



**BSBXBD404**

**ASSESSOR GUIDE**

# Use big data for operational decision making

Assessment 3 of 5

Case Study

Version 1



## Assessment Instructions

### Task overview

This assessment task is divided into four (4) parts and has six (6) activities. Read each question carefully before documenting the demonstration task evidence in the spaces provided.

To complete this assessment, you will need the following:

- *BSBXBD404\_03\_Case Study\_Scenario documents* (zipped folder) - This folder contains the following scenario documents and templates required for completing the tasks in this assessment.
  - AUS Retail\_Data Summaries.xlsx
  - AUS Retail\_Email\_template.docx
  - AUS Retail\_Stakeholder communication policy.pdf
  - AUS Retail\_Request for data access form\_template.docx
  - AUS Retail\_Data source identification and access policy.pdf
  - AUS Retail\_Procedure for gathering business requirements.pdf
  - AUS Retail\_Business requirements gathering form\_template.docx

### Assessment Information

#### Submission

You are entitled to three (3) attempts to complete this assessment satisfactorily. Incomplete assessments will not be marked and will count as one of your three attempts.

All questions must be responded to correctly to be assessed as satisfactory for this assessment.

Answers must be typed into the space provided and submitted electronically via the LMS. Hand-written assessments will not be accepted unless previously arranged with your assessor.

#### Reasonable adjustment

Students may request a reasonable adjustment for assessment tasks.

Reasonable adjustment usually involves varying:

- the processes for conducting the assessment [e.g. allowing additional time]
- the evidence gathering techniques [e.g. oral rather than written questioning, use of a scribe, modifications to equipment]

However, the evidence collected must allow the student to demonstrate all requirements of the unit.

Refer to the Student Handbook or contact your Trainer for further information.



Please consider the environment before printing this assessment.

# Part A: Case study scenario

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All tasks in this assessment refer to a simulated environment where conditions are typical of a workplace that uses big data related to a fictitious retail business organisation called 'AUS Retail'. Read the case study scenario carefully before doing the tasks in Part B.

## A1. Company Background

**AUS Retail** started as a single retail store based in Sydney, NSW. They now have retail store locations across several other states and territories in Australia and continue to grow with the goal of eventually setting up stores across all states in Australia. As the business is growing rapidly, the management requires a more accurate and efficient way to gain insights into their retail sales, enabling them to make better operational decisions.

## A2. Your role

You are working at AUS Retail as an 'Operations Analyst' who is training to use the analytical insights from the organisation's big data sources to help the senior management make more efficient and effective operational decisions. You must comply with any legislative requirements and follow standard operating procedures as outlined in AUS Retail's policy and procedure documents when identifying business requirements for using big data for operational decision-making.

## A3. Standards, legislative requirements and procedures

You are provided with the following organisational documents and data files related to the fictitious organisation 'AUS Retail' to assist with the big data analysis process.

- **AUS Retail\_Stakeholder communication policy.pdf** – includes organisational procedures, communication protocols and standards used when engaging with key stakeholders in the organisation for seeking input and feedback on the identified insights of the analysis.
- **AUS Retail\_Data source identification and access policy.pdf** – contains the details of internal organisational systems from which various types of data flow and their relationships. It also includes legislative requirements that would apply when identifying and obtaining big data sources and summaries for analysis.
- **AUS Retail\_Procedure for gathering business requirements.pdf** – contains the step-by-step procedure for scoping and confirming operational decision-making and reporting requirements.

## A4. Data summaries

**AUS Retail\_Data Summaries.xlsx** – An Excel workbook file containing summaries of transactional data from AUS Retail's Sales and Production departments captured from 2018-2021.

## A5. Document templates

- **AUS Retail\_Email\_template.docx** – This template is referred to in the 'AUS Retail\_Stakeholder communications policy.pdf' and must be used when drafting emails to AUS Retail's stakeholders.
- **AUS Retail\_Request for data access form\_template.docx** – This template is referred to in the 'AUS Retail\_Data source identification and access policy.pdf' and must be used when requesting access to AUS Retail's internal data.
- **AUS Retail\_Business requirements gathering form\_template.docx** – This template is referred to in the 'AUS Retail\_Procedure for gathering business requirements.pdf' and should be used when gathering business requirements from Stakeholders.

## Part B: Obtain domain knowledge of business processes

To complete this part of the assessment, you are required to:

- carefully read the scenario details outlined in Part A
- read through AUS Retail's documentation provided to find relevant information
- answer all the short answer questions (B1 and B2) based on the case study.

### Task B1

Outline the domain knowledge you obtained of the business processes related to AUS Retail's three (3) main departments (work areas).

Use the answer table to:

- identify and list the three (3) main departments (work areas)
- describe the business processes of each department (work area)

(Word count: 35 - 50 words for each work area)

**Assessor instructions:** Student responses are likely to include different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 1 - Answer table for Task B1

Department (work area)	Business process description (35 - 50 words)
<b>Sales</b>	This involves the sales transactions that occur at each store location for the products purchased by customers. For each sales transaction, the Order ID, Product ID, Customer ID, Category ID, Sales, Quantity, Discount and Cost information is captured.
<b>Customer Relations</b>	This involves collecting and maintaining details of AUS Retail's customers including their demographic information. Each customer is assigned a unique ID number and grouped according to their segment type. The personal information of customers should not be used for any analysis reports. Data should be de-identified as per legislative requirements.
<b>Production</b>	This involves the maintenance of the product catalogue and their quantities in the inventory. For each product, the Product ID, Vendor ID, Category ID, Product Name and Product Price details are recorded. Product defects are logged including product defect, the defect type, impact, product category and vendor details.

### Task B2

Identify the opportunities for using big data in business decision-making in work areas of AUS Retail, based on the big data summaries provided to you in 'AUS Retail\_Data Summaries.xlsx'.

Use the answer table to:

- list the names of the two [2] data summaries
- list two [2] types of information/insights that can be obtained from each summary
- outline two [2] opportunities for operational decision-making related to the information from each summary. (Word count: 20 - 35 words for each).

**Assessor instructions:** Student responses are likely to include different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 2 - Answer table for Task B2

<b>Data Summaries</b> <i>(List the name)</i>	<b>Types of information/insights</b> <i>(List two for each summary)</i>	<b>Opportunities for operational decision-making.</b> <i>(Use 20 - 35 words)</i>
Revenue Summary	1. Store locations that have generated the highest/lowest sales turnover	Decisions can be made to allocate resources for marketing campaigns for products in those retail store locations that have lower sales turnover figures.
	2. Specific months where turnover is significantly high/low	Decisions can be made to allocate resources to upgrade store facilities or introduce new products to those stores at specific months in which the sales turnover is high.
Product demand summary	1. The specific product categories having high/low demand.	Decisions can be made to: <ul style="list-style-type: none"> <li>circulate the on-demand product quantities among the retail stores that have the demand for those specific products.</li> <li>Focus marketing campaigns on specific product categories that indicate a low demand.</li> </ul>
	2. The variation of demand for products in store locations.	Decisions can be made to place more frequent/high quantity orders for those products that have the most demand and distribute products to store locations according to the demand.



## Part C: Identify business requirements relating to big data

To complete this part of the assessment, you are required to:

- carefully read the scenario details outlined within this section
- follow the organisational policy, procedures, communication protocols and standards provided.

### Scenario continued:

AUS Retail's key stakeholders Chief Financial Officer (CFO) Karen Jones ([Karen.Jones@ausretail.com.au](mailto:Karen.Jones@ausretail.com.au)) and the Head of Operations, Daniel Brown ([Daniel.Brown@ausretail.com.au](mailto:Daniel.Brown@ausretail.com.au)), have set a business goal for next year's sales turnover to reach \$850,000 (\$850K).

As the Operations Analyst, you are tasked with using big data analytics to help the management make data-driven decisions to achieve this business goal.

The management requires operational decisions for next year to be made based on the data from the years 2018-2021. A sample of AUS Retail's data summaries from 2018-2021 is provided to you for reference. [Note: Assume that 2021 is the last/previous calendar year and that operational decisions must be made for the next calendar year.]

You understand that generally, the sales turnover value can have a direct impact if adjustments are made to variables such as the product selling price and product demand (i.e. quantities of items sold).

The management requires a what-if scenario analysis to be conducted and for a report to be created using *Microsoft Power BI*. This report should showcase the optimum value adjustment of the variables (such as product price, and demand) applied to selected products that can achieve the required sales turnover outcome.

The report needs to be monitored at the end of each month to ensure the target is achieved. The report also needs to be re-evaluated as the data for each month becomes available during the next calendar year. Therefore, the management requires measures to indicate the achievement of targets each month.

You are also aware that AUS Retail's reports have a standard structure and layout that must be followed when creating any report. The report should be accessible to the key stakeholders and the relevant department managers.

### Tasks:

#### Task C1

Identify the scope of the operational decision-making requirements according to the business objective outlined in the scenario.

**Important:** You must follow the recommended strategies as outlined in the 'AUS Retail\_Procedure for gathering business requirements.pdf' and use the 'Business requirements gathering' form to record the following.

- a. Operational decision-making requirements - Under 'Section A' of the form, you must
  - list five (5) questions to capture the scope of the requirements
  - write brief answers and recommendations for each question according to your understanding of the business context and objective. [Note: You will confirm this information from the relevant stakeholders via email in the next task].
- b. Reporting requirements - Under 'Section B', of the form, you must

- list five [5] questions to capture the nature and scope of the reporting requirements.
- write brief answers and recommendations for each question according to your understanding of the business context and objective. **[Note:** You will confirm this information from the relevant stakeholders via email in the next task].

## Task C2

Write a draft email addressed to AUS Retail’s key stakeholders requesting to confirm the operational decision-making and reporting requirements.

**Important:** When drafting the email, you must:

- briefly outline the purpose of the email using clear, specific and industry-related terminology
- include a copy of the completed ‘Business requirement gathering’ form within the body of the email
- request a response from the recipient, to confirm business requirements (i.e. operational decision-making requirements and reporting requirements)
- use AUS Retail’s standard email template to draft the email as outlined in the ‘AUS Retail\_Stakeholder communication policy.pdf’ document.

[Word count: 85 – 115 words in the email body, excluding the information in the form].

**Portfolio of evidence:** *[Drafted email to stakeholder/s and form completion]*

Draft your email in the space given below.

**Assessor instructions:** Student responses are likely to include different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit (for the email body)
- reflect the characteristics described in the exemplar answer
- include a copy of the ‘Business requirement gathering form’ with **Section A** [Operational decision-making requirements] and **Section B** [Reporting requirements] completed with five [5] relevant questions listed and suggested answers/recommendations outlined for each section.

A sample answer is provided below.

**Lastname, Firstname**

**From:** Lastname, Firstname

**Sent:** Monday, 06<sup>th</sup> February 2023 3:44 PM

**To:** Jones, Karen [[Karen.jones@ausretail.com.au](mailto:Karen.jones@ausretail.com.au)], Brown, Daniel [[Daniel.Brown@ausretail.com.au](mailto:Daniel.Brown@ausretail.com.au)]


**Subject:** Business requirements related to achieving the sales turnover goal next year

Hi Karen and Daniel,

I’m writing to confirm the scope of the business requirements related to achieving the sales turnover goal for next year.

In order to analyse the most optimum operational decisions to achieve this goal, I would need to clarify and perhaps need more information from you regarding your expectations and limitations around the operational decisions and reporting requirements.

I have completed the ‘Business requirement gathering’ form capturing some of the information I have investigated so far. If you could please confirm whether the identified information is correct, that would be great.

	<b>Business requirements gathering form</b>	
	Business problem, goal, opportunity:	The goal is to achieve a sales turnover target of \$850K in the next calendar year.
<b>Section A: Operational decision-making requirements – Questionnaire</b> (to be filled by the data analyst and/or stakeholders)		
Q1. Who (or which work areas) will be impacted by the decisions?	Sales Department and Production Department operations.	
Q2. How many variables are required to make the operational decisions and what are they?	There are at least 2. Sales turnover is directly impacted by product price changes (mark-up or mark-downs) and product demand (quantities sold).	
Q3. What type of analysis need to be conducted?	A what-if scenario analysis is recommended for this type of analysis.	
Q4. What kind of impact does the identified variables have on the business goal?	Product price increase would increase sales turnover. An increase in product demand will also increase sales turnover.	
Q5. How timely must the operational decisions be (weekly, monthly, quarterly)?	Operational decisions need to be evaluated monthly, and adjusted accordingly to ensure the sales turnover goal is met by the end of next year.	
<b>Section B: Reporting requirements – Questionnaire</b> (to be filled by the data analyst and/or stakeholders)		
Q1. What specific tool, format or style guides need to be applied to the report?	Microsoft Power BI to be used as the reporting tool. Required to use AUS Retail's reporting guidelines, structure and layout.	
Q2. What and how many metrics, variables and or what-if scenarios need to be included in the report?	A total of two variables can be reported on, to show variations. (Price change percentage and Product demand percentage).	
Q3. What external/internal factors may prevent/limit the report creation or access to the report?	None identified so far. The report needs to be accessible by key stakeholders and Sales and Production department managers.	
Q4. What data is relevant for generating the report?	AUS Retail's internal transactions data from 2018-2021	
Q5. What is the frequency of the report?	The report needs to be re-evaluated monthly.	

Looking forward to your response.  
Thanks and kind regards,

**Firstname Lastname**

Operations Analyst

[Firstname.Lastname@ausretail.com.au](mailto:Firstname.Lastname@ausretail.com.au)



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# Part D: Follow procedure to access big data sources and summaries

To complete this part of the assessment, you are required to:

- carefully read the scenario details outlined within this section and previous sections (Parts A and C)
- follow the organisational policy, procedures, communication protocols and standards provided.

In this task, you will request access to the relevant data sources and summaries according to the organisational policies, procedures and legislative requirements.

## Scenario continued:

Currently, you cannot access the data sources required for the analysis because a formal access request hasn't yet been submitted.

Previously, you were provided with a sample of AUS Retail's data summaries in an Excel document that relates to the years 2018-2021 for reference. However, these high-level summaries do not adequately provide the detailed information required for the analysis.

You were informed by management that there are several Power BI dashboards available that you can refer to which can provide more detailed information on the data summaries relevant to revenue and product demand from 2018-2021 data. However, you currently do not have access to these dashboard versions of the data summaries as well. The specific names of the dashboards you will require access to are as follows:

- Revenue Summary
- Product Demand Summary

## Tasks:

### Task D1

Follow the procedure for accessing AUS Retail's data sources and summaries relevant to the scenario.

**Important:** Refer to the 'AUS Retail\_Data source identification and access policy.pdf' and use the 'Request for data access' form to record the following.

- a. **Section A: Data source details** (listing the specific details of the dataset, tables and fields required for the analysis)
- b. **Section B: Data summary details** (list the specific data summaries required for the analysis)
- c. **Section C: Other details** (outline the application of any legislative requirements relevant to the data sources and summaries requested according to AUS Retail's policies and procedures)

### Task D2

Write a draft email addressed to the correct department [team] requesting access to the big data sources and summaries relevant to the operational decisions to be made.

**Important:** When drafting the email, you must:

- a. briefly outline the purpose of the email using clear, specific and industry-related terminology
- b. include a copy of the completed 'Request for data access' form within the body of the email listing the relevant big data you need access to.
- c. request a response from the correct department [team], regarding access to the data.

- d. use AUS Retail's standard email template to draft the email as outlined in the 'AUS Retail\_Stakeholder communication policy.pdf' document.

(Word count: 65 – 95 words in the email body, excluding the information in the form).

**Portfolio of evidence:** *[Drafted email to collaborate with interdisciplinary teams]*

Draft your email in the space given below.

Assessor instructions: Student responses are likely to include different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit [for the email body]
- reflect the characteristics described in the exemplar answer
- list details of the required data sources and summaries relevant to the scenario
- address the email to the IT Support department/team.

A sample answer is provided below.


**Lastname, Firstname**  
**From:** Lastname, Firstname  
**Sent:** Monday, 06<sup>th</sup> February 2023 4:00 PM  
**To:** IT Support [[ITSupport@ausretail.com.au](mailto:ITSupport@ausretail.com.au)]  
**Subject:** Request access to big data sources and summaries related to Sales transactions in year 2018-2021

Hi Team,

Please find the completed 'Request access to data sources and summaries' form with details of the data sources and summaries that I would need to access in order to perform the what-if scenario analysis as requested by the management.

Also, please flag if there are legislative requirements other than what is outlined in the form.

If you can please arrange access to the required data sources and summaries at your earliest convenience, that would be much appreciated.

	<b>Request access to data sources and summaries</b>	
	<b>Purpose:</b>	To conduct what-if scenario analysis for the purpose of operational decision-making as requested by the management. This involves analysing sales turn over data from the previous years.
<b>Section A: Data source details</b> [to be filled by the data analyst]		
1. Date range:	01/01/2018 to 31/12/2021	
2. Database names/s:	Transactions database	
3. Table names/s:	Transactions	
4. Field names/s:	Order ID, Product ID, Sales, Costs, Discount %, Quantity, Unit Cost, Unit Price, Price Change Amount	
<b>Section B: Data Summary details</b> [to be filled by the data analyst]		
5. Date range:	01/01/2018 to 31/12/2021	
6. Data summary [or dashboard] name/s:	Revenue Summary Product Demand Summary	
<b>Section C: Other details</b> [to be filled by the data analyst]		
7. Legislative requirements:	According to AUS Retail's data protection and privacy policy all records related to customers should be de-identified. However, for this analysis customer data is not required. Therefore, do not include any customer related data fields in the data sources or data summaries.	

Looking forward to your response.

Thanks and kind regards,

**Firstname Lastname**

Operations Analyst

[Firstname.Lastname@ausretail.com.au](mailto:Firstname.Lastname@ausretail.com.au)



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## Assessment checklist:

Students must have completed all activities within this assessment before submitting. This includes:

Part B: Obtain domain knowledge of business processes		
B1	Completed answer table for Task B1	<input type="checkbox"/>
B2	Completed answer table for Task B2	<input type="checkbox"/>
Part C: Identify business requirements relating to big data		
C1	Form completion – 'Business Requirement Gathering'	<input type="checkbox"/>
C2	Drafted Email to Stakeholder/s – email draft including completed form to confirm business requirements for Operational decisions	<input type="checkbox"/>
Part D: Follow procedure to access big data sources and summaries		
D1	Form completion – 'Request for big data access'	<input type="checkbox"/>
D2	Drafted Email to appropriate department/team – email draft including completed form to request access to relevant data sources and summaries	<input type="checkbox"/>

**Congratulations you have reached the end of Assessment [3]!**

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