour: Collection point (dropdown list):

According to Team B's proposal, customers will collect their orders from a branch of their choice, which can be selected from a dropdown menu on the order form. Payment for the items will be made during collection at the chosen branch.

REQUIRED		**MARKS**
(a)	Compare and evaluate the proposals of the task teams in respect of the customised order form, considering the following: • Data input to complete the order • Data available for business analytics • Legal considerations • Other business considerations *X1: Communication skills – clarity of expression* *Y4: Integrative thinking*	18 *1* *1*
Total		**20**

SOLUTION

Y1: Integrative thinking *Synthesise and analyse information across the scenario that is relevant*	*1*
X1: Communication skills – clarity of expression	*1*

Data input and analytics

Name and surname: The task teams presented different order form designs for customers to submit their personalised preferences and personal information. A customer's name and surname can be entered separately in the case of form A or combined in the case of form B. Since a customer will be identified by his/her unique e-mail address, both options are valid.

Date: Form A includes a field for the date of an order, which may not be necessary since the system can automatically detect it. Furthermore, if the customer enters the date manually, s/he might do so in various formats, leading to inconsistencies and difficulties in analysing periodic trends. Hence, it is advisable to omit this field in the order form to avoid confusion and to ensure **data accuracy for analytics** purposes.

Phone number and shipping address: Form A requires customers to provide their phone number, which can be advantageous for contacting them if necessary and for marketing purposes. However, collecting this information increases the amount of personal data held, which raises privacy concerns under the **Protection of Personal Information (POPI) Act**. Phone numbers are considered sensitive personal data due to the risk of SIM swap attacks by which malicious actors could take control of phone numbers and gain access to sensitive

information. Collecting information on customers' shipping address also raises concerns regarding compliance with the POPI Act. Rainbow-T must ensure that it has the necessary **consent** from customers to collect and store their data. It must also secure customers' personal information against unauthorised access or disclosure. Additionally, Rainbow-T must ensure that it only collects data that is **necessary** for the purpose of processing orders. This means that the data collected must be **relevant, adequate and not excessive**.

Fit, size and colour: Both form A and form B require customers to specify their preferences for fit, size and colour. Form A prompts customers to mark their preferences with an X, while form B requires them to enter words. Allowing customers to choose from available options can be beneficial since entering words can result in erroneous inputs. If customers do enter words, data cleansing will be required for accurate analytics. Additionally, form B does not provide examples in respect of size or colour, which could be expressed in different formats (such as US size vs UK size), potentially leading to orders for sizes or colours that the entity does not provide.

Credit card information: Form A requires users to provide their credit card information. Transmitting such information online would expose the company to risks related to compliance with data protection laws, as well as reputational damage should a security breach occur.

Geographical analysis: Both forms of data collection enable analysis, but the types of insights that can be gained are slightly different. In the case of form B, customers can choose a specific branch to collect their orders from, and this data can be analysed to provide insights into the performance of each store. This will allow the entity to identify which stores are performing well and which ones may need additional support. Additionally, this information can be used to optimise inventory management, staffing levels and other operational aspects at each store.

While form A also allows for **data analysis**, the analysis may be more complex since it relies on shipping addresses rather than store selection. The entity would need to use further **analytical techniques** to group shipping addresses into geographical areas, and then analyse the data to gain insights into customer preferences and behaviours in specific regions. This additional step may require more time and resources than analysing the data collected through form B.

Other business considerations

Form A requires customers to **pay immediately** online before the entity starts manufacturing the products they ordered. This option provides immediate cash flow to the entity, but also carries the risk of chargebacks if customers are dissatisfied with the products. Chargebacks can negatively impact the entity's **cash flow** and may result in additional fees or penalties. However, this payment option reduces the entity's **debtor days**, which positively impacts its **working capital cycle**. The length of time it takes the entity to manufacture and deliver products to customers is also relevant to the cash flow and working capital argument since the entity needs to ensure it has sufficient funds to cover the cost of manufacturing and shipping the products during this period.

Form B allows customers to **pay later** at a store when they collect their orders. This option requires the entity to invest in the manufacturing and shipping of the products before receiving payment, which can result in a cash flow gap. The length of time it takes the entity to manufacture and deliver products to the stores for collection by customers is also relevant to the cash flow and working capital argument. However, this option provides customers with the opportunity to inspect the products before paying for them, which can increase customer satisfaction. Additionally, the entity needs to manage its **accounts receivable** and ensure timely payment from customers to maintain its cash flow and working capital cycle.

The choice of payment method and delivery service will affect the entity's **cash flow and customer satisfaction**. Customers have different preferences, with some preferring the convenience of delivery and others feeling more comfortable paying in-store. The use of a third-party delivery service requires careful consideration, including the reputation of the delivery service, the cost of the service and any legal considerations. The entity should ensure that the **delivery service** has a good track record of reliable and timely deliveries to avoid negative customer experiences. The cost of the service should also be considered in relation to the **entity's pricing strategy and overall profitability**. Additionally, any **legal considerations**, such as **liability for items that are lost or damaged during delivery**, should be taken into account. The entity should have a contract in place with the delivery service to ensure that both parties understand their obligations and responsibilities.

Y1:1
X1:1
Max 20
(Source: SAICA ITC 2021, adapted 2023a)

FEEDBACK

Data collected for analysis by Rainbow-T should be **necessary, relevant, adequate and not excessive** since it could become expensive to analyse and store data. By predicting and analysing customer preferences and behaviour, Rainbow-T can use the data collected for its sales and production strategy. Other important factors to consider are privacy, the safekeeping of customer information, compliance with the POPI Act, the entity's cash flow and working capital, and legal consequences.

Activity 3.1.2: Rainbow-T (Part B, extracted and adjusted)

Activity 3.1.2	Estimated time			
	Reading	Writing	Marking and review	Total
Rainbow-T (Part B) 20 marks	10 minutes	30 minutes	6 minutes	46 minutes

Part B

Tshepo particularly liked the proposal put forward by task team A. The team's recommendations were implemented on 1 July 2023.

Rainbow-T incorporated a convenient feedback system for its customers that entails providing a QR code on the tag of every pair of jeans sold. By simply scanning the code, customers can easily provide feedback on their satisfaction with the product.

A report on all the customer feedback received during July 2023, amounting to 50 entries, was generated on 1 August 2023. An extract of this report (the first 10 entries) can be found in table 1.

A multiple regression analysis was performed on the data set. The results of this analysis can be found in table 2.

The management committee of Rainbow-T, upon receiving the data presented in table 2, expressed its frustration at there being no report to explain what the data meant. Accordingly, it was resolved that this omission would be rectified and that the report and the tables would be presented at the committee's next meeting.

Table 1: Extract of customer satisfaction report

Date of sale	Customer name	Fit	Size	Colour	Satisfaction rating (5)
2023/07/01	John Smith	Skinny	30	Black	4
2023/07/02	Jane Doe	Regular	32	Blue	3
2023/07/03	Michael Chen	Slim	36	White	5
2023/07/04	Sarah Lee	Skinny	28	Black	2
2023/07/05	David Kim	Slim	34	Blue	4
2023/07/06	Emily Wong	Regular	30	White	5
2023/07/07	James Johnson	Slim	32	Black	3
2023/07/08	Lily Lee	Skinny	38	Blue	4
2023/07/09	Brian Park	Regular	36	White	2
2023/07/10	Grace Kim	Slim	34	Black	5

Table 2: Results of multiple regression analysis

Multiple Regression Analysis

ANOVA

	df	SS	MS	F	Significance F
Regression	3	35.654	11.885	46.29	0.000
Residual	46	21.162	0.460		
Total	49	56.816			

	Coefficients	Standard Error	t-Statistic	p-Value
Intercept	1.202	0.224	5.365	0.000
Fit: Regular	-0.372	0.165	-2.257	0.029
Fit: Slim	-0.115	0.178	-0.647	0.521
Size: 30	-0.142	0.174	-0.818	0.419
Size: 32	0.158	0.190	0.833	0.410
Color: Black	0.712	0.174	4.098	0.000
Color: Blue	0.462	0.173	2.669	0.010

Multiple R	0.748
R Square	0.560
Adjusted R Square	0.491
Standard Error	0.678
Observations	50

REQUIRED		MARKS
(b)	Write a report to the management committee of Rainbow-T in which you analyse the results of the multiple regression analysis. Include the following information in your report: • Method of analysis and purpose of the analysis • Findings • Recommendations • Limitations • Other considerations *X1(e): Relational acumen: Communication skills*	19 *1*
Total		**20**

SOLUTION

X1(e): Relational acumen: Communication skills *Appropriate layout and structured answer, e.g. link between risks and mitigation*	***1***

Rainbow-T
REPORT

To: Management of Rainbow-T
From: CTA student
Date: 15/02/202X
Subject: Analysis of customer satisfaction with customised jeans

Dear Management,

I am writing to share with you the results of my analysis of customer satisfaction with our customised jeans offerings. A multiple regression analysis was performed on the customer feedback data to determine the factors that have a significant impact on customer satisfaction with the jeans sold by Rainbow-T.

A multiple regression analysis was performed to examine the **relationship** between independent variables (fit, size and colour) and a dependent variable (satisfaction rating). This method is used to identify the **strength and direction** of the relationship between two or more independent variables and a dependent variable. The analysis involved fitting a **linear equation** to the data and testing the **significance** of the relationship between the variables.

The results of the analysis suggest that **colour** *(color)* choice is a **strong predictor** of **customer satisfaction**. Specifically, customers who choose black or blue jeans tend to rate their satisfaction higher than customers who choose white jeans, holding other predictor variables constant. The regression coefficients for both colour: black and colour: blue are **statistically significant** ($p < 0,05$), indicating that these variables have a significant impact on customer satisfaction.

The results also suggest that the **fit and size** of jeans have **weaker associations** with **customer satisfaction**. The regression coefficients for fit: regular and fit: slim have negative values, indicating that customers who choose these fits tend to rate their satisfaction slightly lower than customers who choose fit: skinny. However, the coefficient for fit: slim is **not statistically significant ($p > 0,05$)** and, therefore, may **not be a reliable predictor of customer satisfaction**.

Similarly, the regression coefficients for size: 30 and size: 32 are **not statistically significant** ($p > 0,05$), suggesting that the size of jeans does **not have a significant impact on customer satisfaction**.

Overall, the regression model has a **good fit (adjusted R-squared = 0,491)**, which means that the predictor variables collectively explain about **49% of the variation in customer satisfaction ratings**. However, **other factors** that we are not measuring in this analysis, such as the **quality of the material** or the **speed of delivery**, **could also influence** customer satisfaction.

Based on these results, I recommend that we focus on offering **more black and blue jeans** to our customers since these colours appear to be particularly popular and lead to higher levels of customer satisfaction. Additionally, we may want to consider ways to improve our offerings in other areas, such as the fit and size of the jeans, in order to further enhance customer satisfaction.

It is important to note some **limitations** of the study. First, the **sample size was only 50**, and only responses received during the **month of July** were taken into account for the analysis. While every effort was made to ensure that the sample is representative of our customer base, the results obtained on the basis of the small sample and the limited time frame may not be fully indicative of customer satisfaction throughout the year. Furthermore, since jeans are a seasonal product, the results may not be generalisable to other months, seasons or years.

Regards,

CTA student

(Source: SAICA specimen IAC 2023b)

FEEDBACK

The purpose of the data collected by Rainbow-T was to determine customer satisfaction. A multiple regression analysis (statistical method) was used to determine if there is a relationship between customer satisfaction and the fit, size or colour of jeans.

In learning unit 4 you will learn more about data analytics and the four main types of data analysis, namely, descriptive, diagnostic, predictive and prescriptive (see section 2.10 of *Managerial finance*, 10th edition).

Activity 3.1.3: Real Pirates (extracted and adjusted)

(Source: SAICA 2023)

This activity is of an integrated nature since it relates to data analytics (management accounting), revenue recognition in terms of IFRS 15 (financial accounting) and ethical considerations (auditing).

Activity 3.1.3	Estimated time			
	Reading	Writing	Marking and review	Total
Real Pirates 16 marks	9 minutes	24 minutes	12 minutes	45 minutes

Background

Real Pirates (Pty) Ltd ('RP') is a soccer club that was founded in 1997 by Patrick Khoza. Khoza, through his family trust, remains a key shareholder in RP. When RP was established, its vision was to become the leading soccer club in South Africa and on the African continent.

RP competes in the South African soccer league, which is contested by 16 soccer clubs. Each soccer club plays 30 matches against all other clubs, both home and away (15 home games and 15 away games). The soccer season typically runs from 1 August to 30 April of the following year. The 2022/2023 season therefore ran from 1 August 2022 to 30 April 2023.

RP plays its football matches at the Bacca Stadium in Johannesburg. The stadium, which RP owns, has a maximum capacity of 50 000 seats for supporters. It has a clubhouse and a retail store that sells merchandise, such as soccer jerseys, tracksuits, soccer boots, bags and jackets.

Ticket sales

RP sells tickets for home soccer games (i.e., games played at the Bacca Stadium) in the following three ways:

- ***Season tickets:*** RP collects cash from the sale of season tickets for league games at the beginning of a new soccer season. Season ticket holders receive access to all 15 home games of the regular soccer league season and the right to sit in preselected seats. Season ticket holders do not receive a refund if a home game is cancelled or postponed for whatever reason or if they do not attend a game. All season ticket holders receive a 10% discount when they purchase club merchandise from the club's retail store for the duration of the season, but not during the annual sale.

  A 2022/2023 season ticket sold for R900. RP calculated that R750 of this amount related to access to the games and R150 to the discount on merchandise.

- ***Individual tickets:*** These tickets for league games are purchased at the gate by non-season ticket holders on the day of a match.

- ***Cup game tickets:*** These tickets are for home games that are not part of the regular soccer league, such as national cup games or trophy games, and have to be purchased separately by supporters. The prices of these tickets vary, depending on the popularity of a game.

The following information is available regarding ticket sales for FY2023:

Type	Number of tickets	Average price per ticket	Total received
League game season tickets	10 000	R900	R9 000 000
League game individual tickets	420 000	R75	R31 500 000
Cup game tickets	375 000	R75	R28 125 000

Point-of-sale system

All ticket sales and merchandise sales are transacted via RP's standardised point-of-sale (POS) system. The POS system was procured from a leading global IT firm. The POS system allows RP to transact in a fast and efficient manner. It enables the registration of sales, the processing of payments (credit/debit cards and cash) and data analytics and reporting.

The POS system is maintained by a dedicated RP data analytics team.

The data analytics team is currently investigating ways in which it can analyse RP's sales data to assist RP's accountant in reporting the revenue of the organisation in accordance with IFRS 15 – Revenue from Contracts with Customers.

REQUIRED		MARKS
(a)	Explain to RP's data analytics team the reports, as well as the related key components, that you, as RP's financial accountant, need to be able to extract from RP's database to allow you to account for revenue from the sale of the three different types of tickets. • Explain how each component that you request would enable you to report RP's revenue in accordance with IFRS 15. *Y4: Integrative thinking*	15 *1*
Total		**16**

SOLUTION

Y1: Integrative thinking *Synthesise and analyse information across the scenario that is relevant to data and IFRS15*	***1***

Dear Data Analytics Team,

I am writing to provide guidance on the reports that would allow us to accurately account for revenue from the sale of **season tickets, individual tickets to league games** and **individual tickets to cup games**.

These reports, derived from our **point-of-sale (POS) system database**, will enable us to report revenue in accordance with **International Financial Reporting Standards (IFRS) 15 – Revenue from Contracts with Customers**.

Sales data extraction: The data analytics team can extract relevant sales data, including **transaction details such as date, customer information, product sold (e.g., tickets, merchandise), price, payment method and any other relevant data points**, from the POS system. This comprehensive data set will serve as the foundation for further analysis.

Revenue recognition timing: One of the key aspects of IFRS 15 is determining the appropriate **timing of revenue recognition**. By analysing the sales data, the data analytics team can identify when control of the goods or services is transferred to the customer. This analysis can be done by examining the dates of ticket sales and matching them with the events or games for which the tickets are valid. It will ensure that revenue is recognised when the customers have the right to attend the games or events.

Contract price allocation: For season tickets that include both tickets and additional perks (such as merchandise or exclusive access), the data analytics team can assist in **allocating the total contract price to the respective performance obligations**. This can be achieved by analysing the POS system data and identifying the portion of the price attributable to different components. This procedure will help ensure proper revenue recognition based on the individual performance obligations outlined in the contract.

Reporting and documentation: The data analytics team can develop customised reports that provide a clear breakdown of revenue according to different revenue streams, such as **season tickets, individual tickets to league games, individual tickets to cup games and merchandise sales**. These reports can summarise the revenue recognised in each category, along with any relevant contractual terms or modifications that affect revenue recognition. This will assist the accountant in preparing accurate and compliant financial statements in accordance with IFRS 15.

Data validation and integrity: Since the POS system is crucial for revenue recognition, the data analytics team should also focus on data validation and integrity. Regularly reviewing and reconciling the sales data with other financial records, such as bank statements or general ledger entries, will help with the identification of discrepancies or potential errors that could have an impact on the accuracy of revenue recognition.

The key components that need to be extracted from each report and their significance are outlined below.

1. **Season ticket sales report:** The season ticket sales report should include the following key components:
    - **Customer information:** Each season ticket holder's unique identifier, such as his/her name or customer ID, to track individual contracts.
    - **Contract start and end dates:** The effective period of a season ticket contract, allowing us to determine the revenue recognition timing.
    - **Contract price and allocation:** The total price of a season ticket contract, along with the allocation of the price to different components (e.g., league games, cup games, additional perks). This information is crucial for appropriate revenue allocation.
    - **Payment information:** Payment details, such as payment method, date and instalment structure, if applicable, to ensure accurate recognition of revenue over the term of a contract.
    - **Changes in contract terms:** Any modifications, additions or cancellations of season ticket contracts during the reporting period. This information will help us to assess the impact of these aspects on revenue recognition.

The season ticket sales report provides the necessary data to allocate revenue based on the pattern of benefit derived by season ticket holders over time, as outlined in IFRS 15.

2. **Individual ticket sales report (league games):** The individual ticket sales report for league games should include the following key components:
    - **Customer information:** The identification of customers who purchase individual tickets for league games, allowing us to track revenue recognition for each transaction.
    - **Ticket sale dates:** The dates when individual tickets were sold, aiding in the recognition of revenue in the correct accounting period.
    - **Ticket prices:** The price per ticket sold, enabling the accurate determination of revenue.
    - **Seat information:** Details of the seat location for each individual ticket sale, facilitating revenue allocation if necessary.

The individual ticket sales report for league games assists in recognising revenue for each ticket sold when control of the ticket transfers to the customer in accordance with IFRS 15.

3. **Individual ticket sales report (cup games):** The individual ticket sales report for cup games should contain the following key components:
    - **Customer information:** The identification of customers who purchase individual tickets for cup games, enabling revenue recognition tracking.
    - **Ticket sale dates:** The dates when individual tickets were sold, helping us to determine the appropriate accounting period for revenue recognition.
    - **Ticket prices:** The price per ticket sold, allowing accurate revenue determination.
    - **Cup game information:** Specific identification of the cup games for which individual tickets were sold, aiding in revenue allocation and reporting.

The individual ticket sales report for cup games supports proper revenue recognition when the control of a ticket transfers to the customer in accordance with the requirements of IFRS 15.

By extracting and analysing the data from these reports, we can ensure accurate revenue recognition in accordance with IFRS 15. It is crucial to maintain robust documentation and a thorough understanding of the club's revenue recognition policies to appropriately apply the guidelines outlined in the standard.

Please feel free to reach out if you require any further clarification or assistance in using the POS system database for revenue accounting purposes.

Sinc
erel
y,
Financial
Accountant

(Source: SAICA 2023)
Y4:1
Max :16

	**FEEDBACK** The roles and responsibilities of a management accountant entail taking cognisance of the diverse needs and responsibilities of a financial accountant, an auditor and even a data analyst.

Activity 3.1.4: ExyMed (extracted and adjusted)

(SAICA specimen paper**,** 2023)

This activity is of an integrated nature since it relates to data analytics (management accounting), auditing (material misstatement and inventory), business valuations (financial management) and ethical considerations (auditing).

Activity 3.1.4	Estimated time			
	Reading	**Writing**	**Marking and review**	**Total**
Exymed 52 marks	18 minutes	45 minutes	22 minutes	85 minutes

1 Introduction

ExyMed Ltd ('ExyMed') is a leading retailer of medicines and healthcare products. It operates a chain of 267 pharmacies across South Africa, complemented by a growing digital presence. The majority of the company's revenue is earned from its pharmacies that dispense a wide range of both prescription and self-medication products (also referred to as over the counter (OTC) medicines). The company's mission: *To create a better life for our customers by providing them with access to affordable medication and healthcare products.*

ExyMed was founded in 2001 by Mr Gustav Caroli. He is still a major shareholder and the chairperson of ExyMed's board of directors. ExyMed was listed on the JSE[1] in 2012. Mr

[1] Johannesburg Stock Exchange.

Mandla Pitso is ExyMed's CEO[2] and Mr Devon Gardner CA(SA) is the company's CFO[3]. ExyMed has a 30 November financial year end.

ExyMed pharmacies are well known and ExyMed is an established and reputable brand among South African consumers, mainly due to –

- its wide range of quality products offered at affordable prices; and
- its experienced, knowledgeable and friendly staff, which enables the company to meet its objectives of providing professional care, expert advice and convenient medication management solutions.

ExyMed's presence in all major shopping malls gives it a nationwide footprint, thereby living up to its marketing slogan: *ExyMed Pharmacy, always close to you*.

ExyMed is one of the major private sector employers of qualified pharmacists in South Africa. The company also employs qualified medical nurses in its pharmacies, who are responsible for providing basic nursing services to patients, such as administering vaccinations and measuring blood pressure and blood glucose levels.

ExyMed's accounting division comprises highly qualified individuals with appropriate levels of experience. TickT Inc., a firm of registered auditors, has been the registered auditors of ExyMed since 2015. Mr Alan Buzz CA(SA) RA has served as the audit engagement partner for the past three years. Performance materiality, for purposes of planning and performing the audit of ExyMed's financial statements for the financial year ended 30 November 2023 (FY2023), has been set at R150 million.

ExyMed communicated the following matters, amongst others, to its stakeholders in its integrated report for FY2022:

- ExyMed strives towards a corporate culture of conducting business in a transparent manner while upholding the highest levels of integrity and accountability.
- ExyMed aims to improve sales volume growth by –
  - opening, on average, ten new ExyMed pharmacies every year;
  - improving trading densities (measured as rand sales per square metres (m^2) of floorspace); and
  - strengthening customer loyalty and improving its customer loyalty programme.
- Priorities
  - Leveraging the company's infrastructure to create growth opportunities;
  - Growing the business by acquisition;
  - Training and motivating employees; and
  - Focusing on improving productivity and cost efficiencies.

While ExyMed's long-term target is to have 300 pharmacies in South Africa by 2025, it is running out of locations for new stores. A secondary challenge is recruiting qualified pharmacists to staff pharmacies in the new locations. (A similar challenge is being experienced by its major competitor).

[2] Chief executive officer.
[3] Chief financial officer.

2 Operational structure

The following is an overview of ExyMed's departments:

All departmental functions are performed in-house. In exceptional instances where specialised skills are required, the assistance of external and independent experts is obtained.

3 The South African medicines and healthcare products industry

The medicines and healthcare products industry in South Africa is dominated by five companies, with ExyMed being one of them. While new entrants entered the industry to exploit opportunities arising from the Covid-19 pandemic, the sub-standard products they provided, and at inflated prices, resulted in very few of these companies still trading today. Competition in the market is strong and companies compete based on prices charged and the quality of services rendered.

Trading conditions in the industry have been difficult during the last five years due to particularly high levels of inflation, which has put consumers' disposable income under severe pressure. In addition, the price of medication in South Africa has increased by more than inflation in recent years. The result is that the cost of being a member of a medical aid (which contributes towards amongst others, members' medicine costs) increased dramatically while the benefits (e.g., towards the cost of medicines) offered by medical aids have decreased.

High levels of loadshedding continue to disrupt trading and hamper storage of certain medicines and healthcare products. South Africa is also experiencing a shortage of pharmacists: at least 12 000 pharmacists are required in the private and public healthcare sectors to meet international standards. As a result, pharmacists have substantial bargaining power in the industry and will easily resign from their existing employment if they do not find the working environment favourable or if they feel they are not adequately remunerated. In view of the above, this industry has been growing at a much slower rate than expected.

4 Expansion strategies

To achieve its growth targets, and to turn around profit numbers, which have declined in recent years, ExyMed has been considering various expansion strategies.

ExyMed management realised that many South Africans face challenges in accessing healthcare services, particularly in rural or underserved areas. Therefore, opportunities exist in such regions to provide much needed access to essential medicines and healthcare products. This is especially necessary given South Africa's high prevalence of diseases such as HIV/AIDS, diabetes and hypertension. These services could be rendered in collaboration with other healthcare providers (including the South African government), clinics and hospitals

to offer medication dispensing services on site or through referral programmes. This could enhance patient convenience and streamline care.

ExyMed's expansion strategy is two-fold in nature:

(i) The launch of a same-day delivery service, supported by a unique ExyMed application (i.e., the 'MOW app'); and

(ii) The proposed introduction of telemedicine services.

4.1 Same-day delivery service

To remain relevant and keep up with market trends regarding same-day delivery services of general household goods and necessities, ExyMed decided to expand its business offerings beyond that of only operating as 'bricks and mortar' pharmacies.

Accordingly, in February 2023 ExyMed launched a same-day delivery service, supported by its own Medicine-on-Wheels application, called the MOW App. The MOW app can be downloaded free of charge on any electronic device (such as smart phones, laptops and tablets) and is available on all well-known online app store platforms.

The MOW app enables registered MOW app users to electronically request their medicines from ExyMed. ExyMed supplies, packs and delivers the orders to the customer's door on the same day that the order is placed, at competitive delivery fees. This service is available in most of the towns and cities in which ExyMed has pharmacies.

For the new MOW app, ExyMed had to create and establish a new operational and cost-effective same-day delivery service network. The MOW App service has been very successful since its introduction, partly because none of ExyMed's competitors offers a similar service.

4.2 Proposed telemedicine services

According to Mandla, there are huge opportunities in the 'telemedicine' space. In essence, telemedicine is the exchange of personal medical information, between a patient and a medical general practitioner (GP) using electronic communication.

GPs use electronic communication technologies and tools such as mobile phones, text messages and two-way video streaming platforms.

GPs can provide medical services to patients situated at any location (including remote locations) with no direct access to face-to-face medical service providers. These medical services could include (but are not limited to) –

- e-consultations, which are medical consultations that involve the digital sharing and electronic transmission of personal medical information (such as images of visible conditions, diagnostic reports, and issued prescriptions);
- remote monitoring of the patient's symptoms and vital signs; and
- specialist care referral services.

The telemedicine industry is a relatively new sub-section of the medicines and healthcare products and services industry in South Africa. This industry showed high growth during the Covid-19 pandemic when many GP practices diversified their service offerings to include

telemedicine options for their patients. After the pandemic, many GPs have returned to traditional service delivery models, dropping telemedicine offerings from their services. There are three main reasons for this:

- Many GPs found that patients prefer face-to-face consultations and use telemedicine only as a last resort;
- The telemedicine industry is highly regulated and governed by existing healthcare regulations. These include the Health Professions Act and the National Health Act, as well as regulations specific to the offering of telemedicine services, issued by the Healthcare Professions Council of South Africa; and
- Many GPs are not comfortable offering telemedicine services because of the risk of misdiagnosing patients and the potential legal liability that could result from this. Consequently, there are at present very few credible telemedicine service providers in South Africa.

ExyMed's board identified the provision of telemedicine services as an opportunity both to diversify its existing revenue streams and to respond to the social mandate of providing opportunities for South Africans to have access to good quality and affordable healthcare. A project task team was established to determine the viability of this expansion option.

Mandla noted that ExyMed wants to focus on providing e-consultations (as a form of telemedicine) to achieve the following objectives:

- Improving access to healthcare (especially to patients in the lower income brackets in remote areas);
- Reducing healthcare cost (e.g., it eliminates travel cost to a GP);
- Improving healthcare effectiveness (patients have access to a network of GPs); and
- Improving the quality of healthcare service offerings (offering patients a more convenient and less time-consuming way of consulting a GP and obtaining a prescription for medicine).

ExyMed's IT department recommended that it uses an existing digital consultation tool as opposed to developing its own e-consultation tool, as a pilot for this new venture. The IT department suggested the Consult-Me tool for the following reasons:

- It was developed by a reputable third party and is easy to use. It will enable patients in remote areas to have a digital consultation with a GP by means of video conferencing and/or live streaming.
- Consult-Me received good online reviews regarding its user friendliness, ease of navigation and operational features. Simplicity in using such a digital tool is a key consideration for ExyMed, since it is crucial that patients in remote areas should be able to operate the tool with ease.
- Its functionality is similar to other widely used electronic meeting platforms such as Zoom, Microsoft Teams and Google Meet.
- It provides most of the functionalities that are required for the successful implementation of e-consultations, including –
    - live video streaming,
    - photo/image upload and sharing,
    - an interface with email and electronic messages (such as SMS, WhatsApp and Telegram), and
    - electronic calling, recording and transcription options.

Patients will be able to create an account on the Consult-Me platform by registering with their personal details and a unique username and password. They must select ExyMed as their

preferred service provider to be linked to a ExyMed GP. The IT department cautioned that no information could be found on the ability of Consult-Me to guarantee and provide assurance on the security of data as far as data recording, transmission, storage, access, and backup are concerned. The IT department could not find any reference to Consult-Me having been tested for these data functionalities.

All prescriptions for medicine flowing from each e-consultation conducted with a patient will be issued to the patient electronically via the Consult-Me e-mail interface. This communication will be for patient information purposes only, since the required medication will be supplied, packed and delivered by ExyMed to each remote patient by means of ExyMed's medicine delivery service network. The medicine will be dispatched once the patients or their medical aids have processed a payment for the medication.

To enable the offering of e-consultations, ExyMed will contract with qualified and registered GPs to form part of its telemedicine network. These GPs will not be permanently employed by ExyMed but will be remunerated by ExyMed based on the number of e-consultations performed per month. An e-consultation will cost patients R350 per visit, excluding any medication supplied by ExyMed. The patients must pay the consultation fees prior to the e-consultations taking place or alternatively must have medical aid coverage.

Apart from recruiting GPs, ExyMed envisions training existing ExyMed staff to fulfil administrative and support functions relating to this new venture. ExyMed will also need to recruit a medical director who will be responsible for the strategic and operational management of this venture.

5 Possible business arrangement with the government

The South African National Department of Health called for tenders for a private sector company to partner with the government in the distribution of medicines dispensed by government pharmacies to their patients / beneficiaries monthly.

Since ExyMed already has an operational medicine delivery service network in place following the establishment of its same-day delivery service, Devon is of the opinion that ExyMed will be the perfect partner for this venture with the Department of Health.

6 Inventory

Due the nature of ExyMed's operations, inventory is the largest asset in the company's statement of financial position.

6.1 Inventory management data

To underpin its operations and reinforce data-driven decision making, ExyMed has instituted an advanced inventory management database. This system encompasses a series of structured datasets, each designed to capture and manage specific elements of the inventory process:

1 Batch information dataset

When ExyMed acquires medicines from its suppliers, medicines are delivered with a certain batch number. This dataset then records the following comprehensive details pertaining to the individual medicine batches:

- Inventory description: The standardised name used to identify a product.
- Batch number: A unique batch identifier.

- Initial quantity: Stock count on receipt of the batch from the supplier.
- Date received: Time stamp marking the date the batch was received.
- Expiry date: Essential data, especially pertinent to items with a stipulated shelf life.
- Inventory number: A distinct numerical identifier for each inventory item.

2 Dispatch log dataset

A dataset documenting the following dispatch details associated with inventory items:

- Batch number: Directly correlates with the batch information dataset.
- Date dispatched: The specific date on which the medicine was dispatched.
- Quantity dispatched: The volume of items dispatched.

3 Finance dataset

This dataset captures the financial aspects of the inventory, detailing the cost and revenue of each medicinal product. This enables precise financial analysis and reporting for ExyMed.

- Inventory description: Linked to the batch information dataset.
- Inventory number: Corresponding to the unique code in the batch information dataset.
- Cost price: Unit cost for ExyMed for each item in the batch (excluding VAT).
- Selling price: Customer's purchase price per unit (excluding VAT).

Integrated relationships within the database connect these datasets. For instance, the batch number serves as a bridge between the batch information and dispatch log datasets. This intricate web of relationships ensures data consistency, facilitates streamlined operational management, and provides a foundation for holistic analytics.

Leveraging the vast amount of data in the inventory management database, ExyMed's management is contemplating the development of an interactive dashboard. The objective of this dashboard would be to enhance ExyMed’s understanding of its inventory management, sales patterns, and overall operational efficiency.

ExyMed’s management pinpointed the following four key metrics as being pivotal for this dashboard:
1. Total dispatch revenue over time
2. Inventory turnover rate
3. Expiring stock
4. Average dispatch quantity.

6.2 Obsolete stock policy

ExyMed adopted an obsolete stock policy in terms of which it donates its obsolete OTC medicines to selected registered public benefit organisations across the country. These are mostly shelters (establishments offering temporary accommodation and support to individuals in need) and old age homes. In terms of this policy, ExyMed has an agreement with each of these public benefit organisations not to disclose who made these donations to them, as ExyMed would like to remain anonymous. ExyMed does however receive valid section 18A tax certificates from all of the benefiting organisations.

6.3 Inventory balance at 30 November 2023

The carrying amount for the inventory account balance reflected in the statement of financial position is made up of the following:

	30/11/2023 Unaudited	**30/11/2022 Audited**
	R'million	**R'million**
Merchandise, at cost	797 300	688 400
Goods in transit	5 000	4 100
Less: Obsolescence allowance	(35 700)	(37 200)
Total	766 600	655 300

In addition to the inventory at the company's pharmacies, inventory is stored at ten large distribution warehouses located throughout South Africa. Around 80% of ExyMed's purchases are made from suppliers based in South Africa. ExyMed's suppliers deliver their inventory to these distribution warehouses, from which inventory is supplied to the pharmacies. From time to time, suppliers also supply ExyMed with consignment stock – this is particularly prevalent for new product ranges that suppliers introduce.

The 'obsolescence allowance' relates to inventory that has reached its expiry date or is otherwise unsaleable, but has not been donated to public benefit organisations as at the end of the financial year.

7 Proposed sale of interest in the same-day delivery service business unit

Due to the recent success of ExyMed's same-day delivery service, the company is considering selling a 25% share in this business unit to a private equity group, Gigantic Investments Group Ltd ('GIG'). GIG is a multinational private equity investment and consulting company that holds several investments in different technology companies around the world.

GIG offers its investees free access to the company's extensive knowledge and skill in the areas of IT governance and security. GIG is well known in the industry as an expert in the implementation of COBIT[4] practices.

The ExyMed board is excited by the potential sale of the business unit: first, for the additional cash injection that this will provide, but second, for the access that the unit will have to GIG's IT governance and security expertise.

The GIG board has asked ExyMed to provide it with a valuation of the business unit. GIG will use this valuation to decide whether it should make an offer. The board of ExyMed tasked the company's financial manager with the preparation of a valuation

.**REQUIRED:** For purposes of parts (a) to (e), assume that you are a staff member in the accounting and finance department of ExyMed.		**Marks**
(a)	Advise the management of ExyMed whether it should go ahead with the telemedicine expansion project incorporating e-consultations. In your answer you should address the following: • Identification of the key business risks that ExyMed should consider in relation to this project **for the IT and risk management departments.** • An explanation of the potential impact of each risk on ExyMed if not appropriately mitigated.	*10 Integrated topic with Risk management and control* **for the IT and risk management departments.**

[4] Control objectives for information and related technologies.

	• Identification of the ExyMed department to which the management of each risk should be assigned. *Z1: Business internal environment 1* *Y1: Critical thinking 1* ***Note:*** *For other departments and responsible centres you may perform this risk management and control integration section for* ***Test 4 and Exam preparation*** *question if you require additional exercise on this topic and is for self-study. For the solution please refer to additional resources [50 min]*	
(b)	In view of ExyMed's proposed business arrangement with the National Department of Health, assist Devon with the following: (i) An analysis of ExyMed's strategic position before entering into the proposed business arrangement with the Department of Health; *Z1: Business internal environment* *Z2: Business external environment* *Y1: Critical and analytical thinking* (ii) An evaluation of whether this business arrangement aligns with ExyMed's financial plan for achieving its intended growth targets. *Y2: Integrative thinking 1* *Y3: Problem solving 1* ***Note:*** *You may perform this financial strategy section for* ***Test 4 and Exam preparation*** *question if you require additional exercise on this topic and is for self-study. For the solution please refer to additional resources [50 min]*	15 Business strategy *1* *1* *1* *0* *Integration with Finance strategy*

(c)	In view of the predetermined metrics ExyMed's management seeks to incorporate into its envisioned dashboard, address the following criteria for each metric: • Purpose: Define the core objective or purpose of each metric. Why is it important to ExyMed's management? • Fields needed: List the specific fields from the datasets required to compute this metric. • Chart type: Recommend a visualisation that would most effectively convey the metric's data. Justify your choice. • Filters: Suggest any filters (slicers) that could enhance the metric's visualisation, making it more interactive and insightful. • Relationships needed: Ascertain if any relationships between datasets need to be established for accurate metric computation. Provide details of these relationships. *Y1: Critical and analytical thinking* *W3: Data analytics*	27 Data analysis *1* *1*

(d)	Document the key points that you would make in responding to the following voice note that you received from Ms Thuli Mathope. Thuli is a co-worker, and an inventory controller employed in ExyMed's operations and logistics department:  *Hi there, I am sending you this message privately as I would like your honest opinion on a very sensitive matter.* *I am sure that you are aware that every month ExyMed needs to classify some of its OTC medicines as obsolete stock and then destroy them, due to these medicines reaching their expiry dates.* *However, what ExyMed does is to donate OTC medicines past their expiry dates to public benefit organisations for distribution to persons who would not have access to these medicines otherwise or who are not able to afford them. This obsolete stock policy is giving me sleepless nights. Surely the regulation of placing an expiry date on OTC medicines is there for a reason? It just does not feel right!* *But on the other hand, proper healthcare and access to medicine is such a big problem in South Africa. If these expired OTC medicines are destroyed rather than donated, many of the organisations that depend on ExyMed's obsolete stock will not have access to any of these medicines at all. This is a tricky situation. What do you think?* *Please keep this matter confidential – I hope to hear from you soon. Goodbye!* *I2: Business ethics 1* *Y6: Ethical reasoning 1* *X1: Communication skills 1* ***Note:** You may perform this ethical integration section for **Test 4 and Exam preparation** question if you require additional exercise on this topic and is for self-study. For the solution please refer to additional resources [25 min]*	*0* *Ethical integration*

(e)	Draft an email to the financial manager of ExyMed in which you explain only the most appropriate method for determining a value for the same-day delivery service business unit and how he should go about it. *Z1: Business internal environment 1* *Z2: Business external environment 1* *Y1: Critical and analytical thinking 1* ***Note:** You may perform this business valuation section for **Test 4 and Exam preparation** question if you require additional exercise on this topic and is for self-study. For the solution please refer to additional resources [25 min]*	*0 Business valuation integration*
For purposes of parts (f), assume that you are part of the team assigned to the external audit of ExyMed		
(f)	Prepare a workpaper for the planning of the audit of the inventory balance at 30 November 2023. The workpaper should describe the risks of material misstatement relating to this account balance and the required audit responses to reduce these risks to an acceptable level. *Y1: Critical and analytical thinking 1* *Y2: Integrative thinking 1* *Y3: Problem solving 1* *X1: Communication skills 1* *W3: Data analytics 1* ***Note:** You may perform this audit section for **Test 4 and Exam preparation** question if you require additional exercise on this topic and is for self-study.* *For the solution please refer to additional resources [55 min]*	*0 Auditing integration*
Total		**52**

SOLUTION

(a)	Advise the management of ExyMed whether it should go ahead with the telemedicine expansion project incorporating e-consultations. In your answer you should address the following: • Identification of the key business risks that ExyMed should consider in relation to this project **for the IT and risk management departments.** • An explanation of the potential impact of each risk on ExyMed if not appropriately mitigated. • Identification of the ExyMed department to which the management of each risk should be assigned. *Z1: Business internal environment* *Y1: Critical thinking*	*10 Integrated topic with Risk management and control* *1* *1*

Note: Refer to additional resources for the complete solution including **other responsible** centres, that is for self-study.

Z1: Business acumen: Business internal environment *Interpret the risk of the internal environment on the respective departments*	*1*
Y1: Critical thinking *Distinguish which aspects should be addressed and under what heading*	*1*

	Description		
	Key business risk	**Impact**	**Responsibility**
3	Dependence on technology for telemedicine services introduces the risk of technical failures, system outages and connectivity issues.	Technical failures or cyber attacks could disrupt telemedicine services, impacting patient care and revenue generation. Reliability of the technology is crucial for rendering a quality service. Patients may prefer to switch to a reliable service provider, resulting in a decreased market share and ExyMed not reaching its growth targets.	IT department
4	Using an existing consultation tool can result in the tool not fully meeting ExyMed's needs, customisation of the platform may be limited and ExyMed would be reliant on an external party to make updates / improvements to the platform.	Poor quality service will hinder growth. Furthermore, customers will not recommend this service to others if it does not fully meet their needs, further limiting the growth potential of the project.	IT department
5	Telemedicine consultations carry the risk of misdiagnosis or medical errors due to the limitations of remote assessments.	Medical errors or misdiagnosis can lead to lawsuits and costly settlements. This will erode the credibility of the service as well as ExyMed's reputation and could cast doubt on the quality of other medical services rendered by ExyMed.	Medical director and risk management department
6	The increased reliance on technology makes the business vulnerable to cyber threats, including hacking, ransomware attacks and other cybersecurity breaches.	• Technical failures or cyber attacks could disrupt telemedicine services, impacting patient care and revenue generation. • Reputational impact and customers moving to more reliable suppliers.	• IT department • External cybersecurity consultants (in the case of severe breaches that ExyMed is not equipped to address)

Z1: 1
Y1: 1
Max 10

Part (b)	In view of ExyMed's proposed business arrangement with the National Department of Health, assist Devon with the following: **(i)** An analysis of ExyMed's strategic position before entering into the proposed business arrangement with the Department of Health; and	15

Z1: Business acumen: Business internal environment *Interpret the internal environment on the organisation's strategy*	*1*
Z2: Business acumen: Business external environment *Z2(b): Interpret the influences of the external environment on the ExyMed's strategy*	*1*
Y1: Critical thinking *Candidates will have to conceptualise, analyse and evaluate the ExyMed's current strategic position*	*1*

	Description
1	ExyMed pharmacies are well known and it is an established brand among South African consumers.
2	Due to its presence in shopping malls around the country, it has a national footprint.
3	Barriers to entry seem high, since there are only five major competitors and new entrants do not last long.
4	Competition in the market is strong and based on price, putting pressure on ExyMed to ensure its pricing is competitive in difficult economic circumstances.
5	The company was founded in 2001 and has been in operation for 22 years. It has many years of experience and was able to survive numerous changes in the industry and the economy over the last two decades.
6	ExyMed is a listed company. Its shares are publicly owned by many individuals. ExyMed must take into consideration how any decision will impact these stakeholders and the company's share price.
7	The company seems to be following a cost leadership strategy by providing affordable medicine, professional care, expert advice and convenient medication management solutions.
8	Physical expansion is an important part of ExyMed's strategy and is prioritised as a business decision to live up to the slogan of 'always close to you'.
9	The founder, Gustav Caroli, is still involved in the business, which is considered a strength due to his experience in the industry.
10	The company seems to be identifying opportunities in the industry and adapts to technological change by embarking on digital expansion strategies.
11	ExyMed's strength is that it has diversified revenue streams. Even if medication sales decline, there are other revenue streams to compensate for this.
12	ExyMed is one of the major private sector employers of qualified pharmacists in the country. The pharmaceutical skills shortage is a threat to ExyMed's operations, since its experienced and knowledgeable staff is one of its competitive advantages.
13	Pharmacists having bargaining power can be both a threat and an opportunity to ExyMed. If it does not look after its staff, it could easily lose employees. If it can build a reputation for looking after staff well, it could become an employer of choice amongst pharmacists. This would be in line with its short- to medium-term financial plan.
14	High levels of inflation, putting consumers' disposable income under severe pressure resulting in declining OTC sales, is negatively impacting ExyMed's bottom line.
15	Price sensitivity of demand is further affecting medication sales (OTC and prescription), which is also affecting ExyMed's bottom line.
16	Increased regulations regarding the transparency of medicine prices are leading to a reduction of ExyMed's input costs.

	Description
17	Increased regulations can also pose a threat to medicine dispensers such as ExyMed if regulations are expanded to not only include manufacturers of medicine but also pharmacies that dispense medicines.
18	High levels of loadshedding continue to disrupt trading, negatively affecting industry growth.
19	Industry growth is lower than expected, which can result in not meeting growth targets, negatively impacting stakeholder expectations and reducing funding and investment in the industry.
20	All ExyMed's skills are in-house, but it does recognise when external expertise is required.
21	ExyMed has set a target of having 300 pharmacies in South Africa by 2025, but it is running out of locations to open new stores.
22	Expansion opportunities: • Serve South Africans in rural / underserved areas; • Focus on chronic disease management; and • Partner with other service providers.
23	Focusing on this will address the SDG relating to good health and wellbeing.

Z1: 1
Z2: 1
Y1: 1
Max 15

Part (b)	In view of ExyMed's proposed business arrangement with the National Department of Health, assist Devon with the following: **(ii)** An evaluation of whether this business arrangement aligns with ExyMed's financial plan for achieving its intended growth targets.	0

Note: Refer to additional resources for the complete solution including **ii) financial strategy integration**, that is for self-study.

Part (c):	In view of the predetermined metrics ExyMed's management seeks to incorporate into its envisioned dashboard, address the following criteria for each metric: • Purpose: Define the core objective or purpose of each metric. Why is it important to ExyMed's management? • Fields needed: List the specific fields from the datasets required to compute this metric. • Chart type: Recommend a visualisation that would most effectively convey the metric's data. Justify your choice. • Filters: Suggest any filters (slicers) that could enhance the metric's visualisation, making it more interactive and insightful. • Relationships needed: Ascertain if any relationships between datasets need to be established for accurate metric computation. Proivde details of these relationships.	27

Y1: Critical and analytical thinking Students will have to use a questioning mind-set during problem identification and analysis	*1*
W3: Data analytics application to scenario	*1*

Metric: Total dispatched revenue over time

- **Purpose:** Gauge overall financial success from dispatched medicines over time.
- **Fields needed**
  - Quantity dispatched (from dispatch log)
  - Selling price of inventory (from finance dataset)
  - Date dispatched (from dispatch log) – to plot the trend over time
- **Chart type:** Line chart to show trend
- **Slicers:** Date range (to select specific periods), description of inventory (to view trends for specific items or categories)
- **Relationship needed:** Yes. The relationships will be based on the following:
  - 'Batch number' to ensure the correct quantity dispatched is considered for each inventory item
  - 'Inventory number' to fetch the corresponding selling price from the finance dataset

Metric: Inventory turnover rate

- **Purpose:** Assess efficiency in selling and replacing inventory
- **Fields needed**
  - Initial quantity (from batch information dataset)
  - Quantity dispatched (from dispatch log dataset)
- **Chart type:** Flexible (based on candidate's justification; could be number card, line chart, bar chart, etc.)
- **Slicers:** Date range (to assess turnover rate for specific periods), description of inventory (to view turnover rates for specific items or categories)
- **Relationship needed:** Yes. The relationship will be based on the 'batch number' to correlate the initial quantity with the quantities dispatched

Metric: Expiring stock

- **Purpose:** Monitor items nearing their expiry date to reduce waste
- **Fields needed**
  - **Expiry date of each batch** (from batch information dataset)
  - **Inventory description** (from batch information dataset) – to identify the specific medicine
  - **Initial quantity** (from batch information dataset)
  - **Quantity dispatched** (from dispatch log dataset) to calculate the **items on hand** as **initial quantity – sum of quantity dispatched for each batch**
- **Chart type:** Condensed table showing batches nearing their expiry dates together with the remaining quantities. The table would primarily display the inventory description, expiry date and items on hand
- **Slicers:** Date range – allows users to focus on batches expiring within a specific timeframe, facilitating urgent decisions
- **Relationship needed:** Yes. A relationship based on the 'batch number' is essential to correlate the initial quantity from the batch information dataset with the quantities dispatched from the dispatch log dataset

Metric: Average dispatch quantity

- **Purpose:** Understanding typical dispatch sizes over varying periods
- **Fields needed**
  - **Quantity dispatched** (from dispatch log)
  - **Date dispatched** (from dispatch log) for time-based analysis.
- **Chart type:** Bar chart or line chart to show average dispatch quantities over specified time intervals (e.g., daily, weekly, monthly)
- **Slicers**

○ **Description of inventory** to filter by specific items ○ **Date range** to view data for specific periods • **Relationship needed:** No, as it relies solely on dispatch log data	
	Max 27

Part (d)	Document the key points that you would make in responding to the voice note that you received from Ms Thuli Mathope. Thuli is a co-worker, and an inventory controller employed in ExyMed's operations and logistics department.	0

Note: Refer to additional resources for the complete solution including **ethical integration**, that is for self-study.

Part (e)	Draft an email to the financial manager of ExyMed in which you explain only the most appropriate method for determining a value for the same-day delivery service business unit and how he should go about it.	0

Note: Refer to additional resources for the complete solution including **ii) business valuation integration**, that is for self-study.

Assume that you are part of the team assigned to the external audit of ExyMed		0 min
Part (f):	Prepare a workpaper for the planning of the audit of the inventory balance at 30 November 2023. The workpaper should describe the risks of material misstatements relating to this account balance and the required audit responses to reduce these risks to an acceptable level.	

Note: Refer to additional resources for the solution to this section, that is for self-study.

FEEDBACK

This question requires students to integrate several topics and subject fields that are regularly tested together to reflect integrative thinking.
Similarly throughout Learning units 1 to 3 you have seen the integrated nature of all aspects within an entity. This emphasises especially the importance and integrative nature of **strategy** throughout its business model to ensure sustainable value creation.

Activity 3.1.5: Load Assist Group (LAG) (SAICA 2023 specimen paper extracted and amended)

Integrated question – Test 4 preparation self review in needed

Activity 3.1.5		Estimated time		
	Reading	Writing	Marking and review	Total
90 marks	66 minutes	135 minutes	66 minutes	267 minutes

1 Background

You are a junior accountant in the finance department of Load Assist Group Ltd ('LAG'), a company listed on the JSE[5]. LAG is not a dual-listed company. LAG is the holding company of various subsidiaries in the transport and logistics industry that, together, form the LAG Group. The LAG Group is a leader in this industry and operates throughout Africa. All companies in the LAG Group are South African residents with a 31 December year end. The LAG Group's head office is in Johannesburg, Gauteng.

2 Information on the transport and logistics industry and LAG

The transport and logistics industry can be defined as a series of interconnected processes with the aim of moving supplies or people from point A to point B safely, on time, and according to the expectations of the client. The industry comprises not only purely the transport of various goods, but also an intricate system of logistics such as securing packages, and determining the best routes and the most appropriate transport medium.

South Africa is considered the gateway to Africa and has the biggest market share in Africa in the transport and logistics industry. LAG is one of the top ten companies dominating this sector of the South African economy.

LAG's key processes are the following:

1 Transport: LAG transports cargo from one place to another, by means of trucks, trains and airplanes.

2 Warehousing and distribution: LAG provides short-term storage of goods at its distribution centres.

3 Route optimisation: LAG plans appropriate routes. This is critical for reducing costs and improving the speed and reliability of delivery.

The challenges facing companies in the transport and logistics industry include increasing fuel prices, poor maintenance of road and rail infrastructure, a shortage of qualified drivers, a global demand for the reduction in carbon emissions, and increasing competition. LAG's approach to address these challenges has been to build its business resilience and being proactive in adapting to the 'new normal' in the industry following the Covid-19 pandemic. The company has grown despite the unpredictable socio-economic circumstances that affect customer demand.

To remain competitive, it is important that LAG remains up to date on industry trends and capitalises on innovative developments in the industry. Current trends include self-driving

[5] JSE = Johannesburg Stock Exchange.

vehicles[6], 3D printing, drone delivery, and IoT-enabled RFID[7] chips. The latter uses radio waves to identify people or objects, which enables real-time analytics and tracking capabilities for LAG.

3 Company significant matters

The following extract from the minutes of the meeting of the board of directors held on 31 January 2024, summarises significant matters affecting LAG:

Matters arising from the meeting

1 Proposed share-based incentive scheme

LAG's current management incentive scheme based on ROI[8] was discussed. LAG wanted to shift from its current profit-focused incentive scheme to an incentive scheme that focused more on long-term value creation. This would help reduce senior management staff turnover.

It was agreed that –

- LAG's current incentive scheme change to a share-based incentive scheme for its senior management;
- the scheme focus on long-term value creation and retaining senior management staff and that the scheme not be open for other personnel;
- any shares that would be required to settle the scheme would be via a new share issue;
- quotes be obtained from three independent consultants to advise on the most appropriate share-based incentive scheme for the company; and
- the quotes be tabled for discussion at the next meeting of the board, during which an independent consultant will be selected and appointed.

2 Appointment of foreign drivers

The Board discussed the issues experienced with its South African drivers and their unions regarding demands for increased wages and employee benefits (leave days, improved medical aid, pension benefits, etc.). The board noted the following differences between South African and foreign drivers.

- Wages and benefits for South African truck drivers:
  - Minimum wage: Between R11 000 and R13 000 per month.
  - Fixed accommodation, meals and incidental costs allowance: R3 000 per month. This is to compensate them for being away from their usual place of residence because of their duties.
- General wages and benefits for foreign truck drivers:
  - Wage: R8 000 per month.
  - Fixed accommodation, meals and incidental costs allowance: R1 000 per month for an average of 15 nights away from their usual place of residence.

The company secretary reminded the board of the following considerations regarding legally appointing foreign workers:

[6] A self-driving vehicle is capable of travelling between destinations without a human driver. These vehicles are typically fitted with sensors and cameras to detect surroundings and use artificial intelligence technologies to mimic human decision-making processes.

[7] Internet of things (IoT) radio-frequency identity (RFID) chips.

[8] ROI = return on investment.

- Foreigners must have a job offer before they can apply for a work visa. This visa is employer specific.
- In general, foreign employees do not contribute to any B-BBEE[9] points on the scorecard.

The matter was discussed in depth and the board approved the appointment of foreign truck drivers on the following conditions:

- Wage: Gross R9 000 per month before withholding tax.
- Fixed accommodation, meals and incidental costs allowance: R1 000 per month.
- The payments be made in cash, given the risk of appointing foreign drivers without work visas.

3 Approval of acquisition of Self-Propelled Logistics Solutions Ltd

One of the directors reminded the board that at a previous meeting it resolved to capitalise on the growing demand for advanced logistics technologies and expand LAG's footprint to markets outside of Africa. Self-Propelled Logistics Solutions Ltd ('SPLS'), a leading company specialising in self-driving vehicle technology for logistics and transportation, has been identified as a possible acquisition. A rigorous due diligence has been conducted to assess SPLS's technology, intellectual property, financial health, market positioning and cultural compatibility.

In view of the good due diligence report, the board approved the acquisition of SPLS, which may be the purchase of the shares in SPLS or the acquisition of its net assets.

The board further agreed on the following regarding the acquisition:

- The proposed acquisition decision would be communicated to shareholders;
- The acquisition would be achieved by the acquisition of either SPLS shares (controlling / majority interest) or SPLS's operating assets; and
- It would be financed by using either debt, equity, or other funding options.

The board resolved to approve the details at the next meeting after the final round of negotiations with SPLS's shareholders has been concluded.

4 Integrated report for the financial year ended 31 December 2023

The first draft of the LAG's integrated report for the year ended 31 December 2023 (FY2023) (see *Annexure A* for extracts from the report) was tabled at the meeting.

5 Hybrid vehicle pilot programme efficiency

The board reviewed and discussed LAG's hybrid fleet environmental performance, based on a comprehensive dashboard (see *Annexure B).* The dashboard offers an interactive view of various aspects of the hybrid vehicle pilot programme.

The board agreed that detailed feedback on the dashboard should be provided at the next board meeting.

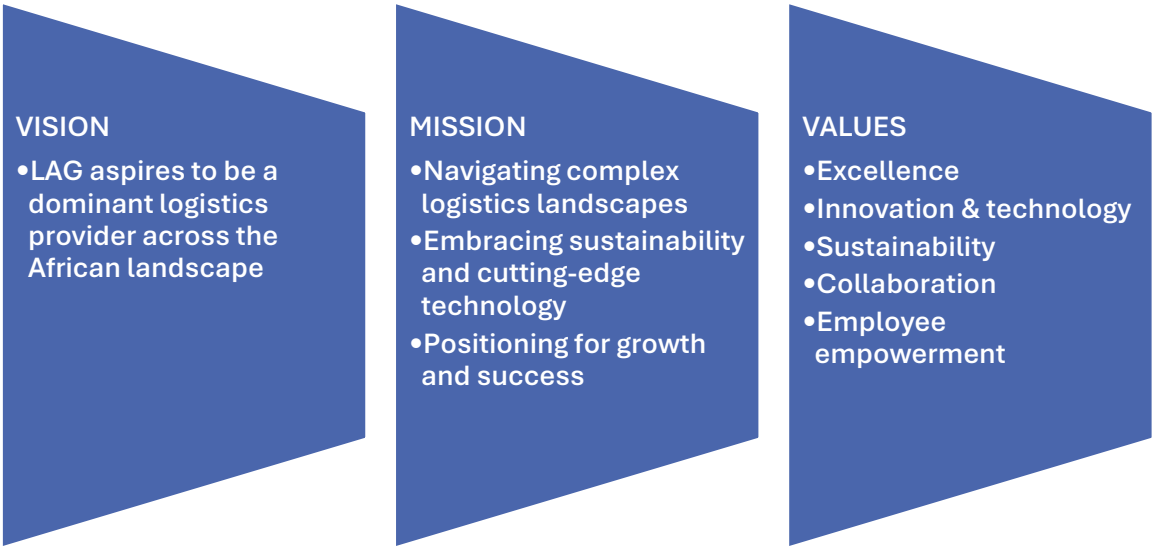
Annexure A – Extracts of the integrated report

[9] Broad-Based Black Economic Empowerment.

1. Introduction

LAG is a prominent force in African logistics. With its primary listing on the Johannesburg Stock Exchange, LAG has established itself as a pivotal player in the industry. The company specialises in comprehensive, efficient logistics solutions across the African continent. Its expertise lies in effectively managing the intricate processes of transportation, warehousing and distribution for various types of goods. This encompasses a wide spectrum of sectors, ranging from agriculture and manufacturing to consumer goods, while leveraging off the flourishing e-commerce field.

2. Vision, mission and values



Vision

LAG's vision underscores the company's commitment to excellence, setting it on a trajectory to transcend industry norms and set new standards of service.

Mission
At the heart of LAG's endeavours, lies a steadfast mission that guides its actions and strategies:

- **Navigating complex logistics landscapes:** LAG excels in addressing the intricate and multifaceted challenges inherent in the diverse African logistics landscape.
- **Embracing sustainability and cutting-edge technology:** This commitment to sustainable practices and innovation underscores the company's intent of not only driving operational efficiency but also minimising its ecological footprint, fostering a responsible approach to logistics.
- **Positioning for growth and success:** LAG's mission extends to positioning itself as a key player primed for growth and success within the dynamic African logistics sector. By adeptly leveraging its resources, expertise and market insights, the company seeks to capture opportunities and drive innovation within an ever-evolving landscape.

Values
LAG’s five core values collectively reflect its overarching vision and mission, guiding the company's actions, decisions and interactions as it pursues a leading role in the African logistics industry.

- **Excellence:** LAG is committed to delivering nothing less than excellence in all its endeavours. Striving to exceed industry norms, the company sets high standards for itself, ensuring that every aspect of its operations reflects a pursuit of exceptional quality and performance.
- **Innovation and technology:** Innovation and technology are cornerstone values for LAG. The company encourages a culture of continuous improvement and creative thinking, constantly leveraging cutting-edge technology to seek new ways of enhancing logistics solutions and driving industry advancement.
- **Sustainability:** Central to LAG's mission is a commitment to sustainability. The company places immense value on environmental responsibility and ethical practices, aiming to balance economic success with ecological stewardship.
- **Collaboration:** Recognising that success in the logistics arena often hinges on collaboration, LAG places high importance on working in partnership with its stakeholders. The company values open communication, cooperation and building strong relationships to collectively achieve shared goals.
- **Employee empowerment:** LAG recognises that its employees are the driving force behind its success. The company values the role of a motivated and skilled workforce in achieving its vision and mission. Through ongoing training, professional development opportunities and a supportive work environment, LAG is committed to investing in its employees' growth and well-being.

3. Strategic overview

At LAG, our strategic overview serves as a compass, providing direction and purpose to every endeavour we undertake. In this strategic overview, we provide insight into the core pillars that underpin our company's direction, laying the foundation for growth, innovation and lasting value.

- **Market expansion and competition:** Expanding operations to new regions while navigating diverse market conditions and intensifying competition from both local and global logistics players.
- **Technology adoption:** Integrating advanced technologies such as the Internet of Things and self-driving vehicles into existing operations, while ensuring that technology investments align with business goals.
- **Sustainability and environmental responsibility:** Balancing growth objectives with the need to adopt sustainable practices, reduce environmental impact and meet regulatory requirements for emissions and waste management.
- **Talent acquisition and development:** Attracting, retaining and developing a skilled workforce capable of managing complex logistics operations, new technologies and cross-border challenges.
- **Infrastructure and connectivity:** Collaborating with relevant stakeholders to overcome infrastructural limitations, unreliable transportation networks and varying levels of connectivity across different African regions.

4. Risk assessment

In the ever-evolving landscape of business, uncertainties and challenges are inevitable. At LAG, we believe in not only anticipating these potential risks but also proactively addressing them to safeguard our operations, stakeholders and long-term success. Risk assessment is an integral part of our decision-making framework, enabling us to identify, analyse and prioritise potential threats and opportunities that may impact our goals and objectives.

Regulatory and compliance risks	Exposure to changing regulatory environments, trade regulations, customs procedures, and compliance requirements across different African countries.
Operational disruptions	Potential disruptions due to political instability, civil unrest, strikes, natural disasters and infrastructure deficiencies in certain regions.
Technology disruption	Risks associated with the adoption and integration of advanced technologies, including potential system failures, data breaches and cyber attacks.
Supply chain disruptions	Dependency on suppliers, carriers, and partners for smooth logistics operations, which make the company vulnerable to disruptions in its supply chains.
Currency and exchange rate fluctuations	Exposure to currency risk due to operating in multiple African countries with different currencies, leading to potential fluctuations in earnings.

Economic volatility	Exposure to economic fluctuations and downturns in specific regions, affects the demand for logistics services and the overall business environment.
Environmental and climate risks	Vulnerability to climate-related risks, such as extreme weather events, natural disasters and changes in environmental regulations impacting logistics routes and operations.
Social and labour issues	Risks related to labour strikes, employee dissatisfaction, social unrest, and potential violations of labour rights within the regions of operation.
Reputation and ethics	Risks of reputational damage due to ethical issues, supply chain controversies, environmental incidents, or breaches of responsible business practices.
Political and geopolitical risks	Uncertainties arising from political instability, regulatory changes and geopolitical tensions that can disrupt cross-border trade and logistics.
Legal and contractual risks	Risks associated with legal disputes, breaches of contracts and regulatory non-compliance that could result in financial penalties and reputational damage.

Remuneration overview

LAG is committed to a remuneration philosophy that nurtures a workforce that is fairly rewarded, motivated and strategically aligned, while adhering to relevant legislation and ethical labour practices.

LAG's current management incentive scheme

OUR STORIES

The current incentive scheme of the company is aligned to its remuneration policy. LAG incentivises management by linking their compensation to the company's return on investment (ROI) performance (the ROI incentive scheme). ROI (calculated as net profit / total investment) incentivises management to maximise profitability relative to the resources invested. The following key considerations are applicable to the ROI incentive scheme:

- **Eligibility:** Senior management, including executives and department heads, are eligible for the ROI incentive scheme.
- **Bonus structure:** Bonuses are awarded based on achieving predefined ROI targets. Higher ROI percentages correspond to higher bonus pay-outs.
- **Bonus pay-outs:** Bonuses are calculated as a percentage of base salary. The percentage increases as ROI surpasses predetermined thresholds, with the maximum bonus pay-out being capped at 100% of one month's base salary.
- **Frequency of pay-outs:** Bonuses are paid on an annual basis, reflecting the company's annual financial performance.

5. Environmental performance

At LAG, our commitment to environmental performance is at the forefront of our business philosophy. We recognise that responsible environmental practices are not only crucial for the well-being of our planet, but also integral to our long-term success as a sustainable and responsible organisation.

Guided by this commitment, we have implemented a comprehensive strategy that addresses various facets of environmental sustainability. Our approach is rooted in the understanding that our actions today directly impact the world we leave for future generations. Therefore, we pledge to continuously strive for excellence in the following areas:

- **Carbon emissions and energy efficiency***:* We are deeply committed to reducing our carbon emissions and enhancing energy efficiency across our operations.
- **Eco-friendly transportation:** In our efforts to embrace sustainable practices, we have embarked on a hybrid fleet programme. This innovative solution aligns with the United Nations Sustainable Development Goal 7: Affordable and clean energy.

Hybrid fleet pilot programme

OUR STORIES

LAG, as part of its commitment to reducing its carbon footprint, launched a hybrid fleet pilot programme in 2023 in Johannesburg, Cape Town and Durban whereby the company procured a fleet of hybrid vehicles specifically tailored for urban logistics operations. Hybrid vehicles can run on fuel as well as electricity.

In collaboration with reputable hybrid car manufacturers and local dealerships, LAG carefully selected hybrid car models that are equipped with advanced technology for fuel-efficient driving in stop-and-go city traffic. These vehicles offer a suitable cargo capacity and can travel an appropriate distance before their batteries need to be recharged and/or fuel tanks need refilling, making them ideal for the company's short-to-medium distance routes with frequent stops within busy urban areas. The collaboration with reputable hybrid car manufacturers and local dealerships extends to driver training programmes, aimed at upskilling the drivers and educating them about the efficient use of hybrid vehicles.

To ensure seamless operations and maintain the hybrid fleet's efficiency, LAG installed charging infrastructure at its logistics hubs and depots located within Johannesburg, Cape Town and Durban. Fast-charging stations have been set up at key locations to ensure the hybrid vehicles have access to convenient charging options while minimising downtime and keeping vehicles on the road. These stations are also equipped with solar photovoltaic systems, including solar panels, to convert solar to electric energy, and with batteries to store the energy for use by the hybrid vehicles. The solar energy not only contributes to reducing our carbon footprint but also alleviates the effects of loadshedding. Notwithstanding the large initial investment, it is estimated that in view of the future cost of electricity purchased from the grid and fuel costs, the hybrid fleet pilot programme would result in cost savings within three years.

When the hybrid fleet pilot programme was initiated, LAG launched a public awareness campaign in the three cities. Through various communication channels, the campaign showcased the positive impact of the hybrid fleet on the environment. LAG aimed to educate the public about its dedication to environmentally responsible logistics and encourage other logistics providers and businesses to follow suit in embracing sustainable practices.

The company has diligently monitored the hybrid fleet's performance throughout the pilot programme, collecting data on fuel savings, emissions reduction, and overall operational efficiency. LAG makes use of a sophisticated fleet management system, FleetLogIt, to collect the required data from each vehicle of the fleet. FleetLogIt uses IoT-enabled RFID[10]

[10] Internet of things-enabled radio frequency identification.

chips to collect, transform and transfer vehicle data such as fuel efficiency and safety to the cloud in near real time.

With positive feedback from drivers and customers alike and promising results from the pilot programme, LAG has set its sights on expanding the use of hybrid vehicles to other cities across Africa. The company is determined to replace conventional vehicles over time and embrace a more sustainable and efficient transportation system.

As LAG continues to make strides in its commitment to eco-friendly logistics, the company strengthens its brand image as an environmentally responsible and forward-thinking industry leader. The company also has an opportunity to promote diversity and inclusivity in its hiring practices as the demand for skilled drivers for hybrid vehicles increases.

6. Innovation and technology

At LAG, we understand that the world of business is evolving rapidly, driven by technological advancements and innovative solutions. Embracing this evolution, we have made steadfast commitments to harness the power of innovation and technology to enhance our operational efficiency and contribute to a more sustainable future.

- **Technology investments:** Our dedication to progress is reflected in our consistent investments in cutting-edge technologies. From state-of-the-art software platforms to advanced hardware solutions, we prioritise technology that aligns with our goals of optimising processes, enhancing customer experiences, and driving continuous improvement.
- **Strategic investments:** Our commitment to innovation takes shape not only within our organisation, but also through strategic investments in companies that are aligned with our goals. By identifying and supporting ventures that leverage technology to drive positive change, we contribute to a broader ecosystem of innovation.

Investment in Self-Propelled Logistics Solutions Ltd

OUR STORIES

The acquisition of SPLS presents an opportunity to enhance the company's technological capabilities and establish a presence in the emerging field of self-driving vehicles.

LAG communicated the acquisition to stakeholders, emphasising the company's commitment to innovation, sustainability, and international growth. By acquiring SPLS, LAG will position itself strategically at the forefront of self-driving logistics technology while expanding its geographic reach. This move will not only enhance the company's competitiveness but also demonstrate its dedication to providing innovative, efficient and sustainable logistics solutions to customers across international markets.

SPLS's self-driving vehicle technology aligns with LAG's innovation-focused approach and commitment to advanced logistics solutions. The acquisition will provide LAG with a competitive edge by offering self-driving last-mile delivery[11] and transportation services.

[11] Last-mile delivery refers to the very last step of the delivery process, such as transporting a parcel from a transportation hub to its final destination. This is usually is a personal residence or retail store.

Technology integration: After the acquisition, LAG will integrate SPLS's self-driving technology into its existing fleet and logistics operations. LAG will adapt the technology to navigate unique African road conditions, regulations and infrastructure challenges.

International expansion: SPLS will provide LAG with a foothold in international markets where self-driving technology is gaining traction. The acquisition will enable LAG to offer cutting-edge logistics services beyond the African continent, positioning the company as an industry leader.

Talent retention and collaboration: Key people and experts from SPLS will be retained to ensure a smooth transition and continuation of technological innovation. Collaboration between SPLS's research and development teams and LAG's experts will enhance the development of self-driving logistics solutions.

Investment in research and development: LAG will allocate resources to further advance the self-driving technology it will obtain from SPLS. Research and development efforts focus on refining technology to address the specific challenges of African markets.

Regulatory compliance: LAG works closely with regulatory bodies in target international markets to ensure compliance with self-driving vehicle regulations. The company proactively engages with government agencies to advocate for policies that support the safe integration of self-driving vehicles into logistics operations.

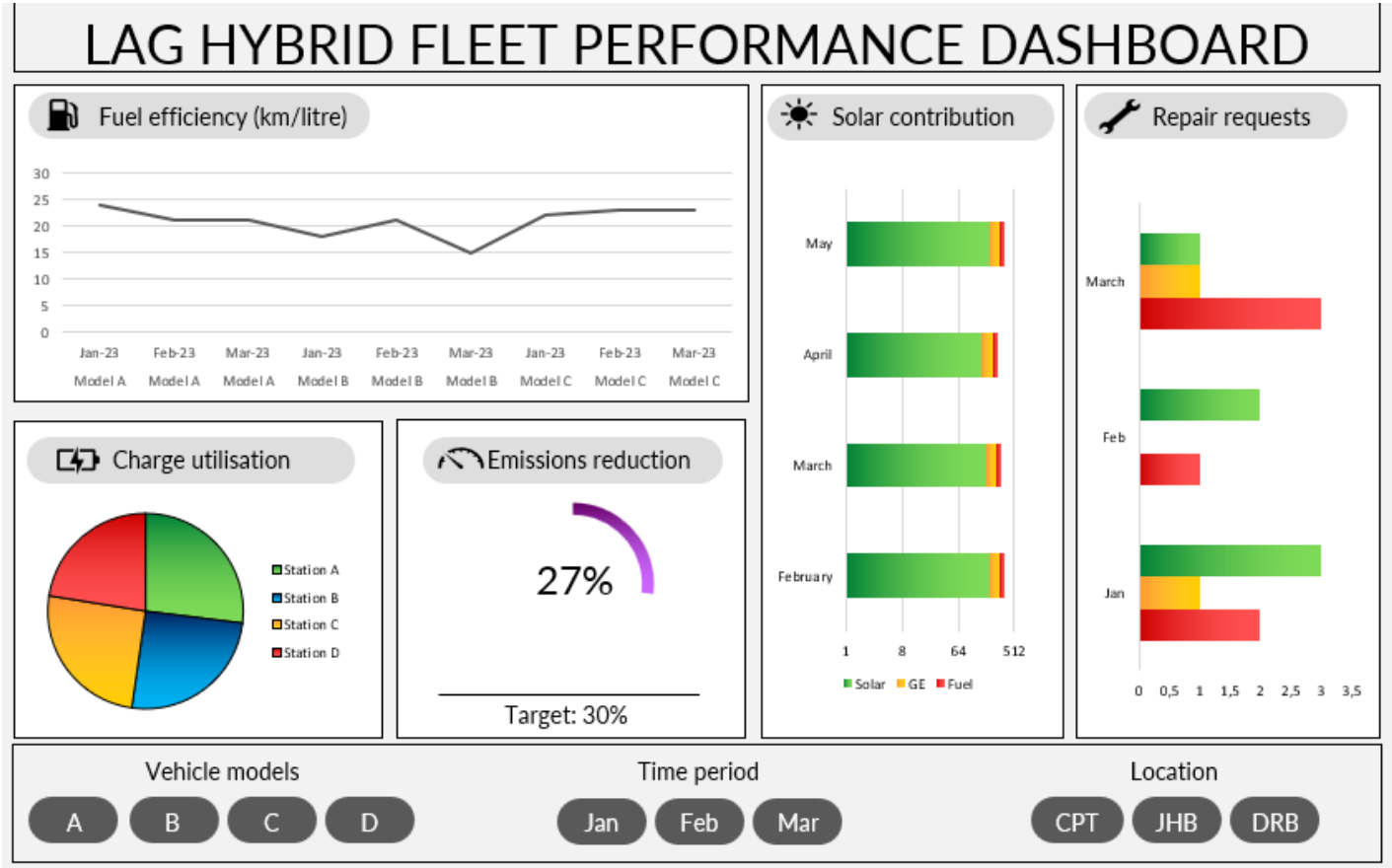
Operational optimisation: The acquisition of SPLS will allow LAG to optimise last-mile delivery operations through self-driving vehicles, reducing delivery times and enhancing efficiency.

7. Basis of preparation

LAG is committed to open and honest reporting. Its suite of reports (i.e., integrated report, annual report, annual financial statements, and shareholder report) is prepared in line with the following frameworks:

- The International <IR> Framework.
- King IV Report on Corporate Governance for South Africa, 2016.
- United Nations Sustainable Development Goals.
- South African Companies Act, 71 of 2008 (as amended).
- International Financial Reporting Standards (IFRS).

Annexure B: Hybrid fleet environmental performance dashboard



Dashboard overview

As part of LAG's initiative to reduce its carbon footprint, a dynamic[12] dashboard has been developed to monitor and analyse the performance of the LAG hybrid vehicle fleet. This dashboard serves as a comprehensive tool to track various aspects of its eco-friendly logistics operations. The data is sourced from LAG's IoT devices and provides real-time insights for informed decision making.

Fuel efficiency chart

This chart displays the fuel efficiency of LAG's three hybrid vehicle models (A, B and C) over time. Fuel efficiency is a measure of how far a vehicle can travel on a litre of fuel. In this context, it indicates how efficiently the hybrid vehicles utilise fuel resources. A higher value in kilometres per litre (km/litre) signifies better fuel efficiency.

Charge utilisation chart

Charging infrastructure utilisation refers to how efficiently the charging stations for hybrid vehicles are being used.

Sample dataset

Charging station	Total hours available	Hours in use	Utilisation rate (%)
Station A	100	80	80
Station B	120	90	75
Station C	80	60	75
Station D	150	100	66,67

The total hours available indicate how many hours the charging station was available for use. If a station is available for a longer period but is not used frequently, it might indicate that it has not been placed optimally or there might be an issue with accessibility.

The hours in use is the actual amount of time the charging station was used. This metric is crucial for understanding the practical demand for charging. Stations with more hours in use are clearly in greater demand.

The utilisation rate indicates what proportion of the time the charging stations are in use compared to the total available time. A higher utilisation rate indicates that the charging stations are being used more frequently and effectively.

Emissions reduction chart

FleetLogIt, as a comprehensive fleet management system, leverages IoT-enabled devices for data collection. Specifically, it employs IoT-enabled RFID chips built into its vehicles. These chips are equipped with advanced sensors and algorithms to monitor various parameters related to vehicle operation, such as fuel consumption, distance travelled and emissions produced. The data collected is then processed and transmitted to the cloud almost in real time. To assess emissions reduction, FleetLogIt compares the collected data with established industry benchmarks and regulatory emissions standards for vehicles of similar type and usage profiles. This enables it to accurately measure the reduction in greenhouse gas emissions achieved through the implementation of this advanced technology.

[12] The dashboard is 'dynamic' because it is updated in real time with data about the hybrid vehicle fleet.

Solar contribution chart

This chart presents the contribution of different energy sources – solar energy (solar), grid electricity (GE) and other sources (fuel) – to charging LAG's hybrid vehicles. This visual representation emphasises the company's reliance on renewable energy.

Repair requests chart

This chart displays the frequency of repair requests for each vehicle model (A, B and C). It provides insights into the maintenance needs of LAG's hybrid fleet.

Slicers (interactive filters)

Slicers are interactive filters that allow one to focus on specific aspects of the data presented. By clicking on different slicer options, one can filter the information displayed on the dashboard according to specific preferences. These slicers provide a dynamic option for exploring and analysing data.

REQUIRED		**Marks**	**Total**
(a)	With regard to the hybrid vehicle pilot programme launched by LAG in 2023 – (i) identify, with reasons, the **relevant stakeholders** affected by the introduction of LAG's hybrid vehicle pilot programme; (ii) describe how the pilot programme aligns with **SDG 7**; and (iii) discuss, on the assumption that LAG will appoint only South African citizens as drivers of the hybrid fleet, whether the hybrid fleet pilot programme could reduce unemployment in South Africa. *II2: Corporate citizenship* *Z1: Business internal environment*	8 4 6 *1* *1*	20
(b)	Critically evaluate LAG's current and proposed incentive schemes. Address the following in your evaluation: i. Suggestions on how the schemes may be improved. ii. Specific consideration of tax implications from the perspective of – ***NOTE*** *Refer to your taxation module for the tax implications* o LAG; and o its senior management employees. *II2: Corporate Citizenship* *Y4: Judgement and decision making*	16 n/a *1* *1*	18
(c)	On the assumption that LAG does decide to employ foreign drivers as an alternative to paying higher wages to South African drivers – I. explain and evaluate the ethical dilemma facing LAG; II. discuss the tax risks and potential consequences from a tax perspective ; and III. discuss any **other risks** arising from this decision IV. including risks relating to strategy deviation. ***Note:*** *Refer to your taxation module for taxation as self-review exercise* *I2: Business ethics* *Y6: Ethical reasoning* *Z1: Business internal environment*	8 n/a 5 4 *1* *1* *1*	20

	REQUIRED	Marks	Total
(d)	Evaluate the construction and design of the **dashboard provided in Annexure B.** In your answer –focus only on the **effectiveness of the visualisations**; i. identify any issues or areas for improvement in the layout, **data representation, labelling, chart types and overall design**; and ii. provide recommendations for **enhancement** based on your evaluation. *Y1: Critical thinking* *Y3: Problem solving*	10 6 *1* *1*	18
(e)	Draft a memo to LAG's board of directors, with regard to LAG's decision to acquire SPLS, in which you – (i) outline the **key factors** that LAG's directors should consider when assessing whether LAG should acquire SPLS (limit your answer to **strategic and risk** considerations); - ***NOTE:*** *Refer to learning units 8 and 9 re risks for self-review if needed* ***before test 4.*** *X1: Communication skills – layout and presentation* *Y2: Integrative thinking* (ii) outline the **key factors** that LAG's board should consider in structuring and financing the acquisition of SPLS - ***NOTE:*** *Refer to learning unit 10 for self-review if needed before test 4.*; and (iii) discuss in detail the potential **financial reporting** and normal taxation implications of LAG's intended acquisition of SPLS. – ***NOTE:*** *Refer to your financial accounting module for the accounting implications for self-review if needed.*	12 *1* *1* n/a (Learning unit 10) n/a (financial accounting)	14

Solution

Part (a)	**identify, with reasons, the relevant stakeholders affected by the introduction of LAG's hybrid vehicle pilot programme;**	**8**
1.	The **environment**, given that the programme will reduce carbon emissions and thereby its negative impact on the environment. (Reduced emissions can lead to improved air quality and overall environmental conditions, which can contribute to the well-being of residents.)	
2.	LAG's **suppliers** • The vehicle fleet (the reputable car manufacturers (indirectly) and local dealerships (directly)), given that they were supported financially through the purchase of the fleet, as well as in providing training programmes to LAG's employees. • Mining industry (indirectly) as a large number of lithium batteries will be needed for the fleet. T-++he raw material for these batteries needs to be mined such as lithium, cobalt, graphite, and manganese. The same can be said for the materials needed for the solar panels. • The charging infrastructure (manufacturers (indirectly) and installers (directly) thereof), given that they were supported financially through the purchase of the infrastructure. • The PV systems (manufacturers (indirectly) and installers (directly) thereof), given that they were supported financially through the purchase of the systems. • Fuel, given that they will sell less fuel to LAG. • Electricity (municipality (directly) and Eskom (indirectly)), who will lose out on the opportunity to sell electricity to LAG, given LAG's implementation of the PV system.	
3.	LAG's **drivers** (employees) of the fleet, given that their intellectual capital was increased by upskilling them regarding the efficient use of the vehicles. • Their feedback and experiences will be valuable in assessing the programme's success and making any necessary adjustments (**management** can use this).	

4.	The **community** in the areas where the fleet was piloted (Johannesburg, Cape Town and Durban), given that their intellectual capital was increased by means of education about LAG's dedication to environmentally responsible logistics. • The introduction of hybrid vehicles has the potential to positively impact the local communities by reducing air pollution and noise levels, especially in congested urban areas.
5.	LAG's **competitors**, given that they were encouraged to follow suit.
6.	**Authorities**, given that they are supplied with relevant and accurate data regarding emissions (the data may also potentially inform future policy setting).
7.	**SARS**, given that it will receive less income through – • reduced carbon tax because of the lower emissions; • reduced income tax because of – o the higher allowance on the solar system under section 12B (for the PV system); and o s11(e) for the fleet, batteries and charging system.
8.	Existing and potential **investors** in LAG, as they are provided with relevant data regarding their environmentally responsible practices to make informed decisions regarding investing in LAG. • Positive outcomes, such as improved efficiency and reduced operational costs, can potentially lead to increased profitability and shareholder value.
9.	Providers of debt capital to LAG – ESG-linked finance may also be a financing option. • Positive outcomes can result in reduced financing costs.
10.	LAG's **customers**, given that they receive the assurance regarding LAG's commitment to environmentally friendly practices, which may encourage them to continue supporting LAG.
	Available 12/ Max 8
	II2: Corporate citizenship and Z1: Business internal environment *2*

Part (a)(ii) describe how the pilot programme aligns with the SDG 7; and	
1.	• SDG 7 is about ensuring access to sustainable, clean, reliable and affordable energy.
2.	By using PV systems to generate electricity at LAG's charging stations, LAG gets access to **clean** energy, as it is a natural source, the sun, which is utilised to generate the electricity, as opposed to using traditional fossil fuels as a source of energy (coal in the case of Eskom) (which also results in carbon emissions).
3.	The use of the sun's energy (which cannot be depleted) as opposed to coal (which is a limited resource), provides LAG with a **sustainable** energy source.
4.	The system also reduces the dependence on Eskom, who consistently implements load shedding, thereby ensuring LAG's continuous **access** to energy.
5.	Electricity costs have increased by about 300% in the last decade, so LAG can access energy at a more **affordable** rate (even though the initial cost of purchasing and installing the PV system results in LAG only experiencing cost savings over the longer term)
6.	LAG's public awareness campaign associated with the pilot programme also aligns with SDG 7. By educating the public about the benefits of hybrid vehicles, clean energy technologies and sustainable transportation practices, LAG contributes to raising awareness and promoting positive behavioural changes related to energy consumption.
	Available 6/ Max 4

Part (a) (iii) discuss, on the assumption that LAG will appoint only South African citizens as drivers of the hybrid fleet, whether the hybrid fleet pilot programme could reduce unemployment in South Africa.	
1.	The training provided to current drivers develops them, increases their skills set and develops an understanding of the importance of energy-efficient driving, and linked to that, the vital nature of living sustainably.
2.	The public awareness campaign provided to the public also **educates** the broad public, thereby encouraging sustainable living.
3.	The demand for skilled drivers for hybrid vehicles will increase, which gives LAG an opportunity to **employ and / or upskill** more drivers.
4.	The opportunity of education available (the training programme), provides LAG with an opportunity to employ unskilled workers and upskill them (addressing **education** and **unemployment**), especially as the highest rates of unemployed people are generally uneducated / unskilled. (Alternatively, there

	is an opportunity over time in the future to hire drivers with the correct qualifications which could also contribute to reducing unemployment if these drivers are not employed.)
5.	From an unemployment perspective: • **positions** related to vehicle maintenance, charging station installation and maintenance and data analysis **are created**. • PV maintenance workers will also be required on the stations. • It could impact employee numbers in the motor car manufacturing industry and those that manufacture photovoltaic batteries in view of **LAG's purchase of the hybrid vehicles (job creation).** • This opportunity to hire more employees allows LAG to **appoint** employees who align with LAG's diversity and inclusivity targets. • Due to electricity demand decreasing as a result of the programme (solar power) this will create less demand. This decreasing demand could lead to less coal mining activity (or decreased profitability) in an area that employs a large portion of our population. The jobs along the supply chain of electricity and fuel will feel the effects of the decreased demand. • The electric vehicles will also increase demand for minerals such as Cobalt, which is mined around Johannesburg. This increase in demand will lead to more mining jobs.
	Available 10/ Max 6

(b)	Critically evaluate LAG's current and proposed incentive schemes. Address the following in your evaluation: iii. Suggestions on how the schemes may be improved. iv. Specific consideration of tax implications from the perspective of – ***NOTE*** *Refer to your taxation module for the tax implications* o LAG; and o its senior management employees. *II2: Corporate Citizenship* *Y4: Judgement and decision making*	16 *1* *1*	 18

1. Critical evaluation of current and proposed incentive schemes	
1.1	Critical evaluation of LAGs **current** incentive scheme – Return on Investment (ROI)
	Advantages • Evaluating performance based on ROI is a control mechanism that **does not restrict a manager's creativity** with respect to how to go about achieving an ROI greater than the hurdle rate. • ROI is a **relative measure (%) which is easy to calculate, understand and use when assessing performance** regardless of different entity sizes / asset bases. • ROI **links income earned to the asset base** (investment) utilised, that managers are able to control (**controllability principle**). Disadvantages • ROI is based on **accounting profits rather than cash flows,** which better reflect economic reality and should be used to assess whether long-term value has been created. • Managers may **manipulate results or behave in ways that are not congruent with LAG's aims** (encourages short-term thinking), for example by delaying new investments to increase the ROI by reducing the value of the asset base. • The asset base is particularly relevant in view of the investment in the hybrid vehicles. The ROI would dissuade managers from increasing their asset base, thereby compromising LAG's sustainability. • ROI does not take into account the time value of money and **can lead to the wrong investment decisions,** e.g., rejecting a project that requires a significant investment (lowering ROI initially) but which has a positive NPV. • Executives and department heads **may not be directly responsible for an investment centre within LAG.** They may for example be responsible for a cost or revenue centre in which case the ROI is inappropriate as they would not have control over investment decisions.

	• ROI is purely a **financial measure of performance**, which is a lagging measure of performance; hence it does not consider any non-financial factors and it is **not pro-active in establishing reasons for good or poor performance** before they are reported in LAG's financial results. • ROI does not reflect value creation efforts beyond financial capital. • ROI may **encourage the assumption of excessive risk to boost ROI**, potentially compromising LAG's financial stability. Other considerations • What is the **predefined ROI target? This should be an appropriate risk-adjusted required rate of return** to ensure that when bonuses are paid to senior management, value is being created. Furthermore, the same ROI target should not be pervasively used unless risk is the same throughout. • There is seemingly **no correlation between the extent of value created by senior management and the quantum of bonus paid**. Based on the scenario, how does 'higher ROI percentages correspond to higher bonus payouts'? • When evaluating ROI to establish whether value has been created or not, the calculation needs to be **technically correct (NOPAT / net investment)**, which is not currently done (NP / total assets). • **No bonus will be paid when senior management work well and deliver good work performance, and the predefined ROI target is not achieved**, which is likely to lead to lower staff morale or other adverse work behaviour. • There is **no penalty for poor performance** by senior management. • Bonuses are capped at 100% of base salary, which means that senior management are **not incentivised after achieving a certain measure of financial return**. This would likely result in sub-optimal work performance once this is achieved within a given financial/bonus period. • **No other LAG staff are seemingly eligible for a bonus**, with only LAG's senior management team incentivised by the current scheme.
1.2	Critical evaluation of LAGs **proposed** incentive scheme – share-based
	Advantages • A share-based scheme will **focus to a larger extent on long-term value creation**. • It will ensure a **longer-term focus** with the senior management team encouraged to focus on LAG's long-term financial sustainability. • It can **help retain experienced senior management** by tying their rewards to LAG's overall, longer-term success. • It **encourages an ownership mentality** that can lead to a greater sense of responsibility, loyalty and eagerness to perform well. Furthermore, this will help align employees with organisation-wide goals. **LAG is listed,** thus its shares are easily tradeable and have a readily available market price, making this a feasible approach to take. Disadvantages • Share-based schemes can be **administratively complex**, involving structuring, valuation, vesting periods, tracking of shares, etc. • Issuing new shares or the allocation of existing shares to employees can **dilute the ownership of existing shareholders**. • The value of shares often changes based on **market fluctuations beyond the control of employees**. • The taxation of the scheme, being a single larger amount after, say, three years of vesting, is less beneficial than an employee having the tax withheld from their annual cash bonuses. This could create a taxation burden for employees as there will be a month in which a large amount of tax is withheld due to years of vesting.
1.3	Suggestions for improvement
	• **Non-financial measures** of performance should also be considered, such as sustainability targets, innovation metrics, customer satisfaction and growth in market share, thus following a balanced scorecard approach to ensure a more holistic view of LAG's performance. • **Others financial measures / performance evaluation systems** could be implemented that are more specific to measuring staff performance, based on what they are able to control.

	For example, a standard costing system with a bonus payable in relation to favourable variances, where appropriate. • A **bonus bank** should be used which defers bonuses so that any subsequent poor performance can be set off against any prior bonus banked. • **All staff should be treated equitably and be entitled to a bonus / share of profits**, not only senior management. This will ensure are staff are motivated and fairly treated. • **Vesting periods** could be used to encourage retention of senior management and ensure that they remain committed to LAG over the long term.	
2. Taxation implications of LAGs current and proposed incentive schemes		
	Refer to taxation module	
II2: Corporate Citizenship and Y4: Judgement and decision making		**Available 30** *2* **Max 18**

(c)	On the assumption that LAG does decide to employ foreign drivers as an alternative to paying higher wages to South African drivers –		
	I. explain and evaluate the ethical dilemma facing LAG;	8	
	II. discuss the tax risks and potential consequences from a tax perspective ; and	*n/a*	
	III. discuss any **other risks** arising from this decision	5	
	IV. including risks relating to strategy deviation.	4	
	***NOTE:** Refer to your taxation module for taxation as self-review exercise*		
	I2: Business ethics	*1*	
	Y6: Ethical reasoning	*1*	
	Z1: Business internal environment	*1*	20

Describing the ethical dilemma section	
1.	• LAG is trying to avoid paying fair wages by appointing foreign drivers. • Should the foreign drivers not be appointed, LAG will face pressure from unions to pay appropriate wages to SA drivers; or • Should the foreign drivers be appointed, LAG faces the risk of various other issues (unrest, strikes, etc. described below).
Discussing the ethical considerations	
1.1	Linking it to the **best interests** of LAG (could be in terms of King IV or in terms of the Companies Act): As directors, they must act in the best interest of the company, in good faith and with a degree of care, skill and diligence (fiduciary duty).
1.2	Positive (+) considerations (linked to best interest) • By appointing foreign drivers, the directors are addressing the current issues that are experienced with its South African drivers and their unions, allowing LAG to continue with operations and driving profitability. • By paying foreign drivers less than South African drivers, LAG can increase its profitability, while still meeting its business objectives. • By appointing foreign drivers, LAG eases unemployment in foreign countries, assisting their economies. • Given the big risk attached to appointing illegal foreign drivers, LAG's directors may still act in good faith and choose to only appoint foreigners with existing visas in place, which would be legal.

1.3	Negative (-) considerations (linked to best interest) • Paying foreign drivers slightly more than what they are willing to work for, yet below the South African minimum wage, may not be seen as fair remuneration to these drivers (this may also link with social issues – see values below). • By appointing foreign drivers as opposed to SA drivers, LAG reduces the employment opportunities for SA drivers, thereby contributing to South Africa's unemployment rate. • Appointing foreign drivers as opposed to South African drivers for the South African truck fleet, may be seen as unfair towards to South African drivers. • Appointing foreign drivers illegally will not be in the best interest of LAG, and this is a big risk given the strict requirements for legally appointing foreigners: o Foreign drivers might not be able to apply for a work visa, and can therefore not be appointed legally. o Illegal drivers will not be able to obtain valid driver's licences in SA, opening LAG up to the risk of falsifying driver's licences and insurance fraud (given that insurance will not pay out without a valid licence).
	Available 12 /Max 8

Risks section	
2.	***Tax risks and potential consequences*** *of non-adherence to tax laws will not be discussed in this section. Please refer to the link provided for the SAICA specimen paper or your taxation material.*
3.	**Other risks**
3.1	Linking it to LAG's risk assessment: Risks already identified by LAG as part of their risk assessment are increased (-): • **Regulatory and compliance risk**, given the risk of – o non-compliance with related laws and regulations in appointing foreign workers (visas, etc.); o breaching of local labour laws should they dismiss existing SA drivers / reduce their working hours; and o non-adherence to tax laws, should foreign drivers be paid in cash *(see point 2).*
3.2	**Operational disruptions**, given the risk that appointing foreign workers, as opposed to SA workers, may lead to civil unrest and strikes.
3.3	**Social and labour issues**, given the risk of – • social unrest and labour strikes *(mark to be awarded either here or under operational disruptions);* • SA employees from other divisions being dissatisfied with LAG's practices, making them unmotivated in working together with LAG to achieve their goals (may affect the well-being of employees); • reputation and ethics, given that LAG may experience reputational damage and be seen as acting unethically; • that SA customers may withdraw their support from LAG; • losing their income, arising from social concerns because illegal foreign drivers are willing to work for less and are willing to not be treated in terms of fair labour regulations; and • conflict in employee relationships when SA and foreign drivers need to work together.
3.4	**Legal and contractual risks**, that LAG could be subject to potential legal disputes should it dismiss the current SA driving force or allocate less working hours to the SA drivers than previously.
	Available 9/ Max 5

Strategy section	
3.5	By appointing foreign drivers, the following **values** of LAG may be at risk at a **strategic level** (-):
3.5.1	Sustainability • Given that appointing foreign drivers, as opposed to local drivers, may be seen as unethical by some stakeholders, and hence not a sustainable solution; and • Given that, should illegal foreign drivers be appointed, they can be repatriated at any time.
3.5.2	Collaboration • Instead of addressing the issues with local drivers and unions through communication, cooperation and building strong relationships, LAG tends to sidestep this and appoint alternative (foreign) drivers, • resulting in poor relationships with the local workforce.
3.5.3	Employee empowerment: • Given that other SA workers (not drivers) may become unmotivated in working towards achieving LAG's objectives (this may affect confidence between employer and employee and good relations); and • Given that the driver force will increasingly consist of foreign drivers, this may lead to diversity issues amongst LAG's employees (foreign drivers would jeopardise LAG's B-BBEE status).
	Available 6/ Max 4

(d)	Evaluate the construction and design of the **dashboard provided in Annexure B.** In your answer –focus only on the **effectiveness of the visualisations**; i. identify any issues or areas for improvement in the layout, **data representation, labelling, chart types and overall design**; and ii. provide recommendations for **enhancement** based on your evaluation. *Y1: Critical thinking* *Y3: Problem solving*	10 6 *1* *1*	18

Y1(c): Critical thinking and Y3(a) Problem solving *Candidates will have to conceptualise, analyse and evaluate the dashboard information to be able to identify where issues are and provide recommendations on its enhancement.*	*1*

Effectiveness of the visualisations

1.	**Fuel efficiency line chart** i) The x-axis of the chart contains vehicle models (Model A, Model B, Model C). While including the vehicle models in the x-axis of the fuel efficiency line chart provides a detailed view, it hampers the ability to read the movement of time effectively, as the time 'resets' after each model. This disrupts the chronological progression of data and makes it challenging to interpret the data trends accurately. It also affects the ability to compare the models effectively, as the time intervals do not flow seamlessly. ***ii) Recommendation:*** Remove the model categories from the x-axis and rather utilise slicers for the model selection. This allows for a cleaner, more intuitive representation of the data. Alternatively, each model can be a separate line on the axis represented by a different colour and the results can be overlapped using Jan, Feb, March. Further to enhance clarity the '23' can be removed and moved to the title, being fuel efficiency for 2023. This would reduce repetition and result in a more simple readable graph. Industry comparative trucks should be added to the graph for actual comparison, not just data points.

2.	**Charge utilisation pie chart** i) Issue: The pie chart does not effectively represent charging infrastructure utilisation. Pie charts are not suitable for comparing utilisation rates across different stations or locations. The pie chart used to represent charging infrastructure utilisation poses several challenges: • All the slices in the pie chart appear to be of the same size, making it difficult to discern meaningful differences in utilisation rates between different charging stations. In reality, these charging stations likely have varying levels of utilisation, and this information is crucial for optimising the placement and availability of the charging infrastructure. • A pie chart is typically used to represent parts of a whole, showing how each part contributes to the total. However, in the case of charging infrastructure utilisation, it is more meaningful to analyse and compare individual utilisation rates for different stations rather than viewing them as components of a whole. A bar chart, grouped bar chart or histogram would be more effective for this purpose, as it allows for a direct and clear comparison of utilisation rates across different stations. • In addition, the pie chart does not provide numerical values for the utilisation rates, making it even more challenging to accurately assess and compare the rates. This lack of numerical data hinders a detailed analysis of the charging infrastructure's performance. The chart also does not specify if this the utilisation rate or the raw utilisation hours that are used. ***ii) Recommendation:*** The names / locations of the stations should be presented instead of the alphabets (A,B,C,D) so that users have a view of how the locations of the stations affect the charge utilisation.
3.	**Solar contribution chart** i) The solar contribution chart covers a time span of four months (February to May), while other charts, such as the fuel efficiency chart and slicers, focus on a three-month period (January to March). This discrepancy not only leads to a misalignment of time frames but also results in a differing total duration under examination. Such inconsistencies can introduce confusion and impede accurate comparisons between different aspects of the dashboard. ***ii) Recommendation:*** To ensure coherence and meaningful comparisons, a consistent time period should be maintained across all visualisations. i) The x-axis of the solar contribution chart exhibits irregular intervals. This results in disproportionate visual representations, particularly favouring the solar energy contribution. As a result, it creates a misleading impression of the relative contributions of different energy sources, potentially misinforming viewers. ***ii) Recommendation:*** The x-axis intervals should be aligned with a consistent and logical progression. This adjustment will provide an accurate and balanced visual representation of energy source contributions, ensuring a more reliable interpretation of the data. The data could alternatively be put into a pie chart here and the slicer used for each month. i) The title refers only to solar and it should be clearer that all energy sources are being represented. ***ii) Recommendation:*** Change the heading i) The abbreviation ‘GE’ is used without explanation, which may cause confusion for viewers. ***ii) Recommendation:*** To enhance clarity and understanding, either provide an explanation of the abbreviation ‘GE’ (grid electricity) or use the full term ‘grid electricity’ in the label. This adjustment will ensure that users, especially those unfamiliar with the acronym, can readily comprehend the information presented on the dashboard.

4.	**Repair requests bar chart** i) This chart does not align closely with the company's sustainability goals compared to the other charts on the dashboard. ii) ***Recommendation:*** Replace this chart with a more relevant metric related to the company's green energy initiatives. i) The chart contains decimal points on the x-axis, which is not meaningful for tracking repair requests, as repair requests are discrete events. *ii)* ***Recommendation:*** Adjust the x-axis intervals to display whole numbers only, as repair requests are counted in whole units and cannot be fractional. i) The absence of labels makes it difficult to identify which colour represents each vehicle model. ***ii) Recommendation:*** Clearly label each vehicle model to enable users to easily differentiate between them on the chart. Alternatively, for easier interpretation, a line chart can be used with each model a separate line on the axis represented by a different colour and the results can be overlapped using Jan, Feb, March. i) Finally, it's worth noting that the quantity of repair requests is relatively small. Given the limited number of requests, the metric may not provide substantial insights into the maintenance needs of the hybrid fleet. Therefore, careful consideration should be given to whether this chart is the most effective way to evaluate maintenance requirements, or if an alternative metric with greater relevance and significance to the company's sustainability goals should be utilised. ***ii) Recommendation:*** Repair requests by number of kilometres travelled would provide more useful information than the repair requests by month.
5.	**Slicers** i) The slicer options include a model 'D', which is not part of the provided data. Including a non-existent model in the slicer options can lead to confusion or misinformation. ***ii) Recommendation:*** Remove the option for model 'D' from the slicer as it serves no purpose. i) The time period buttons may need to be updated in the future (April, May missing), as the dashboard is continuously fed with live data from FleetLogIt. The necessity for future updates to the time period slicers may be a drawback for long-term use. ***ii) Recommendation:*** Include a note or prompt indicating that the time period slicers may require updates as new data becomes available.
6	**Emissions** i) The pie chart can be simplified through making the pie out of the target, such that the total pie is 30% and thus the pie chart will be 90% complete with a 27% achieved. (Similar to apple watch fitness rings.) i) The emissions are also not clear on whether this relates solely to fuel or electricity savings too. ii) It may be beneficial to display the industry usage vs our own usage
	Available 32/ Max 18 **Y1 and Y3:2**

(e)	Draft a memo to LAG's board of directors, with regard to LAG's decision to acquire SPLS, in which you – (iv) outline the **key factors** that LAG's directors should consider when assessing whether LAG should acquire SPLS (limit your answer to **strategic and risk** considerations); - ***NOTE:*** *Refer to learning units 8 and 9 re risks for self-review if needed* ***before test 4.*** *X1: Communication skills – layout and presentation* *Y2: Integrative thinking*	12 *1* *1*	 14

X1: Communication skills – report format	*1*
Y2: Integrative thinking *Integrate the information provided to correctly identify the risks and underlying strategy*	*1*

Memo format, including introduction, etc.: To: LAG's Board of Directors From: AN Accountant, Junior accountant in LAG finance department Date: dd/mm/yyyy Subject: Acquisition of Self-Propelled Logistics Solutions Ltd (SPLS) – key considerations	
1.1	**Financial factors**
1.1.1	Financial due diligence to thoroughly evaluate SPLS's financial performance and position, including revenue, profit margins, cash flow and debt levels, to assess its financial health and prospects, including potential synergies with LAG.
1.1.2	Determination of a reliably estimated fair value for SPLS, considering various methods such as discounted cash flows, market multiples and comparable transactions in the industry.
1.1.2.1	The ability to determine a reasonable fair value for SPLS's technology and reliably estimate future expected cash flows, including synergies (i.e., a range of minimum and maximum values).
1.1.3	Availability of funding and consideration of the most suitable funding structure for the acquisition, including the use of debt or equity, or a combination thereof, while considering LAG's existing financial commitments and capital structure.
1.2	**Non-financial strategic and risk factors**
1.2.1	On the face of it, this is in line with LAG's values as it relates to utilising cutting-edge technology, but one would need to assess the alignment of SPLS's technology and capabilities with LAG's long-term strategic objectives and whether the acquisition will enhance LAG's competitive positioning. [Risk = strategic misalignment]
1.2.2	Evaluate how the acquisition of SPLS will expand LAG's market presence and lead to a competitive advantage, both geographically and in terms of its current service offerings. [Risk = intended expansion not realised]
1.2.3	Consider the cultural fit between SPLS and LAG to ensure a smooth integration, minimise potential post-acquisition challenges, and ensure employee empowerment and collaboration. [Risk = clash of corporate cultures]
1.2.4	Broader (non-financial) due diligence, including an assessment of SPLS's compliance with local and international regulations, as any non-compliance could expose LAG to legal, financial and reputational risks. [Risk = skeletons in cupboard]
1.2.5	Evaluate the strength of all SPLS's intellectual property and the potential for technology integration to create a further competitive advantage for LAG. [Risk = technology not owned / unable to be integrated for LAG's intended benefit]
1.2.5.1	Careful consideration of the expected economic lives and obsolescence of the self-driving technology as it is a rapidly evolving technology. [Risk = rapid obsolescence]
1.2.5.2	The viability of LAG using SPLS's self-driving technology within its current African market, which is less advanced and does not necessarily have the needed infrastructure

	of first-world countries, including road infrastructure. Further the infrastructure issues cannot be solved by LAG for they are entirely dependent on African nations to provide, increasing dependency risks. Further the regulatory environment could limit the use of self-driving technology as it could be deemed unsafe for public use, especially given the African infrastructure. [Risk = inability to use technology]
1.2.5.3	The unionised drivers could push back against the automation of their jobs, leading to strikes and potential reputational damage. [Risk = pushback and business sustainability] The acquisition could also be seen as anticompetitive by the Competition Commission who could block the sale? The risk of cyber attacks and cyber ransoms increases due to the automation of a fleet, hackers could hold cargo or steal the cargo. How can the talent retention be ensured given the poor performance packages implemented in the past and the yet to be approved SBP scheme? [Risk = may not materialise given the high turnover rates of the past]
	Available 16/ MAX 10

Feedback

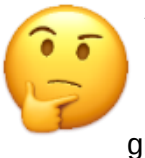
This paper focuses on 'Load Assist Group[13]' (LAG), a company in the transport and logistics industry in South Africa.

LAG faces challenges that include the following aspects:

- Issues pertaining to drivers (including foreign drivers and the move to self-driving vehicles).
- Updating its current cash-settled, profit-focused incentive scheme to a share-based scheme for senior management.
- Credit risk exposure.
- Creating value, by using data analytics and technology.

The key problems/issues this question sets out to assess are the following:

- UN SDG 7 related to sustainable and clean energy
- Social issues in South Africa around unemployment
- Stakeholder identification
- Foreign employees (ethical reasoning)
- Dashboard design
- Performance evaluation
- Decision-making (acquisition) considerations.



Activity 3.1.6: "Artificial intelligence everywhere. Big opportunities. Manageable risks" (PwC 2017–2023)

This PwC (2017–2023) website article shines the light on the enormous economic growth prospects of AI. AI is everywhere and has started to change everything.

AI is automating tasks that previously required human intervention and intelligence, such as fraud detection, capital project oversight and complex decision-making. AI is therefore incorporated into

[13] Load Assist Group and Self-Propelled Logistics Solutions Ltd are fictitious companies, and all events as well as the names of all persons associated with these companies, as mentioned in this IAC specimen paper, are purely fictitious in nature and any resemblance to real persons, living or dead, or to actual business entities, is purely coincidental.

all new **business models and strategies**. The risks involved can be managed through audit algorithms, the integration of cybersecurity, the protection of privacy, policy implementation and so on.

Activity 3.1.6	Estimated time	
	Reading	Total
PwC (2017–2023) website article	18 minutes	18 minutes

REQUIRED	
(a)	Read and contextualise the PwC (2017–2023) website article. The article is available at this link: https://www.pwc.com/gx/en/issues/data-and-analytics/artificial-intelligence.html
(b)	For **additional reading**, click on each of the six tabs and read and contextualise the information. 1. "How can organisations reshape business strategy with AI?" "Boost the bottom line" 2. "What is the impact of AI on government policy and society?" "Make smart policy decisions" 3. "How will AI change the future of work?" "Prepare your workforce" 4. "What are our AI strategic partnerships?" "Strategic AI partnerships" 5. "What is responsible enterprise AI?" "Trust your AI solutions" 6. "What are the key trends in AI?" "AI that's business ready"

FEEDBACK

In this PwC (2017–2023) website article you will learn that to incorporate AI successfully in the long term, an organisation should:

- align its AI strategy and business strategy,
- develop AI capability and build a portfolio of AI capabilities, and
- establish governance over AI security and risk mitigation.

You should be able to describe the advantages of AI and to identify its risks and associated mitigatory measures. You should also be aware of changes that will take place in the workforce as a result of AI. Here are some examples that were derived from the website article:

- AI can **improve productivity and decision-making** and should therefore be incorporated within an organisation's strategy.
- AI has the ability to enhance an organisation's ability to **improve customer satisfaction**.
- Policy decisions can help organisations to become **industry leaders** within the Fourth Industrial Revolution era.
- An organisation should prepare its workforce for automation, which stems from AI.
- AI should be managed by **mitigating its inherent risks**.

SUB-UNIT 3.2: DISRUPTIVE BUSINESS MODELS

3.2.1 INTRODUCTION

An organisation's business model should be flexible to changes and adaptable to the impact of disruptive business models that will be studied in this learning sub-unit.

The mantra "disrupt or be disrupted" can be misleading. Even though organisations need to respond to disruption when it occurs, they should not overreact by dismantling a still-profitable business. According to Christensen, Raynor and McDonald (2015), "disruption entails a small enterprise targeting overlooked customers with a novel but modest offering and gradually moving upmarket to challenge the industry leaders."

One of the key characteristics of a disruptive business model is that it **originates in low-end or new-market footholds**. Another key characteristic of a disruptive business model is that disruptive innovations do not catch on with mainstream customers **until quality catches up to their standards**. To be disruptive does not mean that an organisation will succeed, but smart disrupters improve their products and drive upmarket. Disruptors are frequently overlooked because **disruption is a process** and can take time. The business models of disruptors are very different from those of other organisations.

A great example of an organisation with a disruptive business model is **Netflix**, which launched in 1997. Netflix's initial service was not appealing to most of Blockbuster's customers. Netflix originally delivered movies through the US mail, which meant that selections took several days to arrive, and Blockbuster's customers were typically interested in new movies. Later on, technology allowed Netflix to shift to streaming video over the internet and the company consequently became appealing to Blockbuster's core customer base, offering a wider selection of content with an all-you-can-watch, on-demand, low-price, high-quality, highly convenient approach. As Netflix expanded in **low-end or new-market (streaming) footholds**, Blockbuster failed to respond effectively to its competitor.

Note that this content can be linked to enabling competencies, particularly those involving **business** acumen and **decision-making** acumen.

3.2.2 DISRUPTIVE BUSINESS MODELS

Disruptive business models are new ideas or technologies that are brought to the market in order to **compete** at a higher level and to boost profits. Companies must adapt their policies to ensure their business models are regularly reviewed and updated to be relevant.

According to a 2019 KPMG report on the topic, an organisation should take the following steps:

- **Regularly assess the threats and opportunities** that emerging technologies and business models are creating in the market.
- **Perform an in-depth review of the current strategy** (including people, process, technology, and third-party strategies). Assess its flexibility to adapt to disruption and to maintain relevance to the future market.
- **Stress-test the current strategy** against competitive threats and market disruption.
- **Conduct a skills assessment** to ensure the organisation has the expertise and agility to execute the business strategy.
- **Re-envision the business model** that harnesses new technologies, creates new value propositions and gains competitive advantages.
- **Prioritise the adoption of new technologies** that will enable the company to capitalise on long-term value.
- **Redesign the board agenda** to maintain ongoing focus on disruption, strategy recalibration, change management and execution.

(Source: KPMG 2019:4)

3.2.3 ACTIVITIES

After you have studied the above information and read the prescribed material, complete the following activity:

Activity 3.2.1: "How to build disruptive strategic flywheels: gaming, artificial intelligence, and deep learning are paving the way for dynamic and resilient 21st-century business models"

(Source: PwC 2019)

Activity 3.2.1	Estimated time	
	Reading	Total
PwC (2019) website article	15 minutes	15 minutes

REQUIRED	
(a)	Read and contextualise the PwC (2019) website article that can be found at this link: https://www.strategy-business.com/article/How-to-build-disruptive-strategic-flywheels

FEEDBACK

An AI system can **simulate** voluminous individual choices available to customers, companies and other entities as digital twins (a digital twin is a computerised replica of a physical asset, process, consumer, actor or other decision-making entity). AI simulation can help an organisation and its executive management to make **better strategic and financial decisions than they would be able to make by purely relying on their instincts and prior assumptions**. This approach opens up an abundance of strategic choices at a lower cost of experimentation.

Traditionally, a strategy, as studied in learnings unit 1 and 2, is a clear vision of the future demands of the market. However, in reality, the future is highly uncertain – customer demands, competition, technology, suppliers and regulations change continually. Therefore, organisations should **incorporate AI and advanced analytical techniques** into their strategic planning.

Through the **implementation of disruptive business models**, organisations can successfully predict market trends, giving them a **competitive advantage**. Similarly, the successful analysis of data can improve organisations' **customer satisfaction**, giving them a competitive edge and increasing their **market share**.

AI does not develop an organisation's strategy on its own but changes the way an organisation projects the future and thereby **assists with dynamic strategy development**. Dynamic strategy development can be viewed similar to gamification as both comprise a multiphase process of designing, building, simulating and evaluating. Similarly a dynamic flywheel strategy is a strategy that incorporates AI. It has three components: (i) sense the market, (ii) think through different strategic choices and (iii) evaluate and learn from the outcomes.

3.3 BIBLIOGRAPHY AND ADDITIONAL READING

Christensen, CM, Raynor, ME & McDonald, R. 2015. What is disruptive innovation? Available from: https://hbr.org/2015/12/what-is-disruptive-innovation (accessed on 10 February 2025).

KPMG. 2019. Disruptive companies and business models. Available from: https://assets.kpmg.com/content/dam/kpmg/us/pdf/2019/09/disruptive-companies-business-models-report.pdf (accessed 10 February 2025).

PriceWaterhouseCoopers (PwC). 2017–2023. Artificial intelligence everywhere. Big opportunities. Manageable risks. Available from: https://www.pwc.com/gx/en/issues/data-and-analytics/artificial-intelligence.html (accessed on 10 February 2025).

PriceWaterhouseCoopers (PwC). 2019. How to build disruptive strategic flywheels: gaming, artificial intelligence, and deep learning are paving the way for dynamic and resilient 21st-century business models. Available from: https://www.strategy-business.com/article/How-to-build-disruptive-strategic-flywheels (accessed on 10 February 2025).

South African Institute of Chartered Accountants (SAICA).

SAICA. 2023. Specimen IAC papers revised and adapted. Rainbow-T; Real pirates; ExyMed available under additional resources.