PROJECT REPORT

EXPANDING Q-GADGETS INTO THE B2C MARKET IN NEW YORK

Team 3,

BBA 403

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Q-Gadgets is a dynamic B2B company specializing in computer accessories, serving a diverse range of clients in New York, Chicago, Pittsburgh, and Ohio. With a commitment to quality and customer satisfaction, we have garnered a strong reputation in the industry, and now, we are poised to expand our presence into the B2C market, beginning with New York.

Introduction

We are excited to present this project proposal for Q-Gadgets' strategic expansion into the Business-to-Consumer (B2C) market in New York. Q-Gadgets, known for its exceptional range of computer accessories, is looking to tap into the thriving consumer market. This expansion is rooted in extensive data analysis, identifying New York as the ideal location for our B2C venture.

Project Objectives

- **B2C Market Entry:** The primary goal of this project is to successfully establish a B2C store in New York, leveraging the brand reputation and product quality that Q-Gadgets is known for in the B2B space.
- **Data-Driven Strategy:** We are committed to using data-backed insights to ensure a well-informed and strategic approach to entering the B2C market.
- **Product Diversification:** Expanding our product range to cater to the diverse needs and preferences of individual consumers.
- **Customer-Centric Approach:** Maintaining our strong commitment to customer satisfaction and providing exceptional service in the B2C sector.
- **Investor Partnerships:** We invite investors to participate in this expansion, capitalizing on the growth potential of the consumer market in New York.

Project Scope

- **Data Analysis:** The project begins with an in-depth analysis of consumer behavior, market trends, and competitive landscape in New York.
- **Location Selection:** The selection of the ideal location for our B2C store will be guided by data, ensuring it aligns with our target demographic and market demand.
- **Product Expansion:** Diversifying our product range to include accessories that resonate with individual consumers, such as gaming peripherals, office accessories, and more.
- **Quality Assurance:** Upholding Q-Gadgets' commitment to delivering top-quality products and excellent customer service in the B2C segment.
- **Sustainable Growth:** The project will be designed with long-term sustainability in mind, ensuring the establishment of a lasting presence in the B2C market.
- **Investor Engagement:** Actively seeking investors who recognize the potential of our data-driven strategy and are interested in being part of our expansion into the New York consumer market.

Realizations

The project was executed in phases, with each phase focusing on different aspects of market entry and growth in the B2C market in New York. The timeline for each phase was determined based on market dynamics and operational needs.

1. Data Collection:

Now is the time that we are almost drowning in data. We generate an astronomical amount of data each day, and it will be more difficult for all of us to avoid working with data to make sense out of tons of rows and columns of numbers (if you are not doing so already.)

If you use **Excel**, chances are you must use it to visualize some data. You may already be familiar with creating different types of charts with Excel. In some (or most) projects, you must make several charts. However, you will need to create a **dashboard** to tell a story from the '**big picture**' by connecting those charts, like putting jigsaw pieces together.

A **dashboard** (or a data analysis dashboard) is simply a collection of colorful and meaningful charts that show key business performances based on different metrics. A dashboard doesn't live up to its full potential, though, if it is static. A dynamic, interactive dashboard tells a smooth data story and may lead to interesting insights that are not readily available from a static one.

Following is a hands-on, step-by-step guide to how we are going to create an interactive dashboard from one of the most popular spreadsheets out there, the good old Microsoft Excel.

All data, including all names of the people or organizations, is purely imaginative and programmatically simulated for educational purposes only. The data has nothing to do with any actual person, organization, or situation on this plane of reality.

- ✓ **Getting a dataset**

As mentioned before, the data used in this article is 'purely imaginative and programmatically simulated.' We will use Excel to create an imaginary dataset filled with random names of persons, organizations, locations, and numbers of items sold, prices, and revenue. But first, we need to imagine a situation.

Let's come up with something fun!

Imagine that we are employees at '**Q-Gadgets**,' a B2B company selling computer accessories operating in four states: **New York**, **Chicago**, **Pittsburgh**, and **Ohio**.

The company has eight salespersons responsible for customers in different states (regions). **New York** is for **Lucas** and **Angel**, **Chicago** is for **Mamadou** and **Saidou**, **Pittsburgh** is for **Di** and **Wu**, and **Ohio** is for **Rosa** and **Rey**.

We have local businesses buying our computer accessories in each state. We have '**GameStop**,' '**Staples**,' and **Metro Tech**' in New York, '**Deloitte**' **'Bloomberg'** and **'Lehman Digital'** in Chicago, '**LAM Tech**,' and '**AML & Co.'** in Pittsburgh, and, finally, we have **'BBA 403'** and '**Space X**' in Ohio.

Let's say that **Q-Gadgets** sells only eight types of computer accessories: **keyboard** (each for **$150**), **Mouse** (each for **$40**), **Monitor** (each for **$240**), **Headset** (each for **$60**), **Webcam** (each for **$80**), **Mouse Pad** (each for **$15**), **Joypad** (each for **$160**), **VR Headset** (each for **$600**), **Printer** (each for **$500**), and **USB Drive** (each for **$50**).

It's clear that there are connections between the salesperson, region of operation, and the customer, as you can see in the following tables:

ID SALES REP	SALES REP	REGION
1	Lucas	New York
2	Angel	New York
3	Mamadou	Chicago
4	Saidou	Chicago
5	Di	Pittsburgh
6	Wu	Pittsburgh
7	Rosa	Ohio
8	Rey	Ohio

ID REGION	REGION	Column1
1	New York	Lucas, Angel
2	Chicago	Mamadou, Saidou
3	Pittsburgh	Di, Wu
4	Ohio	Rosa, Rey

ID COMPAN	COMPANY	Column1
1	Gamestop	New York
2	Staples	New York
3	Metro Tech	New York
4	Deloitte	Chicago
5	Bloomberg	Chicago
6	Lehman Digital	Chicago
7	LAM Tech	Pittsburgh
8	AML & Co	Pittsburgh
9	BBA 403	Ohio
10	Space X	Ohio

ID ITEMS	ITEMS	PRICE	QUANTITY SOLI
1	Keyboard	$150	10(min)
2	Mouse	$40	250(max)
3	Monitor	$240	
4	Headset	$60	
5	Webcam	$80	
6	Mouse Pad	$15	
7	JoyPad	$160	
8	VR Headset	$600	
9	Printer	$500	
10	USB Drive	$50	

A (imaginary) fun fact about Q-Gadgets!

One of the perks of being a salesperson at Q-Gadget is that if you already sell 250 items on any day, you can feel free to have the rest of the day for yourself. You can't expect to sell 250 items every day, though. On some slow days, you may sell only 10 items. But because of the attractiveness of our goods, at least 10 sales per day is guaranteed. This is why the minimum amount sold per day is 10, and the maximum is 250 — talking about being imaginative!

✓ **Simulating the Data**

Let's imagine that it's time to visualize (and analyze) our beloved Q-Gadgets' performance with data logged from the beginning of 2022 to the end of 2023. There are a total of 500 records of transactions (Q-Gadgets is a small company). Let's create an artificial randomized sales dataset for Q-Gadgets.

✓ **Randomizing the transaction dates**

Imagine a transaction data set logged on an Excel spreadsheet: the first column would most probably be the '**date**.' Now, it's only reasonable that this data would be recorded in chronological order. But, in reality, we can't say how many salespeople sell which item and how many times on which date. Therefore, we need to create a random list of dates. First, we will create a list of dates from January 1st, 2022, to December 31st, 2023. For the randomization process, we also need to create a list of running numbers starting from 1 next to the date column. We already have the '**id date**' and '**date**' columns filled. We created a new worksheet and named it '**Database**.' In this worksheet, let's drag it to 500 records of random dates with **RANDBETWEEN** and **VLOOKUP** functions. We used **RANDBETWEEN** to randomize the numbers in the id date column and then used **VLOOKUP** to look up the dates related to each randomized number.

The result of the database:

Q-GADGETS

Q-Gadgets : B2B Database 2022-2023

DATE	SALES REP	REGION	COMPANY	ITEMS	PRICE	QUANTITY SOLD	REVENUE
8/4/2022	Rey	Ohio	Space X	Headset	60	110	$ 6,600
12/21/2023	Rey	Ohio	Space X	Monitor	240	46	$ 11,040
12/11/2022	Mamadou	Illinois	Bloomberg	JoyPad	160	233	$ 37,280
7/2/2023	Rosa	Ohio	BBA 403	Monitor	240	85	$ 20,400
8/29/2022	Lucas	New York	Gamestop	JoyPad	160	170	$ 27,200
8/24/2023	Rey	Ohio	BBA 403	Printer	500	169	$ 84,500
5/10/2023	Rey	Ohio	BBA 403	Printer	500	80	$ 40,000
10/21/2022	Rey	Ohio	Space X	Monitor	240	68	$ 16,320
7/2/2023	Di	Pensylvania	Lehman Digital	USB Drive	50	134	$ 6,700
9/5/2023	Di	Pensylvania	LAM Tech	USB Drive	50	180	$ 9,000
7/19/2022	Rosa	Ohio	Space X	USB Drive	50	98	$ 4,900
2/6/2023	Saidou	Illinois	Deloitte	Monitor	240	189	$ 45,360
6/21/2022	Mamadou	Illinois	Bloomberg	Mouse	40	104	$ 4,160
4/4/2023	Rosa	Ohio	BBA 403	Monitor	240	97	$ 23,280
8/23/2023	Lucas	New York	Gamestop	Headset	60	146	$ 8,760
1/2/2023	Lucas	New York	Gamestop	VR Headset	600	45	$ 27,000
3/10/2022	Lucas	New York	Staples	Keyboard	150	171	$ 25,650
12/20/2023	Angel	New York	Staples	JoyPad	160	160	$ 25,600
8/11/2023	Mamadou	Illinois	Deloitte	Mouse	40	241	$ 9,640
4/2/2022	Saidou	Illinois	Bloomberg	Printer	500	131	$ 65,500
1/18/2023	Di	Pensylvania	AML & Co	Headset	60	129	$ 7,740
12/25/2022	Angel	New York	Metro Tech	Headset	60	198	$ 11,880

2. Sales Performance:

For this part, we created a pivot table between the **Date** column and the **Revenue** column. Once we had the pivot table generated by Excel, we made a graph out of it then we generated a line chart graph.

The data from the graph provides a clear overview of the company's sales performance over time (2022-2023), highlighting the fluctuations and the recent upward trend. We use this to discuss strategies for maintaining and enhancing this positive trajectory.

The Graph helps us emphasize the growth potential and revenue projections for the B2C market based on the B2B performance.

3. Customer Analysis:

For this part, we created a pivot table between the **Company** column and the **Quantity Sold** column. Once we had the pivot table generated by Excel, we made a graph out of it then we generated a clustered bar graph.

This graph provides valuable insights into the purchasing behavior of Q-Gadgets' B2B customers, which is useful for understanding demand and planning for the expansion into the B2C market. It highlights the potential for targeting similar customer segments in the B2C market. It helps demonstrate the company's customer base and potential for expansion.

4. Regional Sales Analysis:

For this part, we created a pivot table between the **Region** column and the **Revenue** column. Once we had the pivot table generated by Excel, we made a graph out of it then we generated a clustered bar graph.

In the context of Q-Gadgets' goal to enter the B2C market, this graph helps demonstrate the company's understanding of its current B2B market performance on a regional basis. This is a stepping stone to discuss how the company plans to approach the B2C market in different regions. It's important to note that the B2C market might behave differently than the B2B market, so further market research would likely be necessary.

5. Financial Metrics:

We planned to include a section that shows financial projections for the B2C market based on current sales trends and market analysis but for some reason, we only had access to b2b data therefore it was important to readjust this study. The financial metrics can help demonstrate the company's potential profitability in the B2C market.

6. B2C Market Analysis:

The Market Analysis led to the discovery of the two big giants of the Business-to-customer company specializing in computer accessories, **BestBuy** and **Micro Center.** They carry more than 70% of the B2C market.

7. Forecast

For forecasting, we used the **sales performance graph** on which we added a trendline and let excel generate the regression equation and displayed the R squared.

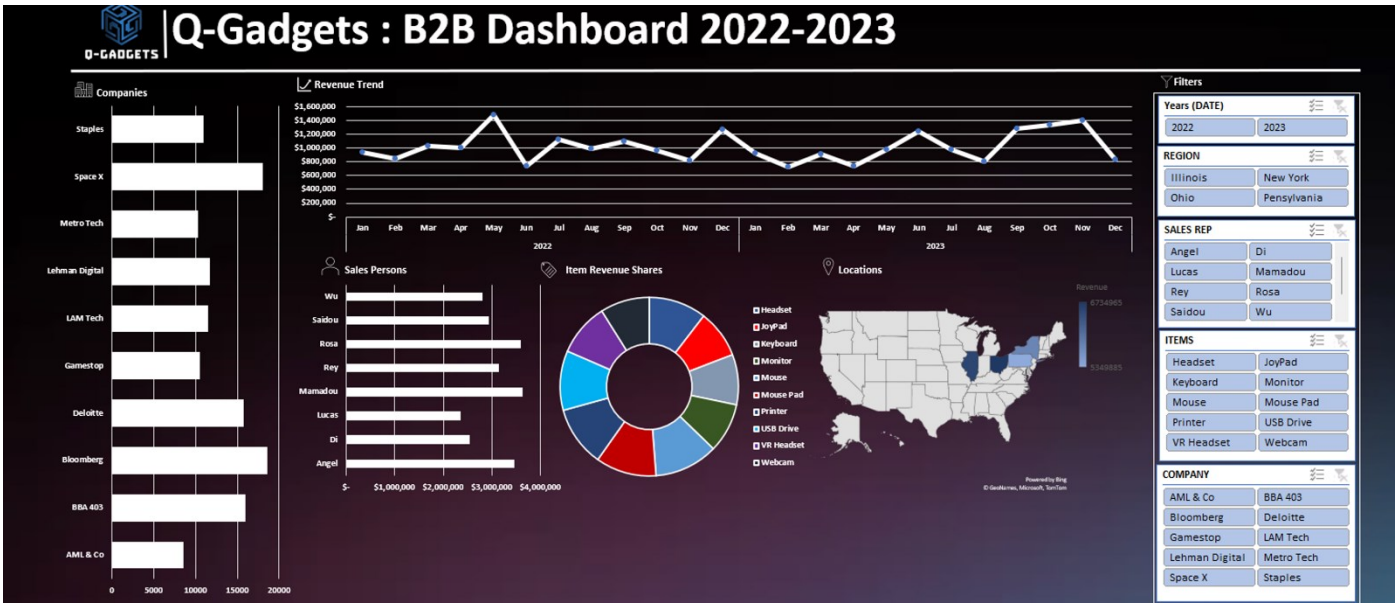
Our regression equation is **Revenue = 4468.2 * Qty Sold + 963027**.

We interpret this as follows:

Each additional unit sold is associated with an increase in revenue of 4468. The intercept represents the predicted revenue when the quantity sold is zero. However, in this context, a quantity sold of zero might not be meaningful or practical. Nevertheless, if we were to interpret it, it suggests that, theoretically, if no units were sold, the company could still expect revenue of approximately $963,027. This value might include fixed costs or other factors not accounted for in the model.

For the **Q-gadgets 2022-2023 Dashboard** we just gathered all the graphs we have created on one sheet and connected all of them and added **filters** so we can be able to take anything we need out of the data.

The result of the dashboard:



Investment Opportunity

Q-Gadgets invites potential investors to join us on this data-driven journey to expand into the B2C market in New York. Our strategy prioritizes quality, customer-centricity, and product diversification, making this an attractive investment opportunity for those who share our vision.

Conclusion

This project outlines our vision for expanding Q-Gadgets into the B2C market in New York. It is a strategic and data-driven approach, backed by our history of providing quality products and services. We look forward to partnering with investors who recognize the potential of this expansion and the value of our well-informed strategy.

For further details or to discuss investment opportunities, please contact our team. Thank you for considering this proposal, and we eagerly anticipate your potential involvement in our data-driven journey to serve individual consumers in the thriving New York market.

We invite you to join us on this transformative journey as we shape the future of electronics because,

TOGETHER, WE CAN SERVE BETTER.