

BUSINESS CASE 2.2

Enterprise for Tech (E4T)

Heading for the future: Data Analysis Southern - Team: beDAta



Key Objective: Evaluate your sales process to develop a breakthrough strategy for the future



The core of the sales process comes from human resource, product and market

Employee

The forces are even between the teams, but for each agent, 5 of them are falling behind

Product

GTK is facing a big challenge in valuation, MG series has difference between products, GTX show strong market demand

Market

Revenue and success rate trend fluctuate on a quarterly basis.

Features are extracted from the three objects above to build strategies

Team	Promoting Engaging increases the opportunity to approach and Win transactions as well as increase negotiation time and efficiency.
Agent	Restore 5 agents without transactions in 3 key product to the market in July
Trend	The trend is to decrease at the start of the quarter, increase sharply in the middle month, peak at the end, then decrease again at the start of the next quarter.
Product	MG is doing well with fast negotiation and GTK is bringing in high revenue

Survey and Valuation

Survey market demand and have the right pricing strategy to increase the success rate

Increase employees performance

Maximize the management ability of managers and promote KPI for each sales agent

Goal: Increase total revenue by 10% in the next 6 months

DASHBOARD OVERVIEW

PDF: [Dashboard Tour PDF](#)

LINK DASHBOARD: [DASHBOARD](#) (but you must request access)

DOWNLOAD: [Here](#)



CLEANING & TRANSFORMATION

About dataset: Includes 5 csv files, including data_dictionary file explaining information about the data

Data Cleaning

Data Consistency:

- Sales Pipeline: GTXPro
- Product: GTX Pro

-> GTXPro -> GTX Pro

Spelling error (Accounts table):

- **technolgy** -> **Technology**
- **Philippines** -> **Philippines**

Remove spaces from some data cells:

- **subsidiary_of** - **Accounts table**
- **account** - **Sales Pipeline**

Transformation

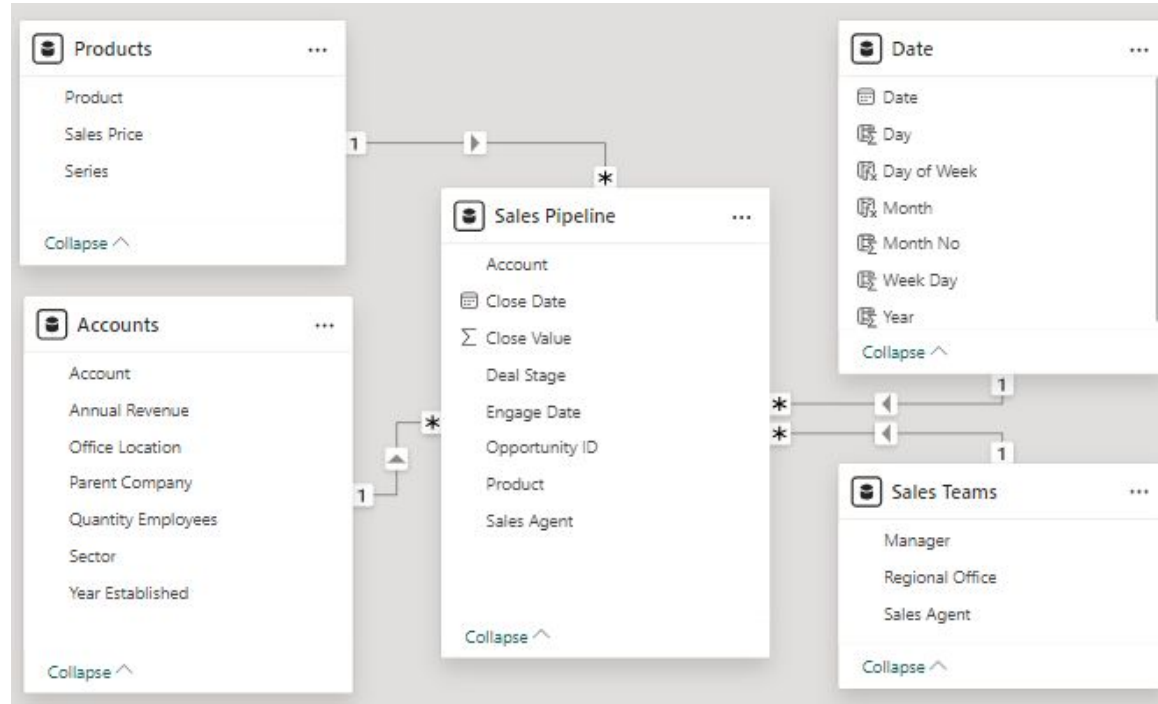
Capitalize the first letter of the content:
Names of industries in the Sector column

eg: retail -> Retail

Format column names, table names appropriately and friendly

- **sales_pipline** -> **Sales Pipeline**
- **subsidiary_of** -> **Parent Company**

DATA MODELLING



Create a **Date table** to contain information about dates. After establishing relationships between tables, we get the **data model as above**.

ANALYZE & PERFORM MISSION

We will analyze the following four problems through analytical techniques and propose solutions using the SMART method

- **Problem 1:** Evaluate sales team
- **Problem 2:** Evaluate your sales agent
- **Problem 3:** Research trends each quarter
- **Problem 4:** Evaluate products

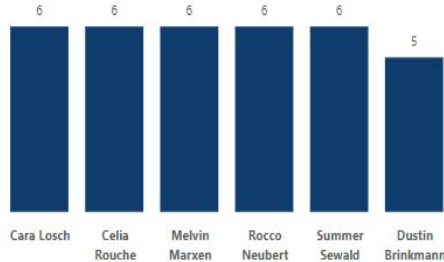
PROBLEM 1: Evaluate Sales Team

There are differences in revenue and opportunities between teams

● Number of Sales Agent ● Number of Manager

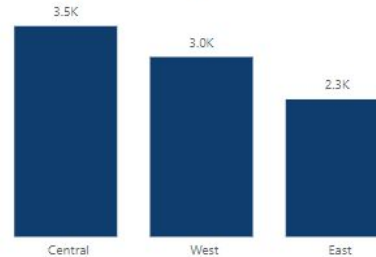


Number of Sales Agent by Manager

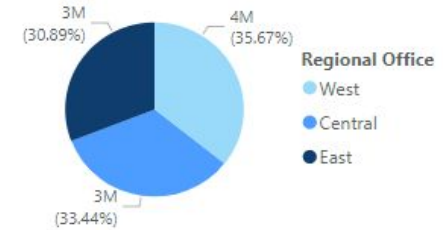


The **distribution scale** is evenly distributed to **3 offices**, each area has **2 sales teams**.

Number of Opportunity by Regional Office



Revenue by Regional Office



- **East teams** are underperforming the other two offices with the **fewest deals and revenue**
- **Central teams** has the **most deals** but **lower revenue** than West

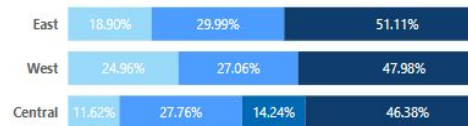
=> There is a **DIFFERENCE** in **PERFORMANCE** between teams even though the **SIZE** is the **SAME**

PROBLEM 1: Evaluate Sales Team

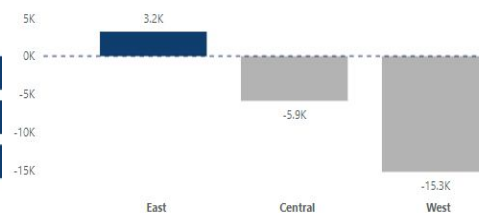
The difference between business strategies of each team

Total Opportunity by Regional Office and Deal Stage

Deal Stage: Engaging (light blue), Lost (medium blue), Prospecting (dark blue), Won (black)

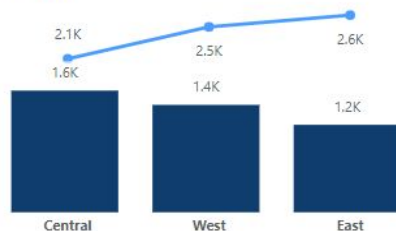


Price Difference by Regional Office



Win Orders and AOV by Regional Office

Win Orders (dark blue bar), AOV (blue line)



Product	Central	East	West
GTK 500	2	1	37
GTX Basic	693	418	755
GTX Plus Basic	539	388	456
GTX Plus Pro	346	303	319
GTX Pro	528	473	479
MG Advanced	579	391	442
MG Special	825	317	509
Total	3512	2291	2997



CENTRAL: High volume (MG & GTX Basic) but **lowest revenue** - prime candidate for upselling! They also have a **unique prospecting stage** in their funnel, indicating potential for future growth.



WEST: Diverse sales with strong GTK 500 performance (high-value) but a trend of significant discounts needs review.



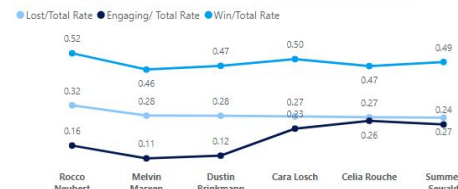
EAST: Balanced sales (GTX & MG) with lower volume but highest margins due to premium pricing.

PROBLEM 1: Evaluate Sales Team

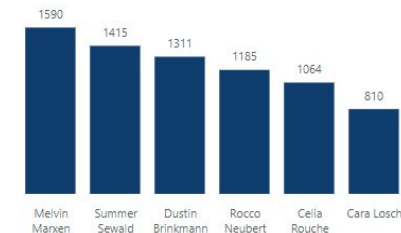
Evaluate performance managers of each team

Manager	Region	Opportunities & Revenue	Ability to negotiate prices	Engage Rate	Won/Lost Rate
Melvin	Central	Highest	Good	Low	Low / Medium
Dustin	Central	Lowest Revenue	Not good	Low	Low / Medium
Summer	West	2nd Highest	Lowest	High	High Win - Low Lost
Cara	West	Lowest chance	Low - Stable	High	Stable
Roccon	East	Stable	Low - Stable	Stable	High Win - Low Lost
Celia	East	Stable	Low - Stable	Stable	Stable

Lost/Total Rate, Engaging/ Total Rate and Win/Total Rate by Manager



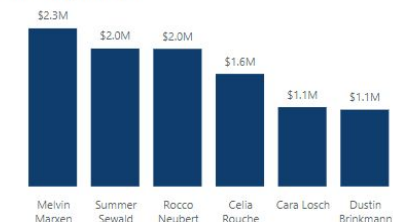
Count of Account by Manager



Price Difference by Manager



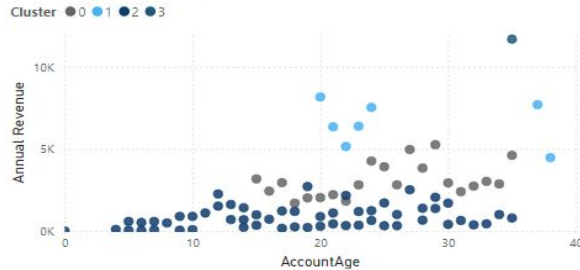
Revenue by Manager



PROBLEM 1: Evaluate Sales Team

Opportunity to find suitable potential customers

Clustering by Account Age and Annual Revenue



Using K-Means clustering algorithm to group business size:

Cluster 0: Small/medium (long-term operation and low revenue)

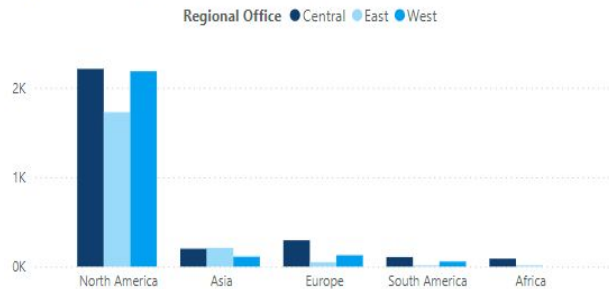
Cluster 1: Large & stable (long-term operation and very high revenue)

Cluster 2: Medium & large (relatively long-term operation and quite stable revenue)

Cluster 3: Medium large (quite long-term operation and stable revenue)



Opportunity by Region Account and Regional Office



Most customers are **mainly from North America**, however:

Central: Mainly groups 2 and 0 - potential in Europe

West: Mainly groups 2 and 0, potential in Europe and more group 3 customers than other regions

East: Mainly group 2, followed by groups 1 and 0 with potential in Asia



PROBLEM 1

SMART - Suggestions for business

SPECIFIC

All 6 sales teams increased revenue and promoted attraction and increased Win rate > 70% in negotiation opportunities.



MEASURABLE

Promoting Engaging increases the opportunity to approach and Win transactions as well as increase negotiation time and efficiency.



ACHIEVABLE

With a fairly high Win rate of nearly 65%, it is necessary to promote and promote the strengths of each potential customer, the most traded product.



RELEVANT

Improve business and negotiation abilities of employees, promote marketing to attract customers.



TIME -BOUND

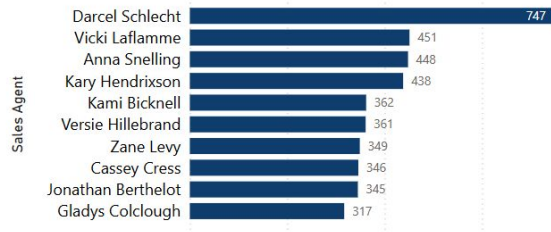
In the following quarters, we will catch the trend of accelerating the stage accordingly.



PROBLEM 2: Evaluate Sales Agent

There are differences in sales strategies between agents

Top 10 Transaction Count by Sales Agent



Darcel Schlecht: highest number of transactions, **1.66x** higher than the 2nd

Top 10 Revenue by Agent



Darcel Schlecht: **outstandingly** high revenue:

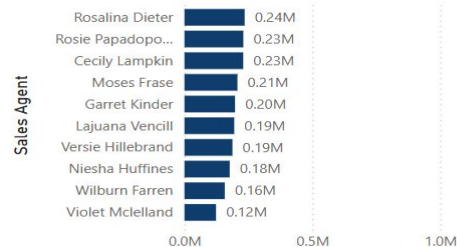
- **2.4x** higher than the revenue of 2nd agent

- **11.53%** of E4T's total revenue

=> the most **active agent** - increasing Success

Rate will bring significant revenue

Bottom 10 Revenue by Agent



Meanwhile, the **lowest revenue** earner - Violet Mclelland only accounts for **1.23% of total revenue**

5 agents without transaction

Sales Agent	Manager	Regional Office
Carl Lin	Summer Sewald	West
Carol Thompson	Celia Rouche	West
Elizabeth Anderson	Cara Losch	East
Mei-Mei Johns	Melvin Marxen	Central
Natalya Ivanova	Rocco Neubert	East

5/35 agents without any transactions

(no data)

-> maybe agents are facing difficult problem

What **if Darcel's strategy** was applied broadly to all agents in general and to the 5 agents with no transactions in particular?



PROBLEM 2

Potential when cooperating with corporate groups

Parent Company	SubCompany Count
Acme Corporation	4
Sonron	3
Bubba Gump	2
Golddex	2
Inity	2
Massive Dynamic	1
Warephase	1

Sales Agent	Parent Company	Sum of SubCompanyCount
Darcel Schlecht	Acme Corporation	4
Marty Freudenburg	Acme Corporation	4
Boris Faz	Acme Corporation	3
Cassey Cress	Acme Corporation	3
Corliss Cosme	Acme Corporation	3
Daniell Hammack	Acme Corporation	3
Darcel Schlecht	Sonron	3
Donn Cantrell	Acme Corporation	3
Garret Kinder	Acme Corporation	3
James Ascencio	Acme Corporation	3
Marty Freudenburg	Sonron	3
Niesha Huffines	Sonron	3
Reed Clapper	Acme Corporation	3
Violet Mclelland	Acme Corporation	3
Wilburn Farren	Acme Corporation	3



Corporations (parent companies) have at most 4 subsidiaries.

Of the agents that cooperate with these corporations, about 50% of agents cooperate with 2-4 subsidiaries of a corporation at the same time.

=> **cooperation** with corporations, especially **Acme Corporation**, has the potential to **increase customers**

PROBLEM 2

Darcel Schlecht

The highest revenue, due to:

- The highest total transactions
- The second high AOV

Why the highest total transaction?

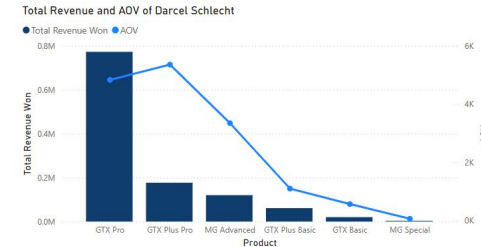
→ **Capture** the general **trend** of the market



- increased continuously from the end of 2016 to the end of the 1st quarter of 2017
- decreased slightly in the 2nd quarter of 2017
- increased sharply in the beginning of the 3rd quarter of 2017
- decreased gradually from the middle of the third quarter to the end of the year

Why the second high AOV?

Is it because it sells a lot of GTX 500 - the most expensive product? - It doesn't sell any GTX 500








Revenue mainly from:

- GTX Pro
- GTX Plus Pro
- MG Advanced

=> 3 products priced high but moderately, suitable for many customers

PROBLEM 2

SMART - Suggestions for business

SPECIFIC	Capture the market trend, especially the July market, focus on mid-priced items, increase Darcel Schlecht's won rate to make the most of the customer base	
MEASURABLE	Increase Darcel Schlecht's won rate to 70%, ensure supply of 3 items GTX Pro, GTX Plus Pro and MG Advanced to meet July demand	
ACHIEVABLE	Apply the negotiation strategy of the agents with the highest won rate, consider whether the market is more volatile than last year to estimate inventory	
RELEVANT	Implement strategies to increase revenue for E4T, as well as resolve issues for 5 agents without transactions	
TIME -BOUND	Evaluate Darcel Schlecht's won ratio on a quarterly basis, evaluate the market of Q1 and Q2 to prepare for any fluctuations in July	

PROBLEM 3: Trends Each Quarter

Revenue by Quarter and Month



The general trend for revenue by quarter: decline in the first month, increase sharply in the middle month, peak in the last month of the quarter, and then continue to decline.

Success Rate by Quarter and Month



Success rate tends to fluctuate quite similar to revenue but increases slowly in the first month and then spikes in the next month and then declines in the first month of the next quarter

PROBLEM 3: Trends Each Quarter

Revenue by Quarter, Month and Regional Office

Regional Office ● Central ● East ● West



All 3 regional offices fluctuated according to the general trend of revenue:

- **Central:** Revenue was stable throughout the year, less volatile than the other 2 regions.
- **East:** Revenue was lower than Central and West, fluctuating quite strongly.
- **West:** Revenue was highest, fluctuating strongly in the middle of the quarter

- **GTK:** Highest revenue and most volatile
- **MG & GTX:** Revenue fluctuates steadily following the general trend throughout the year
- **GTX** in particular tends to decrease in Q2 and then starts to increase in the middle of the month - least volatility

Revenue by Quarter, Month and Series

Series ● GTK ● GTX ● MG



PROBLEM 3: Trends Each Quarter

According to a research article on purchasing demand from US businesses for hardware products (graphics cards).

Link: [Tom's Hardware](#) points out some reasons leading to the above trends

SALES CYCLE:

Decline in the first month: Companies may be clearing inventory from the previous quarter, resulting in lower sales.

Increase in the middle month: This may be due to new product launches, promotional campaigns, or businesses planning purchases in advance.

Peak in the last month: End-of-quarter goals and sales incentives may lead to an increase in orders as companies aim to meet their quarterly targets.

BUDGET CYCLE:

Companies typically finalize their budgets **at the beginning of the quarter**, leading to initial hesitation in spending.

Once the budget is approved, purchasing activity **increases in the middle of the quarter**.

Towards **the end of the quarter**, companies may rush to spend their allocated budget, leading to a spike in revenue.

PROBLEM 4: Evaluate Products

GTX Series is dominating, showing strong market demand



Most Opportunities

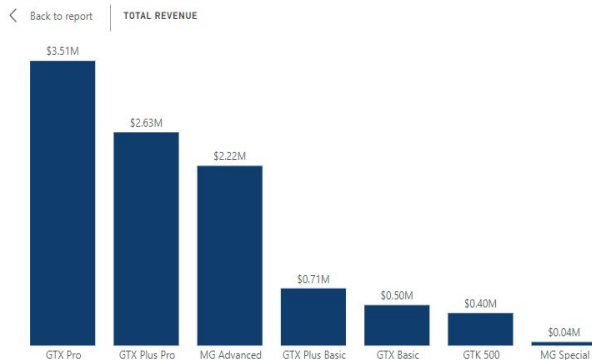
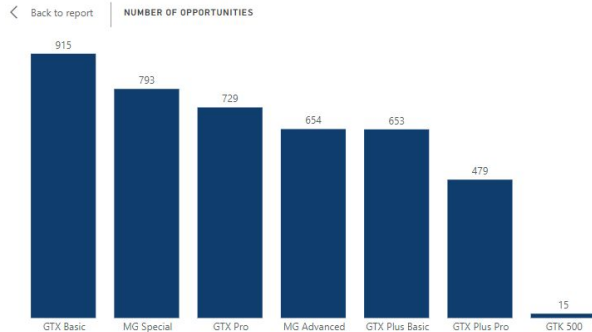
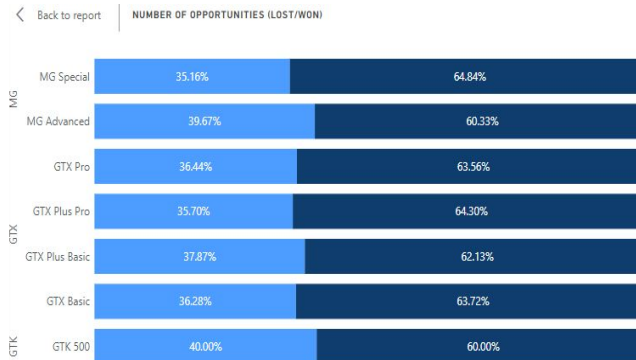
GTX - GTX Basic

Highest Revenue

GTX Pro/Plus Pro

Highest Success

GTX Pro - 2nd
GTX Basic - 3rd



PROBLEM 4

GTK is facing a big challenge in valuation

Series	Product	Sum of Sales Price	Average of Close Value	Valuation Level	Success Rate
GTK	GTK 500	\$26,768	\$16,024.48	59.86%	60.00%
GTX	GTX Basic	\$550	\$347.68	63.21%	63.72%
	GTX Plus Basic	\$1,096	\$671.05	61.23%	62.13%
	GTX Plus Pro	\$5,482	\$3,529.73	64.39%	64.30%
	GTX Pro	\$4,821	\$3,060.66	63.49%	63.56%
MG	MG Advanced	\$3,393	\$2,044.64	60.26%	60.33%
	MG Special	\$55	\$35.79	65.07%	64.84%

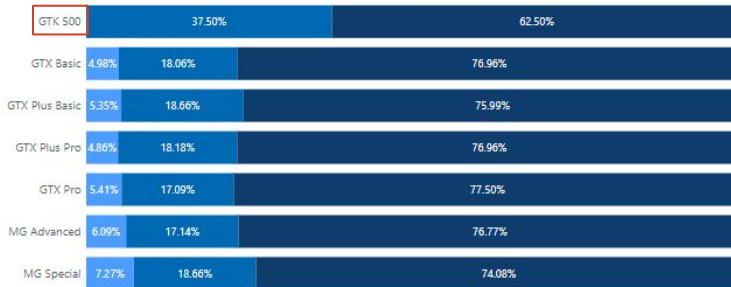
The success rate is quite close to the valuation level -> **priced properly has a high chance**

GTK 500 has price is **1.74x** higher than the sum of the remaining products - Low valuation level & Lowest success rate -> The product **is not priced properly**

< Back to report

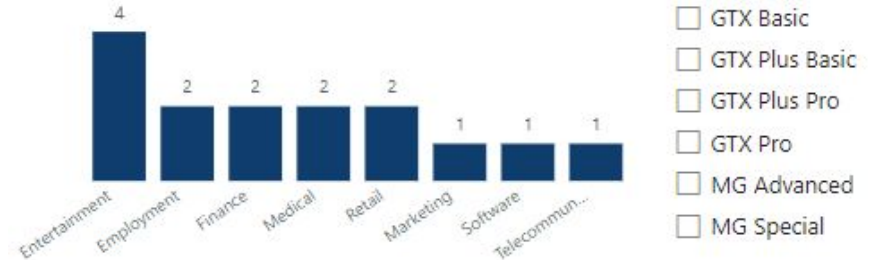
NUMBER OF OPPORTUNITIES

Prospecting Engaging Won/Lost



Never been through the Prospecting

Number of Opportunities



Not in the three main revenue-generating industries

-> E4T should survey the market and price the product appropriately because high prices can make businesses hesitate when finalizing the product

PROBLEM 4

MG series has difference between products

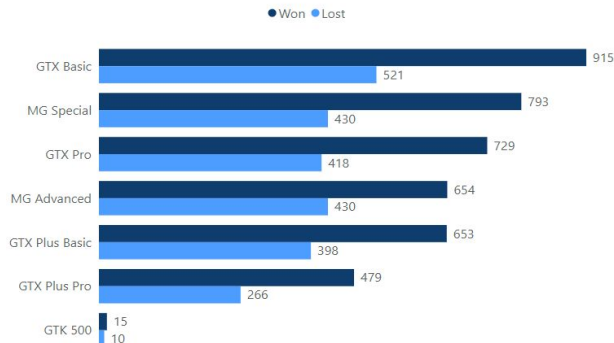
Series	Product	Sum of Sales Price	Average of Close Value	Valuation Level	Success Rate
GTK	GTK 500	\$26,768	\$16,024.48	59.86%	60.00%
GTK	GTK Basic	\$550	\$347.68	63.21%	63.72%
	GTK Plus Basic	\$1,096	\$671.05	61.23%	62.13%
	GTK Plus Pro	\$5,482	\$3,529.73	64.39%	64.30%
	GTK Pro	\$4,821	\$3,060.66	63.49%	63.56%
MG	MG Advanced	\$3,393	\$2,044.64	60.26%	60.33%
	MG Special	\$55	\$35.79	65.07%	64.84%

The price difference -> customers do not have a variety to choose

MG Special: lowest priced - highest conversion rate

MG Advanced: a lot of transaction opportunities - conversion rate is very low (2nd lowest)

< Back to report | NUMBER OF OPPORTUNITIES



Average of Number Days by Series



-> should have a **more suitable pricing strategy** because MG line is **doing well** in shortening the **transaction period**

PROBLEM 4

SMART - Suggestions for business

SPECIFIC

Market research and re-pricing of product lines



MEASURABLE

Increase GTK success rate by 3-5%, increase MG line revenue by 5% for at least 6 months



ACHIEVABLE

Market research on GTK products in other regions, reasonable pricing of all products from won transactions



RELEVANT

Meet the real needs of business customers



TIME -BOUND

Complete survey and valuation in Q1/2018, revenue growth in Q2/2018



MESSAGE FROM INSIGHTS

Survey

Central and East teams survey GTK500 product demand

Reasonable pricing

increase the success rate of GTK, MG products



Cooperate

cooperate strongly with partners with many subsidiaries

Improve Performance

increase attraction and Win rate in Central, increase number of opportunities in East. Sales team Dustin improves sales and increases Win rate.

Survey and price the market reasonably to attract maximum customers

APPENDIX

Data Analysis Process	<ul style="list-style-type: none">- Aggregate data files and Power BI. Review the data set using Python and Excel to prepare for cleaning- Cleaning & Transforming using Power BI. Build Data Modeling for analysis- Draw charts and interpret to analyze and answer 4 questions- Make recommendations based on SMART and build a story <p>Refer to the survey: https://www.tomshardware.com/news/gpu-market-healthy-and-vibrant-in-q2-2023-report</p> <ul style="list-style-type: none">- Build a dashboard to help businesses easily monitor the company's situation.
Analyze & Suggest	<ul style="list-style-type: none">- Analyze using the following methods: describe - diagnose - predict - recommend- Research aspects of the B2B industry to support evidence for recommendations- Use the SMART method
Tools	<ul style="list-style-type: none">- PowerBI- Excel- Python



beDAta would like to thank the **H4TF** Organizing Committee in particular and **AIESEC** in general for organizing a great playground for those who have a passion for data. Thank you everyone for creating opportunities for us. Wish everyone a good day.