ASSIGNMENT 1 FRONT SHEET

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Unit number and title	**Unit 17: Business Process Support**		
Submission date		**Date Received 1st submission**	
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Student Name		**Student ID**	
Class		**Assessor name**	
Student declaration I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.			
		Student's signature	

Grading grid

P1	P2	P3	P4	M1	M2	D1

❒ Summative Feedback:		❒ Resubmission Feedback:
Grade:	**Assessor Signature:**	**Date:**
Internal Verifier's Comments:		
Signature & Date:		

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Introduction

CHAPTER 1: LO1 Discuss the use of data and information to support business processes and the value they have for an identified organisation

1. P1 Discuss how data and information support business processes and the value they have for organisations.

1.1. What is Business Intelligence (BI)

Definition of Business Intelligence (BI)

Business Intelligence (BI) is a technology-driven process for collecting, analyzing, and presenting business data to help organizations make informed decisions. BI transforms raw data into meaningful insights through data analytics, reporting, and visualization tools, enabling businesses to improve performance and gain competitive advantages. Morris, A. (2021)

Explanation of Business Intelligencekey:

- Data Collection: Gathering data from multiple sources such as sales records, customer databases, and external market data.
- Data Analysis: Using statistical tools, data mining, and predictive analytics to identify patterns and trends.
- Reporting and Visualization: Presenting analyzed data through dashboards, charts, and reports for easy interpretation.
- Decision Support: Providing actionable insights that guide strategic and operational business decisions.

BI helps companies understand customer behavior, optimize operations, forecast trends, and measure performance against key performance indicators (KPIs).

How BI Helps CECUS Technology:

- **Improves Operations:** BI analyzes data from manufacturing, sales, and customer service to find inefficiencies, optimize production, and reduce costs.
- **Speeds Up Meetings:** Real-time BI dashboards allow remote teams to review key metrics beforehand, enabling faster decisions and shorter meetings.
- **Enhances Collaboration:** BI integrated with digital platforms improves information sharing across teams and partners, boosting responsiveness and innovation.
- **Supports Sales Growth:** BI analyzes customer behavior, market trends, and competitors to tailor marketing, forecast demand, and identify new sales opportunities.

1.2. Business processes

Definition of Business Processes

A business process is a series of related, organized tasks or activities performed by people or technology to achieve a specific organizational goal. These processes transform inputs into valuable outputs, such as products or services, that fulfill customer needs or support internal functions

Explanation of Business Processes

Business processes are essential for the smooth functioning of any organization. They have clear starting and ending points, are repeatable, add value, and allow flexibility for changes without disrupting operations.

There are three main types of business processes:

- Operational Processes: These are core activities that directly create value for customers and generate revenue. Examples include manufacturing products, processing orders, and delivering services.
- Management Processes: These involve planning, monitoring, and controlling business operations to ensure efficiency and compliance. Examples include budgeting, strategic planning, and performance evaluation.
- Supporting Processes: These support the core operations by providing necessary resources and services but do not directly create customer value. Examples include human resources, accounting, and IT support

Example of Business Processes in CECUS Technology

CECUS Technology, a fast-growing company specializing in high-quality electrical components, uses various business processes to improve efficiency and competitiveness.

Operational Processes

These are core activities that create value for customers:

- **Production Process:** Transforming raw materials into electrical components with quality checks to ensure high standards.
- **Order Fulfillment Process:** Managing customer orders from receipt to delivery, ensuring timely and accurate shipments.

Management Processes

These processes plan and monitor company activities:

- **Performance Monitoring:** Using BI tools to track key metrics such as production efficiency, sales growth, and customer satisfaction.
- **Strategic Planning:** Setting goals to expand market share and improve product quality based on data insights.

Supporting Processes

These support core operations and enhance collaboration:

- **Remote Collaboration:** Using digital platforms and BI dashboards to facilitate communication and decision-making among teams, shortening meetings and speeding up problem-solving.

Sales and Marketing Planning: Analyzing customer data and market trends to design targeted marketing campaigns and forecast demand, supporting revenue growth.

1.3. Value of Data and Information for Organisations

Aspect	Explanation	Value to Organisations
Data vs. Information	Data is raw facts information is processed data that supports decision-making.	Provides accurate insights that improve decisions and reduce uncertainty.
Improving Decision-Making	Data-driven decisions rely on evidence rather than intuition.	Leads to more effective strategies and sustainable growth.
Enhancing Operational Efficiency	Data analysis identifies inefficiencies and cost-saving opportunities.	Streamlines processes and reduces operational costs.
Customer Experience	Customer data reveals preferences and behaviors for personalised services.	Increases customer loyalty and competitive advantage.
Innovation and Growth	Data uncovers trends and new opportunities.	Supports innovation and helps maintain market leadership.
Adaptability and Agility	Timely data enables quick response to changes.	Keeps the organisation competitive and flexible.

Example:

An electronics store collects sales data to see which gadgets sell best. Using this information, it stocks popular items and reduces slow sellers. This improves efficiency and increases profits. Customer data also helps tailor promotions, boosting satisfaction and loyalty.

2. P2 Discuss how data is generated and the tools used to manipulate it to form meaningful data to support business operations.

2.1. Some tool for BI

BI Tool	Core Features	Notes
Power BI	Data visualization, table reports, cross-highlighting, conditional formatting, data connectivity	Microsoft product, widely used
Tableau	Drag-and-drop visualization, advanced analytics, interactive dashboards, data connectivity	Strong in visual storytelling
Looker	Semantic data modeling, simplified data access, exploration for technical and business users	Google Cloud product
Qlik Sense	Associative data modeling, interactive dashboards, ML integration, augmented intelligence	Flexible deployment (cloud/on-premises)
Yellowfin	Interactive dashboards, collaboration, automated insights, data storytelling	Focus on enterprise reporting
Google Data Studio	Free, web-based, customizable dashboards, data integration	Good for quick, cost-effective reporting

2.2. Data visualization

Data Visualization Definition:

Data visualization is the process of representing data visually using elements such as charts, graphs, maps, and dashboards. This graphical representation helps people quickly understand complex data, identify patterns, trends, and outliers, and make better data-driven decisions. Instead of looking at raw numbers or tables, visual formats make information easier to interpret and communicate effectively to different audiences.

In short, data visualization turns raw data into clear, visual stories that help users analyze information faster and more accurately. Denodo. (2025)

Purpose

- **Make data easier to understand:** Visuals help people quickly see what the data is about.

- **Find patterns and trends:** It helps spot important changes or relationships in the data.
- **Support decision-making:** Clear visuals help managers and teams make better choices.
- **Communicate information clearly:** It makes sharing data with others simpler and more effective.
- **Save time:** Looking at pictures of data is faster than reading long tables or reports.

Examples

- **Bar Chart:** Shows sales numbers for each month to compare performance.
- **Line Chart:** Tracks customer growth over several years.
- **Pie Chart:** Displays the market share of different products.
- **Heatmap:** Shows how much a product is used in different locations.
- **Dashboard:** Combines several charts and key numbers to monitor business activities in one place.

3. M1 Assess the value of data and information to individuals and organisations in relation to real-world business processes.

CHAPTER 2: LO2 Discuss the implications of the use of data and information to support business processes in a realworld scenario

4. P3 Discuss the social legal and ethical implications of using data and information to support business processes.

4.1. Why We Need to Consider Social, Legal, and Ethical Implications When Using Data in Business Processes

1. Social Implications

- **Protecting Privacy:** People expect their personal data to be handled with care. Ignoring social concerns can lead to loss of trust and customer backlash.
- **Promoting Fairness:** Data-driven decisions can unintentionally reinforce social biases or inequalities. Considering social impacts helps create fairer outcomes for all groups.
- **Maintaining Reputation:** Businesses that act responsibly with data are more likely to earn public trust and maintain a positive reputation.

2. Legal Implications

- **Compliance with Laws:** Regulations like GDPR and CCPA require businesses to manage data responsibly. Failing to comply can result in heavy fines and legal action.
- **Risk Management:** Understanding legal requirements helps prevent lawsuits, penalties, and damage from data breaches.
- **Contractual Obligations:** Businesses must honor agreements related to data use, confidentiality, and sharing.

3. Ethical Implications

- **Building Trust:** Ethical data use shows respect for customers and stakeholders, building long-term trust.
- **Ensuring Transparency:** Being open about how data is collected and used helps people understand and consent to data practices.
- **Preventing Harm:** Ethical guidelines help prevent misuse of data, such as discrimination or unauthorized access.

4.2. The social legal and ethical implications

Social Implications

- **Privacy concerns:** Businesses must respect individuals' privacy by protecting personal data and ensuring it is collected and used responsibly. Mishandling data can erode trust and cause social harm.
- **Inequality and bias:** Data-driven decisions can unintentionally reinforce social inequalities if biased data or algorithms are used. Companies should actively work to prevent discrimination.
- **Transparency and accountability:** Businesses should be clear about how data is collected, used, and shared, and be accountable for the consequences of data-driven decisions.
- **Impact on employment:** Automation and data analytics can change job roles or displace workers, so companies should consider social and economic effects on their workforce. Cote, C. (2021)

Legal Implications

- **Compliance with data protection laws:** Businesses must follow regulations such as the GDPR (EU), CCPA (California), and others that govern lawful data collection, consent, storage, and usage.
- **Respect intellectual property:** Unauthorized use of data or information can infringe copyrights or patents, leading to legal penalties.
- **Consent and ownership:** Collecting personal data without explicit, informed consent is both illegal and unethical.
- **Data security:** Companies are legally required to protect data from breaches and unauthorized access. Cote, C. (2021)

Ethical Implications

- **Transparency:** Clearly inform individuals about what data is collected, why, and how it will be used.
- **Fairness:** Ensure data practices do not discriminate or cause unfair treatment.
- **Accountability:** Establish responsibility for data use and be prepared to address ethical issues.
- **Data minimization:** Collect only data necessary for the stated purpose to reduce risks.
- **Ethical AI use:** Regularly audit algorithms to avoid biased or unfair outcomes. Korolov, M. (2020)

Aspect	GDPR (General Data Protection Regulation)	CCPA (California Consumer Privacy Act)
Scope	Applies to all organizations worldwide that process personal data of EU	Applies to for-profit businesses with annual revenue over $25 million or meeting other criteria,

	residents	operating in or selling to California residents
Personal Data Definition	Any information relating to an identified or identifiable person, including sensitive data like genetic or biometric data	Information that identifies or can be linked to a consumer or household, broader in some respects but excludes certain protected categories like medical info under HIPAA
Consent	Requires *explicit opt-in* consent before collecting or processing personal data	Uses an *opt-out* system, allowing consumers to opt out of the sale of their personal data (e.g., via a "Do Not Sell My Info" link)
Consumer Rights	Includes rights to access, rectify, erase (right to be forgotten), restrict processing, data portability, and object to processing	Rights to know what data is collected, delete personal data, and opt out of data sale; narrower than GDPR
Transparency	Businesses must provide detailed information about data collection, processing, storage duration, and profiling purposes	Requires disclosure of data collected, its use, and sale, plus notification when data is sold or shared
Legal Basis for Processing	Must have a lawful basis (e.g., consent, contract, legitimate interest) before processing personal data	No explicit legal basis required; focuses on consumer rights and business transparency
Data Security	Requires appropriate technical and organizational measures to protect data	Requires reasonable security measures to protect personal information
Penalties	Fines up to €20 million or 4% of global annual turnover, whichever is higher	Fines of $2,500 per violation, $7,500 per intentional violation, plus potential civil litigation costs
Additional Notes	More stringent on automated decision-making and profiling	Focuses on preventing discrimination against consumers who exercise their privacy rights

European Union (2018).

Both GDPR and CCPA aim to protect personal data and privacy, requiring transparency, data protection, and granting individuals rights over their data. GDPR is broader in scope, stricter on consent (opt-in), and applies globally to EU residents' data. CCPA applies to certain California businesses, uses an opt-out approach, and emphasizes consumer control over data sales. European Union (2018).

P4 Describe common threats to data and how they can be mitigated at on a personal and organisational level.

M2 Analyse the impact of using data and information to support business realworld business processes.

LO3 Explore the tools and technologies associated with data science and how it supports business processes

1. **P5 Discuss how tools and technologies associated with data science are used to support business processes and inform decisions.**

2. **M3 Assess the benefits of using data science to solve problems in real-world scenarios.**

LO4 Demonstrate the use of data science techniques to make recommendations to support real-world business problems

3. **P6 Design a data science solution to support decision making related to a real-world problem.**

4. **P7 Implement a data science solution to support decision making related to a real-world problem.**

5. **M4 Make justified recommendations that support decision making related to a real-world problem.**

CONCLUSION

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