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Assignment 05: Data Reflection Exercise

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Introduction

I am researching a real world business problem from my workplace. I work for a medical equipment company that manufactures high tech eye surgery systems.

For the past few years, our company was very successful and received many orders from all over the world. However, in the last year, our sales have decreased significantly. Because of this drop in orders, the company is now considering a major change: moving part of our production from the USA to another country to save money on manufacturing.

The goal of this assignment is to identify the most important data that can help us understand why our customers are buying less and to decide if moving our production abroad is a smart financial decision.

	Difficult to Access	Readily Accessible
Critical / Important	<ul style="list-style-type: none">• Real reasons why surgeons are unhappy (in their heads)• Competitors' secret future plans• Internal quality control issues	<ul style="list-style-type: none">• Monthly sales reports• Competitor prices• Currency exchange rates• Import/Export taxes (Tariffs)
Probably Not Needed	<ul style="list-style-type: none">• Private chats between employees within the company	<ul style="list-style-type: none">• Weather in office locations• Capacity of the company parking lot

Data Item	Importance	Accessibility	Why it's important	Why it's accessible (or not)
Monthly sales reports	A	4	To identify exactly when and where orders began to drop.	Standard internal company records.
Competitor prices	A	4	To see if our products are now too expensive for the market.	Usually published on competitor websites.
Production cost (USA)	A	3	Comparing current costs against the cost of moving abroad.	Internal financial data; needs management permission.
Estimated production cost (Abroad)	A	3	Essential to decide if moving production actually saves money.	Requires market research and quotes from vendors.
Surgeons' real opinions	A	2	They may feel the product quality has decreased.	Requires time to collect via surveys or interviews.
Reasons for employee turnover	A	2	Losing top talent can directly lead to lower product quality.	Requires private, manual exit interviews.
Currency exchange rates	A	4	Weak currencies in other countries make our machines more expensive.	Readily available on any financial news website.
Import/Export tariffs	A	4	New trade barriers can stop sales in certain regions.	Publicly available via government trade portals.
Technical complaint records	A	4	To see if customers are reporting more hardware failures or bugs.	Stored in the internal customer support database.

Delivery lead times	A	4	If our delivery is too slow, customers switch to competitors.	Tracked in the internal logistics system.
Private competitor strategy	A	1	Knowing their secret plans would help us compete.	Impossible and illegal to acquire.
Internal quality control	A	3	Some offices may not care about high-quality assembly.	Requires internal audits and customer feedback.
Global eye surgery volume	B	4	To see if the total market is shrinking or just our brand.	Found in public medical and health reports.
Google Trends ("Eye Surgery")	B	4	Shows if public interest in this technology is decreasing.	Publicly available through Google Trends.
Shipping & Logistics costs	B	3	Global shipping costs can significantly eat into profits.	Requires quotes from specific shipping companies.
Competitor's new products	B	4	To see if they have designed better technology than ours.	Publicly promoted on their corporate websites.
Government health budgets	B	4	Less government money means hospitals buy fewer systems.	Available in public government budget records.
Global inflation rates	B	4	High inflation reduces the overall buying power of customers.	Available on public economic websites.
Employee happiness surveys	B	3	Unhappy employees often produce lower-quality work.	Stored within internal HR records.
Social media brand mentions	C	4	Online talk is often general and doesn't explain hospital sales.	Readily available on public social platforms.
Weather at customer	C	4	Weather does not affect a clinics	Publicly available information.

clinic locations			need for surgery systems.	
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CLOSING REFLECTION

This exercise taught me to think like a data analyst. I learned that the "data universe" is huge, but I must choose only the most important parts.

I realized that some of the best data is not in a computer, but in people's heads and their idea like why a doctor likes a competitor or why some employees quit. The 2x2 grid showed me that while some data is easy to find, the most valuable information is often hard to get. Now, I can focus on the right data for my project and avoid wasting time on some useless data like weather, some chatting between employees or parking space.