



DATA ANALYTICS TEST

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A person wearing a blue button-down shirt is sitting at a desk, pointing their right index finger at a laptop screen. They are holding a blue pen in their left hand and a black coffee cup in their right hand. The desk also has a tablet and some papers. The background is slightly blurred, showing office shelves.

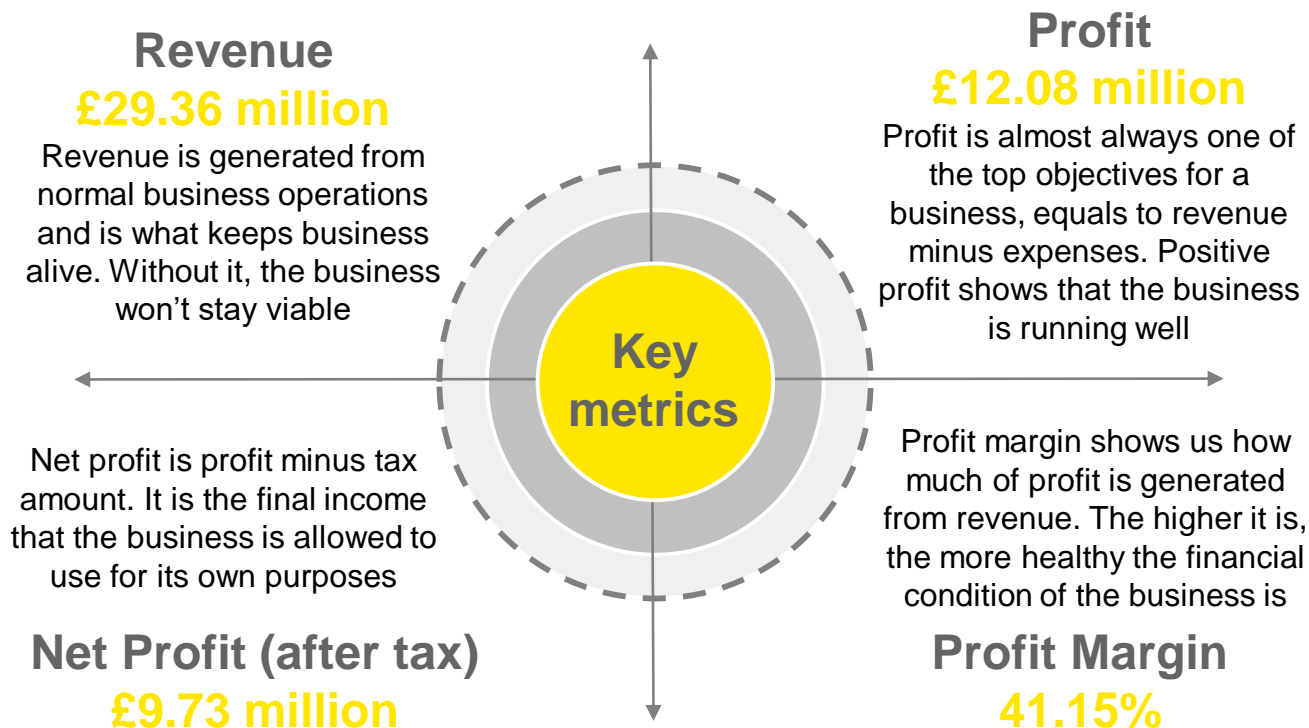
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ANALYSIS OF BUSINESS PERFORMANCE

Analysis of Business Performance

Financial Performance

X is a US-based company selling Bikes and Bikes Accessories. Business Development manager want to understand its business performance. Below are some financial metrics to provide an overview into revenue and profit of X

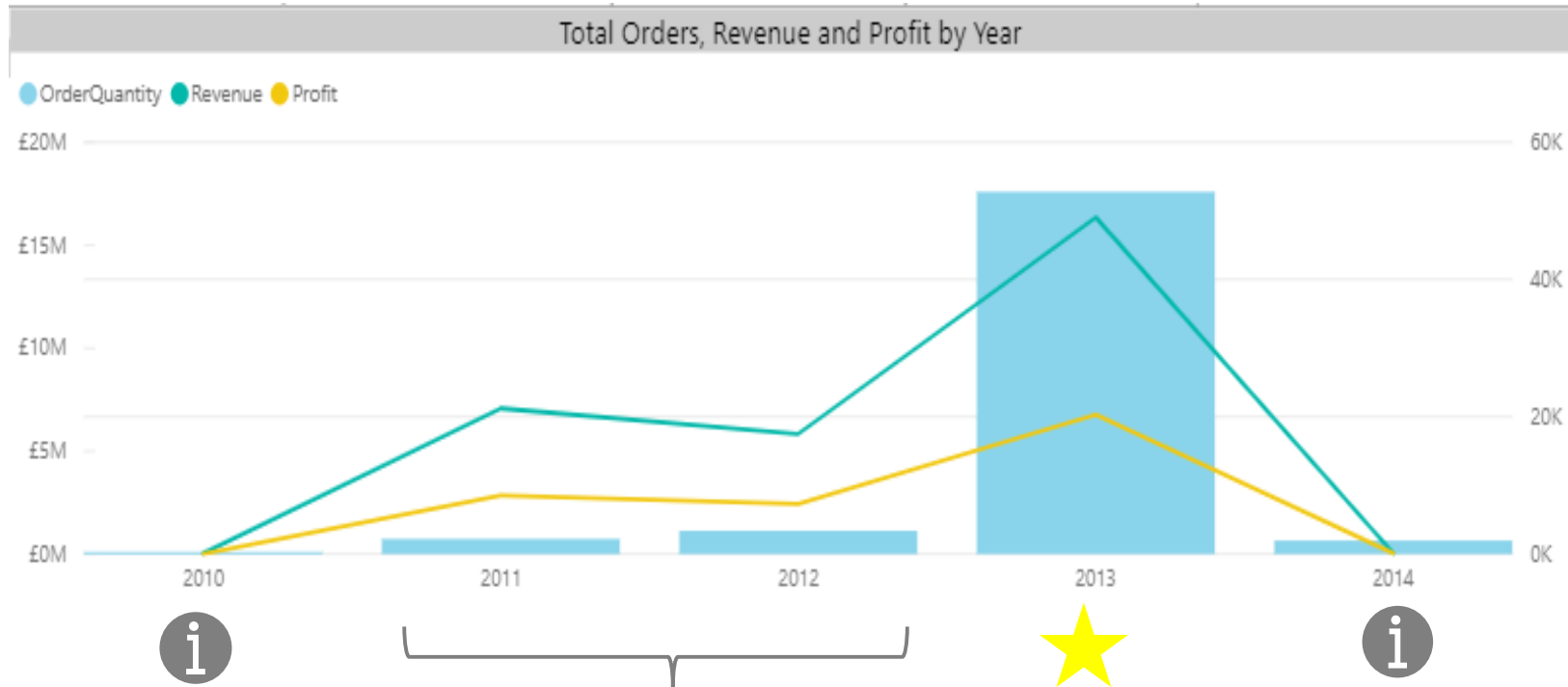


Key insights

1. Both total revenue and profit of the company during 2011-2014 are positive, which is a good sign for its financial condition
2. Net profit after tax is also positive, and this amount could be used for further investment in the company
3. Profit margin is 41.15%, which is a relatively good result. This metrics can be compared to competitors or industry standard to understand the business's profitability.

Analysis of Business Performance

Financial Performance



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The start of data input is 12/29/2010, meaning insufficient data for analysis of the year

Both years have similar number of orders, revenue and profit, and much lower than those of 2013

★

2013 is the year yielding highest orders, revenue and profit

i

The end date of data input is 1/28/2014, meaning insufficient data for analysis of the year

Analysis of Business Performance

Financial Performance



Calculate the business's profit by location gives insight into which place is the most popular one that bringing highest income for the company. Also, it gives us additional information about where the business hasn't operating and thus, considering for expanding existence there.

Analysis of Business Performance

Financial Performance

Top products by Profit

ProductKey	OrderQuantity	Revenue	Profit
312	337	£1,205,876.99	£474,150.84
310	336	£1,202,298.72	£472,743.87
361	427	£979,960.73	£445,364.71
353	422	£979,035.78	£444,944.35
363	419	£961,600.81	£437,020.65
359	416	£954,715.84	£433,891.62
313	302	£1,080,637.54	£424,906.69
357	401	£930,315.99	£422,802.57
314	295	£1,055,589.65	£415,057.86
355	392	£909,436.08	£413,313.24
311	281	£1,005,493.87	£395,360.20
362	201	£411,868.74	£189,600.93
360	187	£383,181.36	£176,394.89
356	179	£370,784.11	£170,687.90
352	174	£360,427.01	£165,020.08
Total	60398	£29,358,677.22	£12,080,883.65

Top customers by Profit

FullName	OrderQuantity	Revenue	Profit
Jordan Turner	20	£15,999.10	£6,669.16
Willie Xu	9	£13,490.06	£5,702.91
Kaitlyn Henderson	14	£13,294.27	£5,273.81
Margaret He	14	£13,269.27	£5,254.60
Nichole Nara	13	£13,295.38	£5,250.42
Adriana Gonzalez	10	£13,242.70	£5,237.24
Randall Dominguez	11	£13,265.99	£5,232.02
Rosa Hu	15	£13,215.65	£5,221.03
Brandi Gill	12	£13,195.64	£5,208.51
Brad She	11	£13,173.19	£5,198.01
Maurice Shan	12	£12,909.67	£5,196.60
Francisco Sara	12	£13,164.64	£5,189.10
Janet Munoz	14	£12,489.17	£5,075.89
Lisa Cai	25	£11,469.19	£4,815.11
Franklin Xu	14	£11,284.97	£4,705.44
Lacey Zheng	17	£11,248.46	£4,701.87
Lisa Munoz	12	£11,068.01	£4,588.18
Total	60398	£29,358,677.22	£12,080,883.65

Product with highest profitability is product **no.312**, with profit of **£474,150.84**

The customer who brought us highest profit is **Jordan Turner**, with **£6,669.16**

Analysis of Business Performance

Customer Analysis

To understand a business, it is essential to first understand who are the target customers. Below are some average numbers for one customer of company X during 2011-2014:

Average Orders per customer	Average Profit per customer	Average Yearly Income per customer	Average Number of Cars per customer
3	£653.59	£57.31K	1

On average, one customer will place around 3 orders at company X for the period of 2011 - 2014

On average, one customer will bring about approximately £653.59 profit for company X during the period of 2011 - 2014

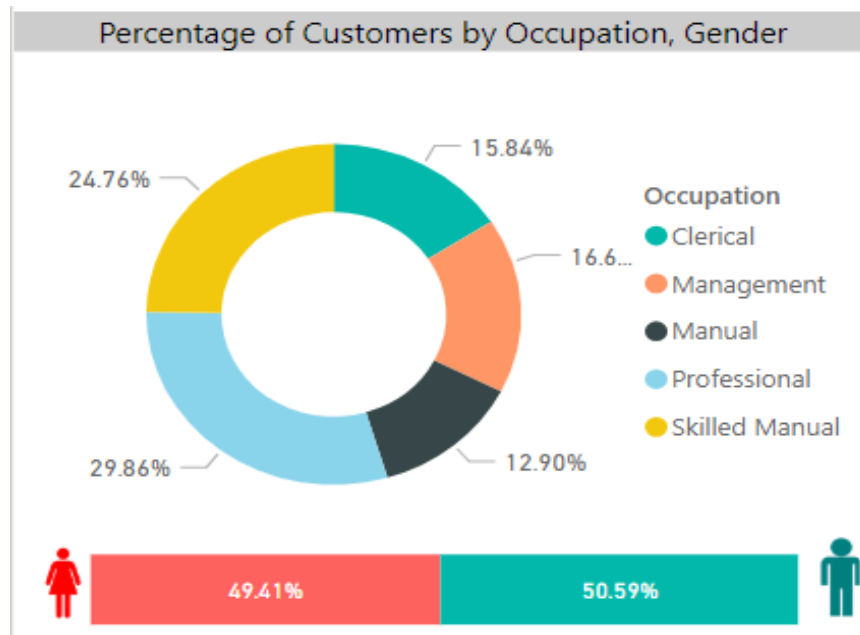
On average, the yearly income of a customer buying products at company X is £57,310

On average, a customer, at the time of buying products at Company X, has already owned 1 cars

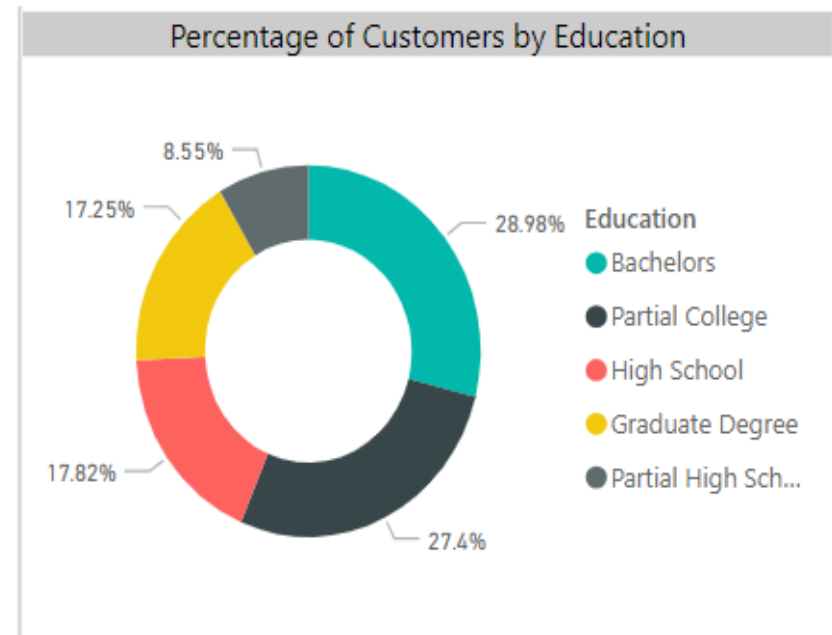
Analysis of Business Performance

Customer Analysis

Also, to better understand target customers, it is necessary to classified customers into many groups based on their demographics



Professional and skilled manual take up more than 50% of total customers, which means they are the company's main buyers. But the gender seems to doesn't affect much, since both female and male are nearly equally interested in our products.



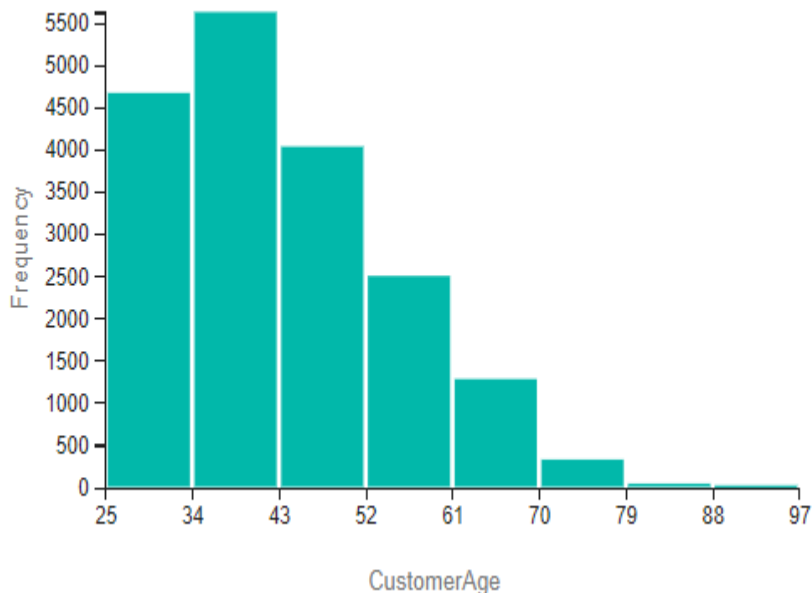
Education is another factor we should consider. It seems like the more educated people are, the more they are likely to buy our products (except for Graduate level that goes out of the trend).

Analysis of Business Performance

Customer Analysis

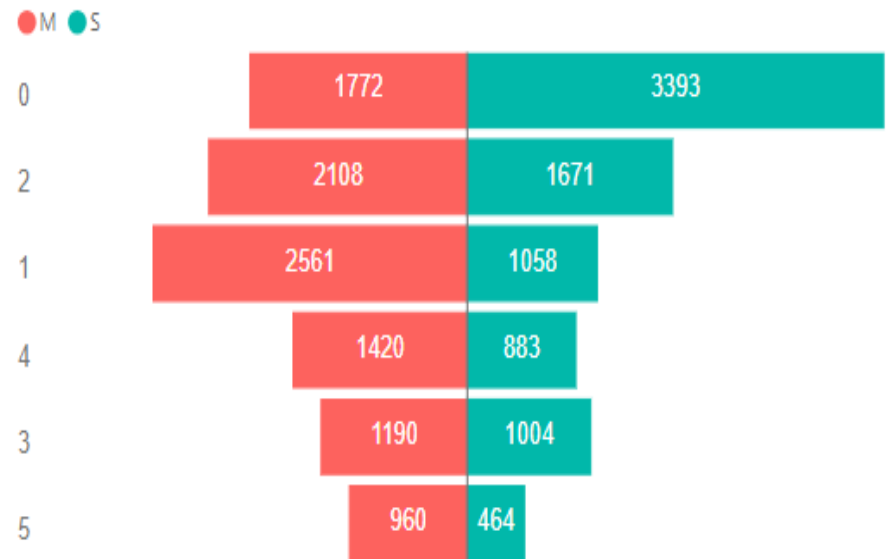
Age, marital status and children are closely related to each other, and they greatly affect customer's decision to buy our products.

Number of Customers by Age group



Customer age range is large, from 25 to 97 years old. Of all of them, younger people, especially those in their 30s seems to be interested in bikes the most, followed by people in mid 20s

Number of Customers by Marital Status, detailed by Total Children

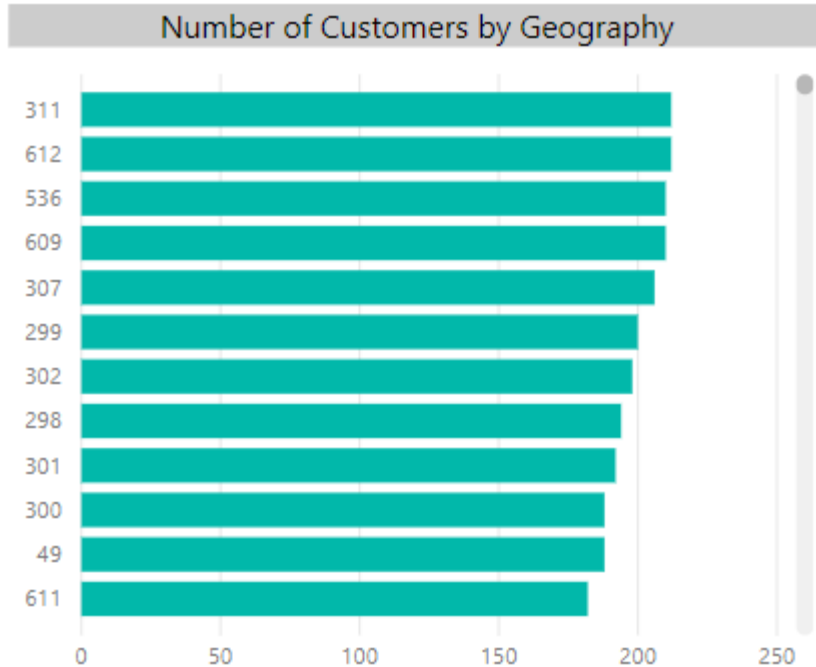


Since most customers are in 30s or 20s, they are mostly single when buying our products and thus, have no children. Even among married people, they tend to buy our products when having less children (0-2)

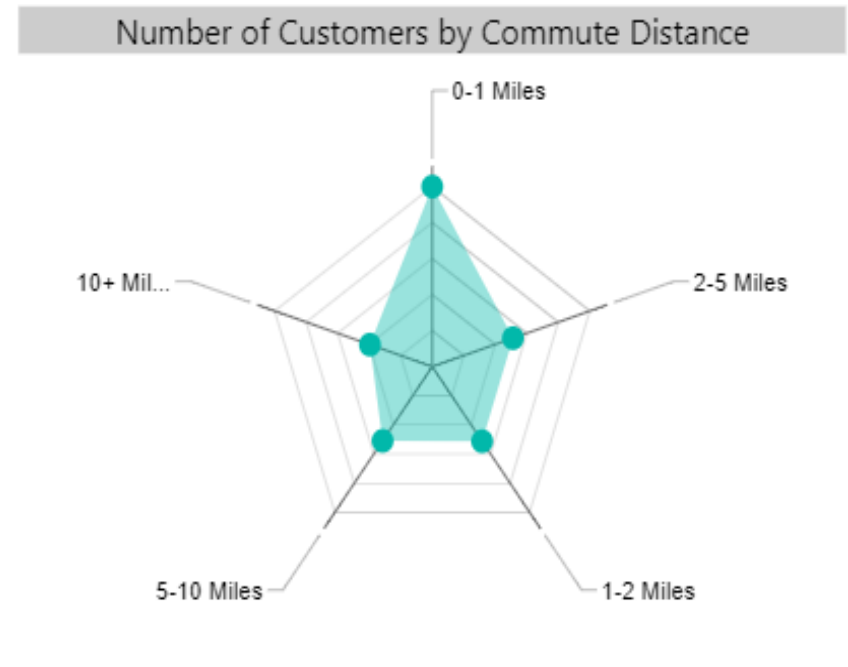
Analysis of Business Performance

Customer Analysis

Next, geographical factors will be taken into account as below:



A lot of customers are currently residing in these geographic key of 311, 612, 536, 609, 307 (more than 200 customers per area)



Since X is selling bikes, understanding commute distance of customer is important in choosing products. Overall, most customers have short commute distance, range from 0-1 miles

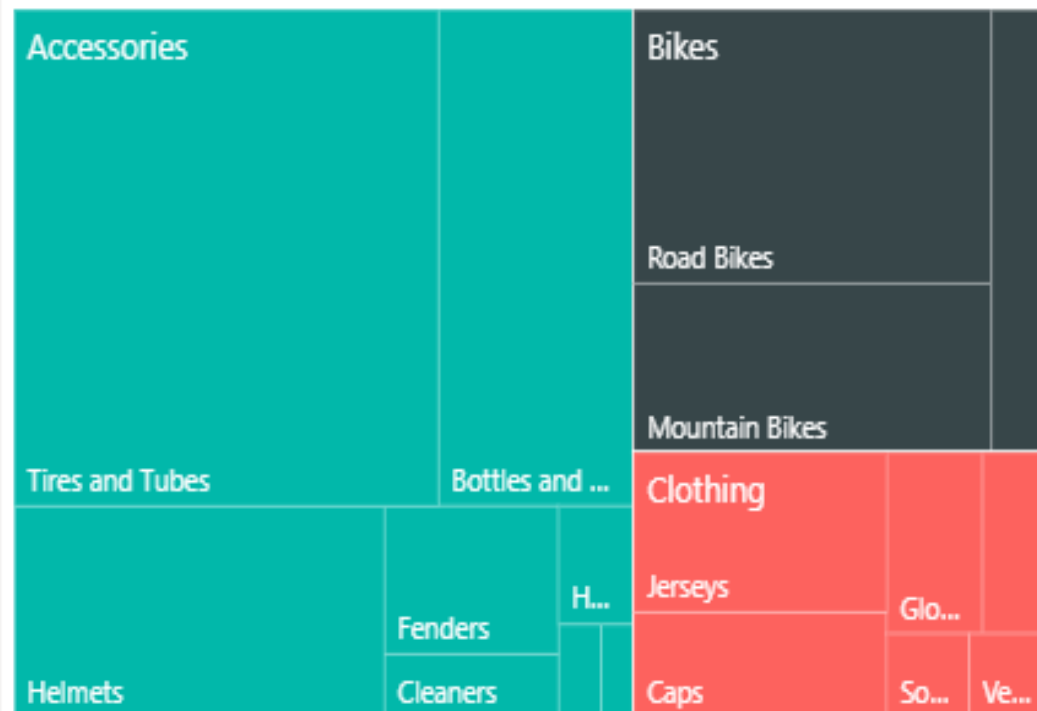
Analysis of Business Performance

Product Analysis

X is currently offers 4 types of products: Accessories, Bikes, Clothing & Components. In general, Accessories are ordered the most, more than half of the company's total orders, while there are no order of components (*)



Total Orders by Product Category & Sub Category



Accessories


On average, unit price for accessories is small, but they are frequently alternated, leading higher number of orders, especially Tires and Tubes

Bikes

Bikes have highest unit price, and our current top products are Road Bikes and Mountain Bikes

Clothing

Clothing is in 3rd place in terms of total orders, in which Jerseys and Caps are the most popular ones among customers.

A person wearing a blue button-down shirt is sitting at a wooden desk. They are pointing at a laptop screen with their right hand. On the desk, there is a laptop, a tablet, a coffee cup, and some papers. The background is slightly blurred, showing a window and some office equipment.

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RECOMMENDATIONS FOR THE COMPANY

Recommendations for the company

Recommendations to improve revenue and profit



Based on these above analysis, below are some suggestions for Company X to improve revenue and profit:

1

Profit takes up more than 40% of revenue, so we can assume that cost control is pretty good and could focus on increasing sales and improving price strategies.

4

Implement appropriate marketing strategies that aims to target customers in hot areas (in combination with their personal demographics)

2

Focus on US (highest profitability region) and consider expanding market to other continents, such as Asia

5

Cross-selling bikes with accessories and clothing, so that customers buying bikes will come back for accessories and clothing

3

Tailor product more suitable for target customers (neutral, young style, color, functionalities for short commute distance, etc.)

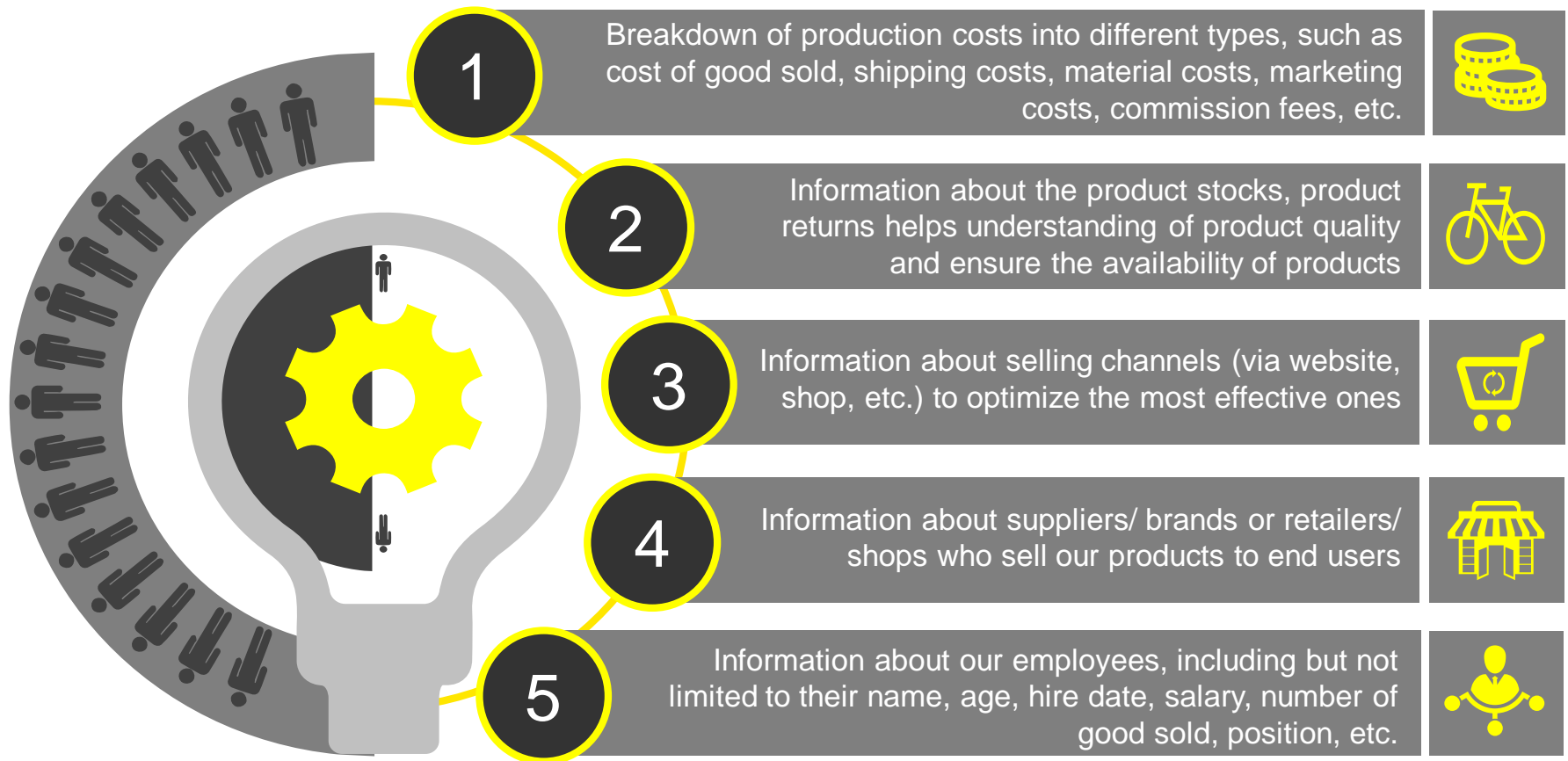
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Diversify accessories and ensure a large number of stocks for top products. Other types, such as Components and Clothing should be reduced

Recommendations for the company

Recommendations for data collection

The above analysis is an overview into some aspects of the company: financial performance, products, and customers. To conduct further analysis, below are some of additional information that the company should consider gathering and maining:



A photograph of two business people shaking hands, with a yellow rectangular frame overlaid in the center containing the text "THANK YOU FOR YOUR TIME". The background is blurred, showing other people in business attire and a table with papers.

**THANK YOU
FOR YOUR TIME**